Arts-Educ/ Liberal Arts/ Math

Arts, Humanities & Rdg

COM121 EFFECTIVE SPEAKING

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course is designed to introduce students to the process of researching, writing, and presenting speeches. Students will explore the basic theories and principles of oral communication and will write and deliver formal speeches throughout the course. Areas of concentration include researching, outlining, organizing, language, verbal and nonverbal delivery, critical listening, and persuasion. TAG OCM004, summer 2007 TMCOM, Autumn 2008

Pre-reqs:

COM122 INTERPERSONAL COMMUNICATION

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course examines the theory and application of interpersonal communication concepts and principles, emphasizing application toward becoming a more competent interpersonal communicator. Areas of study include perception, culture, listening, nonverbal communication, relationships, and conflict. This course is Ohio TAG approved. OCM002 effective Summer 2008. Ohio Transfer Module Approved effecfive Autumn 2008.

Pre-reqs:

COM123 SMALL GROUP COMMUNICATION

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course examines the role of the individual in small social and working groups. The emphasis is on communication verbal and non-verbal to become a group member capable of participation, problem-solving, and leadership. TAG approved course- OCM003 effective Summer 2007.

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Compass Reading - 080

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 246

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

IDS102

Arts-Educ/ Liberal Arts/ Math

Arts, Humanities & Rdg

COM125 INTRO TO COMMUNICATION THEORY

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course will provide students with a survey of the basic elements of communication in a variety of contexts including interpersonal, group, organizational, intercultural, and mass media. Analysis and application of communication theories is emphasized as well as the study of current communication theory research. This course is Ohio TAG approved. OCM001 effective Summer 2008.

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: ACT Composite - 22

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Compass Reading - 080

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 246

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

IDS102

Or IDS102

Or IDS102

Or IDS102

COM126 INTRO TO MASS COMM

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course introduces students to the role of media in contemporary, political, and cultural contexts as well as the global stage. Topics of study include the evolution of media technology, relationships between mass communication and other forms of communication, and the philosophical and ethical issues that arise in mass communication. TAG approved Spring 2012 OCM006.

Pre-reqs:

Arts-Educ/ Liberal Arts/ Math

Arts, Humanities & Rdg

COM223 INTERVIEWING I

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course is designed to introduce students to the art of interviewing. Students will study the principles and practices of interviewing as well as the application of effective interviewing methods in real-life and role-playing assignments. Topics of exploration include question strategies, approaches, structures and types of interviews from both aspects of interviewer and interviewee.

Pre-reqs:

COM225 SEX, GENDER, AND CULTURE

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course introduces students to the study of communication and its relation to sex, gender, and culture. Students will explore the complexities of gender communication in interpersonal relationships, the educational environment, the media, and the workplace. Theoretical approaches to gender development, cultural construction and reconstruction of gender, and gender communication in practice will be examined.

Pre-reqs:

COM227 INTERCULTURAL COMMUNICATION

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course is an introduction to the study of culture and co-cultures and how they are influenced by and effect communication. This course provides an overview of study in communication between and within cultures and co-cultures. In an increasingly global society, being able to communicate effectively with people from different cultures and diverse backgrounds is imperative. Toward that end, this course emphasizes a practical application of intercultural communication concepts and principles, encouraging students to become more competent communicators in a culturally diverse world.

Pre-reqs:

Arts-Educ/ Liberal Arts/ Math

Arts, Humanities & Rdg

COM228 NONVERBAL COMMUNICATION

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course introduces students to important nonverbal concepts, theories, and typologies. Students will learn to interpret and manage nonverbal communication behaviors as they relate to interpersonal relationships in both personal and professional contexts. The course also provides students with an opportunity to analyze and interpret nonverbal elements of mediated communication messages.

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Compass Reading - 080

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 246

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

IDS102

COM229 PERSUASION

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course provides a foundation in the application of theories, principles, and strategies of social influence in a variety of contexts. Empirical investigations of persuasion, social influence, and compliance-gaining will be studied, in addition to strategies and techniques of persuasion and persuasion resistance relating to a wide variety of real-life communication contexts.

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Compass Reading - 080

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 246

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

IDS102

Arts-Educ/ Liberal Arts/ Math

Arts, Humanities & Rdg

HIS121 U.S. HISTORY I -TO 1877

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course will cover the major trends and ideas in American history from the first settlements in North America to the end of the Civil War and Reconstruction. The economic, social, political and religous beliefs and issues affecting the growth and development of the American nation will be examined, along with the issues that produced conflict in the formative years of our history. Topics include: early settlements and immigration, the growth of the colonies, the American Revolution, westward expansion, sectional conflict and the Civil War. TAG approved OHS010 effective Spring 2012. OT36 approved, effecttive spring 2024

Pre-reqs:

HIS122 U.S. HISTORY II FROM 1877

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course will cover the major trends and ideas in American history from the end of Reconstruction to the present. The economic, social, political and religious beliefs and issues affecting the growth and development of the American nation will be examined. Topics discussed will include Industrialization, Immigration, Suffrage, the Great Depression, World War II, the Cold War, Vietnam, the youth movement of the 1960s, Watergate, the Reagan Era, and the United States in the 21st Century. OT36 approved effective spring 2024

Pre-reqs:

HIS221 World Civ to 17th Century

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course will look at world history from early human societies through the mid-17th century.

Pre-reqs:

Arts-Educ/ Liberal Arts/ Math

Arts, Humanities & Rdg

IDS102 CRITICAL ANALYSIS

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

This course teaches vocabulary skills, critical comprehension, and analysis of college-level reading material. The course requires a computerized reading software program.

Pre-reqs:

IDS115 College & Career Succ Skills

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course is designed to aid students in gaining success skills needed for constructive and efficient learning both in college and other life settings. Topics include punctuality and discipline, study and test-taking skills, critical thinking/problem solving, library use, and a variety of techniques in oral and written communication. Other workplace topics such as reliability, teamwork and collaboration, creativity/innovation, leadership, professionalism, techniques to demonstrate a commitment to being drug-free, and respect for global/intercultural awareness will be explored. Students will also self-advocate and articulate their strengths, knowledge, and experiences relevant to success in a job for post-secondary education.

Pre-reqs:

PHL122 ETHICS

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Uses historical and contemporary theories to examine the role and application of ethics to a variety of personal and professional modern-day situations. TAG approved course- OAH046 effective summer 2020. TMAH Approved effective Autumn 2008.

Pre-reqs:

Education

Arts-Educ/ Liberal Arts/ Math

Education

ASL121 INTR TO DEAF CULTURE COMMUNTY

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course is designed to provide students with an overview of the Deaf Culture and Community; history of American Sign Language; deafness and its causes, community services available to the deaf community, Americans with Disabilities Act laws. Five observation hours are required.

Pre-reqs:

ASL122 AMERICAN SIGN LANGUAGE I

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

This course is the first in a series of three American Sign Language courses and is based on the integration of learning outcomes across interpersonal, receptive and expressive modes of communication. Students accomplish real-world communicative tasks in culturally appropriate ways as they gain familiarity with products, practices, and perspectives of American Deaf culture. Students learn grammar, vocabulary, structures, and spatial orientation to enable them to meet functional performance goals at this level and to build a foundation for continued language learning. During this course, students generally perform in the novice range, although a few abilities may emerge in the intermediate range. Ten Community Learning Experience (CLE) hours are required. TAG approved--effective Summer 2016 OFL025 (TAG approved sequence (ASL124 and ASL122) OFL029 effective spring 2018)

Pre-reqs:

ASL123 INTRODUCTION TO INTERPRETING

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course introduces the student to the philosophy of interpreting, history and models of interpreting; ethical issues; physical, social and psychological factors. Five observation hours are required.

Pre-reqs:

Arts-Educ/ Liberal Arts/ Math

Education

ASL124 AMERICAN SIGN LANGUAGE II

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

This course is the second in the series of three American Sign Language courses and is based on the integration of learning outcomes across interpersonal, receptive, and expressive modes of communication. Students accomplish real-world communicative tasks in culturally appropriate ways as they gain familiarity with products, practices, and perspectives of American Deaf culture. Students learn grammar, vocabulary, structures, and spatial orientation to enable them to meet functional performance goals at this level and to build a foundation for continued language learning. During this course, students perform better and stronger in the novice range while some abilities emerge in the intermediate range. Ten Community Learning Experience (CLE) hours are required. TAG approved OFL026 effective spring 2018 (TAG approved sequence (ASL124 and ASL122) OFL029 effective spring 2018)

Pre-reqs:

ASL122

Or ASL122

ASL221 AMERICAN SIGN LANGUAGE III

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

This course is the third in a series of three language courses and is based on the integration of learning outcomes across interpersonal, receptive, and expressive modes of communication. Students accomplish real-world communicative tasks in culturally appropriate ways as they gain familiarity with products, practices, and perspectives of American Deaf culture. Students learn grammar, vocabulary, structures, and spatial orientation to enable them to meet functional performance goals at this level and to build a foundation for continued language learning. During this course, students can consistently perform in the novice range while more abilities emerge and develop in the intermediate range. Ten Community Learning Experience (CLE) hours are required. TAG approved OFL027 effective spring 2018

Pre-reqs:

ASL124

ASL222 AMERICAN SIGN LANG PRAC/SEM

Credit Hours: 3 Contact Hours: 15 Lecture Hours: 1 Lab Hours: 0 Other Hours: 14

ASL Practicum and Seminar is a 210 hour supervised educational experience . This course will allow students to observe and practice signing in actual situations. Students will be able to apply the skills and knowledge learned in the classroom. Students will be assigned to specific community sites and will be supervised by a staff person from the community agency. This is a capstone course.

Pre-reqs:

ASL123

And ASL221 Can be Taken Concurrently

Arts-Educ/ Liberal Arts/ Math

Education

EDU121 INTRO EARLY CHILDHOOD EDUC

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This introductory course provides a general introduction to the field of early childhood education as well as related services that support children and their families, birth to age 5. This course is intended for those who are interested in the field of early childhood as well as those who are still undecided but are considering a career working with young children. Content in this course provides an overview of the profession of early childhood education and the role of the teacher/caregiver. It explores the history of early childhood education, major models and programs that support and/or educate young children, the theories and practices that are the foundations for such programs, and current issues in the classroom/child setting. Thirty observation hours are required. CTAG CTECE001 effective Spring 2018. ITAG-ITECE001, effective spring 2023.

Pre-reqs:

Or Test & Score: ACT English - 18

Or Test & Score: Accuplacer English/Writeplacer - 5

Or Test & Score: Compass English - 070

Or Test & Score: HS English Proficiency - 3

Or ENG011
ENG101

Or ENG105

EDU122 CURRICULUM DESIGN AND INS

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Studies theory and practice of instructional design and delivery for children birth to eight. Goal-setting, curriculum design, lesson planning and instructional methods based on NAEYC guidelines. Emphasis is placed on developmentally-appropriate, integrated and thematic instruction. Skill development is fostered in observing and recording behavior and evaluation/assessment of children's needs, levels and progress. Includes use of a wide range of educational media. Ten observation hours required.

Pre-reqs:

EDU131

EDU123 Health, Safety, and Nutrition

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

In this course, students will examine and discuss content and issues related to the health, safety, and nutrition of young children birth through age 5. Students will explore information that relates to the development of safe learning environments, healthy nutrition, and other positive interactions that support optimal growth and development of young children. Ways to engage the family in supporting these practices as well as licensing rules and information about requirements will be included. Five observation hours are required. CTAG approved CTECE002 effective Spring 2018 ITAG-ITECE002, effective spring 2023.

Pre-reqs:

EDU121

Or EDU130

Or EDU131

Arts-Educ/ Liberal Arts/ Math

Education

EDU124 INFANT TODDLER CURRICULUM

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course engages participants in exploration and discussion about high-quality care giving and developmentally appropriate practices when engaging with infants and toddlers and their families. The importance of quality environments that support development, language and literacy, family engagement, advocacy, positive guidance, and professionalism are discussed as they relate to required standards and the care of infants and toddlers. Five observation hours are required. CTAG approved CTECE003 effective Spring 2018

Pre-reqs:

EDU131

EDU126 EDUCATIONAL TECHNOLOGY

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Encompasses effectively identifying, locating, evaluating, designing, preparing and efficiently using educational technology as instructional resources in the classroom as related to principles of learning and teaching. Students will develop increased classroom communication abilities through lectures, discussions, modeling, laboratory experiences and completion of a comprehensive project

Pre-reqs:

EDU130 INTRO TO THE TEACHING PROFESSN

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This introductory course explores the purposes, organizations, and outcomes of schooling from the perspectives of the field of social foundations in education. Candidates undertake critical inquiry into teaching as a profession. Licensure requirements, teachers' legal responsibilities, and the accountability of public schools are also explored. TAG OED007 approved spring 2018, CTAG CTEDU007 approved spring 2018

Pre-reqs:

Or Test & Score: ACT English - 18

Or Test & Score: Accuplacer English/Writeplacer - 5

Or Test & Score: Compass English - 070

Or Test & Score: HS English Proficiency - 3

Or Test & Score: GED Reasoning Through Lang Art - 1

Or ENG011

Or ENG011

Or ENG101

ENG105

Arts-Educ/ Liberal Arts/ Math

Education

EDU130 INTRO TO THE TEACHING PROFESSN

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This introductory course explores the purposes, organizations, and outcomes of schooling from the perspectives of the field of social foundations in education. Candidates undertake critical inquiry into teaching as a profession. Licensure requirements, teachers' legal responsibilities, and the accountability of public schools are also explored. TAG OED007 approved spring 2018, CTAG CTEDU007 approved spring 2018

Pre-reqs:

Or ENG124

EDU221 LANGUAGE ARTS

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Examines research-based strategies and techniques for supporting and encouraging young children's emerging literacy development, including pre-writing/writing, pre-reading/reading, and language development. Includes orientation to children's literature and utilization of children's interest in planning. Five field observation hours required.

Pre-reqs:

EDU122

Or EDU124

Or EDU130

EDU223 COMMUNITY & FAM BASED PR

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course explores educational considerations for teachers including the policies, theories, practices, skills, and knowledge of home, school, and community partnerships. Candidates will examine the multiple influences on the whole child; accessibility of community services and supports; ethical, practical, and culturally competent decisions to foster family engagement; knowledge and skills needed to address family structure, socio-cultural and linguistic backgrounds, identities and customs, and advocacy for children and families. Five volunteer/observation hours are required. TAG approved OED011 effective spring 2019

Pre-reqs:

EDU121

Or EDU130

Arts-Educ/ Liberal Arts/ Math

Education

EDU224 EARLY CHILDHOOD PROG ADM

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Examines key aspects of starting and operating various types of early childhood programs. Policies/procedures, legalities, supervision, finances, planning and organizing, and personnel management are emphasized.

Pre-reqs:

EDU121

Or EDU130

EDU225 THE EXCEPTIONAL CHILD

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This is a survey course to prepare all educators to teach diverse learners, including those with exceptionalities. It covers developmental characteristics, assessment methods, intervention strategies, and ethical principles for students in education and community settings. TAG OED009 approved Spring 2018

Pre-reqs:

EDU121

Or EDU130

Or EDU131

EDU227 ECE Practicum & Seminar

Credit Hours: 3 Contact Hours: 15 Lecture Hours: 1 Lab Hours: 0 Other Hours: 14

A 210-hour, supervised experience working in the early childhood education/caregiving setting. Open only to Early Childhood Education Technology majors. Weekly seminar participation required.

Pre-reqs:

EDU124

And EDU132

And EDU221

Or EDU232

And EDU235 Can be Taken Concurrently

Arts-Educ/ Liberal Arts/ Math

Education

EDU228 PHONICS FOR YOUNG CHILDREN

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Explores the theory and role of phonics and phonemics awareness as well as current research regarding phonics instruction.

Pre-reqs:

Or EDU130

EDU221

EDU229 EDUCATIONAL PSYCHOLOGY

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course explores major theories of human development, learning, and motivation. Planning of instruction, teaching strategies, assessment, classroom management, and diversity of learners are examined. Authentic educational practices and application of research in these areas are also emphasized. TAG OED008 approved Spring 2018

Pre-reqs:

EDU130

Or EDU131

EDU232 Literature Across the Curricul

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course focuses on current issues, research, and effective practices regarding the use of children's literature across the early childhood classroom curriculum. Students will learn how to select quality children's books for use in a variety of content areas, develop respect and appreciation for numerous types of literature, authors, illustrators, and poets. Students will plan lessons that use children's literature to effectively support and enrich instruction in a variety of classroom settings. Five observation hours are required.

Pre-reqs:

EDU122

Or EDU130

Arts-Educ/ Liberal Arts/ Math

Education

EDU235 Incl Class for Young Child

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Definitions, causes, and characteristics of students identified with mild to moderate socio-emotional/behavioral and physical disabilities are studied. Social, educational, physical and emotional implications of learning and development are examined. Methods of assessment, interventions, and accommodations based on developmentally and individually appropriate procedures are presented. The range of service needs are explored using an interdisciplinary approach. Five field observation hours are required.

Pre-reqs:

EDU225

English

ENG010 INTRODUCTION TO ACAD WRITING

Credit Hours: 5 Contact Hours: 5 Lecture Hours: 5 Lab Hours: 0 Other Hours: 0

This course is a writing-intensive course which emphasizes the composition process through individualized and group instruction in a workshop setting. It engages students in the writing habits, strategies, and skills needed to become confident, successful college writers.

Pre-reqs:

ENG011 ACADEMIC WRITING

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

This course provides supplementary instruction for students who are co-enrolled in College Composition (ENG124). This course is designed to enhance student success, providing intensive individualized instruction and practice in major components of drafting, such as process writing, audience awareness, and critical thinking.

Pre-reqs:

Or Test & Score: ACT English - 16

Or Test & Score: Accuplacer English/Writeplacer - 4

Or Test & Score: Compass English - 050

Or Test & Score: SAT Verbal - 450

ENG010

Or ENG103

Arts-Educ/ Liberal Arts/ Math

English

ENG024 Writing Workshop

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course provides additional instructional support for students who are co-enrolled in ENG124. The course is designed to assist students in developing academic writing and reading strategies and skills needed to successfully complete ENG124 assignments and curriculum. Course work includes practice and application of the major components of composition, such as process writing, audience awareness, critical thinking, and textual analysis through individualized and group instruction.

Pre-reqs:

ENG124 COLLEGE COMPOSITION

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course emphasizes writing based on reading response with review of essay development, grammar, and punctuation. Emphasis is on the process of drafting, revising, and editing to achieve clarity. A research project requires APA or MLA documentation. TMEC Approved effective Autumn 2008. OT36-TME001, effective summer 2023

Pre-reqs:

Test & Score: ACT English - 18

Or Test & Score: Accuplacer English/Writeplacer - 5

Or Test & Score: Compass English - 070

Or Test & Score: HS English Proficiency - 3

Or Test & Score: GED Reasoning Through Lang Art - 1

Or ENG011 Can be Taken Concurrently

Or ENG024 Can be Taken Concurrently

Or ENG101

Or ENG105

ENG125 TECHNICAL EDITING AND LAYOUT

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course will introduce students to the editing process and teach students the basic of design layout. Students will practice both hardcopy and electronic editing and proofreading, as well as study and discuss a variety of editorial approaches.

Pre-reqs:

ENG124

Arts-Educ/ Liberal Arts/ Math

English

ENG126 TECHNICAL GRAMMAR AND STYLE

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course provides an intense review of modern English grammar, style, and punctuation, and examines how these subjects pertain to current technical writing.

Pre-reqs:

ENG124

ENG221 TECHNICAL REPORT WRITING

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course stresses clarity, logic and appropriate organization in informal and formal technical reports. An oral presentation/proposal may be required. TMEC Approved effective Autumn 2008. Ohio Transfer Module Approved Spring 2012 TME002.

Pre-reqs:

ENG124

ENG227 WRITING FOR MEDIA

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course covers writing for the following media: web, broadcast, and scriptwriting. Students examine basic issues of design and are introduced to stylistic and content requirements involved with creating media-specific text.

Pre-reqs:

ENG124

Arts-Educ/ Liberal Arts/ Math

English

ENG228 WRITING FOR THE WEB

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Writing for the Web is designed to introduce students to the unique writing style, issues, and audience associated with writing for the web and digital media. Students will come to understand how users read on the web, the dual nature of language and aesthetics in web writing, flow and construction of information on the web, language appropriateness and usage, and the relationship between audience, message, and language.

Pre-reqs:

ENG124

ENG229 GRANT WRITING

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Students will study the general and varied requirements of grant writing in a diversity of public and private areas. Hands-on practice will result in a completed grant or simulated grant of some complexity by the end of the semester.

Pre-reqs:

ENG124

ENG230 BUSINESS COMMUNICATION

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course provides a realistic sampling of varied forms of communication. During the course of the semester, students will write memos, letters, description, and instructions; conduct research; practice conducting simulated business meetings featuring reports and graphic aids; and develop skills in interviewing and resume creation. The importance of working with others is stressed throughout the class. TMEC Approved effective Autumn 2008. OTM approved for TME002 effective Fall 2011.TAG approved Spring 2012 OBU005.

Pre-reqs:

ENG124

Arts-Educ/ Liberal Arts/ Math

English

ENG231 COLLEGE COMPOSITION II

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course will build on the skills and knowledge obtained in College Composition including research and inquiry. Students will develop an understanding of rhetoric, argument, and language as they explore and write about complex topics in formal papers. TMEC Approved effective Spring 2010. OT36-TME002, effective summer 2023.

Pre-reqs:

ENG124

ENG232 SCRIPTWRITING

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course will focus on the creation of scripts for corporate marketing, training and educational videos. Narrative structure and dramatic storytelling will be employed in the creation of the scripts.

Pre-reqs:

ENG124

ENG233 BRITISH LITERATURE:MED TO 1785

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course covers British literature from the Middle Ages to the early modern period. Students will read, discuss, and write about works by British authors in their historical and cultural contexts. Emphasis will be placed on the critical reading of the works and techniques used to analyze them. Course is TAG approved OAH055 effective Spring 2010. OT36-TMAH, effective summer 2023.

Pre-reqs:

ENG124

Arts-Educ/ Liberal Arts/ Math

English

ENG234 BRITISH LIT:1785 TO PRESENT

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course covers British literature from the Romantic to contemporary periods. Students will read, discuss, and write about works by British authors in their historical and cultural contexts. Emphasis will be placed on critical reading of the works and techniques used to analyze them. TAG approved OAH056 effective Summer 2010. OT36-TMAH, effective summer 2023.

Pre-reqs:

ENG124

ENG235 INTRO TO SHAKESPEARE

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course is a study of representative plays and poetry of William Shakespeare. Students will read, discuss, and write about the works in their historical and cultural contexts. Emphasis will be placed on the critical reading of the works and techniques used to analyze them. TMAH Approved effective Spring 2016.

Pre-reqs:

ENG124

ENG236 AMERICAN LIT:COLONIAL to 1865

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course covers American Literature from the time of Native Americans to the Civil War. Students will read, discuss, and write about works by American authors in their historical and cultural contexts. Emphasis will be placed on critical reading of the works and techniques used to analyze them. TAG OAH053 approved Spring 2012. OT36-TMAH, effective summer 2023.

Pre-reqs:

ENG124

Arts-Educ/ Liberal Arts/ Math

English

ENG237 AMERICAN LIT:1865 TO PRESENT

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course surveys American Literature from the mid- to late-nineteenth century to the present. Students will read, discuss, analyze, and write about works by American authors in their historical and cultural contexts. Emphasis will be placed on critical reading of the works and techniques used to analyze them. TAG approved Summer 2012 OAH054. OT36-TMAH, effective summer 2023.

Pre-reqs:

ENG124

ENG238 INTRO TO CREATIVE WRITING

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Students will study and practice creative writing by critically analyzing creative writing strategies and experiencing a writing workshop to create their own texts.

Pre-reqs:

ENG124

ENG239 FILM APPRECIATION

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Film Appreciation will introduce students to the way films are put together and how they transmit story and ideas to an audience. Students will learn about narrative form, film style, genre, etc., as well as film criticism and theory. OTM approved TMAH, effective summer 2020.

Pre-reqs:

ENG124

Arts-Educ/ Liberal Arts/ Math

English

ENG240 WOMEN'S LITERATURE

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course explores representative works by women of diverse eras, cultures, historical, social and literary perspectives. Emphasis will be placed on critical reading of the works and techniques used to analyze them, especially in terms of race, ethnicity, class, sexual orientation, and cultural context. Through this analysis, students will gain knowledge and understanding of women's role in the literary tradition and how their roles and views of themselves change and are reflected in their writing. OTM approved TMAH, effective summer 2020

Pre-reqs:

ENG124

ENG241 MAJOR MODERN WRITERS

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course explores the writing of major American and British authors of the twentieth century and after. Students will read, discuss, and write about works by these authors in their historical and cultural contexts. Emphasis will be placed on critical reading of the works; techniques used to analyze them; and their social, historical, and literary significance in relation to the twentieth century and after.TMAH Approved effective Spring 2016.

Pre-reqs:

ENG124

ENG250 TECHNCL COMMUNICATNS INTERSHIP

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Students will work with the student newspaper advisors and staff during a specified period of time with a member of the English Department at Stark State College serving in an advisory capacity. This is a non-paid internship. Successful completion of the internship will require confirmation by the representative of the student organization and the student's advisor that obligations and objectives have been met. Can only be completed in the student's final semester at Stark State College.

Pre-reqs:

Arts-Educ/ Liberal Arts/ Math

English

SPN100 ELEMENTARY SPANISH I

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

This course incorporates the five world-readiness standards for learning languages – Communication, Communities, Comparisons, Connections, and Cultures – to give students the ability to undertake real-world linguistic tasks in Spanish across a wide range of topics and settings. The communication methods used to incorporate the standards are interpersonal, interpretative, and presentational to enable students to achieve a novice-mid to novice-high level of performance. Students learn grammar, vocabulary, and structures of the language to meet performance goals and build a foundation of continuous language learning. Students practice language using tasks in culturally appropriate ways to assimilate the Spanish language within the perspective of Hispanic culture. Students practice speaking through both interpersonal tasks and presentations to integrate speaking and writing the language while visually presenting information. TAG OFL019 approved, effective spring 2022

Pre-reqs:

SPN200 ELEMENTARY SPANISH II

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

This course incorporates the five world-readiness standards for learning languages – Communication, Communities, Comparisons, Connections, and Cultures – to give students the ability to undertake real-world linguistic tasks in Spanish across a wide range of topics and settings. The communication methods used to incorporate the standards are interpersonal, interpretative, and presentational to enable students to achieve a novice-high to intermediate-low level of performance. Students learn grammar, vocabulary, and structures of the language to meet performance goals and build a foundation of continuous language learning. Students practice language using tasks in culturally appropriate ways to assimilate the Spanish language within the perspective of Hispanic culture. Students practice speaking through both interpersonal tasks and presentations to integrate speaking and writing the language while visually presenting information. TAG approved OFL020, effective spring 2023.

Pre-reqs:

SPN100

Or SPN100

General Studies

SSC101 STUDENT SUCCESS SEMINAR

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

This course is designed to aid students in gaining the skills necessary for academic success at Stark State College (SSC). Topics include learning styles, critical thinking, time management, study and test-taking techniques, communication skills, and a variety of personal development strategies. Students will learn how to access and use SSC resources such as mystarkstate, the College's Learning Management System (LMS), Digital Library, Writing Center, Career Development, advising, tutoring, and other College support services. This course also fosters connections between students, their respective academic divisions, and their classmates. Upon completion of this course, students should be able to incorporate into their degrees or certificate programs the tools and skills necessary to be academically and professionally successful.

Pre-reqs:

Mathematics

Arts-Educ/ Liberal Arts/ Math

Mathematics

MTH005 Found for Math Allied Health

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course provides remediation for students who are co-enrolled in Math for Allied Health. It is designed to enhance student success. Topics to be covered are basic arithmetic, basic fractions and decimals, basic variables and equations, and basic percent and proportions.

Pre-reqs:

MTH007 Foundation for Industrial Math

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course provides a mathematical foundation and practice in topics relevant to Industrial Math, along with intensive individualized instruction. Students will receive targeted support using a “just in time” model that will boost their understanding and learning of their college-level course.

Pre-reqs:

MTH018 Foundations Quan Reason

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course provides a mathematical calculation and reasoning foundation and practice in topics related to a Quantitative Reasoning course. It includes arithmetic and algebra review and practice. Students will also discuss, analyze, and construct mathematical arguments using reasoning and logic. The course is designed to provide just-in-time support as a corequisite for Quantitative Reasoning.

Pre-reqs:

Arts-Educ/ Liberal Arts/ Math

Mathematics

MTH020A 1st Half PrRq Math--MTH021-023

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course is a shell course. This means that you register for MTH020A, but then your registration will be transferred to the correct prerequisite course required for your college-level math course. You will not get credit for this shell, but instead will get credit for one of the courses listed below.

Once you sign up for this shell course, you will be transferred into one of these courses. Both the shell and the courses listed below are 2-credit hours each.

- MTH021 Math Fundamentals
- MTH022 Pre-Statistics
- MTH023 Pre-College Algebra

Pre-reqs:

MTH020B 2nd Half PrRq Math--MTH021-025

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course is a shell course. This means that you register for MTH020A (or B), but then will be transferred to the correct prerequisite course required for your college-level math course. You will not get credit for this shell, but instead will get credit for one of the courses listed below.

Once you sign up for this shell course, you will be transferred into one of these courses.Both the shell and the courses listed below are 2-credit hours each. Note to advisors and students: MTH024 and MTH025 should only be taken by students who have taken more than one semester to finish their prerequisite courses. Otherwise, they should be taken with the appropriate college-level course.

- MTH021 Math Fundamentals
- MTH022 Pre-Statistics
- MTH023 Pre-College Algebra
- MTH024 Foundations for Statistics
- MTH025 Foundations for College Algebra

Pre-reqs:

MTH020A Can be Taken Concurrently

MTH021 Math Fundamentals

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course covers mathematical topics that are essential for students in any discipline. Topics to be covered are signed numbers; signed fractions; signed decimals; an introduction to variables; and solving equations.

Pre-reqs:

Arts-Educ/ Liberal Arts/ Math

Mathematics

MTH022 Pre-Statistics

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course covers mathematical topics that are essential for students taking statistics or a quantitative reasoning course. Topics to be covered are ratios, rates and proportions; percent; and solving equations. Emphasis is placed on applications of concepts and mathematical reasoning.

Pre-reqs:

Or Test & Score: M021 Transfer Prof/Placement - 3

MTH021

MTH023 Pre-College Algebra

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course covers mathematical topics that are essential for students in any discipline, but especially for those planning to take a STEM-related college level math course. Topics covered include linear graphing; linear systems of equations; exponents; polynomials; factoring; roots and radicals; and solving equations. Emphasis is placed on techniques and processes to prepare students for the analysis in a College Algebra or Precalculus course.

Pre-reqs:

Or Test & Score: M021 Transfer Prof/Placement - 3

MTH021

MTH024 Foundations for Statistics

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course provides a mathematical foundation and practice in topics of an introductory level statistics course, along with intensive individualized instruction. Students will receive targeted support using a “just in time” model that will boost their understanding and learning of Statistics.

Pre-reqs:

Or Test & Score: ACT Math - 19

Or Test & Score: Accuplacer College-level Math - 040

Or Test & Score: Accuplacer Elementary Algebra - 097

Or Test & Score: Compass Algebra - 039

Or Test & Score: M022 Transfer Prof/Placement - 3

Or Test & Score: M023 Transfer Prof/Placement - 3

Or Test & Score: M092 Transfer Prof/Placement - 3

Arts-Educ/ Liberal Arts/ Math

Mathematics

MTH024 Foundations for Statistics

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course provides a mathematical foundation and practice in topics of an introductory level statistics course, along with intensive individualized instruction. Students will receive targeted support using a "just in time" model that will boost their understanding and learning of Statistics.

Pre-reqs:

Or Test & Score: NextGen Accuplacer AAF Math - 237

Or Test & Score: NextGen Accuplacer QAS Math - 250

Or Test & Score: SAT Mathematics - 510

Or MTH022

Or MTH023

MTH092

MTH105 Math for Allied Health

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course is designed to provide health science students with the mathematical skills and concepts required to be successful in allied health fields. Topics covered in this course will be: allied health applications, metric conversions, apothecary and household systems, systems of measurements, use of formulas, dimensional analysis, percent, decimals, fractions, ratios and proportions, direct and inverse variation, solutions, dosage calculations, allied health graphs, scientific notation, and statistical concepts.

Pre-reqs:

And Test & Score: ACT Math - 19

Or Test & Score: ACT Math - 19

And Test & Score: Accuplacer College-level Math - 040

Or Test & Score: Accuplacer College-level Math - 040

And Test & Score: Accuplacer Elementary Algebra - 097

Or Test & Score: Accuplacer Elementary Algebra - 097

Or Test & Score: Compass Algebra - 039

Or Test & Score: GED Mathematical Reasoning - 1

Or Test & Score: M021 Transfer Prof/Placement - 3

Or Test & Score: M092 Transfer Prof/Placement - 3

And Test & Score: NextGen Accuplacer AAF Math - 237

Or Test & Score: NextGen Accuplacer AAF Math - 237

And Test & Score: NextGen Accuplacer QAS Math - 250

Or Test & Score: NextGen Accuplacer QAS Math - 250

Arts-Educ/ Liberal Arts/ Math

Mathematics

MTH105 Math for Allied Health

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course is designed to provide health science students with the mathematical skills and concepts required to be successful in allied health fields. Topics covered in this course will be: allied health applications, metric conversions, apothecary and household systems, systems of measurements, use of formulas, dimensional analysis, percent, decimals, fractions, ratios and proportions, direct and inverse variation, solutions, dosage calculations, allied health graphs, scientific notation, and statistical concepts.

Pre-reqs:

Or	Test & Score: SAT Mathematics - 510	
Or	MTH005	Can be Taken Concurrently
Or	MTH005	Can be Taken Concurrently
Or	MTH005	Can be Taken Concurrently
Or	MTH005	Can be Taken Concurrently
Or	MTH005	Can be Taken Concurrently
Or	MTH005	
Or	MTH020A	
Or	MTH020B	
Or	MTH021	
	MTH092	
Or	MTH100	

MTH107 Industrial Math

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course will cover the topics of elementary mathematics needed for applications in the vocational and technical curriculum. The operation and use of the scientific calculator as a problem solving tool will be emphasized. Topics include: basic concepts, fractions, the metric system, measurements, polynomials, basic right angle trigonometry, ratios and proportions, geometry, oblique triangles, the law of sines and law of cosines.

Pre-reqs:

Or	Test & Score: ACT Math - 19
Or	Test & Score: ACT Math - 19
Or	Test & Score: Accuplacer College-level Math - 040
Or	Test & Score: Accuplacer Elementary Algebra - 097
Or	Test & Score: Compass Algebra - 039
Or	Test & Score: GED Mathematical Reasoning - 1
Or	Test & Score: M021 Transfer Prof/Placement - 3
Or	Test & Score: NextGen Accuplacer AAF Math - 237

Arts-Educ/ Liberal Arts/ Math

Mathematics

MTH107 Industrial Math

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course will cover the topics of elementary mathematics needed for applications in the vocational and technical curriculum. The operation and use of the scientific calculator as a problem solving tool will be emphasized. Topics include: basic concepts, fractions, the metric system, measurements, polynomials, basic right angle trigonometry, ratios and proportions, geometry, oblique triangles, the law of sines and law of cosines.

Pre-reqs:

Or	Test & Score: NextGen Accuplacer AAF Math - 237	
Or	Test & Score: NextGen Accuplacer QAS Math - 250	
Or	Test & Score: NextGen Accuplacer QAS Math - 250	
Or	Test & Score: SAT Mathematics - 510	
	MTH007	Can be Taken Concurrently
And	MTH007	Can be Taken Concurrently
And	MTH007	Can be Taken Concurrently
And	MTH007	Can be Taken Concurrently
Or	MTH020A	
Or	MTH020B	
Or	MTH021	
Or	MTH092	

MTH118 Quantitative Reasoning

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This is a college-level mathematics course focused on quantitative reasoning in real-world situations and data-analysis for students who are in a non-STEM major. Using numeracy, mathematical modeling, and statistical methods, students will use mathematical language to investigate, describe, analyze, calculate, interpret, and make decisions in real-world scenarios within fields such as personal finance, industry, and civics. OTM approved TMM011 effective summer 2021.

Pre-reqs:

Or	Test & Score: ACT Math - 19
Or	Test & Score: Accuplacer College-level Math - 040
Or	Test & Score: Accuplacer Elementary Algebra - 097
Or	Test & Score: Compass Algebra - 039
Or	Test & Score: GED Mathematical Reasoning - 1
Or	Test & Score: NextGen Accuplacer AAF Math - 237
Or	Test & Score: NextGen Accuplacer QAS Math - 250
Or	Test & Score: SAT Mathematics - 510

Arts-Educ/ Liberal Arts/ Math

Mathematics

MTH118 Quantitative Reasoning

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This is a college-level mathematics course focused on quantitative reasoning in real-world situations and data-analysis for students who are in a non-STEM major. Using numeracy, mathematical modeling, and statistical methods, students will use mathematical language to investigate, describe, analyze, calculate, interpret, and make decisions in real-world scenarios within fields such as personal finance, industry, and civics. OTM approved TMM011 effective summer 2021.

Pre-reqs:

Or	MTH018	Can be Taken Concurrently
Or	MTH020B	
	MTH022	
Or	MTH023	

MTH118S Quan Reas w/Co(MTH118+MTH018)

Credit Hours: 6 Contact Hours: 6 Lecture Hours: 6 Lab Hours: 0 Other Hours: 0

This course is a "shell course" comprised of two components, Quantitative Reasoning (MTH118) and Foundations for Quantitative Reasoning (MTH018), lecture and corequisite respectively.

** Students who have completed MTH022 (or equivalent) with B or Better or by Placement are not required to take Foundations for Quantitative Reasoning (MTH018), the corequisite component. In this case, you should register for MTH118 (3 credit hours).

** Students will get separate credit for MTH118 (3 credit hours) and MTH018 (3 credit hours) upon successful completion of MTH118S.

Pre-reqs:

MTH124 Statistics

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course introduces the student to statistical thinking and the use of statistical methods for gathering and analyzing data. The focus is on graphical, tabular, and numerical methods for summarizing distributions. Fundamental concepts of probability are introduced as well as the concepts of discrete (binomial) and continuous (normal) probability distributions and their importance to inferential statistics. Point estimates and interval estimates of population means and standard deviations are obtained stressing the importance of random sampling. Hypothesis testing of one sample mean and proportions is used for statistical inference. Chi-Square goodness-of-fit test and least squares regression analysis for linear correlation are computed manually and with a statistical package such as SPSS, SAS, Minitab, Excel, or similar technology.

Pre-reqs:

Or	Test & Score: ACT Math - 19
Or	Test & Score: ACT Math - 22
Or	Test & Score: Accuplacer College-level Math - 040
Or	Test & Score: Accuplacer College-level Math - 055

Arts-Educ/ Liberal Arts/ Math

Mathematics

MTH124 Statistics

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course introduces the student to statistical thinking and the use of statistical methods for gathering and analyzing data. The focus is on graphical, tabular, and numerical methods for summarizing distributions. Fundamental concepts of probability are introduced as well as the concepts of discrete (binomial) and continuous (normal) probability distributions and their importance to inferential statistics. Point estimates and interval estimates of population means and standard deviations are obtained stressing the importance of random sampling. Hypothesis testing of one sample mean and proportions is used for statistical inference. Chi-Square goodness-of-fit test and least squares regression analysis for linear correlation are computed manually and with a statistical package such as SPSS, SAS, Minitab, Excel, or similar technology.

Pre-reqs:

Or Test & Score: Accuplacer Elementary Algebra - 108
Or Test & Score: Compass Algebra - 039
Or Test & Score: Compass Algebra - 052
Or Test & Score: GED Mathematical Reasoning - 1
Or Test & Score: M024 Transfer Prof/Placement - 3
Or Test & Score: M093 Transfer Prof/Placement - 3
Or Test & Score: HS Math and Multiple Measures - 3
Or Test & Score: NextGen Accuplacer AAF Math - 250
Or Test & Score: NextGen Accuplacer QAS Math - 263
Or Test & Score: SAT Mathematics - 530
Or MTH020A
And MTH020B
Or MTH022
And MTH024 Can be Taken Concurrently
And MTH024 Can be Taken Concurrently
And MTH024 Can be Taken Concurrently
And MTH024 Can be Taken Concurrently
And MTH024 Can be Taken Concurrently
Or MTH024 Can be Taken Concurrently
Or MTH092
MTH093
Or MTH123

Arts-Educ/ Liberal Arts/ Math

Mathematics

MTH124A Statistics, Module A

Credit Hours: 1.5 Contact Hours: 1.5 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course introduces the student to statistical thinking and the use of statistical methods for gathering and analyzing data. The focus is on graphical, tabular, and numerical methods for summarizing distributions. Fundamental concepts of probability are introduced as well as the concepts of discrete (binomial) and continuous (normal) probability distributions and their importance to inferential statistics. Point estimates and interval estimates of population means and standard deviations are obtained stressing the importance of random sampling. Hypothesis testing of one and two sample means and proportions is used for statistical inference along with the F-Test, Chi-Square, and ANOVA. Least squares regression analysis for linear correlation is computed manually or with a statistical package such as SPSS, SAS, Minitab or Excel.

Pre-reqs:

Or Test & Score: ACT Math - 19

Or Test & Score: ACT Math - 22

Or Test & Score: Accuplacer College-level Math - 040

Or Test & Score: Accuplacer College-level Math - 055

Or Test & Score: Accuplacer Elementary Algebra - 108

Or Test & Score: Compass Algebra - 039

Or Test & Score: Compass Algebra - 052

Or Test & Score: GED Mathematical Reasoning - 1

Or Test & Score: M024 Transfer Prof/Placement - 3

Or Test & Score: M093 Transfer Prof/Placement - 3

Or Test & Score: HS Math and Multiple Measures - 3

Or Test & Score: NextGen Accuplacer AAF Math - 250

Or Test & Score: NextGen Accuplacer QAS Math - 263

Or Test & Score: SAT Mathematics - 530

Or MTH020A

And MTH020B

Or MTH022

And MTH024 Can be Taken Concurrently

And MTH024 Can be Taken Concurrently

And MTH024 Can be Taken Concurrently

And MTH024 Can be Taken Concurrently

And MTH024 Can be Taken Concurrently

Or MTH024

Or MTH092

MTH093

Or MTH123

Arts-Educ/ Liberal Arts/ Math

Mathematics

MTH124B Statistics, Module B

Credit Hours: 1.5 Contact Hours: 1.5 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course introduces the student to statistical thinking and the use of statistical methods for gathering and analyzing data. The focus is on graphical, tabular, and numerical methods for summarizing distributions. Fundamental concepts of probability are introduced as well as the concepts of discrete (binomial) and continuous (normal) probability distributions and their importance to inferential statistics. Point estimates and interval estimates of population means and standard deviations are obtained stressing the importance of random sampling. Hypothesis testing of one and two sample means and proportions is used for statistical inference along with the F-Test, Chi-Square, and ANOVA. Least squares regression analysis for linear correlation is computed manually or with a statistical package such as SPSS, SAS, Minitab or Excel.

Pre-reqs:

MTH124A

MTH124S Stats w/CoReq(MTH124+MTH024)

Credit Hours: 5 Contact Hours: 5 Lecture Hours: 5 Lab Hours: 0 Other Hours: 0

This course is a “shell course” comprised of two components, Statistics (MTH124) and Foundations for Statistics (MTH024), lecture and corequisite respectively.

** Students who have completed MTH022 (or equivalent) with B or Better or by Placement should register for this shell course, MTH124S (5 credit hours).

** Students who have completed MTH024 or MTH025 with B or Better or by Placement are not required to take Foundations for Statistics (MTH024), the corequisite component. In this case, you should register for MTH124 (3 credit hours).

Pre-reqs:

** Students will get separate credit for MTH124 (3 credit hours) and MTH024 (2 credit hours) upon successful completion of MTH124S.

Or Test & Score: ACT Math - 19
Or Test & Score: Accuplacer College-level Math - 040
Or Test & Score: Accuplacer Elementary Algebra - 097
Or Test & Score: Compass Algebra - 039
Or Test & Score: M022 Transfer Prof/Placement - 3
Or Test & Score: M023 Transfer Prof/Placement - 3
Or Test & Score: M092 Transfer Prof/Placement - 3
Or Test & Score: NextGen Accuplacer AAF Math - 237
Or Test & Score: NextGen Accuplacer QAS Math - 250
Or Test & Score: SAT Mathematics - 510
Or MTH020B
MTH022
Or MTH023

Arts-Educ/ Liberal Arts/ Math

Mathematics

MTH125 COLLEGE ALGEBRA

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

In this course, students will study linear, quadratic, polynomial, radical, rational, exponential, logarithmic, and piecewise (including absolute value) equations and inequalities by applying analytical, graphical, and numerical methods of solution. Elementary functions will be examined with reference to extrema, roots (zeros), and end-behavior of their respective graphs. Theory of equations including the Remainder and Factor Theorems, The Rational Root Theorem, and Descartes' Rule of Signs will be used for non-graphical analysis of higher-order polynomial functions. Systems of equations will be solved by traditional algebraic methods. OT36-TMM001, effective summer 2023.

Pre-reqs:

Or Test & Score: ACT Math - 19
Or Test & Score: ACT Math - 22
Or Test & Score: Accuplacer College-level Math - 040
Or Test & Score: Accuplacer College-level Math - 055
Or Test & Score: Accuplacer Elementary Algebra - 108
Or Test & Score: Accuplacer Elementary Algebra - 108
Or Test & Score: Compass Algebra - 039
Or Test & Score: Compass Algebra - 052
Or Test & Score: GED Mathematical Reasoning - 1
Or Test & Score: M025 Transfer Prof/Placement - 3
Or Test & Score: M094 Transfer Prof/Placement - 3
Or Test & Score: HS Math and Multiple Measures - 3
Or Test & Score: NextGen Accuplacer AAF Math - 250
Or Test & Score: NextGen Accuplacer QAS Math - 263
Or Test & Score: SAT Mathematics - 530
Or MTH023
And MTH025 Can be Taken Concurrently
And MTH025 Can be Taken Concurrently
And MTH025 Can be Taken Concurrently
And MTH025 Can be Taken Concurrently
And MTH025 Can be Taken Concurrently
Or MTH025 Can be Taken Concurrently
MTH094
Or MTH094
Or MTH123

Arts-Educ/ Liberal Arts/ Math

Mathematics

MTH125A COLLEGE ALGEBRA A

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

Study of linear, quadratic and absolute value equations and inequalities, graphs of elementary functions and non-functions. TMM001 approved Spring 2012.

Pre-reqs:

Or Test & Score: ACT Math - 19
Or Test & Score: ACT Math - 22
Or Test & Score: Accuplacer College-level Math - 040
Or Test & Score: Accuplacer College-level Math - 055
Or Test & Score: Accuplacer Elementary Algebra - 108
Or Test & Score: Compass Algebra - 039
Or Test & Score: Compass Algebra - 052
Or Test & Score: GED Mathematical Reasoning - 1
Or Test & Score: M025 Transfer Prof/Placement - 3
Or Test & Score: M093 Transfer Prof/Placement - 3
And Test & Score: M094 Transfer Prof/Placement - 3
Or Test & Score: HS Math and Multiple Measures - 3
Or Test & Score: NextGen Accuplacer AAF Math - 276
Or Test & Score: NextGen Accuplacer QAS Math - 263
Or Test & Score: SAT Mathematics - 530
And MTH025 Can be Taken Concurrently
And MTH025 Can be Taken Concurrently
And MTH025 Can be Taken Concurrently
And MTH025 Can be Taken Concurrently
Or MTH025
MTH093
Or MTH093
And MTH094
And MTH094
Or MTH123

Arts-Educ/ Liberal Arts/ Math

Mathematics

MTH125B COLLEGE ALGEBRA B

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

Graphing of polynomial and rational functions, zeros of polynomial functions including the Fundamental Theorem of Algebra, exponential and logarithmic functions including graphs and applications, conic sections, systems of equations using matrices and determinants, matrix algebra, partial fraction decomposition. Ohio Transfer Module Approved effective Summer 2010.

Pre-reqs:

MTH125A

MTH125S Col Alg w/CoReq(MTH125+MTH025)

Credit Hours: 6 Contact Hours: 6 Lecture Hours: 6 Lab Hours: 0 Other Hours: 0

This course is a "shell course" comprised of two components, College Algebra (MTH125) and Foundations for College Algebra (MTH025), lecture and corequisite respectively.

** Students who have completed MTH023 (or equivalent) with B or Better or by Placement should register for this shell course, MTH125S (6 credit hours).

** Students who have completed MTH025 with B or Better or by Placement are not required to take Foundations for College Algebra (MTH025), the corequisite component. In this case, you should register for MTH125 (4 credit hours).

Pre-reqs:

** Students will get separate credit for MTH125 (4 credit hours) and MTH025 (2 credit hours) upon successful completion of MTH125S.

Or Test & Score: ACT Math - 19

Or Test & Score: Accuplacer College-level Math - 040

Or Test & Score: Accuplacer Elementary Algebra - 097

Or Test & Score: Compass Algebra - 039

Or Test & Score: M023 Transfer Prof/Placement - 3

Or Test & Score: M092 Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer AAF Math - 237

Or Test & Score: NextGen Accuplacer QAS Math - 250

Or Test & Score: SAT Mathematics - 510

Or MTH020B

MTH023

Arts-Educ/ Liberal Arts/ Math

Mathematics

MTH130 TRIGONOMETRY

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Study of angles and degree measure; radian measure; arc length and area; angular and linear velocity; trigonometric functions; right angle trigonometry; trigonometric identities and reference angles; unit circle and graphing; general sine wave; graph of tangent function; inverse trigonometric functions; basic sine, cosine and tangent equations; multiple angle equations; vectors and their applications; oblique triangles and their applications; polar coordinates and complex numbers.

Pre-reqs:

MTH125

Or MTH125A

And MTH125B

MTH135 PRECALCULUS

Credit Hours: 5 Contact Hours: 5 Lecture Hours: 5 Lab Hours: 0 Other Hours: 0

Study of linear and quadratic equations, their applications; solving rational and radical equations; complex numbers; linear, polynomial and rational inequalities; equations and inequalities involving absolute value; graphs of equations; relations and functions; transformation of functions; combining functions and composite functions; inverse functions; exponential and logarithmic functions and equations; angles and their measure; right angle trigonometry, trigonometric functions of any angle, graphs of trigonometric ratios; inverse trigonometric functions; trigonometric identities and equations, sum, difference, double angle, half angle; applications of trigonometric functions; systems of equations; matrices and determinants; the conic sections; sequences and series.

Pre-reqs:

Or Test & Score: ACT Math - 22

Or Test & Score: Accuplacer College-level Math - 055

Or Test & Score: Accuplacer Elementary Algebra - 108

Or Test & Score: Compass Algebra - 052

Or Test & Score: GED Mathematical Reasoning - 1

Or Test & Score: M025 Transfer Prof/Placement - 3

Or Test & Score: HS Math and Multiple Measures - 3

Or Test & Score: NextGen Accuplacer AAF Math - 250

Or Test & Score: NextGen Accuplacer QAS Math - 263

Or Test & Score: SAT Mathematics - 530

MTH025

Or MTH093

And MTH094

Arts-Educ/ Liberal Arts/ Math

Mathematics

MTH135A PRECALCULUS A

Credit Hours: 2.5 Contact Hours: 2.5 Lecture Hours: 2.5 Lab Hours: 0 Other Hours: 0

Study of linear and quadratic equations, and their applications; solving rational and radical and radical equations; complex numbers; linear, polynomial and rational inequalities; equations and inequalities involving absolute value; graphs of equations; relations and functions; transformation of functions; combining functions and composite functions; inverse functions; exponential and logarithmic functions and equations; the conic sections; sequences and series.

Pre-reqs:

Or Test & Score: ACT Math - 22

Or Test & Score: Accuplacer College-level Math - 055

Or Test & Score: Accuplacer Elementary Algebra - 108

Or Test & Score: Compass Algebra - 052

Or Test & Score: GED Mathematical Reasoning - 1

Or Test & Score: M025 Transfer Prof/Placement - 3

Or Test & Score: M093 Transfer Prof/Placement - 3

And Test & Score: M094 Transfer Prof/Placement - 3

Or Test & Score: HS Math and Multiple Measures - 3

Or Test & Score: NextGen Accuplacer AAF Math - 250

Or Test & Score: NextGen Accuplacer QAS Math - 263

Or Test & Score: SAT Mathematics - 530

Or MTH025

MTH093

And MTH094

MTH135B PRECALCULUS B

Credit Hours: 2.5 Contact Hours: 2.5 Lecture Hours: 2.5 Lab Hours: 0 Other Hours: 0

The student of angles and their measure; right angle trigonometry; trigonometric functions of any angle; graphs of trigonometric ratios; inverse trigonometric functions; trigonometric identities and equations, sum, difference, double angle, half angles; applications of trigonometric functions; systems of equations; matrices and determinants.

Pre-reqs:

MTH135A

Arts-Educ/ Liberal Arts/ Math

Mathematics

MTH214 Discrete Mathematics

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course will focus on mathematical reasoning and proof techniques as well as the applications of discrete mathematics in computer science. These include finite set theory, graph theory, combinatorics, propositional logic, discrete probability, relations, recursion, Boolean algebra, error-correcting codes, formal methodology and proof techniques. Precise mathematical notation will be used and emphasized.

Pre-reqs:

Or Test & Score: ACT Math - 27

Or Test & Score: Accuplacer College-level Math - 085

Or Test & Score: Compass Algebra - 084

Or Test & Score: NextGen Accuplacer AAF Math - 276

Or Test & Score: SAT Mathematics - 640

Or MTH125

Or MTH125A

And MTH125B

MTH135

Or MTH135A

And MTH135B

MTH223 ANALYTIC GEOMETRY-CAL I

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

In this course students will develop mathematical thinking and communication skills and learn to apply precise logical thinking to the study of analytic geometry, limits, continuity, derivatives, tangent and normal lines, derivatives of trigonometric functions, related rates, Newton's method, Rolle's theorem, mean value theorem, extrema of functions, antiderivatives, definite integrals, indefinite integrals, areas and volumes. Key ideas and concepts will be presented from a variety of perspectives with a broad range of examples and applications. A graphing utility will be used to reinforce and extend concepts and for numerical methods such as the Trapezoidal Rule and Simpson's Rule for integration. Students will progress from a procedural/computational understanding of mathematics to a broader understanding encompassing logical reasoning, generalization, abstraction, and formal proof. OT36-TMM005, effective summer 2023.

Pre-reqs:

Or Test & Score: ACT Math - 27

Or Test & Score: Accuplacer College-level Math - 085

Or Test & Score: Compass Algebra - 084

Or Test & Score: NextGen Accuplacer AAF Math - 276

Or Test & Score: SAT Mathematics - 640

Or MTH125

And MTH130

MTH135

Arts-Educ/ Liberal Arts/ Math

Mathematics

MTH223 ANALYTIC GEOMETRY-CAL I

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

In this course students will develop mathematical thinking and communication skills and learn to apply precise logical thinking to the study of analytic geometry, limits, continuity, derivatives, tangent and normal lines, derivatives of trigonometric functions, related rates, Newton's method, Rolle's theorem, mean value theorem, extrema of functions, antiderivatives, definite integrals, indefinite integrals, areas and volumes. Key ideas and concepts will be presented from a variety of perspectives with a broad range of examples and applications. A graphing utility will be used to reinforce and extend concepts and for numerical methods such as the Trapezoidal Rule and Simpson's Rule for integration. Students will progress from a procedural/computational understanding of mathematics to a broader understanding encompassing logical reasoning, generalization, abstraction, and formal proof. OT36-TMM005, effective summer 2023.

Pre-reqs:

Or MTH135A

And MTH135B

MTH223A ANALYTIC GEOMETRY-CAL I A

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

In this course students will develop mathematical thinking and communication skills and learn to apply precise logical thinking to the study of analytic geometry, limits, continuity, derivatives, tangent and normal lines, derivatives of trigonometric functions and related rates. A graphing utility will be used to reinforce and extend concepts and for numerical methods such as the value of a derivative at a given point. Students will progress from a procedural/computational understanding of mathematics to a broader understanding encompassing logical reasoning, generalization, abstraction, and formal proof. OT36-TMM005, effective summer 2023.

Pre-reqs:

Or Test & Score: ACT Math - 27

Or Test & Score: Accuplacer College-level Math - 085

Or Test & Score: Compass Algebra - 084

Or Test & Score: NextGen Accuplacer AAF Math - 276

Or Test & Score: SAT Mathematics - 640

Or MTH125

And MTH130

MTH135

Or MTH135A

And MTH135B

Arts-Educ/ Liberal Arts/ Math

Mathematics

MTH223B ANALYTIC GEOMETRY AND CAL I B

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

In this course students will develop mathematical thinking and communication skills and learn to apply precise logical thinking to the study of functions, Newton's method, Rolle's theorem, mean value theorem, extrem of faunctions, antiderivatives, definite integrals, indefinite integrals, areas and volumes. Key ideas and concepts will be presented from a variety of perspectives with a broad range of examples and applications. A graphing utility will be used to reinforce and extend concepts and for numerical methods such as the Trapezoidal Rule and Simpson's Rule for integration. Students will progress from a procedural/computational understanding of mathematics to a broader understanding encompassing logical reasoning, generalization, abstraction, and formal proof. OT36-TMM005, effective summer 2023.

Pre-reqs:

MTH223A

MTH224 ANALYTICAL GEO & CALC II

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

This is the second course in the study of calculus. It includes the derivatives of inverse and exponential functions and a sustained study of integration techniques including integration by parts, trigonometric integrals, and partial fraction decomposition and applications of these. The importance of Riemann sums is demonstrated with the use of numerical methods such as the Trapezoidal Rule and Simpson's Rule. Students will see limits leading to indeterminate forms and the incorporation of L'Hopital's Rule and they will evaluate improper integrals and integrals on which the integrand becomes infinite. The existence of limits of sequences will be determined and tests for convergence of series will be introduced. Analysis of curves given parametrically and in polar form and areas of regions defined by such curves will also be investigated. Ohio Transfer Module Approved Spring 2012 TMM006.

Pre-reqs:

MTH223

Or MTH223A

And MTH223B

MTH225 ANALYTIC GEO & CALC III

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

This course will examine calculus in three or more dimensions. Some topics covered are differentiation and integration of functions of multiple variables, double and triple integrals; vector-valued functions; graphs of multivariate functions; partial and directional derivatives. Students will find equations of tangent planes and normal lines to a surface. They will apply the chain rule to functions of several variables and solve optimization problems by analysis of critical points including extrema and saddle points. Students will also study line and surface integrals, conservative and inverse square fields, and vector fields. Green's Theorem, Gauss's Divergence Theorem, and Stokes Theorem will be introduced. TAG approved OMT018, effective spring 2020

Pre-reqs:

MTH224

Arts-Educ/ Liberal Arts/ Math

Mathematics

MTH226 LINEAR ALGEBRA

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

In this course students will study vectors in Rn and operations with vectors including addition, scalar multiplication, dot product, determination of orthogonality, and computation of the angle between vectors. They will use Gauss-Jordan elimination and other matrix methods to solve systems of linear equations and therefore perform common matrix operations including transposition and computation of inverses. Spanning sets and linear independence will be examined in regard to subspaces of Rn along with proofs of theorems concerning rank and nullity. Students will explore linear transformations from Rn to Rm and gain an understanding of kernel and image as well as the relationship between a linear transformation and its matrix representation. Matrix products will come to be viewed as a composition of linear transformations. Through the use of determinants, students will learn of row operations and their affects on the determinant. Further topics will include eigenvalues, eigenvectors, characteristic polynomials, and the axioms of abstract vector spaces over real or complex fields. TAG approved course OMT019, effective Summer 2013.

Pre-reqs:

MTH224

MTH227 ORDINARY DIFFERENTIAL EQUAT

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

In this course students will study first-order differential equations that are separable, linear or exact. Included will be Bernoulli and homogeneous equations. Applications requiring the use of first-order differential equations will include exponential growth and decay, population logistic growth, velocity, mixture, two component series circuits and chemical reactions. Students will also solve higher order homogeneous and nonhomogeneous equations with constant coefficients by the methods of undetermined coefficients and variation of parameters. Equations with variable coefficients, most notably Bessel's equation, will be solved by applying power series techniques. Applications requiring the use of second-order differential equations will include motion, acceleration, and three component series circuits. Students will also perform operations with Laplace and inverse Laplace transforms and solve systems of differential equations using various methods such as elimination, matrices, and eigenvalues. In addition to the analytical methods of differential equations, students will also explore numerical methods such as Euler and Runge-Kutta. TAG approved course OMT020, effective Summer 2013.

Pre-reqs:

MTH224

Social Sciences

GER121 INTRO TO GERONTOLOGY

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Presents a basic understanding of the historical, cultural, biological, physiological, psychological, and social contexts of aging. Addresses the changes that occur within the aging individual, how these changes influence interactions with social and physical environments, and how the older person, in turn, is affected by these interactions. Includes a discussion of age-related changes in anatomy and physiology, socialization, personality, intelligence, sensation, social support, economics and retirement, death and dying, and crime and fraud.

Pre-reqs:

Arts-Educ/ Liberal Arts/ Math

Social Sciences

GER121 INTRO TO GERONTOLOGY

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Presents a basic understanding of the historical, cultural, biological, physiological, psychological, and social contexts of aging. Addresses the changes that occur within the aging individual, how these changes influence interactions with social and physical environments, and how the older person, in turn, is affected by these interactions. Includes a discussion of age-related changes in anatomy and physiology, socialization, personality, intelligence, sensation, social support, economics and retirement, death and dying, and crime and fraud.

Pre-reqs:

GER122 PSYCHOSOCIAL ASPECT OF AGING

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Examines the process of aging from individual and societal perspectives. Uses a psychosocial approach to discuss the images of growing old, created by individual and institutional structures of society, as well as the myriad of patterns of inequality of gender, race, and economics that are compounded in old age. Topics include a discussion of speed of behavior, mental functioning, mental disorders, socialization, social support, economics and retirement, leisure activities, living arrangements, and death and dying.

Pre-reqs:

HIS222 World Civ from 17th Century

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course will study world history from the mid-17th century to the present.

Pre-reqs:

Arts-Educ/ Liberal Arts/ Math

Social Sciences

KARC100 Understanding Architecture

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KARF140 Drawing 1

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KARF140 Sculpture II

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

Arts-Educ/ Liberal Arts/ Math

Social Sciences

KARF140 Painting 1

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KARF999 Fine Arts Core Course

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KARF999 Fine Arts Core Course

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

Arts-Educ/ Liberal Arts/ Math

Social Sciences

KARF999 Fine Arts Core Course

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KARF999 Fine Arts Core Course

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KARF999 Fine Arts Core Course

Credit Hours: 5 Contact Hours: 5 Lecture Hours: 5 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

Arts-Educ/ Liberal Arts/ Math

Social Sciences

KART120 Art Survey

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KART140 2-D Composition

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KART140 3-D Composition

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

Arts-Educ/ Liberal Arts/ Math

Social Sciences

KART220 Art History I

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KART220 Art History II

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KENG210 Introduction to Shakespeare

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

Arts-Educ/ Liberal Arts/ Math

Social Sciences

KENG220 Great Books I

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KENG230 Major Modern Writers

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KHIS110 History of Civilization I

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

Arts-Educ/ Liberal Arts/ Math

Social Sciences

KHIS110 History of Civilization II

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KHIS120 U.S. Formative Period

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KHIS120 U.S. Modern Period

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

Arts-Educ/ Liberal Arts/ Math

Social Sciences

KHUM99 Humanities Core Course

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KHUM99 Humanities Core Course

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KHUM99 Humanities Core Course

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

Arts-Educ/ Liberal Arts/ Math

Social Sciences

KHUM99 Humanities Core Course

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KHUM99 Humanities Core Course

Credit Hours: 5 Contact Hours: 5 Lecture Hours: 5 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KMTH999 Math and Critical Reasoning

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

Arts-Educ/ Liberal Arts/ Math

Social Sciences

KMTH999 Math and Critical Reasoning

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KMTH999 Math and Critical Reasoning

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KMTH999 Math and Critical Reasoning

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

Arts-Educ/ Liberal Arts/ Math

Social Sciences

KMTH999 Math and Critical Reasoning

Credit Hours: 5 Contact Hours: 5 Lecture Hours: 5 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KMUS111 Music Fundamentals

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KMUS111 Music Rudiments

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

Arts-Educ/ Liberal Arts/ Math

Social Sciences

KMUS111 Music Theory 1

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KMUS111 Music Theory

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KMUS171 Piano

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

Arts-Educ/ Liberal Arts/ Math

Social Sciences

KMUS211 Music Theory to 1750

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KMUS211 Music Theory from 1750 to 1900

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KMUS221 The Understanding of Music

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

Arts-Educ/ Liberal Arts/ Math

Social Sciences

KMUS221 Music as a World Phenomenon

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KMUS253 Chamber Music

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KMUS259 Major Ensemble

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

Arts-Educ/ Liberal Arts/ Math

Social Sciences

KMUS312 Composition

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KMUS352 Studio Ensemble

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KMUS369 Applied Music

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

Arts-Educ/ Liberal Arts/ Math

Social Sciences

KMUS421 History of Jaz

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KMUS470 Folk Guitar Class 1

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KMUS473 Voice Class

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

Arts-Educ/ Liberal Arts/ Math

Social Sciences

KPAS230 Black Experience I

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KSCI9990 Basic Sciences

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KSCI9990 Basic Sciences

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

Arts-Educ/ Liberal Arts/ Math

Social Sciences

KSCI9990 Basic Sciences

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KSCI9990 Basic Sciences

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KSCI9990 Basic Sciences

Credit Hours: 5 Contact Hours: 5 Lecture Hours: 5 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

Arts-Educ/ Liberal Arts/ Math

Social Sciences

KSOC999 Social Sciences

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KSOC999 Social Sciences

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KSOC999 Social Sciences

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

Arts-Educ/ Liberal Arts/ Math

Social Sciences

KSOC999 Social Sciences

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

KSOC999 Social Sciences

Credit Hours: 5 Contact Hours: 5 Lecture Hours: 5 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

PSC121 U.S. Government and Politics

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This introductory course provides an overview of the American governmental and political systems. Topics include the history, structure, and purposes of American government; the U.S. Constitution and its evolution; the dynamics and components of the U.S. political system; and citizen participation in the system. TAG approved course- OSS011 effective Spring 2007. Ohio Transfer Module Approved effective Autumn 2008. TMSBS approved Spring 2012.

Pre-reqs:

Arts-Educ/ Liberal Arts/ Math

Social Sciences

PSC221 State and Local Government

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course introduces students to the structure and processes of state governments and their relationship with the federal government, as well as the structure and processes of local governments and their relationship to state government. Emphasis will be placed on state and local government in Ohio. TAG approved - OSS014 effective Spring 2018

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 246

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

IDS102

PSC222 Public Policy

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course explores the public policy process, from issue identification through policy implementation and evaluation, in the context of specific policy areas. Topics include economic, environmental, education, health care, immigration, welfare, defense, and criminal justice policies.

Pre-reqs:

PSC121

PSY121 GENERAL PSYCHOLOGY

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Surveys the scientific study of behavior, addressing a wide range of traditional topics including introduction and research; perception; consciousness; learning; cognition; personality; pathology/treatment; development; biological basis of behavior; social and organizational psychology. Emphasizes classical and current theory and research with selected attention to practical application. OT36 approved TMSBS, effective summer 2022

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

Arts-Educ/ Liberal Arts/ Math

Social Sciences

PSY121 GENERAL PSYCHOLOGY

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Surveys the scientific study of behavior, addressing a wide range of traditional topics including introduction and research; perception; consciousness; learning; cognition; personality; pathology/treatment; development; biological basis of behavior; social and organizational psychology. Emphasizes classical and current theory and research with selected attention to practical application. OT36 approved TMSBS, effective summer 2022

Pre-reqs:

Or Test & Score: Compass Reading - 080

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 246

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

IDS102

Or IDS102

Or IDS102

Or IDS102

PSY123 HUMAN GROWTH AND DEVELOP

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

A study of normal physical, mental, emotional and social development and changes in the development of the individual from prenatal to old age. TAG approved OSS048 effective Spring 2011 OT36 approved TMSBS, effective summer 2022

Pre-reqs:

PSY121

PSY124 INDUSTRIAL/ORGANL PSYCH

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Drawing from a wide range of psychological theories, principles and research, this course emphasizes personal and interpersonal skill-building beneficial to the prospective professional. Topics include learning and memory; perception; motivation and leadership; group dynamics and team-building; problem-solving and conflict resolution; communications; and stress management. Ohio Transfer Module effective Autumn 2008.

Pre-reqs:

Arts-Educ/ Liberal Arts/ Math

Social Sciences

PSY124 INDUSTRIAL/ORGANL PSYCH

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Drawing from a wide range of psychological theories, principles and research, this course emphasizes personal and interpersonal skill-building beneficial to the prospective professional. Topics include learning and memory; perception; motivation and leadership; group dynamics and team-building; problem-solving and conflict resolution; communications; and stress management. Ohio Transfer Module effective Autumn 2008.

Pre-reqs:

PSY131 Psychology of Personality

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course provides a survey of major perspectives of personality. Students will apply the scientific method as a tool in the discovery of personality description, development, and assessment. TAG apprvoed OSS018, effective summer 2020 OT36 approved TMSBS, effective summer 2022

Pre-reqs:

PSY121

PSY220 SOCIAL PSYCHOLOGY

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

The scientific study of the way in which people's thoughts, feelings and behavior are influenced by their social and cultural environments. This course focuses on such topics as attitude formation, conformity/obedience, group processes, pro-social behavior, interpersonal relationships, aggression and social cognition. TAG OSS016 approved Spring 2012. Ohio Transfer Module Approved Spring 2012 TMSBS.

Pre-reqs:

PSY121

Arts-Educ/ Liberal Arts/ Math

Social Sciences

PSY221 ABNORMAL PSYCHOLOGY

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

An overview of the range of human behavior, emphasizing current distinctions between normal and abnormal. Explores historical and contemporary cause-and-effect models with focus on current diagnostic and statistical criteria, as well as treatment approaches and related issue. TMSBSeffective Autumn 2008. TAG Approved OSS017 effective Autumn 2005.

Pre-reqs:

PSY121

PSY222 Psy Aspect of Therapy

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Covers the general principles of interaction with a specific focus on those unique challenges confronting the patient and the health care provider. Attention is given to the psychosocial needs of both the patient and the health care provider. Issues of communication, patient-provider relationships, patient dependency, personal values, and relating to people from differing cultures, ages, and special needs are discussed.

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Compass Reading - 080

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 246

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

IDS102

Or IDS102

Or IDS102

Arts-Educ/ Liberal Arts/ Math

Social Sciences

PSY229 PSYCHOLOGICAL METHODS

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course serves as the keystone experience for those pursuing the Associate of Arts in Psychology. This course synthesizes previous course work to allow the student an opportunity to demonstrate understanding and competency of broad psychological concepts. Additionally, students are provided the opportunity to apply this understanding through exploring concepts of interest within the field by conducting and producing an empirical study. Systematic guidance is provided throughout the course to assist students in understanding the process.

Pre-reqs:

PSY123
And PSY220
And PSY221
And PSY221
And PSY222

SOC121 SOCIOLOGY

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Introduces the general theories of the field, and research methods. Students will examine the impact of culture, social interaction, social structure, socialization, and social institutions on social behavior. OT36 approved TMSBS, effective summer 2022

Pre-reqs:

Or Test & Score: ACT Reading - 18
Or Test & Score: Accuplacer Reading - 070
Or Test & Score: Compass Reading - 080
Or Test & Score: GED Reasoning Through Lang Art - 1
Or Test & Score: IDS Transfer Prof/Placement - 3
Or Test & Score: NextGen Accuplacer Reading - 246
Or Test & Score: Reading Proficiency - 3
Or Test & Score: SAT Verbal - 480
IDS102
Or IDS102
Or IDS102

Arts-Educ/ Liberal Arts/ Math

Social Sciences

SOC122 SOCIETY AND TECHNOLOGY

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

An examination of the consequences of technological change on social organizations, cultural values and social institutions, and the response or adaptation of social systems to this change. Includes an assessment of the social problems of a technological age as seen through current events. TMSBS Approved effective Autumn 2008.

Pre-reqs:

SOC123 DYNAMICS OF THE FAMILY

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Explores various social and psychological approaches to family analysis, with emphasis on the family as a system. The transformation of the structure and function of the family from the traditional family to a more diverse definition of family is examined in relationship to changing roles and life issues. TMSBS Approved effective Summer 2008. TAG approved Course-OSS023 effective Summer 2023.

Pre-reqs:

SOC221 SOCIAL PROBLEMS

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

An examination of significant contemporary problems in American society and their impact on traditional and emerging sociological institutions/systems. Special consideration is given to these topics as they apply to social service agencies. TAG approved course--OSS025 effective Spring 2007.

Pre-reqs:

SOC121

Arts-Educ/ Liberal Arts/ Math

Social Sciences

SOC222 JUVENILE DELINQUENCY

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Introduces students to the nature and causes of juvenile delinquency. Major theories proposed as explanations of delinquent behavior are reviewed and evaluated. Students will gain an understanding of the life experiences leading up to delinquent behavior, to the external and internal influences on the delinquent and to the choices that lead to a life of crime. Topics such as status offenses, substance use and abuse, street crime and gang membership will be discussed. Preventive strategies, community-based corrections and institutions for juveniles will be reviewed.

Pre-reqs:

SOC121

SOC225 Diversity in American Society

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course introduces students to the dimensions of culture and identity through racial, ethnic, gender, sexuality, religious, and other forms of diversity within the United States. Students will use sociological theory and data to explore the dynamics of diversity, social processes, and systemic factors relating to sociocultural status and access to resources. TMSBS Approved. Effective Autumn 2008.

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Compass Reading - 080

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 246

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

IDS102

SOC228 Soc Structure & the Individual

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course examines the reciprocal relationship between the individual and society. Topics covered include: the nature and scope of sociological social psychology, symbols and symbolic communication, the structure of social interaction, the development of self and identity, small group processes and collective behavior, and the production of social structure and culture. Special consideration will be placed on interaction in organizational contexts, such as schools, workplaces, and policy decision arenas.

Pre-reqs:

SOC121

Arts-Educ/ Liberal Arts/ Math

Social Sciences

SOC229 The African American Experienc

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course examines the unique cultural experiences of African Americans in the United States. This course will primarily explore sociological issues and concepts and their relationship to the African American experience. A broad historical overview will be presented that will focus on African arrival in the Americas, slavery, reconstruction and the Civil Rights movement. Special emphasis will be placed on the social construction of race, discrimination and inequality in the United States and strategies to ameliorate discrimination and achieve equal opportunity. TAG approved OSS050, effective summer 2019

Pre-reqs:

SOC121

SOC230 Applied Sociological Methods

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course will introduce students to basic sociological research, and test their proficiency in applying theory, research methodologies, and data analysis. The course begins with a brief synopsis of sociological theories and perspectives that can be used to identify and frame social problems and issues. A variety of quantitative and qualitative research methods will be introduced, and a number of statistical analytic techniques will be presented as options for consideration in data analysis. Throughout the course, students will be expected to isolate a problem or issue amenable to sociological analysis and develop a research project in order to demonstrate proficiency in applied sociological research.

Pre-reqs:

Or MTH124
And MTH222
SOC123
And SOC221
And SOC225
And SOC228
And SOC229

ZARC900 Understanding Art

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

See Kent State University course catalog at www.kent.edu.

Pre-reqs:

Arts-Education and Human Serv

Arts-Education and Human Serv

Education

EDU131 Child Development

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course focuses on applying knowledge of the characteristics and needs of young children, prenatal to age twelve, for the creation of healthy, respectful, supportive, challenging, and effective learning environments. Multiple and interrelated influences on the development and learning of young children will be examined. Historical and contemporary theories and research that support the importance of play, environments for learning, relationships, and the role of the teacher are presented. Ten observation hours are required. TAG approved OED010 effective Spring 2019

Pre-reqs:

Or Test & Score: ACT English - 18

Or Test & Score: Accuplacer English/Writeplacer - 5

Or Test & Score: Compass English - 070

Or Test & Score: HS English Proficiency - 3

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 246

ENG011

Or ENG101

Or ENG105

EDU132 Observ, Assess, Group Mgt

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course introduces the student to authentic and formal tools and strategies used in early childhood settings to appropriately assess, plan, and guide young children. Topics include methods of observation, recording growth, development and behavior, interpreting assessment data, influence of culture, and child guidance and group management with an emphasis on fostering self-discipline and pro-social skills. Ten observation hours are required. ITAG approved ITECE004, effecrive fall 2023

Pre-reqs:

Or Test & Score: ACT English - 18

Or Test & Score: Accuplacer English/Writeplacer - 5

Or Test & Score: Compass English - 070

Or Test & Score: HS English Proficiency - 3

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 246

ENG011

Arts-Sciences

Biology

Arts-Sciences

Biology

BIO101 INTRO TO ANAT AND PHYSIO

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course investigates basic human anatomy and physiology using a science-based approach. Students are introduced to principles of the scientific method as they explore basic chemistry, cells, tissues and the key functions of each body system.. TMNS Approved effective Autumn 2008.

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Compass Reading - 080

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 244

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

IDS102

BIO121 ANATOMY AND PHYSIOLOGY I

Credit Hours: 4 Contact Hours: 5 Lecture Hours: 3 Lab Hours: 2 Other Hours: 0

The human body is presented as an integrative, homeostatic organism with emphasis on the underlying chemical and cellular processes necessary for proper functioning. The course covers basic histology and examines the following systems: Integumentary, muscular, skeletal, central nervous, and somatic nervous. The laboratory portion of the course includes microscopic study of tissues, detailed study of bone models and human cadaver muscles, examination of preserved mammalian specimens, and conduction of wet labs. This is the first course in a two-semester sequence.

Pre-reqs:

Or Test & Score: HS Biology - 2

BIO101

BIO122 ANATOMY AND PHYSIOLOGY II

Credit Hours: 4 Contact Hours: 5 Lecture Hours: 3 Lab Hours: 2 Other Hours: 0

This is the second course in a two-semester sequence, focusing on the integration of all body systems with emphasis on the influences of the autonomic nervous and endocrine systems upon the special senses, cardiovascular, lymphatic, respiratory, renal, digestive, and reproductive systems. Introductory immunology, fluid/electrolyte, and acid-base balance concepts are included. The laboratory portion includes continued study of the human cadaver and preserved mammalian specimens. Examination of physiological processes utilizing wet labs, case studies, and other methods of instruction allow the student to compare and contrast normal physiologic mechanisms with basic pathophysiology.

Pre-reqs:

Arts-Sciences

Biology

BIO122 ANATOMY AND PHYSIOLOGY II

Credit Hours: 4 Contact Hours: 5 Lecture Hours: 3 Lab Hours: 2 Other Hours: 0

This is the second course in a two-semester sequence, focusing on the integration of all body systems with emphasis on the influences of the autonomic nervous and endocrine systems upon the special senses, cardiovascular, lymphatic, respiratory, renal, digestive, and reproductive systems. Introductory immunology, fluid/electrolyte, and acid-base balance concepts are included. The laboratory portion includes continued study of the human cadaver and preserved mammalian specimens. Examination of physiological processes utilizing wet labs, case studies, and other methods of instruction allow the student to compare and contrast normal physiologic mechanisms with basic pathophysiology.

Pre-reqs:

BIO121

Or BIO123

BIO123 PRIN OF HUM STRUCT AND FUN

Credit Hours: 5 Contact Hours: 7 Lecture Hours: 4 Lab Hours: 3 Other Hours: 0

A one-semester accelerated anatomy and physiology course which introduces the human body at the chemical, cellular, tissue, organ and system levels of organization. Emphasis is placed on the relationships and maintenance of homeostasis between the systems. The laboratory includes microscopic study of tissues, detailed study of the human cadaver and preserved mammalian organs, conduction of wet labs, and the application of selected physiological processes.

Pre-reqs:

Or Test & Score: HS Biology - 2

BIO101

BIO124 HUMAN DISEASES

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course encompasses the etiology, pathogenesis, manifestations and basic treatment of diseases and disorders of the human body. Special attention is given to organic and infectious diseases as well as immune dysfunction and neoplasia. Case studies are utilized to gain an understanding of disease processes and treatments. TAG approved course - OHL019 effective Summer 2010.

Pre-reqs:

BIO122

Or BIO123

Arts-Sciences

Biology

BIO125 MEDICAL TERMINOLOGY

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

An introduction to medical word structure, including prefixes, suffixes, roots, plurals and abbreviations. Spelling, definitions and pronunciation are stressed and reinforced by frequent examination. TAG approved course- OHL020 effective Spring 2011 CTAG approved course - CTMT001 effective Spring 2011

Pre-reqs:

BIO126 SCIENCE/ENERGY AND THE ENV

Credit Hours: 4 Contact Hours: 5 Lecture Hours: 3 Lab Hours: 2 Other Hours: 0

Utilizing interdisciplinary and theme-based learning, this course examines major environmental and energy problems and evaluates possible solutions to those problems. Topics include biodiversity, human population growth, water, air, and soil pollution, and hazardous and solid wastes. Emphasis is placed on cooperative learning, analytical thinking and problem-solving as students examine environmental issues. Laboratory and field experiences reinforce the basic ecological principles. TMNS Approved effective Autumn 2008. CTAG approved CTNRM001, effective spring 2023.

Pre-reqs:

BIO127 HUMAN BIOLOGY

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 3 Lab Hours: 3 Other Hours: 0

This course introduces the scientific study of the human body through basic biology, evolution, genetics, development, and a survey of the major body systems. This is a lab-based course applying hands on interactive activities to measure, record and evaluate the functions of the body systems. The course is designed for non-science majors and will guide the student in a multidisciplinary study of human life. TMNS Approved effective Autumn 2008.

Pre-reqs:

Arts-Sciences

Biology

BIO128 CLIMATE STUDIES

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

An introductory science course designed to familiarize students with the basics of climatology. The course focuses on the principles of the natural world and the dynamics of climate change. The impact of human activities on climate and the global system will also be explored. Real-world environmental data from the National Weather Service and historical climate records will be used to investigate, analyze, and interpret the effects of climate on our natural and human ecosystems.

Pre-reqs:

BIO129 METEOROLOGY

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

An introductory science course designed to familiarize students with the basic facts, theories, and methods relating to the study of meteorology. This course will focus on the principles of the natural world and the causes of weather. Students will apply these principles by analyzing and interpreting the effects of the atmosphere on our natural and human ecosystems using real-time data from the National Weather Service. This course will also analyze the effects of various human activities upon weather and the global system.

Pre-reqs:

BIO130 OCEAN STUDIES

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

An introductory science course designed to examine the world's oceans from an earth science perspective. Students will use real-world ocean information to explore the physical, chemical, biological, and geographical properties of oceans and investigate the interactions between the oceans and the hydrosphere, atmosphere, lithosphere, and biosphere.

Pre-reqs:

Arts-Sciences

Biology

BIO141 GENERAL BIOLOGY I

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 3 Lab Hours: 3 Other Hours: 0

Explores general biological structures and processes experienced by all living things. Topics include: Organization of life from sub cellular to systems homeostasis, how cells harvest energy and the fundamentals of molecular biology that drive genetic inheritance, evolution and population diversity. Supporting laboratory aligns with lecture topics and includes: quan/qual analysis of biomolecules, observing plant and animal cell structure and function, basic genetic analysis and examination of population dynamics. TAG approved course-OSC024-Biology Sequence, effective Spring 2008. TAG approved course-OSC003, effective Summer 2017

Pre-reqs:

BIO142 GENERAL BIOLOGY II

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 3 Lab Hours: 3 Other Hours: 0

This course explores general biological problems and processes as they are experienced by all living organisms: plant and animal diversity, evolution, basic plant and animal systems, hormones, immunology, and ecology. Specific topics for this course include origins and biodiversity of life through an evolutionary survey of viruses, bacteria, plants and animals; the principles of biological classification; the identification and dynamics of biological ecosystems; and the design and reporting of biological research. The supporting laboratory aligns with lecture and topics include examination and dissection of representative organisms to show evolutionary progression; exploration of phylogenetic concepts and analysis; and evaluation of local ecosystems to identify population dynamics and the effects of pollution. Students will design, conduct, and report the results of a research experiment using the scientific method. TAG approved course-OSC024, Biology sequence, effective Spring 2008. TAG approved OSC004, effective Summer 2017. TMNS approved-effective Summer 2016.

Pre-reqs:

BIO200 Ecology

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 3 Lab Hours: 3 Other Hours: 0

This course will include topics that cover natural history and evolution, adaptations to the environment, population ecology, inter- and intra-species interactions, communities and ecosystems, and large-scale ecology including landscape, geographic, and global ecology. A supporting laboratory will apply lecture topics in laboratory and field experiences including ecological sampling and analyses, identifying, visiting, and evaluating local ecosystems, and analyzing current environmental issues such as global warming, habitat fragmentation and destruction, extinction of species, human population growth, and depletion of global natural resources. Students will learn about and apply the scientific method by conducting environmental research experiments. TMNS approved, effective Summer 2016

Pre-reqs:

Or BIO141
BIO142

Arts-Sciences

Biology

BIO221 PRINC OF MICROBIOLOGY

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 3 Lab Hours: 3 Other Hours: 0

This course examines microbial structure and function with emphasis on medical microbiology. Content includes taxonomy, microbial growth and control, microbial genetics, principles and applications of the immune system, disease epidemiology, and the characteristics of common infectious diseases. The laboratory includes staining, aseptic culturing techniques, microbial control, selective and differential media, and diagnostic procedures. TMNS Approved effective Autumn 2008.

Pre-reqs:

BIO122

Or BIO123

Or BIO127

Or BIO141

BIO222 PHARMACOLOGY

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

A course that introduces the student to general pharmacology, including drug nomenclature, classifications, and therapeutic and side effects on the body systems and functions.

Pre-reqs:

BIO122

Or BIO123

BIO241 GENERAL GENETICS

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 3 Lab Hours: 3 Other Hours: 0

This course explores genetic problems and processes as they are experienced by all biological systems. The nature of genetic materials, patterns of inheritance, and pedigree analysis are examined. The structure of DNA and the molecular biology of gene function, gene expression, and gene regulation are studied. The course covers genetic variation in genomes, population genetics, evolution genetics, and explores the topics of comparative genetics, including techniques used to obtain and analyze genomic information. The course includes discussions of the bioethics of current genetic technologies. The supporting lab reinforces lecture topics and includes genetic analysis on a model organism and molecular genetic experiments utilizing the technique of polymerase chain reaction (PCR). (TMNS, Effective Summer 2013) TAG approved OSC028, effective summer 2022

Pre-reqs:

BIO141

Arts-Sciences

Biology

BIO242 CELL AND MOLECULAR BIOLOGY

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 3 Lab Hours: 3 Other Hours: 0

Cell and Molecular Biology will explore various principles of cell structure and function. Topics include energy and metabolism, protein structure and function, and the fundamentals of molecular biology that contribute to genetic inheritance and diversity within organism populations. A supporting laboratory aligns with lecture topics and includes observation of plant and animal cell structure, analysis of metabolic processes, analysis of genetic inheritance patterns and their influence on population diversity, and basic molecular biology techniques.

Pre-reqs:

BIO141

CST121 MODELING AND SIMULATION

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 3 Lab Hours: 1 Other Hours: 0

Analyze a variety of scientific problems by designing a representative model, implement the model, complete a verification and validation process of the model, report on the model in oral and written form, and changing the model to reflect corrections, improvements and enhancements.

Pre-reqs:

Or Test & Score: ACT Math - 27

Or Test & Score: Accuplacer College-level Math - 085

Or Test & Score: Compass Algebra - 084

Or Test & Score: NextGen Accuplacer AAF Math - 276

Or Test & Score: SAT Mathematics - 640

MTH221

Or MTH223

GEO141 PHYSICAL GEOLOGY

Credit Hours: 4 Contact Hours: 5 Lecture Hours: 3 Lab Hours: 2 Other Hours: 0

Investigation into the physical earth materials and processes. These processes include mineral formation, igneous rock and metamorphic deformation associated with plate tectonics, sedimentary rock formation and geologic time, geomorphology of the surface rocks through hydrologic processes including weathering, mass wasting and erosion. Emphasis on recognizing the impacts of earth science on society. Supporting lab to emphasize the use of technology in earth science, topographic and geologic map reading skills, and identification of minerals and rocks. TAG approved OSC025, effective spring 2018

Pre-reqs:

Arts-Sciences

Biology

SCI271 Special Topics in Science I

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

A sophomore level science capstone course designed for students pursuing an Associate of Science Degree within one of the Sciences degree programs. This course will provide a cumulative experience where students can apply the scientific skills and knowledge gained in the program to perform an inquiry-based project. The exact location, scope of the project, and method(s) of evaluation will be provided in a contract drawn up between the student, the faculty mentor, and if applicable, the host internship supervisor. An emphasis will be placed on the individual interactions between the student and the faculty mentor and/or internship supervisor. All students are expected to apply and expand on their current scientific knowledge, while learning the basic skills involved in project management. Registration for this course requires sophomore standing.

Pre-reqs:

SCI272 Spoecial Topics in Science II

Credit Hours: 2 Contact Hours: 4 Lecture Hours: 0 Lab Hours: 4 Other Hours: 0

A sophomore level science capstone course designed for students pursuing an Associate of Science Degree within one of the Sciences degree programs. This course will provide a cumulative experience where students can apply the scientific skills and knowledge gained in the program to perform an inquiry-based project. The exact location, scope of the project, and method(s) of evaluation will be provided in a contract drawn up between the student, the faculty mentor, and if applicable, the host internship supervisor. An emphasis will be placed on the individual interactions between the student and the faculty mentor and/or internship supervisor. All students are expected to apply and expand on their current scientific knowledge, while learning the basic skills involved in project management. Registration for this course requires sophomore standing.

Pre-reqs:

SCI273 Special Topics in Science III

Credit Hours: 3 Contact Hours: 6 Lecture Hours: 0 Lab Hours: 6 Other Hours: 0

A sophomore level science capstone course designed for students pursuing an Associate of Science Degree within one of the Sciences degree programs. This course will provide a cumulative experience where students can apply the scientific skills and knowledge gained in the program to perform an inquiry-based project. The exact location, scope of the project, and method(s) of evaluation will be provided in a contract drawn up between the student, the faculty mentor, and if applicable, the host internship supervisor. An emphasis will be placed on the individual interactions between the student and the faculty mentor and/or internship supervisor. All students are expected to apply and expand on their current scientific knowledge, while learning the basic skills involved in project management. Registration for this course requires sophomore standing.

Pre-reqs:

Chemistry

Arts-Sciences

Chemistry

CHM100 Exploring Science & Technology

Credit Hours: 4 Contact Hours: 5 Lecture Hours: 3 Lab Hours: 2 Other Hours: 0

This course is designed for non-science majors and intended to develop an understanding of basic chemistry concepts and applications important to technology and society. Topics include air and water quality, the chemistry of global climate change, petroleum and natural gas, acid rain, polymers, fuel cells, drugs, nutrition, and genetic engineering. Laboratory experiments and research projects will reinforce cooperative learning, the utilization of the scientific method, problem-solving skills, and critical thinking skills. OT36 (TMNS and TMNSVDL) approved, effective spring 2022

Pre-reqs:

CHM101 Introduction to Chemistry

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

A problem-solving course to familiarize the student who has limited previous chemistry background with basic chemistry and mathematical skills. Course covers basic algebra skills, powers of ten (exponents), dimensional analysis, metric measurements and conversions, atomic theory, molecular structure, the periodic table and its uses, inorganic nomenclature, the mole concept, the gas laws and different types of solutions. The recitation portion of this class will involve pertinent problem-solving. TMNS Approved effective Autumn 2008.

Pre-reqs:

Or Test & Score: ACT Math - 19

Or Test & Score: Accuplacer College-level Math - 040

Or Test & Score: Accuplacer Elementary Algebra - 097

Or Test & Score: HS Chemistry - 2

Or Test & Score: Compass Algebra - 052

Or Test & Score: GED Mathematical Reasoning - 1

Or Test & Score: M022 Transfer Prof/Placement - 3

Or Test & Score: M023 Transfer Prof/Placement - 3

Or Test & Score: HS Math and Multiple Measures - 3

Or Test & Score: NextGen Accuplacer AAF Math - 237

Or Test & Score: NextGen Accuplacer QAS Math - 250

Or Test & Score: SAT Mathematics - 510

Or MTH020B

MTH022

Or MTH023

Or MTH105

Or MTH105S

Or MTH107

Or MTH107S

Arts-Sciences

Chemistry

CHM105 Intro to Forensic Science

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course is designed to introduce students to the study of forensic science and crime scene investigation. It will cover basic general chemistry and biochemistry topics with an emphasis of applying the scientific method to investigating crime. The class will follow evidence from the time it is discovered at a crime scene until it is involved in a court case. Students will learn forensic methods required to assess, test and present evidence. The laboratory experiments presented are designed to teach critical thinking and laboratory skills necessary to ensure safety and protect crucial evidence. TMNSVDL approved, effective summer 2021.

Pre-reqs:

CHM121A GEN, ORG AND BIOL CHEMISTRY IA

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

A broad overview of inorganic chemical principles. Topics include significant figures, atomic structure, chemical bonding and molecular structure of inorganic compounds. TMNS approved Spring 2012.

Pre-reqs:

Or Test & Score: HS Chemistry - 2

CHM101

CHM121B GEN, ORG, AND BIO CHEMISTRY IB

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

A broad overview of inorganic chemical principles. Topics include energy changes, gas laws, soluability, solutions and acids and bases. TMNS approved Spring 2012.

Pre-reqs:

CHM121A

Arts-Sciences

Chemistry

CHM123 Gen Organic & Biological Chem

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 3 Lab Hours: 3 Other Hours: 0

This course is a survey of fundamental concepts in general, organic, and biological chemistry. The concepts are introduced to emphasize the application of chemistry in the health and applied technology fields. Topics include measurement, chemical bonding and compounds, energy changes, gas laws, solutions, acids and bases, polymers, nuclear chemistry, organic, and biological chemistry. The structures and reactions of organic compounds are detailed to expand the understanding of the chemistry of hydrocarbons, functional groups, lipids, carbohydrates, nucleic acids, vitamins, proteins, and metabolism. Laboratory experiments reinforce hands-on experience, the scientific method, problem-solving skills, and critical thinking skills. OT36 approved TMNS, effective summer 2022

Pre-reqs:

Or Test & Score: ACT Math - 22

Or Test & Score: Accuplacer College-level Math - 055

Or Test & Score: Accuplacer Elementary Algebra - 108

Or Test & Score: HS Chemistry - 2

Or Test & Score: Compass Algebra - 039

Or Test & Score: M024 Transfer Prof/Placement - 3

Or Test & Score: M025 Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer AAF Math - 250

Or Test & Score: NextGen Accuplacer QAS Math - 263

Or Test & Score: SAT Mathematics - 530

Or CHM101
MTH024

Or MTH025

Or MTH105

Or MTH107

CHM141 General Chemistry I

Credit Hours: 5 Contact Hours: 7 Lecture Hours: 3 Lab Hours: 4 Other Hours: 0

An introduction to the fundamental principles of chemistry, including measurement and calculation, chemical stoichiometry, the properties of gases, atomic and molecular structure, bonding, thermochemistry, and periodic properties. OSC023 sequence & OSC008, effective Summer 2017 OT36-TMNS, effective summer 2023

Pre-reqs:

Or Test & Score: ACT Math - 22

Or Test & Score: Accuplacer College-level Math - 055

Or Test & Score: Accuplacer Elementary Algebra - 108

Or Test & Score: HS Chemistry - 2

Or Test & Score: Compass Algebra - 039

Arts-Sciences

Chemistry

CHM141 General Chemistry I

Credit Hours: 5 Contact Hours: 7 Lecture Hours: 3 Lab Hours: 4 Other Hours: 0

An introduction to the fundamental principles of chemistry, including measurement and calculation, chemical stoichiometry, the properties of gases, atomic and molecular structure, bonding, thermochemistry, and periodic properties. OSC023 sequence & OSC008, effective Summer 2017 OT36-TMNS, effective summer 2023

Pre-reqs:

Or Test & Score: M024 Transfer Prof/Placement - 3

Or Test & Score: M025 Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer AAF Math - 250

Or Test & Score: NextGen Accuplacer QAS Math - 263

Or Test & Score: SAT Mathematics - 530

CHM101

Or MTH024

Or MTH025

Or MTH124S

Or MTH125S

CHM141A GENERAL CHEMISTRY I A

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

An introduction to the fundamental principles of chemistry, including measurement and calculation, chemical stoichiometry, atomic and molecular structure, bonding, thermochemistry and periodic properties.

Pre-reqs:

Or Test & Score: HS Chemistry - 2

CHM101

Arts-Sciences

Chemistry

CHM141B GENERAL CHEMISTRY I B

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

A continuation of the study of the fundamental principles of chemistry, including chemical stoichiometry, the properties of gases, atomic and molecular structure, bonding and periodic properties.

Pre-reqs:

CHM141A

CHM142 General Chemistry II

Credit Hours: 5 Contact Hours: 7 Lecture Hours: 3 Lab Hours: 4 Other Hours: 0

A continuation of the study of the principles of chemistry, including solution properties, acids and bases, chemical equilibrium, thermodynamics, reaction kinetics, organic chemistry, and electrochemistry. This course is Ohio TAG approved. OSC024 sequence & OSC009, effective Summer 2017. OT36-TMNS, effective summer 2023

Pre-reqs:

CHM141

Or CHM141A

And CHM141B

CHM205 Forensic Chemistry

Credit Hours: 4 Contact Hours: 5 Lecture Hours: 3 Lab Hours: 2 Other Hours: 0

This course introduces students to the techniques of forensic chemistry, particularly as they relate to crime scene investigation and ongoing analysis of evidence obtained after a crime is committed. The course is an integrated study of forensic science in the areas of chemistry, toxicology, and trace analysis. The topics include but are not limited to drugs, poisons, colorants, paints, polymers, and ink. Chemistry and biochemistry concepts will be used in the forensic analysis of materials and in the chemical analysis of evidence using qualitative and quantitative analysis. The laboratory experiments in the course are designed to help students gain experience in the use of current analytical methods that are used to analyze evidence during criminal investigations. In addition to the qualitative analytical techniques, the course will explore how instrumental analysis can be used to determine the identity of a drug or poison. TMNS approved-effective Summer 2016

Pre-reqs:

CHM105

Or CHM123

Or CHM141

Arts-Sciences

Chemistry

CHM241 ORGANIC CHEMISTRY I

Credit Hours: 5 Contact Hours: 7 Lecture Hours: 3 Lab Hours: 4 Other Hours: 0

A broad overview of chemical principles and reactivity of organic compounds. Topics include structure, bonding, nomenclature, reactions, reaction mechanisms, and synthesis of alkanes, alkenes, alkynes, alkyl halides, and aromatic compounds. Additional topics include stereochemistry and an introduction to spectroscopic techniques such as UV, IR, NMR, and mass spectroscopy. TAG OSC010 approved Summer 2018.

Pre-reqs:

CHM142

CHM242 Organic Chemistry II

Credit Hours: 5 Contact Hours: 7 Lecture Hours: 3 Lab Hours: 4 Other Hours: 0

A continuation of the study of chemical principles and reactivity of organic compounds. Topics include structure, bonding, nomenclature, reactions and reaction mechanisms of aromatic compounds, alcohols, phenols, ethers, epoxides, amines, aldehydes, ketones, carboxylic acids and carboxylic acid derivatives. Additional topics include reactions and synthesis of biomolecules such as carbohydrates, amino acids, proteins, lipids, nucleic acids and synthetic polymers. The use of modern spectroscopic techniques such as IR, NMR, and mass spectroscopy also will be included. TAG OSC010 approved Summer 2018.

Pre-reqs:

CHM241

CHM243 BIOCHEMISTRY I

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course will cover the biochemical mechanisms involved in chemistry of amino acids and proteins, human immune system, catalysis and enzymes, carbohydrate and glycogen metabolism, lipids and biological membranes, and energetics of metabolic reactions.

Pre-reqs:

CHM123

Or CHM141

Physics

Arts-Sciences

Physics

PHY101 Principles of Physics

Credit Hours: 4 Contact Hours: 5 Lecture Hours: 3 Lab Hours: 2 Other Hours: 0

Survey course that assumes no familiarity with physics. Space, time, matter, motion, force, momentum, mechanical energy, heat, electricity, magnetism, light, units of measure and other concepts are studied descriptively. Basic calculation and problem-solving techniques are introduced, including a brief review of elementary algebra. Laboratory work emphasizes how to read measuring instruments, proper use of measured data in calculations, and how measured data can be used to test theories of physics. OT36 (TMNS and TMNSVDL) approved, effective spring 2022

Pre-reqs:

Or Test & Score: ACT Math - 22
Or Test & Score: ACT Reading - 18
Or Test & Score: Accuplacer College-level Math - 055
Or Test & Score: Accuplacer Elementary Algebra - 108
Or Test & Score: Accuplacer Reading - 070
Or Test & Score: Compass Algebra - 052
Or Test & Score: Compass Reading - 080
Or Test & Score: GED Mathematical Reasoning - 1
Or Test & Score: GED Reasoning Through Lang Art - 1
Or Test & Score: IDS Transfer Prof/Placement - 3
Or Test & Score: M024 Transfer Prof/Placement - 3
Or Test & Score: M025 Transfer Prof/Placement - 3
Or Test & Score: HS Math and Multiple Measures - 3
Or Test & Score: NextGen Accuplacer AAF Math - 250
Or Test & Score: NextGen Accuplacer Reading - 246
Or Test & Score: NextGen Accuplacer QAS Math - 263
Or Test & Score: Reading Proficiency - 3
Or Test & Score: SAT Mathematics - 530
And IDS102
MTH024
Or MTH025
Or MTH105
Or MTH105S
Or MTH107
Or MTH107S
Or MTH124S
Or MTH125S

Arts-Sciences

Physics

PHY105 Astronomy

Credit Hours: 4 Contact Hours: 5 Lecture Hours: 3 Lab Hours: 2 Other Hours: 0

This class is a study of fundamentals of astronomy. Topics include: the solar system, planets, stars, galaxies, and the universe. This course is a comprehensive survey of astronomy designed primarily for the non-science major. Pivotal discoveries discussed in class are reinforced through lab activities that replicate topic-related studies. This course should provide the student with an understanding of the nature of the universe and insight into the scientific fields that provide the evidentiary basis for modern cosmological theories.

Pre-reqs:

PHY121 Col Physics I w/ Alg

Credit Hours: 4 Contact Hours: 5 Lecture Hours: 3 Lab Hours: 2 Other Hours: 0

Study of motion, force, momentum, energy, mechanical advantage, structure and properties of matter, fluids, heat. Problem-solving in orientation, emphasizing the application of formulas, algebra, and trigonometry to physical situations. Laboratories focus on the correct reading of measuring instruments, proper handling of measurement in calculations, and testing physical theories using measured data. TAG approved course- OSC021(Not for Physics majors) approved Spring 2008. TAG approved course - OSC014 (not for Physics majors) approved Spring 2008. OT36 approved, effective summer 2022, TMNS

Pre-reqs:

Or Test & Score: ACT Math - 27

Or Test & Score: Accuplacer College-level Math - 085

Or Test & Score: Compass Algebra - 084

Or Test & Score: NextGen Accuplacer AAF Math - 276

Or Test & Score: SAT Mathematics - 640

Or MTH125

Or MTH125B

And MTH130

And MTH130

MTH135

Or MTH135B

Arts-Sciences

Physics

PHY121A COL PHYSICS IA W ALG

Credit Hours: 2 Contact Hours: 2.5 Lecture Hours: 1.5 Lab Hours: 1 Other Hours: 0

Study of motion and force. Problem-solving in orientation, emphasizing the application of formulas, algebra, and trigonometry to physical situations. Laboratories focus on the correct reading of measuring instruments, proper handling of measurement in calculations, and testing physical theories using measured data. TMNS approved Spring 2012.

Pre-reqs:

Or Test & Score: ACT Math - 27

Or Test & Score: Accuplacer College-level Math - 085

Or Test & Score: Compass Algebra - 084

Or Test & Score: NextGen Accuplacer AAF Math - 276

Or Test & Score: SAT Mathematics - 640

Or MTH125

Or MTH125B

And MTH130

And MTH130

MTH135

Or MTH135B

PHY121B COL PHYSIC I B W ALG

Credit Hours: 2 Contact Hours: 2.5 Lecture Hours: 1.5 Lab Hours: 1 Other Hours: 0

Study of motion, force, momentum, energy, mechanical advantage, structure and properties of matter, fluids, and heat. Problems-solving in orientation, emphasizing the application of formulas, algebra, and trigonometry to physical situations. Laboratories focus on the correct reading of measuring instruments, proper handling of measurement in calculations, and testing physical theories using measured data. TMNS approved Spring 2012.

Pre-reqs:

PHY121A

Arts-Sciences

Physics

PHY122 Col Physics II w/Alg

Credit Hours: 4 Contact Hours: 5 Lecture Hours: 3 Lab Hours: 2 Other Hours: 0

General topics are waves, electricity, magnetism (including circuits), electromagnetic radiation (including light). Emphasis exercises and problem solving using formulas, algebra, and some trigonometry. Laboratories focus on the correct reading of measuring instruments, proper handling of measurements in calculations, and testing physical theories using measured data.

Pre-reqs:

PHY121

Or PHY121A

And PHY121B

PHY221 Gen Physics I w/Calc

Credit Hours: 5 Contact Hours: 6 Lecture Hours: 4 Lab Hours: 2 Other Hours: 0

Study of mechanics, heat and thermodynamics, oscillations and sound. Problem solving in orientation, emphasizing the application and derivation of formulas using calculus for physical situations. Laboratories focus on the correct reading of measuring instruments, proper handling of measurement in calculations, and testing physical theories using measured data. TAG approved Fall 2012 OSC016.

Pre-reqs:

MTH223

And MTH224 Can be Taken Concurrently

PHY222 Gen Physics II w/Calc

Credit Hours: 5 Contact Hours: 6 Lecture Hours: 4 Lab Hours: 2 Other Hours: 0

Study of electricity, magnetism, light, optics, and modern physics. Problem solving in orientation, emphasizing the application and derivation of formulas using calculus for physical situations. Laboratories focus on the correct reading of measuring instruments, proper handling of measurement in calculations, and testing physical theories using measured data. TAG approved Spring 2013 OSC017

Pre-reqs:

And MTH224

And MTH225 Can be Taken Concurrently

PHY221

Business-Engineering Tech

Automotive

Business-Engineering Tech

Automotive

ETD202 ENG INDEP STUDY

Credit Hours: 2 Contact Hours: 20 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

An independent study may be arranged through the Engineering Technology Division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for Engineering Technology will determine course content, meeting schedules and credit hours.

Pre-reqs:

ETD204 ENG INDEPENDENT STUDY

Credit Hours: 4 Contact Hours: 40 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

An independent study may be arranged through the Engineering Technology Division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for Engineering Technology will determine course content, meeting schedules and credit hours.

Pre-reqs:

Engineering

ABC110 Electrical Applications I

Credit Hours: 6 Contact Hours: 8 Lecture Hours: 4 Lab Hours: 4 Other Hours: 0

This course will cover the creation and analysis of practical applications of lighting, load calculations for branch and feeder circuits, hazardous locations, and commercial electric service applications.

Pre-reqs:

Business-Engineering Tech

Engineering

ABC120 Electrical Applications II

Credit Hours: 5 Contact Hours: 8 Lecture Hours: 2 Lab Hours: 6 Other Hours: 0

This course covers the creation and analysis of practical applications for healthcare facilities, standby and emergency systems, fire alarm systems, heat tracing and freeze protection, and fundamentals of crew leadership.

Pre-reqs:

AIT139 Introduction to Robotics

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

Basic terminology, theory and application of robotics, including: selection, construction, classification, operating characteristics and safety. Emphasis is given to industrial examples in stand-alone and work cell applications.

Pre-reqs:

CET121 BLDG MAT AND CON MET

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course familiarizes the student with the basic materials of construction according to their physical properties, durability and suitability for use under varying conditions. Use of materials in combination with one another and in the finished product will be examined both verbally and graphically. Emphasis is placed on material selection according to given criteria. CTCON003, effective spring 2016.

Pre-reqs:

Business-Engineering Tech

Engineering

CET122 ARCHITECTURAL DRAFT I

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

This course familiarizes the student with the preparation and comprehension of basic architectural drawings. Intended for those with little or no drafting experience, the course will concentrate on drafting techniques through the drafting of plans, elevations and selected details, in pencil on vellum.

Pre-reqs:

CET123 ARCHITECTURAL DRAFT II

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

This course concentrates on the preparation of building details and sections. Emphasis will be placed upon the design of details and their synthesis into a final graphic product.

Pre-reqs:

And CET121 Can be Taken Concurrently

CET122

CET124 HIGHWAY AND MAP DRAWING

Credit Hours: 2 Contact Hours: 4 Lecture Hours: 0 Lab Hours: 4 Other Hours: 0

Surveyors' notes are used by the student to develop and draw topographic and contour maps and plan-profile sheets for highway construction. Proper interpretation and uses of these drawings are also discussed.

Pre-reqs:

MTH125

Or MTH125A

And MTH125B

Business-Engineering Tech

Engineering

CET125 SOIL MECHANICS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course includes laboratory tests, soil classification systems, and theoretical concepts relative to soil strengths, stresses in soil masses, settlement under structures, bearing capacity for shallow foundations, retaining walls and slope stability. TAG approved course- OET017 effective Summer 2007.

Pre-reqs:

And MET124
MTH125
Or MTH125B
Or MTH135
Or MTH135B

CET221 SURVEYING GRAPHICS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course will introduce the student to computerized methods of preparing the various types of maps used by surveyors, civil engineers and contractors. Students will also learn how to prepare plans from electronic data recorders. Coding techniques for field use of data recorders will also be discussed.

Pre-reqs:

CET227
And DET125

CET222 CONCRETE AND ASPHALT TEST

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Major emphasis will be placed on the testing procedures used by engineers in determining material acceptance. Concrete and asphalt design methods will be covered, along with the conducting of many tests and the design of pavement. TAG approved course- OET018 effective Spring 2008.

Pre-reqs:

And CET121
MTH125
Or MTH125B
Or MTH135

Business-Engineering Tech

Engineering

CET222 CONCRETE AND ASPHALT TEST

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Major emphasis will be placed on the testing procedures used by engineers in determining material acceptance. Concrete and asphalt design methods will be covered, along with the conducting of many tests and the design of pavement. TAG approved course- OET018 effective Spring 2008.

Pre-reqs:

Or MTH135B

CET223 STRUCTURAL DESIGN I

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course introduces the student to the analysis of simple structures. Topics include the application of loads on structures, and the analysis and design of steel and concrete members such as beams, columns, and frames. Current computer software for structural analysis will also be used.

Pre-reqs:

MET124	Can be Taken Concurrently

CET224 STRUCTURAL DESIGN II

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Analysis and design of wood members (beams, columns) will be covered in this class. Advanced topics in steel connections and concrete reinforcement of beams, slabs, columns, footings and retailing walls will also be studied. Current computer software for structural analysis will be used.

Pre-reqs:

CET223

Business-Engineering Tech

Engineering

CET225 SUSTAINABLE BDG SRVCE SYS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course examines sustainable storm water management, water supply and waste for buildings and how they can be designed to promote conservation, thermodynamics of buildings and how design of the envelope can reduce energy usage. HVAC system design for conservation and lighting design to maximize day-lighting and energy conservation.

Pre-reqs:

CET121	Can be Taken Concurrently

CET226 ESTIMATING

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

This course develops the methods and procedures for preparing construction estimates, both manually and electronically. Topics include excavation, masonry, concrete, steel and carpentry. Emphasis is placed on take-off procedures and pricing, consideration of labor and equipment costs, and overhead and profit. Computer programs will be utilized to establish a construction schedule. The student will do a complete estimate of a building project and prepare a competitive bid for the job.

Pre-reqs:

Or Test & Score: ACT Math - 22
Or Test & Score: Accuplacer College-level Math - 055
Or Test & Score: Accuplacer Elementary Algebra - 108
Or Test & Score: Compass Algebra - 052
Or Test & Score: Computer Test - 21
Or Test & Score: GED Mathematical Reasoning - 1
Or Test & Score: M025 Transfer Prof/Placement - 3
Or Test & Score: HS Math and Multiple Measures - 3
Or Test & Score: NextGen Accuplacer AAF Math - 250
Or Test & Score: NextGen Accuplacer QAS Math - 263
And CET121
And CET122
Or CET237
Or DET125
And ITD100
Or MTH025
Or MTH094
MTH123

Business-Engineering Tech

Engineering

CET227 SURVEYING I

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

The student is given practical experience in the use of the various surveying instruments while learning how to measure distances, angles and elevations. Methods of determining error of closure, coordinates and area for a property survey are discussed, as well as construction surveys.

Pre-reqs:

MTH125

Or MTH125B

Or MTH135

Or MTH135B

CET228 SURVEYING II

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

Course covers methods and procedures for establishing line and grade for construction. Circular, spiral and parabolic curves, earth volume determination, cross-sectioning methods and advanced construction staking methods are also covered. The student is also introduced to electronic total stations and data collection. Use of the computer will be emphasized. This course is Ohio TAG approved. OET015 effective Summer 2008.

Pre-reqs:

CET227

CET229 SURVEYING III

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

The primary emphasis of this course will be the use of the electronic total station to perform surveying operations. Increased abilities and accuracies of field work, including precision measurement, will be demonstrated and obtained by students in such areas as traversing, horizontal and spiral curve layout, construction staking and data gathering for topographic maps. Appropriate computer software will be used. The student will also experience increased usage of digital levels and automatic data collection along with geodetic survey methods and state plane coordinate systems.

Pre-reqs:

CET228

And ECA122

Business-Engineering Tech

Engineering

CET231 LEGAL PRINC OF SURVEYING

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

The laws of land ownership, title guarantees, deed platting, interpretation of property descriptions, riparian rights and establishment of property lines will be discussed. Also covered will be the surveyor's rights, duties and liabilities; the state of Ohio survey laws; and minimum standards for boundary determination, description writing and map preparation. The historical development of the rectangular system of land subdivision will be covered, with primary emphasis placed on Ohio, as it is the site of the first public land surveys.

Pre-reqs:

CET232 LAND PLANNING AND DESIGN

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

This course covers the study of site capabilities and potentials as they relate to land planning and subdivision design. Students will complete preliminary layouts for projects such as industrial parks, housing allotments, planned unit developments and commercial home sites in accordance with zoning and subdivision regulations.

Pre-reqs:

And CET122

Or CET124

CET227 Can be Taken Concurrently

Or DET125

CET233 ARCHITECTURAL DESIGN

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

The basics of design will be examined while solving architectural design problems. The student will be required to prepare preliminary design drawings that fully express the intended solution.

Pre-reqs:

CET122

And CET123 Can be Taken Concurrently

Business-Engineering Tech

Engineering

CET234 Architect CAD (Revit 3D-BIM)

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

In this course, students will review architectural working drawings while covering the basic principles of Building Information Modeling (BIM) through the use of Revit Architecture CAD software. Students will be introduced to the tools of Revit Architecture CAD and parametric modeling. The fundamental concepts covered in this course include: user interface, parameters, families, walls, roof openings, rendering, and printing. Students will produce a variety of architectural working drawings utilizing Revit Architecture CAD software.

Pre-reqs:

CET121

And CET122

CET235 CONSTRUCT MGT/JOB COST AND SAF

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course examines the progression of a building project from its inception to completion along with the administration of it in the office and in the field. Contract law and the legal implications of documents will be discussed. The student will also be familiarized with specifications, shop drawings and computerized project control software.

Pre-reqs:

Or Test & Score: Computer Test - 21

CET121

And ITD100

CET236 GLOBAL POSITIONING SYS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Introduction to Global Positioning System to determine location on earth in a three dimensional way (latitude, longitude and elevation). Students will practice the use of electronic receivers using radio signals to collect data and process later using computers. The use surveying and topography mapping is also included.

Pre-reqs:

CET227

Business-Engineering Tech

Engineering

CET237 INTERPRETING CONSTRUCTION DOC

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course focuses on interpreting the construction documents for the purposes of estimating, scheduling, and field-directing a construction project. It includes reading the designers' drawings for residential, light commercial, heavy commercial, and civil engineering projects. The specifications for the projects are studied with attention to the materials and installation requirements contained therein. effective Fall 2016: CTCON001

Pre-reqs:

CET238 TECH PROJECT-CIVIL ENGINEERING

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Students will apply knowledge acquired from technical courses to work in an interdisciplinary team and complete a comprehensive Civil-Surveying projects. (Bridge-Roadway projects, Construction staking-Superstructure design, Volume calculations-Retaining Wall design) The scope will include research, calculations, CAD drafting, mapping, a report and presentation.

Pre-reqs:

CET223

Or CET228

CET239 BUILDING CODE APPLICATIONS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Commercial building and residential building codes are studied to become familiar with the general intent of the codes in selected areas and how they relate to the construction industry. Special attention is paid to portions of the code that are typically a problem to code officials in the prosecution of their duties.

Pre-reqs:

CET121

Or CET122

And CET237

Business-Engineering Tech

Engineering

DET121 ENGINEERING DRAWING

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

This is a beginning drafting course that includes use of instruments, geometric constructions, technical lettering, orthographic projection, auxiliary views, sectional views, dimensioning and conventional practice. CTAG approved effective fall 2019: CTEGT002

Pre-reqs:

DET122 DESCRIPTIVE GEOMETRY

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

This course is designed to enable the student to properly visualize any object, regardless of its complexity. The three basic geometric elements (points, lines and surfaces) and their relationships to each other are described in detail.

Pre-reqs:

DET121

DET124 WORKING DRAWINGS

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

Course covers threads, welding, fasteners, tolerancing, fits, and basic geometric dimensioning as they relate to detail and assembly drawings. Students are required to complete a set of working drawings that are technically correct and feasible for production. Emphasis is placed on the various components that constitute a well-executed drawing.

Pre-reqs:

DET121

And DET125 Can be Taken Concurrently

Business-Engineering Tech

Engineering

DET125 BASIC AUTOCAD

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

This course begins with basics and gives students hands-on experience using personal computers to create engineering drawings with AutoCAD software. Topics include: basic components of a CAD system, overview of [Windows] operations, input methods, drawing setup and display, editing, dimensioning, text, layers, hatching, blocks and plotting. This course is Ohio TAG approved. OET012 effective Summer 2008. CTAG CTMET005 approved Fall 2019.

Pre-reqs:

DET126 CUSTOMIZING AUTOCAD

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Building on concepts learned in Basic AutoCAD, this course focuses on more advanced topics: isomode; attributes; creation of toolbars, pull-down and button menus; creation of custom line types and hatch patterns; and an introduction to the fundamentals of AutoLISP programming.

Pre-reqs:

DET125

DET131 Pro/ENG (Creo Parametric)

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This three-dimensional drawing uses Parametric Technology Corporation Pro/ENGINEER software and covers the basic through advanced commands. The basics focus on practical applications of design to develop parametric solid model representations of parts and assemblies. Advanced design features include the use of skeletons, advanced sketching, geometry, patterns, surface options, dimensions, bill of materials, and features, and plotting.

Pre-reqs:

DET125

Business-Engineering Tech

Engineering

DET132 SolidWorks 3D Print/Scan

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course is designed to introduce the student to SolidWorks, a parametric feature-based solid modeling program. SolidWorks is used for the design of parts, assemblies and engineering drawings. The student will design actual mechanical components, and the areas of concentration include: basic program syntax, design intent, top down and bottom up design, and parametric relations. Many parts and assemblies will be developed. Engineering drawings, solid models, and 3D prints will be created. 3D prints also will be generated from 3D-scanned parts.

Pre-reqs:

DET125

DET223 KINEMATICS

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

This course covers motion of mechanisms. Machine displacement, velocity and accelerations are studied in detail. Using graphical, analytical and numerical approaches, various machine elements are analyzed and designed. The course relates theory learned in the first year with practical machine design applications. PC software programs and spreadsheets are used to verify design solutions

Pre-reqs:

PHY121

Or PHY121B

DET226 GEOMETRIC DIM AND TOL

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

Designed to introduce students to the type of dimensioning that is part of ANSIY14.5M1994 dimensioning standard. General tolerancing methods will be reviewed first, then the geometric characteristics symbols and terms will be discussed. Datums will be defined and modifiers will be identified. The geometric tolerances of form, runout, orientation, profile and location will be analyzed in detail. The GD&T system will then be applied to actual manufacturing drawings. Special attention will be given to the problems that are experienced in industry between design, manufacturing and inspection personnel.

Pre-reqs:

DET124

Business-Engineering Tech

Engineering

DET230 AutCAD Invent 3D Prt/Scan

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

An introduction to solid modeling using Autodesk's Inventor and the tools and commands to complete fully parametric three-dimensional parts, assemblies, presentations, and two-dimensional drawings. The student must have an understanding of computer-aided and mechanical drafting. 3D prints will be created. 3D prints also will be generated from 3D-scanned parts.

Pre-reqs:

DET125

DET231 TOOL DESIGN

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

This course covers the design and drawing of production jigs, fixtures, and stamping dies. The emphasis in jig and fixtures is placed on coordination of machine tools and standard component parts, using symbol libraries and AutoCAD to draw the final layout. While in stamping dies, a step-by-step approach is emphasized in drawing the details and assembly of a die including material punches, die sets, strippers, gauges, pilots and presses.

Pre-reqs:

DET124

And DET125

EET120 DC CIRCUIT ANALYSIS

Credit Hours: 4 Contact Hours: 5 Lecture Hours: 3 Lab Hours: 2 Other Hours: 0

Direct current (DC) circuit analysis. Topics include: voltage, current, resistance, Ohm's law, power, circuit reduction, Kirchhoff's laws, network analysis methods, network theorems, capacitors, inductors, transients and sine wave characteristics. TAG approved course- OET001 effective Summer 2007. CTAG CTEET001 Approved Spring 2012.

Pre-reqs:

	MTH125	Can be Taken Concurrently
Or	MTH125B	Can be Taken Concurrently
Or	MTH135	Can be Taken Concurrently
Or	MTH135B	Can be Taken Concurrently

Business-Engineering Tech

Engineering

EET122 AC CIRCUIT ANALYSIS

Credit Hours: 4 Contact Hours: 5 Lecture Hours: 3 Lab Hours: 2 Other Hours: 0

Alternating current (AC) circuit analysis and instrumentation. Topics include: phasor analysis, RL, RC and RLC circuits network theorems, power, resonance, fitters, pulse analysis, transformers and three phase systems. TAG approved course-OET003 effective Spring 2008.

Pre-reqs:

	EET120	
Or	MTH130	Can be Taken Concurrently
And	MTH135	Can be Taken Concurrently
Or	MTH135B	Can be Taken Concurrently

EET123 ELECTRONC DEVICES AND CIRCUITS

Credit Hours: 4 Contact Hours: 5 Lecture Hours: 3 Lab Hours: 2 Other Hours: 0

Theory, characteristics and applications of solid-state devices. Devices covered include: diodes, bipolar junction transistors, field effect transistors, operational amplifiers, analog and digital voltage regulators.

Pre-reqs:

	EET120	
And	EET122	Can be Taken Concurrently

EET125 CIRCUITS MANUFAC TECHNIQUES

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

Safety in the shop and stages of project development are emphasized. Electrical and mechanical shop practice including use of hand tools, through hole and surface mount, soldering techniques, solderless terminations, wire preparations, wiring techniques and parts ordering.

Pre-reqs:

EET120

Business-Engineering Tech

Engineering

EET126 ELECTRICAL MACHINES

Credit Hours: 4 Contact Hours: 5 Lecture Hours: 3 Lab Hours: 2 Other Hours: 0

This course covers the principles of electromagnetic induction, dynamo construction, direct current generation characteristics and operation, armature reaction, DC motor characteristics, operation and control, machine efficiency, single and three-phase transformers theory and operation, construction of three-phase transformers, AC motors and generators. Subjects include: polyphase transformers, induction motors, alternators, synchronous motors, single phase induction, universal and specialty motors.

Pre-reqs:

EET122 Can be Taken Concurrently

EET128 NEC AND ELECTRICAL SYS DES

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

A study of the National Electric Code as it applies primarily to the design of large commercial and industrial installations. Emphasis is placed on definitions, calculating conductor and conduct size, selection of circuit over-current protection, grounding, service sizing transformers connections, short circuit analysis, and other related subject material.

Pre-reqs:

EET122

EET129 OPTICS

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course is complementary physics for students in Electrical/Electronic Technology and related fields of study. Topics include: the physical nature of light, optics, lasers, optics and their relation to the electronic field and fiber optics.

Pre-reqs:

PHY121

Or PHY121B

Or PHY122

Business-Engineering Tech

Engineering

EET135 Semiconductor 101

Credit Hours: 4 Contact Hours: 5 Lecture Hours: 3 Lab Hours: 2 Other Hours: 0

This course introduces students to the concepts and applications of the semiconductor industry and cleanroom environment, semiconductor materials science and processes in the development of semiconductor devices. The student will explore career opportunities within the semiconductor industry and learn how people effectively work in a cleanroom environment and adhere to chemical safety best practices. Students will be introduced to how semiconductor wafers are manufactured and processed to become an integrated circuit used in a variety of industries. Students will demonstrate problem-solving, critical thinking and communication skills while learning how the microelectronic manufacturing environment focuses on punctual delivery of products and tasks, according to the Standard Operating Procedure (SOP)/checklist.

Pre-reqs:

EET136 Introduction to Vacuum Systems

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course will introduce students to the operational mechanisms and process use of vacuum pumps used in the semiconductor industry. Description of operational methodology and process use of equipment that requires vacuum pumps used in the semiconductor industry. Students will practice the ability to safely test, troubleshoot, and fix a vacuum pump system with a leak using tools while gowned up in a cleanroom environment.

Pre-reqs:

EET137 Intro to Manufacturing

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course will introduce students to print reading and part visualization from drawings, including analyzing and interpreting multi-view drawings and three-dimensional models, location of key features and dimensioning specifications. Students are introduced to beginning concepts in geometric dimensioning and tolerancing. Instruction in using precision measurement tools including, but not limited to scales, calipers, micrometers, dial indicators, and coordinate measurement machines. Students will incorporate the use of computer interfaces in metrology and basic statistical process control and topics in lean manufacturing.

Pre-reqs:

Business-Engineering Tech

Engineering

EET142 LGHT DES, APP AND ELECL ELEM I

Credit Hours: 2 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

Develop the skills to design and apply functional and practical lighting systems for industrial and commercial properties. The topics covered include the physical nature of light, color, and sight behavior; and understanding of photometry of light, along with design criteria and calculations including the zonal cavity method; complete coverage of light sources, and application techniques using fixtures, along with the electrical elements necessary for design and controlling of today's and tomorrow's illumination systems.

Pre-reqs:

EET143 LGHT DES, APP AND ELEC ELEM II

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course complements Lighting Design, Application and Electrical Elements I. Topics included are advanced lighting design techniques, including hands-on computer studies and in-depth application workshops within the following areas: industrial lighting, exterior lighting, office and educational facility lighting, public building lighting, merchandise and store lighting, along with special applications such as houses of worship, museums, and recreational areas. Also included are sessions on visual performance, in-depth color evaluation, psychological effects of lighting, lighting for improving productivity, safety and security lighting, lighting economics, and energy-saving techniques, calculations, and evaluations, with guidelines for ASHRAE 90. 1-2001.

Pre-reqs:

EET227 PLCS AND INDUSTRIAL CONTROLS I

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

A presentation of techniques, application and development analysis of relay control circuits with implementation of electromechanical devices, programmable controllers and variable frequency drives. Circuits, devices and techniques studied include control of motor starting, motor speed control, machine cycle control, control components, pilot devices, maintenance and troubleshooting circuits. TAG approved Summer 2017 OET022

Pre-reqs:

EET120

Or EST130

Or EST230

Business-Engineering Tech

Engineering

EET228 PLCS AND INDUSTRL CONTROLS II

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Application and analysis of microprocessor-based computer systems and programmable logic controllers to industrial control systems. Introduction to closed systems control (PID control) and robot control. Introduction and application of Programmable Logic Control Network Interfaces. Human-machine interfaces topics are also addressed.

Pre-reqs:

EET227

EET231 ELECTRONIC CIRCUITS II

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

A study of power amplifier design, heat sinking, differential amplifiers, operational amplifiers, IC fundamentals, feedback and oscillator circuits.

Pre-reqs:

EET230

EET232 INDUSTRIAL ELECTRONICS

Credit Hours: 4 Contact Hours: 5 Lecture Hours: 3 Lab Hours: 2 Other Hours: 0

The course consists of digital and analog industrial circuits, such as interfacing to programmable logic controller, DC to DC converters, AC inverters, thyristor phase control, pulse generation and electronic motor speed and motion control with supporting laboratory exercises.

Pre-reqs:

EET123

And EET227

Business-Engineering Tech

Engineering

EET233 Tech Proj-Electrical/Electroni

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

A course designed to allow the student to demonstrate capabilities acquired during previous course work in the electrical/electronic program. The student will choose an approved project compatible with interest and background. The project must be in the area of electrical and/or electronic engineering technology. The scope will be determined by the project, but in general, will include research, testing, drawing, actual construction, and a report and presentation.

Pre-reqs:

EET123

And EET227

EET244 ELECC TELECOMMUNICATIONS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

A course dealing with telecommunications hardware and software. Laboratory exercises address both hardware and software applications.

Pre-reqs:

EET246 TECH PROJ - COMP NETWKG

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

A course designed to allow the student to use the capabilities developed in the networking program courses to carry a project from concept to completion.

Pre-reqs:

Business-Engineering Tech

Engineering

MET123 MATERIAL SCIENCE

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

The study of the science of materials used in the fields of engineering and manufacturing. Emphasis is placed on the physical properties of materials. Areas covered include: stress and strain, hardness, creep, fatigue, metallurgy, equilibrium diagrams, and heat treatments. Advantages, disadvantages and applications of ferrous metals, non-ferrous metals, plastics, elastomers, composites and ceramics are discussed.

Pre-reqs:

MET124 STATICS/STR OF MATERIALS

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

The study of major force systems under conditions of equilibrium. Various methods are used to analyze the effects loads have on structural members and machine components. Topics include force systems, friction, stress and strain, moment and shear diagrams, centroids, moments of intertia, and beam deflection analysis. Emphasis is placed on learning the fundamentals and applying them to solving problems. TAG approved course- OET007 effective Spring 2008.

Pre-reqs:

	PHY121	Can be Taken Concurrently
Or	PHY121B	
Or	PHY221	Can be Taken Concurrently

MET221 ADV STRENGTH OF MATERIAL

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

The study of torsion, columns, combined stresses, thin- walled pressure vessels, connections (bolted, riveted and welded), and statically indeterminate beams. Emphasis is placed on learning the fundamentals and applying them to solving problems. TAG approved course- OET008 effective Spring 2008.

Pre-reqs:

MET124

Business-Engineering Tech

Engineering

MET222 FLUID POWER

Credit Hours: 4 Contact Hours: 5 Lecture Hours: 3 Lab Hours: 2 Other Hours: 0

The study of the subjects essential to understanding the design, analysis, operation and application of fluid power systems is the focus of this course. Theoretical principles will be used to develop an understanding of hydrostatics and hydrodynamics. Teamwork skills will be reinforced through hands-on experimentation and written presentation of results. Students will submit formal reports in a format that requires the use of word processing and spreadsheet software. TAG approved course - OET009 effective Summer 2008.

Pre-reqs:

MET124

MET223 DYNAMICS

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

Methods are developed to analyze kinematics and kinetics of bodies. Practical derivations, equations, and applications of displacement, velocity, acceleration, work, energy, power, impulse, and momentum in both planar and rotational motion will be applied.

Pre-reqs:

MET124

MET225 MANUFACTURING PROCESSES

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Students will investigate a variety of manufacturing techniques including casting, powder metallurgy, metal forming, hot and cold working, arc and gas flame welding, rapid prototyping, microelectronic manufacturing, and chip-type machining processes. Scheduled tours of local industry and/or guest speakers augment the material for the traditional format. The web 3 format will replace tours with DVD review and reflection assignments of all manufacturing processes. CTAG CTMET004, effective fall 2019.

Pre-reqs:

Business-Engineering Tech

Engineering

MET226 TECH PROJECT-MECHANICAL

Credit Hours: 2 Contact Hours: 4 Lecture Hours: 0 Lab Hours: 4 Other Hours: 0

Students will apply knowledge acquired from technical courses and practical work experience to work independently and complete a technical task. A project is chosen by the student and proposed for approval by the instructor. Topics may be chosen from any area of mechanical, electro-mechanical, design, manufacturing, testing, quality assurance, etc. The scope of the project could include a literature survey, schematics, research analysis, design, fabrication, assembly and testing to create a new or optimize a current design or system. The project will entail students working in teams with elements of both design and mechanical engineering technology.

Pre-reqs:

DET125	Can be Taken Concurrently
And MET228	Can be Taken Concurrently

MET227 THERMODYNAMICS & HEAT TRANSFER

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Fundamentals of thermodynamics: heat, work and energy. Thermodynamic processes: constant volume, constant pressure, isothermal, adiabatic and polytropic, P-V-T relationships, work and internal energy. Laws of thermodynamics: enthalpy, entropy and reversibility. Gas power cycles and efficiencies: Carnot, Otto, and Diesel. Fundamentals of heat transfer: conduction, convection, radiation and heat exchangers. Emphasis is placed on learning the fundamentals and applying them to solving problems.

Pre-reqs:

PHY121

Or PHY121B

MET228 MACHINE DESIGN

Credit Hours: 4 Contact Hours: 5 Lecture Hours: 3 Lab Hours: 2 Other Hours: 0

Descriptive, dimensional, and kinematic analysis of machine components including bearings, shafts, couplings, cam, brakes, gear drives, belt and chain drives, and clutches are the focus of this course. Laboratory work includes problem solving in the design of machine components with spreadsheet analysis when necessary.

Pre-reqs:

MET124

Business-Engineering Tech

Engineering

MST126 PIPEFITTING PRINC AND APPLIC

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Piping systems, valves, fittings, metal piping and non-metallic piping are identified and their use and maintenance are presented. Strainers, filters, traps and other accessories such as pressure and temperature gauges are discussed in detail, including a detailed description of their operation and required maintenance. The procedures, use, and application of the BOCA basic plumbing code is also covered.

Pre-reqs:

Engineering Independent Study

ETD201 ENG INDEPENDENT STUDY

Credit Hours: 1 Contact Hours: 10 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

An independent study may be arranged through the Engineering Technology Division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for Engineering Technology will determine course content, meeting schedules and credit hours.

Pre-reqs:

ETD203 ENG INDEPENDENT STUDY

Credit Hours: 3 Contact Hours: 30 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

An independent study may be arranged through the Engineering Technology Division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for Engineering Technology will determine course content, meeting schedules and credit hours.

Pre-reqs:

Business-Engineering Tech

Engineering Independent Study

ETD223 ENGINEERING CO-OP

Credit Hours: 3 Contact Hours: 30 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Co-op opportunities are available to students enrolled in Engineering Technologies. Students may contact their faculty advisors or Career Services for more information.

Pre-reqs:

Engineering/Applied

AET121 SUSTAINABLE/AET SOURCES

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course introduces the student to alternate/sustainable energy sources such as solar, wind power, geothermal, hydroelectric, bio-energy and fuel cells. The course addresses solar topics such as efficiency of photovoltaic cells, both tracking and stationary solar arrays; wind power topics such as where to install wind farms; geothermal power topics such as how to take advantage of the earth's core temperatures to efficiently heat and cool a facility; hydroelectric and micro-hydroelectric power topics such as generation and distribution of power to customers; bio-energy topics such as biomass to energy and algae generation of petroleum products and hydrogen gasses; and fuel cell topics such as components(anode, cathode, electrolyte), fuels (hydrogen and hydrocarbons), and types of fuel cells (polymer electrolyte membrane, solid oxide, alkali, phosphoric, molten carbonate).

Pre-reqs:

AIT101 Basic Machines

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course is intended to develop the student's engineering aptitude. Subject matter will reveal how the tools of antiquity continue to inspire modern industrial design. The course covers basic theory, from the lever and inclined plane to the principles of the internal combustion engine and power transmissions. Upon completion of this course, students will be able to explain how the application of simple machines is related to work efficiency. Students will also be able demonstrate how basic machine components are integrated into present-day applications.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

AIT103 Non-Destructive Testing

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course provides students an introduction to non-destructive evaluation methods that are used in the evaluation of materials. This includes understanding principles of various non-destructive testing methods, fundamentals, and discontinuities. Students will be introduced to relevant quality assurance and quality control testing requirements in accordance with ASQ, ASME, and ANSI standards.

Pre-reqs:

AIT121 Indust Internet of Things

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Industrial Internet of Things or IIoT is a phrase that applies to the union of smart technologies into the manufacturing and industrial infrastructure to improve efficiency at all levels. This course provides fundamental knowledge of the technologies and strategies used in a smart manufacturing environment. Knowledge and understanding of the technologies are reinforced through a set of hands-on laboratory exercises.

Pre-reqs:

AIT122 MACHINE TOOLS

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 2 Lab Hours: 4 Other Hours: 0

This course will cover basic machine operations used in machining industries. Topics include safety, basic machine functions, inspection processes, precision measuring tools, layout procedures, cutting tools, proper machine settings and various machine setups to accomplish laboratory projects. The student will be introduced to soft skills necessary to function in a team environment with a general focus on team building, team problem solving and team decision making.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

AIT123 ADVANCED MACHINE TOOLS

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 2 Lab Hours: 4 Other Hours: 0

This course will cover advanced machine operations used in the area of machining industries. Topics include safety, advanced machine functions, inspection processes, precision measuring tools, layout procedures, cutting tools, proper machine settings and various machine setups to accomplish laboratory projects. The student will apply soft skills necessary to function in a team environment with a general focus on team building, team problem solving and team decision making.

Pre-reqs:

AIT122

AIT124 PRINCIPLES OF RIGGING

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

Provides a study of safe rigging principles, practices, and equipment. Topics of study include fiber and wire rope, block and tackle, lift and rigging chain, proof test, safe working load, design factor, sling geometry, fittings, and lifting and moving equipment.

Pre-reqs:

AIT125 COMMERCIAL PLUMBING

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course is designed to provide the student with an overview of the tools, materials, fixtures, practices, and processes used in commercial and residential plumbing. A focus on design and utilization with respect to traps, drains, vents, sizing, and overall codes will be addressed. Joining, design characteristics, and application for the various types of plumbing are also covered in detail.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

AIT127 LOW PRESSURE STEAMPLANT OPERTS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course covers the principles and applications of low pressure (15psi or less) boiler operation and construction. Principles and applications of maintenance and safety are also covered in detail. This course also counts toward the overall hours toward taking your low psi boiler operator's license and helps to prepare you to take the test. This course counts for 1,400 hours of the state-required experience hours needed to apply to take the low pressure boiler operator's licensure test.

Pre-reqs:

AIT128 HIGH PRESSURE STEAMPLANT OPERT

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course covers the principles and applications of high pressure (15psi or more) boiler operation. Topics include: Boiler Feed pumps and fuel feeder, feedwater heaters and feedwater treatment, and fuel combustion. Principles and applications of maintenance and safety are also covered in detail. This course also counts toward the overall hours towards taking your high psi boiler operator's license and helps to prepare you to take the test. This course counts for 1,100 hours of the state-required experience hours needed to apply to take the high pressure boiler operator's licensure test.

Pre-reqs:

AIT129 STATIONARY STEAMPLANT ENGINERG

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course covers the principles and applications of Ohio code law for boiler operation, abatement equipment, boiler design and application mathematics, duplex pump and steam engine. This course also applies towards the hours necessary towards the 3rd class stationary engineer's license exam. This course counts for 1,000 hours of the state-required experience hours needed to apply to take the third-class stationary engineer's state license exam.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

AIT132 STATIONARY STEAMPLANT ENGINERG

Credit Hours: 6 Contact Hours: 8 Lecture Hours: 4 Lab Hours: 4 Other Hours: 0

This course covers the principles and applications of Ohio code law for boiler operation, abatement equipment, boiler design and application mathematics, duplex pump and steam engine. This course counts for 1,000 hours of the state-required experience hours needed to apply to take the third-class stationary engineer's state license exam.

Pre-reqs:

AIT122

AIT134 PREVENT/PREDICT MTCE

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course is designed to familiarize the student with preventive maintenance practices which includes the regular inspection, lubrication, testing, adjustment, and analysis of equipment. Included is the framework for all planned maintenance activity to correct potential problems identified by inspection resulting in optimized equipment performance and life. An introduction to predictive maintenance practices will be covered.

Pre-reqs:

And MST125

MST221

AIT136 ALTERNATE ENERGY SOURCES

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course is designed to expand a student's knowledge of different forms and ways to produce energy without conventional combustion fossil fuels. This class gives the student the needed information to explain why and how we generate many forms of alternative energy and why it is important. It discusses the needs and uses of wind turbines, solar, fuel cells, and other alternative energy sources as part of energy solutions in our economy.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

AIT137 CAD/CAM

Credit Hours: 4 Contact Hours: 5 Lecture Hours: 3 Lab Hours: 2 Other Hours: 0

This course is designed to give a student the basic understanding of programming for machining centers and for turning centers, using the latest Computer Aided Design/Computer Manufacturing CNC programming software.

Pre-reqs:

AIT122

Or ARL129

And IET223

AIT138 ROOT CAUSE ANALYSIS

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course outlines a structured approach to identifying the factors that resulted in the nature, magnitude, location, and timing of harmful outcomes (consequences) of one or more past events. Root Cause Analysis identifies what behaviors, actions, inactions, or conditions that need to be changed to prevent recurrence of similar harmful outcomes and to identify the lessons learned to promote the achievement of more desirable outcomes or consequences. This course identifies and applies the major tools needed to achieve positive results.

Pre-reqs:

AIT220 Industrial Robotics

Credit Hours: 4 Contact Hours: 5 Lecture Hours: 3 Lab Hours: 2 Other Hours: 0

This course will provide knowledge and skills to setup and program an industrial grade robot. The student will use a FANUC robot and simulation software to acquire hands on experience working with programming software, troubleshooting, and to perform a complete system setup.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

AIT221 ADVANCED CNC PROGRAMMING

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course will cover advanced features of machining and turning center operations including programming, editing, proper installation and removal of cutting tools, safety and actual running of equipment both manually and in programmed modes. The student will apply soft skills necessary to function in a team environment with a general focus on team building, team problem solving and team decision making.

Pre-reqs:

Or ARL121

Or ARL122

IET223

AIT226 ROBOTIC VISION

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course will provide knowledge and skills to set up and program an industrial robot for vision applications. Student will learn about hardware, software, and concepts for setting up a vision system for a Fanuc robot. At completion of course student will be able to setup an industrial robot tocomplete a vision task.

Pre-reqs:

AIT220

AIT228 Automated Weld & Fabrication

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

This course is designed to provide students with an introduction to programed cutting and robotic welding operations of material fabrications. The student will be required to produce a number of acceptable projects from standard blueprints and instructor guidelines using metalworkers, plasma cutters and programmable welders. Students will learn to safely operate robots, create cutting paths and programs, employ setup part fixtures, edit programs to minimize cycle times, and operate the cell in a safe, programmed automated mode.

Pre-reqs:

AIT220

And MST127

Business-Engineering Tech

Engineering/Applied

ARL121 CNC LATHE OPERATIONS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This Computer Numerical Control course has been designed to help students read, understand and develop the confidence to edit the various programming formats used in standard EIA/ISO, Conversational and Macro types of programming used in lathe operations. The students will be given the opportunity to apply the information learned from the lecture portion of the course on the lathes available to enter the various Ariel styles of programs into the machine tool control.

Pre-reqs:

ARL122 CNC MILL OPERATIONS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This Computer Numerical Control course has been designed to help students read, understand and develop the confidence to edit the various programming formats used in standard EIA/ISO, Conversational and Macro types of programming used in mill operations. The students will be given the opportunity to apply the information learned from the lecture portion of the course on the mills available to enter the various Ariel styles of programs into the machine tool control.

Pre-reqs:

ARL123 CNC GRINDING OPERATIONS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This Computer Numerical Control course has been designed to help students read, understand and develop the confidence to edit the various programming formats used in standard EIA/ISO, Conversational and Macro types of programming used in various grinding operations. The students will be given the opportunity to apply the information learned from the lecture portion of the course on the grinders available to enter the various Ariel styles of programs into the machine tool control and to develop the ability for the various aspects of OD grinding.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

ARL124 BASIC METROLOGY

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course provides an in-depth study of measuring principles, instruments, and techniques. The measuring instruments most commonly used in industry, including coordinate measuring machines, are covered. Emphasis is placed on proper use of equipment in terms of prevention and minimization of reading errors as related to Geometric Dimensioning and Tolerances.

Pre-reqs:

ARL125 METALLURGICAL INSPECTION

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course has been designed to give the student a working knowledge of the processes in the manufacturing of the various types of steel and iron and the advantages and disadvantages of each. The student will be able to identify various metals from a typical color code chart as well as identify the visual characteristics of each material. The various tests used for problems from stress, work hardening, welding, as well as other evidence will be covered.

Pre-reqs:

ARL126 METALLURGY FOR FERROUS MATL

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course will cover the processes used in the manufacturing of the various types of ferrous materials and their characteristics. The products covered will range from basic cast iron through the advanced materials such as titanium. The course will also go into the detail of the properties of each of the metals and why they are chosen for a particular product, such as Ariel compressor components, and the newer materials used in automobiles, armor plating, and aerospace parts.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

ARL128 PRECISION GRINDING

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course is designed to give the student an introduction to the different types of precision grinding. Both CNC and manual grinders will be discussed. The manual function and all aspects of preparing grinding wheels for operation, including the basics of selecting, dressing, and balancing the different types of grinding wheels as applied to the various types of metal will be discussed in great detail. The set-up of specialized grinding fixtures will be explained. All safety issues will be stressed.

Pre-reqs:

ARL129 FUNDAMENTAL OF CNC OPERATIONS

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 2 Lab Hours: 4 Other Hours: 0

The course will cover features of the mill and lathe, manual operations and all aspects of preparing machine tools for operation (including all aspects of mounting and setting up cutting tools), manually entering and test running programs including MDI operation, and the restarting of the programs at random stopping points.

Pre-reqs:

ARL130 CNC TRNG CTR PROG EIA FORMAT

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This Computer Numerical Control course provides the core knowledge to read, understand, and edit the various programming formats used in standard EIA/ISO, and Macro types of programming used in turning center operations. With assigned lab projects, the student will reinforce the concepts covered.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

ARL131 CNC MACHING CTR PRG EIA FRMT

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This Computer Numerical Control course provides the core knowledge to read, understand, and edit the various programming formats used in standard EIA/ISO, and Macro types of programming used in turning center operations. With assigned lab projects, the student will reinforce the concepts covered.

Pre-reqs:

ARL132 CNC TURNING CTR PRG-CONV FRMT

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This Computer Numerical Control course provides the core knowledge to read, understand, and edit the various programming formats used in standard Conversational, Mazatrol, and Macro types of programming used in turning center operations. With assigned lab projects, the student will reinforce the concepts covered.

Pre-reqs:

ARL133 CNC MACHNG CTR PROG-CONV FRMT

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This Computer Numerical Control course provides the core knowledge to read, understand, and edit the various programming formats used in standard Conversational, Mazatrol, and Macro types of programming used in machining center operations. With assigned lab projects, the student will reinforce the concepts covered.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

ARL139 MECHANICAL FASTENERS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course will present a practical guide pertaining to mechanical fastener systems for technicians who work with a wide variety of fasteners found in industry. The course will outline complex and critical design elements focused on safety, reliability and long service life.

Pre-reqs:

ARL140 MATERIAL HAND & COMP PREP

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course will cover the procedures, practices, and methods of lifting and maneuvering large compressor parts with appropriate crane lifting techniques. Students will lift guides, frames, cylinders and other large parts of varying sizes to learn appropriate techniques for lifting and positioning equipment for part cleaning and assembly tasks.

Pre-reqs:

ARL141 COMPRESSOR SUB ASSEMBLY

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course will cover the procedures, practices, and methods for executing all of the sub assembly processes implemented in the assembly of natural gas compressors. Students will identify all of the sub assembly components, execute the assembly process for the components, and prepare a complete sub assembly which could be used as a part of a fully assembled compressor.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

ARL142 SMALL UNIT COMPRESSOR ASSEMBLE

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course will cover the procedures, practices, and methods for assembling small unit natural gas compressors. Each component and part of the small unit natural gas compressor will be identified. Procedures for assembling parts and components will be demonstrated and practiced so that the student will be ready to assemble a small unit natural gas compressor.

Pre-reqs:

ARL143 COMPRESSOR COATING PROCESSES

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course instructs students in the processes, procedures, and techniques for coating compressors in the production environment. There is a review of safety procedures for working with paint, pigments, thinning agents and industrial painting equipment. Students will learn fundamentals of how to operate automatic coating equipment used in paint booths. Manual coating processes and techniques will also be addressed.

Pre-reqs:

ARL144 CYLINDER HYDROTESTING

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course will cover the basic knowledge and skills required to successfully hydrotest cylinders for compressor operations. Students will evaluate work orders and understand the requirements for each job as dictated by the work order. They will complete all steps required to prepare a cylinder for hyrdrotesting. They will learn how to execute the test process and then close out a test with final documentation.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

ARL145 COMPRESSOR ION NITRIDING

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course teaches students about the processes, procedures, and techniques for ion nitriding compressor parts in preparation for nitriding equipment. Students will learn how to prepare a load for a nitriding operation and appropriately remove parts from the nitriding unit upon completion of the nitriding operations.

Pre-reqs:

ARL146 COMPRESSOR DOC INTEGRATION

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course will cover documentation, information access, and reporting required to successfully engage in the compressor assembly process. The build book will be a primary focus of the course where students will understand how the book is generated and used to help guide successful assembly of compressors. Students will also use MRP systems to locate and report data to fuel the assembly process. ISO procedures will also be identified and reviewed.

Pre-reqs:

ARL221 IND LAYOUT AND TRIGONOMETRY

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

The course covers algebra, geometry, and trigonometry as they are applied in the machining industry. The Cartesian coordinate system will help in determining functions of angles greater than 90°. The course concludes with oblique angle trig (law of sines and law of cosines).

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

ARL222 ADVANCED CNC OPERATIONS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course will cover the more advanced features of CNC machine tools, including more difficult blueprints to work from, to include more complex operations such as thread cutting on the CNC lathe as well as helical circle milling on the CNC vertical machining center. The more complex programs will be handwritten and will include trigonometry calculations for the correct cutting paths. The students will also learn the use of sub programs and when to use more complex canned cycles.

Pre-reqs:

ARL223 MFG CELL LDSHP AND COMMUNIC

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course is designed to educate the student on the cellular manufacturing concepts and overall plant layout logistics & efficiencies. Machining family concepts will be discussed and explored in detail. The theory and application of leadership will also be explored in a manufacturing environment as well as the process of effective group communication and various communication models .

Pre-reqs:

ARL224 MASTER CAM OPERATIONS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course is designed to give the student an introduction to the different types of precision grinding. Both CNC and manual grinders will be discussed. The manual function and all aspects of preparing grinding wheels for operation, including the basics of selecting, dressing, and balancing the different types of grinding wheels as applied to the various types of metal will be discussed in great detail. The set-up of specialized grinding fixtures will be explained. All safety issues will be stressed.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

ARL230 FIELD SERVICE OPERATIONS

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course will cover the common challenges that can arise when working in a field environment to disassemble, rebuild, or assemble compressors and compressor components. Strategies will be taught for dealing with environmental conditions, required adjustments for different compressor applications, and working effectively with customers in the field.

Pre-reqs:

ARL231 COMPRESSOR FINAL INSPECTION

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course will cover the final inspection process which is performed before a compressor is certified as ready to be delivered. Students will learn the final inspection process and evaluate compressors in the key inspection areas including clearances, alignment, and component balancing. Students who complete this course will be capable of executing a final inspection of any compressor.

Pre-reqs:

ARL232 ROTARY UNIT ASSEMBLY

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course will cover the procedures, practices, and methods for assembling rotary unit natural gas compressors. Each component and part of the rotary unit natural gas compressor will be identified. Procedures for assembling parts and components will be demonstrated and practiced so that the student will be ready to assemble a rotary unit natural gas compressor.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

ARL233 IND APP, CUSTOMERS & PRODUCTS

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course will explore the fundamental uses of compressors in a production environment. Types of customers, distributors and end users pertaining to their specific needs will be reviewed. Specific applications will be related to the applicable compressor unit families. Key subcomponents of the compressor system will also be reviewed and studied as to how they operate as a compressor unit in a package.

Pre-reqs:

ARL234 GAS COMPRESSION/FLOW DYNAMICS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course will review basic math required to understand equations and ratios which impact the function of natural gas compressors. Material will focus on understanding equations which are important to compressor assembly and operations. Students will also review variables and understand the relationships between variables in these types of equations.

Pre-reqs:

ARL235 MIDSIZE UNIT COMPRESSOR ASSEMB

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course will cover the procedures, practices, and methods for assembling midsize unit natural gas compressors. Each component and part of the natural gas compressor will be identified. Procedures for assembling parts and components will be demonstrated and practiced so that the student will be ready to assemble a midsize unit natural gas compressor.

Pre-reqs:

ARL142

Business-Engineering Tech

Engineering/Applied

ARL236 ADV CYLINDER HYDROTESTING

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course builds on the knowledge and skills taught in the cylinder hydrotest course to show students how to troubleshoot more advanced applications of cylinder testing processes. The course will further explore hydrotesting equipment, resolving advanced issues. Students will learn how to identify and resolve advanced leakage issues that may arise. They will also learn procedures and processes for additional testing processes using helium gasses in rotary cylinders.

Pre-reqs:

ARL144

ARL237 ADV COMPRESSOR COATING PROC

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course builds on the compressor coating processes course to teach coating processes of large and mid- sized units. The course also addresses maintenance and troubleshooting of automated paint equipment and paint booth environments.

Pre-reqs:

ARL143

ARL238 ADV COMPRESSOR ION NITRIDING

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course instructs students in the material hardening process and explores the equipment used to harden materials pertaining to the ion nitriding process. Students will understand the metallurgical changes occurring in the materials that result in hardening the outer case. Components of the nitrider will be defined and basic troubleshooting and maintenance tasks will be addressed.

Pre-reqs:

ARL145

Business-Engineering Tech

Engineering/Applied

ARL239 LARGE LINE UNIT COMP ASSEMBLY

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course will cover the procedures, practices, and methods for assembling large unit natural gas compressors. Each component and part of the natural gas compressor will be identified. Procedures for assembling parts and components will be demonstrated and practiced so that the student will be ready to assemble a large unit natural gas compressor upon completion.

Pre-reqs:

ARL240 Ariel Technical Doc

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course is intended to develop the understanding of proper execution of written, visual, and verbal processes of technical communication in business and industry. Students will differentiate between effective and ineffective technical communication.

Pre-reqs:

ARL241 Solid Edge

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course will provide the student with the skillset to use Edge software as their primary tool for design and revision of mechanical components. This course will build on part assembly and draft workflows as they assist in the development of machining programs.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

ARL242 Multiple Axis Programming

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course will provide the skills required to program, set up, and operate multiple-axis CNC machines. Students will learn about multi-axis machining fundamentals such as dynamic work offsets, tool center point control, inverse feed time, and machine rotary zero point offsets.

Pre-reqs:

ARL243 CNC Fixtures, Macros, & Probes

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course will provide the skills required to use wireless probes, fixtures, and macros in a programming system for part setup, tool setting, and various inspection routines. Students will incorporate these tools into machining programs to check for dimensional conformity, update work offsets, and output data for recording purposes.

Pre-reqs:

CDL121 CDL-CLASS A-SAFE OPER & CONTRO

Credit Hours: 6 Contact Hours: 6 Lecture Hours: 6 Lab Hours: 0 Other Hours: 0

This course will provide the student with instruction and requirements needed to take the written CDL permit test (CDIP). Employability skills and basic first aid/CPR will be addressed. Instruction and requirements necessary to take the (H) hazardous materials and (T) double and triple configuration endorsement knowledge tests is included. Instruction consists of classroom and simulator. Students must be at least 18 years of age and able to provide a valid Ohio State Driver's License with minimum two years experience, proof of U. S. Citizenship (birth certificate and Social Security card), meet minimum Department of Transportation (DOT) medical and vision standards and pass a DOT drug screen. Individuals seeking the (H) endorsement are required to undergo a security threat assessment and obtain clearance from the Transportation Security Administration (TSA).

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

CDL122 CDL-CLASS A-ADV OPER & MAINT

Credit Hours: 6 Contact Hours: 8 Lecture Hours: 4 Lab Hours: 4 Other Hours: 0

This course will provide the student with the instruction and requirements needed to take the Ohio CDL Class A driver's license examination. Students will acquire the advanced skills needed to respond to road emergencies, hazards and malfunctions. Non-vehicle activities include log keeping, trip planning and driver's health. Instruction will include classroom, pre-trip, behind the wheel range and street practice. Students must be at least 18 years of age and able to provide a valid Ohio State Driver's License, meet minimum Department of Transportation (DOT) medical and vision standards, and pass 5-Panel DOT drug screen. Individuals seeking the hazardous (H) endorsement are required to undergo a security threat assessment and obtain clearance from the Transportation Security Administration (TSA) at their own cost.

Pre-reqs:

CDL121	Can be Taken Concurrently

ENV123 OSHA 10-HR GEN IND SAFETY

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

This safety orientation course meets the requirements of the Occupational Safety and Health Administration (OSHA) 10-hour training requirement. Students are made aware (general overview) of the most common hazards encountered on the job sites and taught methods (related safety guidelines) to avoid them. Students are introduced to the OSHA standards and requirements as they pertain to general industry.

Pre-reqs:

ENV124 TRANSP HAZARD MTL TRNG

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

This course is designed to familiarize the student with Department of Transportation Pipeline and Hazardous Safety Administration (DOT PHMSA) Hazardous Materials Regulations (HMR). The student learns how to properly complete shipping papers, label & mark hazardous material packages and how to placard highway and rail vehicles plus air and vessel containers. The student completes exercises using the Hazardous Materials Table (HMT) and the Emergency Response Guidebook (ERG). Hazardous materials transportation regulations are accessed online.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

ENV125 INTR HAZRDS MTRLS AND WSTE MGT

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

This course is designed to introduce the student to the hazards of all chemicals produced or imported as well as laws and regulations governing the management of solid and hazardous wastes. It is intended to satisfy training requirements of the OSHA Hazard Communication Standard (29 CFR Part 1910.1200(h)) and applicable EPA solid and hazardous waste regulations (40 CFR Part 260 through Part 265). Students that successfully complete this course receive a certificate of completion.

Pre-reqs:

ENV126 HAZWOPER-MODERATE RISK

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

An internet-based course that provides 24 hours of interactive training online for those needing Moderate Risk certification (29 CFR Part 1910.120). The course consists of an online text, interactive exercises, web links, self-grading quizzes and final exam. This is a 100% web-based course.

Pre-reqs:

ENV129 WATER/WASTEWATER-PERMITS&ADMIN

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Students will become more familiar with safety issues and responsibilities associated with the permitting and certification process as it relates to water and wastewater treatment plant operations. They will also have the opportunity to improve their people skills and operations management techniques as they relate to water and wastewater treatment plant operations. This is a 100% web-based course.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

ENV130 WATER/WASTEWATER-PUMPS, MAINT

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Using the internet, students will cover a very broad range of topics including centrifugal pumps, selection and replacement of packing, seals, hydraulics, operating conditions, preventive maintenance, motors, plans and specifications, hazard types, plant equipment and procedures, lab safety and fire prevention and hazard communications. This is a 100% web-based course.

Pre-reqs:

ENV131 WASTEWATER TREATMENT I

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

Using the internet, students will explore the rudiments of wastewater treatment. This introductory course includes instruction in water pollution control, preliminary and primary treatment, fixed film processes and suspended growth systems. Along with reading assignments from the text, the course is enhanced with up-to-date photographs, audio, interactive exercises and online links. This is a 100% web-based course.

Pre-reqs:

ENV132 WASTEWATER TREATMENT II

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

Using the internet, students will focus on issues of concern to wastewater treatment facilities. The topics of this course include activated sludge process control, sludge digestion and solids handling, nitrogen and phosphorus removal and odor control. Along with reading assignments from the text, the course is augmented with audio, photographs, interactive exercises and online tasks. This is a 100% web-based course.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

ENV133 WASTEWATER TREATMENT-INDUSTRL

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

Using the internet, students will focus on issues of concern to industrial wastewater treatment facilities. The topics of this course include regulatory requirements; flow measurement; preliminary, physical and chemical treatment; filtration; and treatment of metal streams. Along with reading assignments from the text, the course is augmented with audio, photographs, interactive exercises, and onlinks. This is a 100% web-based course.

Pre-reqs:

ENV134 WASTEWATER COLLECTION SYSTEMS

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

Using the internet, students will gain a working knowledge of wastewater collection systems safety procedures, sewer inspection and testing, pipeline cleaning and maintenance, underground repair, lift stations, equipment maintenance, and sewer rehabilitation. Along with reading assignments from the text, the course is enhanced with up-to- date photographs, audio, interactive exercises, and links. This is a 100% web-based course.

Pre-reqs:

ENV135 WASTEWATER ANALYSIS

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Using the internet, students will be introduced to basic laboratory safety and gravimetric, spectrophotometric, electrochemical, titrimetric, and microbiological methods. The units include instruction on the laboratory procedures for microscopic, coliform, BOD5, COD, ammonia, grease and oil, chlorine and solids analysis. Along with reading assignments from the text, the course is enhanced with up-to-date photographs, interactive exercises, and online links. This is a 100% web-based course.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

ENV136 WATER TREATMENT I

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

Using the internet, students will explore the rudiments of water treatment. The topics of this course include regulatory monitoring, iron and manganese removal, filtration, coagulation, flocculation, and disinfection. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and onlink. This is a 100% web-based course.

Pre-reqs:

ENV137 WATER TREATMENT II

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

Using the internet, students will focus on issues of concern to surface water treatment facilities. The topics of this course include reservoir management, taste and odor control, corrosion management, softening, demineralization, and trihalomethanes. Instrumentation and sludge handling and disposal issues are also addressed. Along with reading assignments from the text, the course is augmented with audio, photographs, interactive exercises, and online links. This is a 100% web-based course.

Pre-reqs:

ENV138 WATER DISTRIBUTION SYSTEMS

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

Using the internet, students will obtain a working knowledge of potable water distribution systems. The topics of this course include water storage facilities, operation and maintenance of water mains, water quality issues, disinfection, and safety. This is a 100% web-based course.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

ENV139 WATER ANALYSIS

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Using the internet, students will be introduced to basic laboratory safety and gravimetric, spectrophotometric, electrochemical, titrimetric and microbiological methods. The units include instruction on the procedures for regulatory sampling and safety, and specific analytical procedures for total residue, fluoride, pH, ammonia, acidity, alkalinity, calcium, chloride, hardness, and coliform analysis. This is a 100% web-based course.

Pre-reqs:

ENV140 BASIC WATER TRTMT-COAG/FLOC

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Using the internet, students will explore the rudiments of water treatment. The topics of this course include general issues operators face when dealing with coagulation and flocculation. Along with reading assignments from the text, the course is enhanced with audit, up-to-date photographs, interactive exercises, and online links. This is a 100% web-based course.

Pre-reqs:

ENV141 BASIC WATER TRMT-DISINFECTN

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Using the internet, students will explore the rudiments of water treatment. The topics of this course include general issues operators face when dealing with a variety of disinfection processes. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This a 100% web-based course.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

ENV142 BASIC WATER TRMT-FILTRATION

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Using the internet, students will explore the rudiments of water treatment. The topics of this course include general issues operators face when dealing with the filtration processes. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% web-based course.

Pre-reqs:

ENV143 BASIC WATER TRMT-FLUORIDATION

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Using the Internet, students will explore the rudiments of water treatment. The topics of this course include general issues operators face when dealing with the fluoridation processes. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% web-based course.

Pre-reqs:

ENV144 BASIC WATER TRMT-IRON & MANG

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Using the internet, students will explore the rudiments of water treatment. The topics of this course include general issues operators face when dealing with iron and manganese levels. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% web-based course.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

ENV145 BASIC WATER TREATMENT-QUALITY

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Using the internet, students will explore the rudiments of water treatment. The topics of this course include general issues operators face when insuring the quality of the water. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% web-based course.

Pre-reqs:

ENV146 BASIC WATER TRTMNT-SEDIMTATION

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Using the internet, students will explore the rudiments of water treatment. The topics of this course include general issues operators face when dealing with sedimentation basins. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% web-based course.

Pre-reqs:

ENV147 BASC WATR TREATMNT-WATER SOURC

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Using the internet, students will explore the rudiments of water treatment. The topics of this course include an overview of water treatment and reservoirs management. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% web-based course.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

ENV148 WATER DISTRTN SYS-DISTRIB FAC

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Using the internet, students will obtain a working knowledge of potable water distribution systems. The specific topics of this course involve the issues of water distribution systems and facilities. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% web-based course.

Pre-reqs:

ENV149 WATR DISTBTN SYS-STORAGE SYS

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Using the internet, students will obtain a working knowledge of potable water distribution systems. The specific topic of this course is that of water storage facilities. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% web-based course.

Pre-reqs:

ENV150 WATR DISTRBN SYS-SYS DISINFCTN

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Using the internet, students will obtain a working knowledge of potable water distribution systems. The specific topic of this course is that of water disinfection systems. Along with reading assignments from the text, the coures is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% web-based course.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

ENV151 WTR DISTBN SYS-SYSTEM O M

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Using the internet, students will obtain a working knowledge of potable water distribution systems. The specific topic of this course is that of the needs for proper operations and maintenance of water distribution systems. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% web-based course.

Pre-reqs:

ENV152 WTR DISTRIBUTION SYS-SYS SAFEY

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Using the internet, students will obtain a working knowledge of potable water distribution systems. The specific topic of this course is that of safety issues confronting water distribution systems. Along with reading assignments from the test, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links.

Pre-reqs:

ENV153 WTR DISTRBN SYS-VALVES,MAIN ME

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Using the internet, students will obtain a working knowledge of potable water distribution systems. The specific topics of this course are that of proper maintenance operations of the values, and meters found in water distribution systems. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% web-based course.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

ENV154 WATER DISTRIBTN SYS-WATR MAINS

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Using the internet, students will obtain a working knowledge of potable water distribution systems. The specific topic of this course is that of water mains for distribution systems. Along with reading assignments from the text, the course in enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% web-based course.

Pre-reqs:

ENV155 WATER DISTRIBTN SYS-WATR QUALT

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Using the internet, students will obtain a working knowledge of potable water distribution systems. The specific topic of this course is that of water quality for distribution systems. Along with reading assignments from the text, the course is enhanced with audio, up-to- date photographs, interactive exercises, and online links. This is a 100% web-based course.

Pre-reqs:

ENV156 WASTEWATER TRTMT-DISINF CHLORN

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Using the internet, students will explore the rudiments of wasterwater treatment. The topics of this course include general issues operators face when disinfecting wastewater. Along with reading assignments from the text, the course is enhanced with audio, up-to- date photographs, interactive exercises, and online links. This is a 100% web-based course.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

ENV157 WASTEWATER TRTMT-FIXED FILM PR

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Using the internet, students will explore the rudiments of wasterwater treatment. The topics of this course include general issues regarding the trickling filter process when treating wastewater. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% web-based course.

Pre-reqs:

ENV158 WASTEWATER TRTMT-PLLUTN CONTRL

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Using the internet, students will explore the rudiments of wastewater treatment. The topics of this course include general issues regarding what is meant by the term water pollution, the steps needed to treat it and the math used. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% web-based course.

Pre-reqs:

ENV159 WASTEWATER TRTMNT-POND SYSTMS

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Using the internet, students will explore the rudiments of wastewater treatment. The topics of this course include general issues regarding use of wastewater ponds as a treatment method. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% web-based course.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

ENV160 WASTEWATER TRTMT-PRELIMY TRTMT

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Using the internet, students will explore the rudiments of wastewater treatment. The topics of this course include general issues regarding the steps in preliminary treatment of wastewater. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% web-based course.

Pre-reqs:

ENV161 WASTEWATER TRTMT-PRIMARY TRTMT

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Using the internet, students will explore the rudiments of wastewater treatment. The topics of this course include general issues regarding the steps in primary treatment of wastewater. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% web-based course.

Pre-reqs:

ENV162 WASTEWATER TRTMT-SUSP GRTH SYS

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Using the internet, students will explore the rudiments of wastewater treatment. The topics of this course include general issues regarding suspended growth systems. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% web-based course.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

ENV163 WATER/WASTEWATER MATH CHEM

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

In this course, students will be introduced to math and chemistry concepts used in water and/or wastewaterplant operations. This is for a credit course that can be taken by water and/or wastewater plant operators planning to take a certification exam or seeking post- certification contact hours. This is a half-semester course with 2-2 hour classes each week for 8 weeks.

Pre-reqs:

ENV164 SUSTAINABLE GR BLD TECH

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This is an introductory course providing information on how Green Building Technologies improve the environment through proper site development considerations-including brownfield site remediations strategies, storm water run-off management, renewable energy sources, and managing water efficiency in buildings. Improving energy efficiencies through passive solar heating and cooling methods are emphasized. Selecting building materials made from rapidly renewable resources or made with recycled content are discussed. Economic and social benefits of Green Building Technologies are also emphasized. Students are exposed to the "Leadership in Energy and Environmental Design: (LEED) Green Building Rating System established by the U.S. Green Building Council.

Pre-reqs:

ENV165 OSHA 10 HR CONSTRUCTION SAFETY

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 0 Lab Hours: 1 Other Hours: 0

This safety course meets the requirements of the Occupational Safety and Health Administration (OSHA) 10-Hour training requirement for the construction industry. Students are made aware (general overview) of the most common hazards encountered on construction sites and are taught methods (related safety guidelines) to avoid them. Students are introduced to OSHA standards and requirements as they pertain to the construction industry in accordance with 29 CFR 1926. Students that attend the required time and pass a final examination receive an OSHA 10-Hour Construction Safety Card issued by an OSHA authorized instructor. TAG approved course ORE004, effective Summer 2013. CTAG approved course CTS001, effective Summer 2013.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

ENV166 LEAD SAFE RENOVATOR

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 0 Lab Hours: 1 Other Hours: 0

Common renovation activities such as sanding, cutting, and demolition may create hazardous lead dust and chips by disturbing lead-based paint, which can be harmful to adults and children. To protect against this risk the EPA issued the Renovation, Repair and Painting Rule. It requires contractors performing renovation, repair, and painting projects that disturb lead-based paint in pre-1978 homes, child care facilities and schools be certified by the United States Environmental Protection Agency and use certified renovators who are trained by EPA-approved training providers. This course will provide students with techniques to ensure lead-safe work practices are followed. Training will include information necessary to contain a work area, minimize dust and how to properly clean up a renovation area to prevent the spread of harmful lead dust. The student will be issued a certificate as a Lead Safe Renovator in accordance with federal and state regulations upon successful completion of the course and a comprehensive final exam.

Pre-reqs:

ENV169 RADIATION SAFETY

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course provides the student with both classroom and applied training. Students are introduced to basic atomic structure and the process of ionization. Classroom topics include: the four basic types of radiation, units of measurement (roentgen, rad, rem, curie and SI units), the sources of radiation, biological effects, dosimetry, ALARA, contamination control, radiological emergencies, radiological postings plus administrative and engineering controls. Applied training consists of hands on training. Students learn and demonstrate how to: don and doff radiological personal protective equipment, use survey instruments and dosimetry to measure radiation. Students also learn proper radiological decontamination procedures for both contaminated personnel and equipment. The course is based on the requirements of the Code of Federal Regulations 10 CFR 835 for Department of Energy radiological workers.

Pre-reqs:

ENV221 OSHA - 40 HR - HAZWOPER

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

(40-hour OSHA training) This course satisfies the requirements of OSHA Standard 1910.120. It is a health and safety training course required for all personnel who may work at a hazardous waste site. Topics to be covered include: hazardous materials chemistry, toxicology, air purifying respirators, self-contained breathing apparatus, protective clothing, site decontamination and response incidents.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

ENV222 INDUST PROCES & POLUTION CNTRL

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course introduces the students to environmental control systems and practical applications of their operation and maintenance. Particular attention given to piping and instrumentation diagrams, the reading of strip charts, continuous emission monitors, stack and source sampling and volumetric measurement of fluids. General troubleshooting techniques are also covered.

Pre-reqs:

CHM121

Or CHM121B

Or CHM141

Or CHM141B

And MTH107

ENV223 BASIC GEOLOGY/HYDROLOGY

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course will cover the basic components of the earth, and will include a study of its interior, minerals, rock structure, weathering and mass movement. Basic soil properties, testing, and topographic maps will be studied. The properties and flow patterns of water in both surface and subsurface conditions will be considered with emphasis placed on how hazardous materials are spread from a contaminated site.

Pre-reqs:

MTH107

ENV228 HEALTH AND SAFETY

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course helps students develop an understanding of site occupational health and safety programs including: good industrial and construction workplace practices, ergonomics, chemical toxicology, respiratory protection, personal protective equipment, record keeping, industrial hygiene sampling, ventilation measurements, machine guarding methods and accident prevention.

Pre-reqs:

ENV121

Business-Engineering Tech

Engineering/Applied

ENV230 OSHA 8-HR HAZWOPER REFRESHER

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

This course is required by OSHA regulation as an annual refresher for the materials covered in the OSHA 40-hour HAZWOPER class. Material to be reviewed include: hazardous material chemistry, toxicology, respiratory protection, protective clothing, site decontamination and response to incidents.

Pre-reqs:

ENV231 OSHA 30 HOUR GENERAL INDUSTRY

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course is designed to develop an understanding of site occupational health and safety programs. This 30-hour comprehensive course is ideal for anyone with safety and health responsibilities and for employee safety and health awareness. This course covers all the topics in the OSHA 10-hour General Industry course plus additional OSHA approved topics.

Pre-reqs:

ENV232 ASBESTOS ABATEMENT WKR INTIAL

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 1 Lab Hours: 1 Other Hours: 0

This course provides 16 hours of asbestos abatement worker refresher training in which students will review the various types of asbestos and will be provided updates on federal and state regulations pertaining to the removal of asbestos. Students will review proper asbestos removal procedures from ceilings, walls and pipes and how to set up a containment area that will protect the public from asbestos exposures during abatement activities. Students will review self-protection methods from asbestos hazards by the use of respirators, personal protective clothing and HEPA asbestos filtration units. Upon initial and continued approval by the Ohio Department of Health this course will provide the training requirements established by the Ohio Department of Health and the United States EPA to continue to be a licensed asbestos abatement worker in the state of Ohio. Upon successful completion of the course which includes a comprehensive examination, a certificate of completion will be provided to the student

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

ENV234 ASBESTOS ABATEMENT WKR REFRSH

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 0 Lab Hours: 1 Other Hours: 0

This course provides 16 hours of asbestos abatement worker refresher training in which students will review the various types of asbestos and will be provided updates on federal and state regulations pertaining to the removal of asbestos. Students will review proper asbestos removal procedures from ceilings, walls and pipes and how to set up a containment area that will protect the public from asbestos exposures during abatement activities. Students will review self-protection methods from asbestos hazards by the use of respirators, personal protective clothing and HEPA asbestos filtration units. Upon initial and continued approval by the Ohio Department of Health this course will provide the training requirements established by the Ohio Department of Health and the United States EPA to continue to be a licensed asbestos abatement worker in the state of Ohio. Upon successful completion of the course which includes a comprehensive examination, a certificate of completion will be provided to the student.

Pre-reqs:

ENV232

ENV236 ENV HLTH AND SAFTY SPEC PRJECT

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course is designed to allow the student to exercise the capabilities developed in other courses within the environmental areas. Special current topics important to the environmental or safety field are also incorporated into this class. Students will choose approved projects compatible with their interest and background. An environmental problem will be studied and all regulations that affect the problem are researched, and a plan of action for compliance, abatement and/or remediation will be developed.

Pre-reqs:

ECA122

And ENV121

And ENV221

Or ITD122

EST129 SWITCHGEAR, TRANS, CONTROLS

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

The course covers low and high voltage circuit breakers and switchgear primarily from 4KV to 15KV. It shows how switchgear is basically constructed, how circuit breakers work, and general maintenance of such equipment. The basic theory of transformers and connection schemes of common types of transformers including dry and wet type distribution transformers, power transformers, and instrument transformers is explained. Control ladder and wiring diagrams with an introduction to input and output control devices, are presented and implemented in lab.

Pre-reqs:

EET122

Or EST130

Or EST230

Business-Engineering Tech

Engineering/Applied

EST132 FUNDAMENTAL OF ELECTRICITY

Credit Hours: 4 Contact Hours: 5 Lecture Hours: 4 Lab Hours: 1 Other Hours: 0

This course consists of analytical and laboratory techniques with heavy emphasis on resistive and reactive DC & AC electrical circuits, as well as the principles of electronic devices, including diodes and transistors.

Pre-reqs:

Or Test & Score: ACT Math - 19

Or Test & Score: Accuplacer College-level Math - 040

Or Test & Score: Accuplacer Elementary Algebra - 097

Or Test & Score: Compass Algebra - 039

Or Test & Score: GED Mathematical Reasoning - 1

Or Test & Score: M094 Transfer Prof/Placement - 2

Or Test & Score: NextGen Accuplacer AAF Math - 237

Or Test & Score: NextGen Accuplacer QAS Math - 250

Or Test & Score: SAT Mathematics - 510

MTH101

EST221 ELECTRONIC TBLSHOOTING

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 3 Lab Hours: 1 Other Hours: 0

Course covers:principles of troubleshooting with electronic/electrical testing instruments, troubleshooting electric motors and generators, industrial controls, residential and industrial wiring, power supply repair, signal tracing, "in-circuit" semi-conductor testing and pulse circuit troubleshooting.

Pre-reqs:

EET123

EST222 Industrial Networks

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course will provide a basic understanding of different types of networks that are used in an industrial facility. Course will cover network terminology, hardware, software, and basic troubleshooting.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

EST222 Industrial Networks

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course will provide a basic understanding of different types of networks that are used in an industrial facility. Course will cover network terminology, hardware, software, and basic troubleshooting.

Pre-reqs:

EET120

Or EST130

Or EST230

EST230 Electrical Circuits & Devices

Credit Hours: 4 Contact Hours: 5 Lecture Hours: 3 Lab Hours: 2 Other Hours: 0

This course is to provide a general understanding of electricity and the operation of electrical devices; to be able to make electrical measurements and basic calculations involving voltage, current, resistance, reactance, capacitance, and power; and to learn how to supply power to commercial equipment.

Pre-reqs:

Or Test & Score: ACT Math - 19

Or Test & Score: Accuplacer College-level Math - 040

Or Test & Score: Accuplacer Elementary Algebra - 097

Or Test & Score: Compass Algebra - 039

Or Test & Score: M025 Transfer Prof/Placement - 3

Or Test & Score: M094 Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer AAF Math - 237

Or Test & Score: NextGen Accuplacer QAS Math - 250

Or Test & Score: SAT Mathematics - 510

Or MTH025

Or MTH094

Or MTH107

MTH123

Business-Engineering Tech

Engineering/Applied

EST235 Power Gener & Grid Tech

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course encompasses power generation from creation from multiple sources (coal, nuclear, turbine, fuel cell, etc.) and various distribution technologies until it enters the home or business. Students will learn the technology of local and national transmission and distribution systems as well as bulk generation, distributed generation, microgrid and smartgrid technologies. Energy efficiency, storage, cogeneration and energy security will be studied and analyzed during this course.

Pre-reqs:

EST230

ETD225 SPECIAL TOPICS

Credit Hours: 6 Contact Hours: 8 Lecture Hours: 4 Lab Hours: 4 Other Hours: 0

Special topics in Engineering, Industrial, and Emerging Technologies Division.

Pre-reqs:

ETD226 SPECIAL TOPICS

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

Special topics in Engineering, Industrial, and Emerging Technologies Division.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

ETD226A Special Topics

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

Special topics in Engineering, Industrial, and Emerging Technologies Division.

Pre-reqs:

ETD226B Special Topics

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

Special topics in Engineering, Industrial, and Emerging Technologies Division.

Pre-reqs:

ETD226C Special Topics

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

Special topics in Engineering, Industrial, and Emerging Technologies Division.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

ETD226D Special Topics

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

Special topics in Engineering, Industrial, and Emerging Technologies Division.

Pre-reqs:

ETD226E Special Topics

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

Special topics in Engineering, Industrial, and Emerging Technologies Division.

Pre-reqs:

ETD227 SPECIAL TOPICS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Special topics in Engineering, Industrial, and Emerging Technologies Division.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

ETD227A Special Topics

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Special topics in Engineering, Industrial, and Emerging Technologies Division.

Pre-reqs:

ETD228 SPECIAL TOPICS

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 2 Lab Hours: 4 Other Hours: 0

Special topics in Engineering, Industrial, and Emerging Technologies Division.

Pre-reqs:

ETD229 SPECIAL TOPICS

Credit Hours: 5 Contact Hours: 5 Lecture Hours: 5 Lab Hours: 0 Other Hours: 0

Special topics in Engineering, Industrial, and Emerging Technologies Division.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

EUT121 OVERHEAD LINE TECHNOLOGY I

Credit Hours: 5 Contact Hours: 20 Lecture Hours: 2 Lab Hours: 18 Other Hours: 0

Supervised practical applications of electrical overhead line worker job duties in a directed practice setting under direct supervision of FirstEnergy personnel. Emphasis on skills to safely climb wood poles, the operation of a line truck, setting poles, framing poles on the ground, and operation of a digger derrick. Student will receive instruction to pass the Class "A" Commercial Driver's License skills test. Rigging, wire identification, and use of rubber goods will also be learned. Safety topics include: Rigging Safety Awareness; Fall Protection; Flame Retardant Personal Protective Equipment; Medic First Aid; Blood-Borne Pathogens; and good housekeeping.

Pre-reqs:

EUT122 OVERHEAD LINE TECHNOLOGY II

Credit Hours: 5 Contact Hours: 20 Lecture Hours: 2 Lab Hours: 18 Other Hours: 0

Supervised practical applications of electrical overhead line worker job duties in a directed practice setting under direct supervision of FirstEnergy personnel. Emphasis on skills required to perform work on secondary voltage circuits. Emphasis on the installation of services, street lighting, and secondary circuits, bucket truck familiarization and bucket rescue. Overview of distribution electrical systems, and Occupational Safety and Health Administration (OSHA) rules are also included. Safety topics include: Work Zone Traffic Control; Minimum Approach Distances; Rubber Protective Equipment; and knowledge of UD Excavation/Trenching/Shoring.

Pre-reqs:

EUT121

EUT123 SUBSTATION TECHNOLOGY I

Credit Hours: 5 Contact Hours: 20 Lecture Hours: 2 Lab Hours: 18 Other Hours: 0

Supervised practical applications of substation worker job duties in a directed practice setting under direct supervision of FirstEnergy personnel. This course provides the student with the basic knowledge and skills necessary to assist with the performance of maintenance and testing in substations and switchyards.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

EUT124 SUBSTATION TECHNOLOGY II

Credit Hours: 5 Contact Hours: 20 Lecture Hours: 2 Lab Hours: 18 Other Hours: 0

Supervised practical applications of substation worker job duties in a directed practice setting under direct supervision of FirstEnergy personnel. This course provides the student with a broader skill set as well as the enhanced knowledge and skill level necessary to safely assist in the performance of routine repairs on distribution and power transformers, bushings, circuit breakers, disconnect switches, control equipment and other de-energized electrical equipment used in the distribution of electrical energy.

Pre-reqs:

EUT123

EUT221 OVERHEAD LINE TECHNOLOGY III

Credit Hours: 5 Contact Hours: 20 Lecture Hours: 2 Lab Hours: 18 Other Hours: 0

Supervised practical applications of electrical overhead line worker job duties in a directed practice setting under direct supervision of FirstEnergy personnel. Emphasis on skills required to identify, install, and maintain primary underground residential distribution (URD) equipment, including various methods of troubleshooting URD primary and secondary circuits. Grounding distribution circuits will also be learned. Students will develop the knowledge and skill to safely perform rubber gloving assignments utilizing the insulate and isolate techniques and will perform various tasks while working on an energized three-phase circuit under controlled conditions. Safety topics include: fire extinguisher safety, temporary protective grounds, stored energy devices, and utilities protective service.

Pre-reqs:

EUT122

EUT222 OVERHEAD LINE TECHNOLOGY IV

Credit Hours: 5 Contact Hours: 20 Lecture Hours: 2 Lab Hours: 18 Other Hours: 0

Supervised practical applications of electrical overhead line worker job duties in a directed practice setting under direct supervision of FirstEnergy personnel. Emphasis on line equipment, hot line tools, power industrial trucks, and transmission (including wood pole, steel pole, ladder, and tower climbing). Bucket, pole top, and self-rescue will also be reviewed. Safety topics include: spill response, live Line tools, hazardous communications, and Accident Prevention Handbook review.

Pre-reqs:

EUT221

Business-Engineering Tech

Engineering/Applied

EUT224 SUBSTATION TECHNOLOGY III

Credit Hours: 5 Contact Hours: 20 Lecture Hours: 2 Lab Hours: 18 Other Hours: 0

Supervised practical applications of electrical substation worker job duties in a directed practice setting under direct supervision of FirstEnergy personnel. This course provides the student with the advanced knowledge and skills necessary to safely work in a supervised capacity on energized equipment and in an unsupervised capacity on de-energized equipment employed in the production and distribution of electrical energy. This course also introduces the student to power transformer testing, troubleshooting, alarm systems, circuit breaker troubleshooting, reclosers and sectionalizers, oil circuit breaker maintenance and voltage regulators.

Pre-reqs:

EUT124

EUT225 SUBSTATION TECHNOLOGY IV

Credit Hours: 5 Contact Hours: 20 Lecture Hours: 2 Lab Hours: 18 Other Hours: 0

Supervised practical applications of electrical substation worker job duties in a directed practice setting under direct supervision of FirstEnergy personnel. This course provides the student with the knowledge and skills to work safely and competently in a supervised or unsupervised capacity. This course is the culmination of prior courses with the introduction of advanced knowledge and skills related to motor operated air brake switch, electronic recloser controls, SF6 gas breakers, air circuit breaker maintenance, oil circuit breaker timing and travel tests, calibration of various substation equipment, potential transformer testing, phasing, switching procedures and the performance of energized primary work. The work activities in this final semester will be performed in a crew setting and will require continuous team work with fellow students.

Pre-reqs:

EUT224

HVC121 HVAC PRINCIPLES I

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Overview of heating, ventilating, and air conditioning, including basic design, equipment characteristics, venting, the refrigeration cycle, system control, basic heat transfer, basic airflow principles, air quality, product quality and comfort principles.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

HVC122 HVAC PRINCIPLES II

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

An in depth study of the main principles of HVAC. Beginning with safety, topics covered include piping, refrigeration piping, the refrigerant cycle, and refrigerant handling. Also studied are duct sizing and layout, air test and balance, including blower drives and system components. Heating and cooling loads will be discussed. Special attention will be given to electrical wiring and controls and troubleshooting.

Pre-reqs:

HVC121	Can be Taken Concurrently

HVC125 Sheet Metal Layout & Fabric

Credit Hours: 4 Contact Hours: 5 Lecture Hours: 3 Lab Hours: 2 Other Hours: 0

This course covers the layout of basic sheet metal duct fittings using geometrical methods and the fabrication of fittings using industry accepted joining methods. Topics include layout and fabrication of rectangular, round, and transition fittings in straight, curved, and offset configurations, as well as design impacts on airflow efficiency in various types of fittings.

Pre-reqs:

HVC221 HVAC FURNACE COMBUSTION PRINC

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

The National Fuel Gas Code (NFPA54) will be used as the basis for this course of study. Subjects covered will include appliance venting and vent sizing, combustion air requirements and sizing, mechanical room configuration and equipment location. Published manufacturer installation procedures will be a significant part of this course.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

HVC222 HVAC DESIGN & APPLICATION

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

The student's understanding of heat transfer will be expanded to encompass application. The principles of thermodynamics, psychometrics, and calculating heating and cooling loads are emphasized. Heating, venting and combustion air will be included. Reading plans and specification, systems design, and equipment selection are studied.

Pre-reqs:

HVC122

HVC223 HVAC SYS OPER AND TRBLSHT- HT

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Heating equipment and system operation and studied together with development of problem solving techniques. Through the use of laboratory demonstrations, measurements, observations and experiments with HVAC systems and components the student learns proper system diagnosis and repair procedures.

Pre-reqs:

HVC122

HVC224 HVAC SYS OP AND TRBLST- COOLNG

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Cooling equipment and systems operation are studied together with development of problem solving techniques. Through the use of laboratory demonstrations, measurements, observations and experiments with HVAC systems and components, the student learns proper system diagnosis and repair procedures.

Pre-reqs:

HVC122

Business-Engineering Tech

Engineering/Applied

HVC227 HVAC FIELD INSTALL TECH PROC

Credit Hours: 4 Contact Hours: 5 Lecture Hours: 3 Lab Hours: 2 Other Hours: 0

Laboratory intensive introduction to air conditioning system field installation techniques and procedures.

Pre-reqs:

HVC122	Can be Taken Concurrently

HVC228 HVAC SYS AIRFLOW DUCT SIZING

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

A detailed examination of air and its properties and HVAC system airflow principles along with duct sizing are presented. As a final project, a properly sized duct system is designed given equipment performance data.

Pre-reqs:

Or Test & Score: ACT Math - 19

Or Test & Score: Accuplacer College-level Math - 040

Or Test & Score: Accuplacer Elementary Algebra - 097

Or Test & Score: Compass Algebra - 039

Or Test & Score: GED Mathematical Reasoning - 1

Or Test & Score: M094 Transfer Prof/Placement - 2

Or Test & Score: NextGen Accuplacer AAF Math - 237

Or Test & Score: NextGen Accuplacer QAS Math - 250

Or Test & Score: SAT Mathematics - 510

MTH101

HVC229 AIR CONDITNING REFRIG CYCLE

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

The refrigeration cycle is presented together with the operation of compressors and metering devices. Equipment studied includes residential air conditioning and heat pumps, their principles of operation, their components and auxiliary devices, and performance ratings.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

HVC229 AIR CONDITNING REFRIG CYCLE

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

The refrigeration cycle is presented together with the operation of compressors and metering devices. Equipment studied includes residential air conditioning and heat pumps, their principles of operation, their components and auxiliary devices, and performance ratings.

Pre-reqs:

HVC230 HVAC RESIDENTIAL EQUIP SIZING

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

This course provides the HVAC student with a powerful, efficient, and highly accurate method of load estimating and duct selection. The software covered in this course simplifies a very complex and time-consuming task of manually calculating the estimated load with the Right J software package. Outside classwork may be assigned.

Pre-reqs:

HVC231 HVAC MOTORS AND COMPRESSORS

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Motors and compressor types, designs, applications, and failure modes are studied. Heavy emphasis is placed on failure symptoms, causes and resolution. Actual failed motors and compressors are examined and probable causes and remedies determined.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

HVC232 Hydronic Apps and Design

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Hydronic system application and design including steam and hot water systems using fan coils, radiator, baseboard, and radiant panel terminations are presented. Residential, commercial, and industrial applications are covered.

Pre-reqs:

HVC122

HVC233 HVAC BID SPECIFICATION

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course of study will make use of actual historic construction industry plans and specifications. The student will be taken through the entire estimation process including work and technical specification reading and comprehension, acquisition of bids and calculation of pricing, preparation of the bid, formatting the bid according to specifications and accepted standards and delivery of a comprehensive bid quotation. Labor rates, available workforce, travel time, completion dates, subcontracts, bonds, accepted alternates, project value and how these items affect the delivered quotation will be introduced during the class exercises.

Pre-reqs:

HVC222

HVC234 HVAC ELECTRICAL SYS & APPLIC

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course provides the knowledge and skills to understand and safely install, service, and troubleshoot HVAC/R electrical circuits and electronics. Basic electrical foundation fundamentals are provided. HVAC/R electricity and electronic circuits are covered in depth. A focus on proper meter usage is engrained in the process. Motors, controls, and other electrical/electronic devices are covered also. The sequence of operation and diagnostic trouble-shooting, utilizing pictorial, schematic, and hands on approaches are provided.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

HVC235 REFRIGERATION

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

A basic understanding of mechanical refrigeration from safety to cryogenics is presented. The refrigeration cycle, components, controls, in instrumentation, installation, servicing, and troubleshooting are studied. Various components including the compressor, condenser, filter-dryer, and refrigeration controls are studied in detail

Pre-reqs:

HVC122

HVC236 ADV HVAC ELECTRICAL APPLIC

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course encompasses complex HVAC control circuitry schemes, including microprocessor controlled as used on large chillers, large tonnage DX, and DDC controls. The student outcome is full understanding of control functions, sequence of operation, and troubleshooting skills applicable to complex HVAC circuitry. This ensures that the student has the ability to systematically and logically troubleshoot these complex systems with efficiency and accuracy.

Pre-reqs:

HVC234

HVC237 HVAC COMMERCIAL CONTROLS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course will further the students knowledge of control by introducing the student to the equipment and devices that control HVAC commercial equipment, pnuematics, and Direct Digital Controls. The lectures/labs will discuss the function, operation, service, and how to troubleshoot the controls.

Pre-reqs:

HVC122

Business-Engineering Tech

Engineering/Applied

HVC238 CHILLER OPERATIONS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course will discuss the specifics of the operation of chillers. The lectures will include small 25 ton unites to large commercial 500 ton chillers. Including installation of the units, service and general maintenance, and troubleshooting and repair. The course will cover how to locate the problems and how to safely manage repairs working with large pieces of equipment.

Pre-reqs:

HVC122

IET121 INDUSTRIAL MANAGEMENT CONCEPTS

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This is an introductory course which examines the essential elements of contemporary management in the industrial organization. Topics include, but are not limited to: the changing role of supervisors/managers; the decision-making process; supervisor/manager-employee relationships; team management and problem solving; planning and communication.

Pre-reqs:

IET223 COMPUTER NUMERICAL CTRL

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 2 Lab Hours: 4 Other Hours: 0

This course will cover basic features of machining and turning center operations including programming, editing, proper installation and removal of cutting tools, safety and actual running of equipment both manually and in programmed modes. The student will be introduced to soft skills necessary to function in a team environment with a general focus on team building, team problem solving and team decision making. CTAG CTMET006 approved, effective fall 2019

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

IET270 DIM METROLOGY AND INSPECT I

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course provides an in-depth study of measuring principles, instruments, and techniques. The measuring instruments most commonly used in industry, including coordinate measuring machines, are covered. Emphasis is placed on proper use of equipment in terms of prevention and minimization.

Pre-reqs:

Or Test & Score: ACT Math - 19

Or Test & Score: Accuplacer College-level Math - 040

Or Test & Score: Accuplacer Elementary Algebra - 097

Or Test & Score: Compass Algebra - 039

Or Test & Score: GED Mathematical Reasoning - 1

Or Test & Score: M025 Transfer Prof/Placement - 3

Or Test & Score: M094 Transfer Prof/Placement - 2

Or Test & Score: NextGen Accuplacer AAF Math - 237

Or Test & Score: NextGen Accuplacer QAS Math - 250

Or Test & Score: SAT Mathematics - 510

Or MTH025

MTH094

Or MTH107

MST121 BLUEPRINT READING

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course provides the opportunity for students to develop the skills of reading and interpreting blueprints. Orthographic projection and concepts of visualization are discussed before the various types of blueprints are introduced. "The reading of," rather than the drawing of blueprints is emphasized throughout the course. Types of prints covered include but not limited to industrial, structural, civil, sheet metal, building, piping, hydraulic, welding, and electrical.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

MST122 HYDRAULC AND PNEUMATIC PRI

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

The study of fluids, their properties, behavior and applications. Topics cover compressible and incompressible fluids, viscosity and basic hydraulic and pneumatic pumps, actuators, valves and piping used.

Pre-reqs:

Or Test & Score: ACT Math - 19

Or Test & Score: Accuplacer College-level Math - 040

Or Test & Score: Accuplacer Elementary Algebra - 097

Or Test & Score: Compass Algebra - 039

Or Test & Score: GED Mathematical Reasoning - 1

Or Test & Score: NextGen Accuplacer AAF Math - 237

Or Test & Score: NextGen Accuplacer QAS Math - 250

Or Test & Score: SAT Mathematics - 510

And MST123 Can be Taken Concurrently

MTH101

MST123 HYDRAULC AND PNEUMATIC APP

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

The course deals with the study of hydraulic applications, types of circuits used, how to pipe the various systems and how to troubleshoot the hydraulic/pneumatic circuits.

Pre-reqs:

Or Test & Score: ACT Math - 19

Or Test & Score: Accuplacer College-level Math - 040

Or Test & Score: Accuplacer Elementary Algebra - 097

Or Test & Score: Compass Algebra - 039

Or Test & Score: GED Mathematical Reasoning - 1

Or Test & Score: NextGen Accuplacer AAF Math - 237

Or Test & Score: NextGen Accuplacer QAS Math - 250

Or Test & Score: SAT Mathematics - 510

And MST122 Can be Taken Concurrently

MTH101

Business-Engineering Tech

Engineering/Applied

MST125 BASIC PUMPS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course covers the centrifugal, propeller, turbine, rotary, reciprocating, metering and special purpose pumps. Pump applications, selection and routine maintenance are also reviewed, along with various types of packings and seals that are used.

Pre-reqs:

MST127 PRINCIPLES OF WELDING

Credit Hours: 6 Contact Hours: 9 Lecture Hours: 3 Lab Hours: 6 Other Hours: 0

This course will introduce the student to basic principles of welding which include preparation, cutting, and joining similar and dissimilar metals. Oxygen/acetylene and AC/DC electric are the major techniques used with other processes discussed. Safe working procedures will be reviewed and followed. Lab practice will consist of arc, MIG, TIG, and gas welding, along with layout and cutting processes.

Pre-reqs:

MST130 ELEMENTS OF MICROPROCESS

Credit Hours: 4 Contact Hours: 3 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

The study of microprocessor system hardware including basic understanding of the software used to control microprocessor systems. Troubleshooting techniques are studied and applied to service any microprocessor system. Meters, oscilloscopes and various probes are used in servicing work.

Pre-reqs:

EST128

Business-Engineering Tech

Engineering/Applied

MST134 HYDRAULIC AND PNEUMATIC SYS

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 2 Lab Hours: 4 Other Hours: 0

This course is a combination of MST122 and MST123 and is the study of fluids, their properties, behaviors and applications. Topics include: basic hydraulic and pneumatic pumps, actuators, valves, piping, hydraulic and pneumatic applications, the various types of hydraulic and pneumatic circuits, and how to troubleshoot these circuits. CTAG approved CTAIE002, effective fall 2023 ITAG approved ITAIE002, effective fall 2023

Pre-reqs:

Or Test & Score: ACT Math - 19

Or Test & Score: Accuplacer College-level Math - 040

Or Test & Score: Accuplacer College-level Math - 040

Or Test & Score: Accuplacer Elementary Algebra - 097

Or Test & Score: Compass Algebra - 039

Or Test & Score: GED Mathematical Reasoning - 1

Or Test & Score: M022 Transfer Prof/Placement - 3

Or Test & Score: M023 Transfer Prof/Placement - 3

Or Test & Score: M092 Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer AAF Math - 237

Or Test & Score: NextGen Accuplacer QAS Math - 250

Or Test & Score: SAT Mathematics - 510

Or MTH022

Or MTH023

MTH092

MST135 PLUMBNG AND PIPE CODE PRINCPLE

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Course concentrates on plumbing rules and regulations governing the installation of simple and complex plumbing systems with an emphasis on the specifications and regulations pertaining to joints, traps, clean-outs, water distribution, fixtures, and drainage.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

MST136 3G & 4G Weld Cert Exam Prep

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 2 Lab Hours: 4 Other Hours: 0

This course covers the fitment and joining of steel plates vertically, 3G and overhead, 4G using SMAW and GMAW processes. Specific topics include welding defects and their causes, the Heat Affected Zone and the Fusion Zone. Students will be introduced to and perform various destructive tests per the American Welding Society (AWS) D1.1 Code. Welding of roots, filler passes, and cover passes is also included. In addition, students may take the AWS certification exams for an additional fee. ITAG approved ITWLD001, effective fall 2023

Pre-reqs:

MST127

MST137 6G WLDG CERT EXAM PREP

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 2 Lab Hours: 4 Other Hours: 0

This course will cover: the fit-up and welding of pipe in 5G and 6G positions (uphill) using the SMAW process, the welding of root and hot pass methods done with E-6010 electrodes, and the fill and cap pass using E-7018 electrodes. Students will perform destructive tests per American Society of Mechanical Engineers (ASME) Section IX Boiler and Pressure Vessel Code.

Pre-reqs:

MST136

MST138 PREP GAS TUNGSTEN ARC WLDG

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 2 Lab Hours: 4 Other Hours: 0

This lab course will provide the student with a technical understanding of gas tungsten arc welding, arc characteristics and welding safety procedures. In addition, the student will develop skills necessary to weld with pulsed current.

Pre-reqs:

MST127

Business-Engineering Tech

Engineering/Applied

MST139 Gas Tungsten Arc Welding

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

This course encompasses the principles, procedures, and operation of equipment to properly and safely demonstrate gas tungsten arc welding (GTAW) processes. Emphasis is placed on producing welds on a variety of material thicknesses, various positions/directions of welds, proper set-up/finishing procedures, and weld bead geometry. Students will use both direct current electrode negative (DCEN) and alternating current (AC) styles.

Pre-reqs:

MST138

MST221 MECHANICAL DRIVE COMPON

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

The study of bearings, shafts, couplings, cams, brakes, gear drives, belt drives, chain drives and clutches. Included are component application and maintenance.

Pre-reqs:

MST223 HYDRAULC AND PNEUMATC ELEC

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course covers the study of fluids, their properties, behavior and applications. Various hydraulic and pneumatic circuits, along with cycle charts and associated electrical circuits, are reviewed. Students are required to know components and their identification symbols and operations.

Pre-reqs:

Business-Engineering Tech

Engineering/Applied

MST224 DIMENSIONAL METROLOGY

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

An in-depth study of measuring principles, instruments and techniques. This course covers the measuring tools most commonly used in industry. Course covers how to read and use these instruments, how to prevent the most common errors and how to minimize errors.

Pre-reqs:

MST226 TUNGSTEN INERT GAS WELD

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

Study of standard and programmable TIG welding equipment: welding of various metals such as aluminum, stainless steel, copper, and mild steel with considerations given to variables such as shielding gas types and sizes, and types of tungsten electrodes.

Pre-reqs:

And MST127

MST128

MST227 METALLIC INERT GAS WELD

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

Study of application and use of continuous consumable with electrode application and MIG welding equipment. Properties of gases with regard to flow and regulation in gas metal-arc. Welding techniques are studied in relation to welding steels and non-ferrous materials.

Pre-reqs:

MST127

Business-Engineering Tech

Engineering/Applied

MST228 SHIELDED METAL ARC I

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

Continuation of shielded ARC welding as it relates in vertical, overhead 45, and overhead positions, using E-6010 and E-7018 low hydrogen type electrodes.

Pre-reqs:

MST127

And MST128

PET230 Petrol Measure Capstone

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Students will be tasked to optimize uptime, production, and take-away capacity of a simulated and/or functioning well pad. Pad and tank battery operations such as influent and effluent totalizing, fluid level monitoring, temperature control, separator efficiency, and logistics management will be used to integrate and apply the skills and knowledge developed throughout the program. Learners taking this course will work independently, in teams, and in varying roles.

Pre-reqs:

PET102

And PET131

And PET135

And PET141 Can be Taken Concurrently

And PET210 Can be Taken Concurrently

General Engineering

BTA100 Core Skills 1

Credit Hours: 6 Contact Hours: 8 Lecture Hours: 4 Lab Hours: 4 Other Hours: 0

In this course, students learn basic use and care of tools, pipe fitting materials and core supporting elements, as well as, the related science and related math including measurement of plumbing and pipefitting. Students also learn basic soldering, brazing, torch cutting and how to use the International Pipe Trade Handbook. Basic rigging, signaling and introduction to the related equipment is taught.

Pre-reqs:

Business-Engineering Tech

General Engineering

BTA101 Weld Skills-Shield/Metal Arc

Credit Hours: 5 Contact Hours: 6 Lecture Hours: 4 Lab Hours: 2 Other Hours: 0

This course teaches welding fundamentals and skills in Shielded Metal Arc Welding and Gas Metal Arc Welding. Students will also learn about various types of metals and the best types of welding for those metals. Students will also understand how the various welding gasses work to help the overall welding process.

Pre-reqs:

BTA103 Plumbing Core and Code

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course teaches students the rules and regulations of the International Plumbing Code pertaining to fixtures, water supply, drainage, venting, storm drains, and gas piping. This course also teaches students theory and application of waste drainage, vent materials, fittings and supports, traps and fixtures connections, the building sanitary drainage systems, vent systems, sewers, sewer treatment, storm drainage, and alternate sources of drainage systems. Sizing for drainage and sewers will be taught also. This course utilizes the 2017 Ohio Plumbing Code Manual for theory and applications.

Pre-reqs:

BTA106 Advanced Fitting

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 2 Lab Hours: 4 Other Hours: 0

In this course, students learn advanced fitting processes and procedures. Various techniques and methods for the layout of simple rolling offsets, miters, odd angle fittings, and odd angle laterals will be utilized. Pipe welding techniques and processes will be applied and skill building is a focus in the areas of Shielded Metal Arc Welding, Gas Tungsten Arc Welding, and Gas Metal Arc Welding.

Pre-reqs:

Business-Engineering Tech

General Engineering

BTA108 Advanced Welding

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

In this course, students practice and build their specific skills on pipefitting related welding applications, utilizing Shielded Metal Arc Welding, Gas Tungsten Arc Welding, and Gas Metal Arc Welding processes. A variety of weld testing methods are utilized to check for quality welds.

Pre-reqs:

BTA109 Crane Signaling

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course will teach students the understanding and applications of crane signaling for a safe and effective job site. Boom signals will be taught and practiced with job site safety as a focus.

Pre-reqs:

BTA110 CFC

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This class helps to prepare students to successfully sit for the Environmental Protection Agency Section 608 Technician Certification examination. Core areas covered in this course are: history of refrigerants, ozone and global warming, proper refrigerant recovery, refrigerant recycling and reclamation, safety, proper storage and transportation and transportation of refrigerants. This course also covers refrigerant recovery tools and equipment.

Pre-reqs:

Business-Engineering Tech

General Engineering

BTA111 Basic Electricity

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course teaches core electrical concepts and theory with respect to electrical safety, voltage, amperage and resistance. Electrical troubleshooting is a key component of this class with respect to heating, ventilation, air conditioning and refrigeration control circuits. Students will utilize circuit design software as well.

Pre-reqs:

BTA112 Gas Install

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course teaches the principles and applications of safe natural gas pipe joining for the heating, ventilation and air conditioning industry. This includes plastic joining fusion equipment for a variety of joining processes and applications. Concepts and applications for tapping and stopping pipelines under pressure will also be explored.

Pre-reqs:

BTA113 Tube Bending, Rigging & Signal

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course introduces students to the process of accurately bending tubing. An overview and application of the simple bending process, and the Setback, Advance, Gain process, as well as an understanding of how a bender works will be covered. This will include the trigonometric functions and calculations to accurately bend tubing to the needed dimensions.

Pre-reqs:

Business-Engineering Tech

General Engineering

BTA115 Electric Controls

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course teaches the core Direct Current and Alternating Current fundamentals with respect to heating, ventilating and air conditioning and related components. This includes applications related to fuel burning, water heating, air conditioning and refrigeration.

Pre-reqs:

BTA116 Hydronics

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course teaches the fundamentals of hydronics, which is heat transported utilizing circulated water and its applications. Students will understand the methods and components in which heated circulated water can be utilized for controlled specific heating applications. This includes: boilers, heat exchangers, chillers, heat pump systems and additional related equipment.

Pre-reqs:

BTA117 Refrigeration Controls

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This class covers the principles, operation, installation and servicing of the devices and equipment required to control the flow of refrigerant in all types of air conditioning and refrigeration systems.

Pre-reqs:

Business-Engineering Tech

General Engineering

BTA118 Sheet Metal Layout

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course teaches basic sheet metal layout, calculations, principles and installation practices. Basic duct sizing and hanger configuration is also taught. Proper drawing and building of transition pieces for existing Heating, Ventilation, and Air Conditioning systems will also be a focus.

Pre-reqs:

BTA120 Start, Test, and Balance

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course teaches the principles of heat transfer and fluid flow, as related to hydronic balancing and system performance. Core electrical testing, troubleshooting and measurement will also be covered. The application and operation of system components, such as fans, pumps, duct systems, and hydronic piping systems will be taught in relation to heating, ventilating, and air conditioning systems.

Pre-reqs:

BTA121 Schematics and Diagrams

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 2 Lab Hours: 4 Other Hours: 0

This course covers how to read basic schematics, basic diagram symbols and nomenclature. The incorporation of diagrams and schematics into workplace application and equipment will be utilized. Extensive coverage of sequence of operation and flow of electricity through a diagram will be a core part of this course.

Pre-reqs:

Business-Engineering Tech

General Engineering

BTA123 Supermarket Refrigeration

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course provides a broad understanding of commercial cooling and refrigeration systems. Topics will range from walk-in freezers and coolers down to refrigerated display cases. Typical troubleshooting of overall refrigeration systems as well as individual component diagnostics are taught. An overview of typical repair and maintenance, contracts and customer service communication skills will be discussed.

Pre-reqs:

BTA124 Solar Systems

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course teaches the fundamentals of residential and light commercial solar water heating systems for domestic hot water systems. Core topics covered are: sight assessment, system design, sizing, installation, start up and service/maintenance.

Pre-reqs:

BTA125 Rigging, Signal, Shop Project

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course teaches additional rigging functions and processes with regards to the specific commands involved with crane signaling. This allows for safe hoist, movement and precise placement of loads at the job site. This course also includes a capstone (shop) project that includes many of the combined skills to create a plumbing and/or pipefitting specific project.

Pre-reqs:

Business-Engineering Tech

General Engineering

BTA127 CO2 Transcritical Systems

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course covers the definition and uses of transcritical CO2 and their design and operation of systems, including the state of change of the CO2 inside the system. This includes CO2 system safety due to elevated operational pressures. Students will gain an overall understanding of CO2 equipment and where these systems will be used. The efficiency of CO2 systems and cost effectiveness are core elements covered including heat reclamation from CO2 transcritical systems.

Pre-reqs:

BTA128 A2L Refrigerants

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course teaches students principles and concepts of utilizing more toxic, flammable refrigerants in air conditioning and refrigeration systems that are less destructive overall for the environment. It will help students understand the impact all refrigerants have on the environment. The A2L refrigerant family is flammable so a focus on safety use and application will be a core component of this course.

Pre-reqs:

BTA129 Install Braze and Solder

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course teaches students to properly prepare and join cup type copper tubing joints utilizing both the soldering and brazing methods. Safe and proper tool use is stressed throughout this course. The identification and utilization of various filler materials, fluxes and solders are taught. A focus on typical brazing techniques for the heating, ventilation and air conditioning industry are taught and practiced.

Pre-reqs:

Business-Engineering Tech

General Engineering

PET142 Artificial Lift

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course is an overview of the latest procedures, practices, and equipment used in artificially lifting reservoir fluids. The class will describe hardware and operational issues associated with downhole and surface equipment. Rod pumping, gas lift, plunger lift and other related methods of artificial lift will be covered.

Pre-reqs:

PIP110 Plumbing/Pipefit Appl I

Credit Hours: 6 Contact Hours: 8 Lecture Hours: 4 Lab Hours: 4 Other Hours: 0

This course covers core plumbing and piping concepts and applications. Topics include maintenance tools and equipment, piping systems, plumbing systems, and piping layout.

Pre-reqs:

PIP120 Plumbing/Pipefit Appl II

Credit Hours: 6 Contact Hours: 8 Lecture Hours: 4 Lab Hours: 4 Other Hours: 0

This course covers intermediate plumbing and piping concepts and applications. Topics include building trades applications, steam/hot water systems, hydronics, and core systems maintenance.

Pre-reqs:

Business-Engineering Tech

General Engineering

PIP130 Plumbing/Pipefit Appl II

Credit Hours: 6 Contact Hours: 8 Lecture Hours: 4 Lab Hours: 4 Other Hours: 0

This course covers advanced plumbing and piping concepts and applications. Topics include advanced building trades applications, backflow prevention application and design, and piping of medical gasses.

Pre-reqs:

PIP140 HVAC Systems Operations I

Credit Hours: 6 Contact Hours: 8 Lecture Hours: 4 Lab Hours: 4 Other Hours: 0

This course covers water related HVAC systems and applications. Topics include steam systems, hot water systems, and hydronics.

Pre-reqs:

PIP150 HVAC Systems Operations II

Credit Hours: 6 Contact Hours: 8 Lecture Hours: 4 Lab Hours: 4 Other Hours: 0

This course covers advanced heating and cooling systems in residential and commercial/industrial applications. Topics include advanced residential and commercial/industrial installation techniques and design principles.

Pre-reqs:

Business-Engineering Tech

General Engineering

PIP164 Comp,Cond,Evap,Expan Devcs

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course teaches the identification, use and core operation definition of key components of Heating, Ventilation and Air Conditioning (HVAC) and Refrigeration. This specifically includes: compressors, condensers, evaporators, and expansion devices.

Pre-reqs:

PIP166 Circuit Bds & Wire Diagrams

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course teaches the basics of electrical/electronic function of circuit boards and their overall operation. This course also teaches how to read and understand wiring diagrams.

Pre-reqs:

PIP167 Ele Safe,Meters & Mat Ident

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course teaches students how to safely work with and around electricity. It teaches the fundamentals of electrical measurement and resistance with a standard volt meter. Material identification selection in the form of proper wire gauge sizing is also covered.

Pre-reqs:

Business-Engineering Tech

General Engineering

PIP168 Pump Oper & Syst Installation

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course covers core principles and applications of basic pump operation. This course also covers core fundamentals of pump installation in a variety of plumbing systems.

Pre-reqs:

PIP169 Soldering,Brazing,Tube Bending

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

Students will learn the safe and proficient method of soldering and brazing. Students will learn soldering and brazing techniques used in the plumbing and pipe fitting field on typical joints and piping utilized in the field, such as, copper and cast iron. Fundamentals and techniques of proper tube bending to meet job needs will be taught.

Pre-reqs:

PIP195 Safe, Fittings, Intro to Code

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course covers safety application with respect to pipe fitting. It also teaches the various types of fittings involved with the pipefitting trade. This course introduces the students to the Ohio Plumbing Code Manual and its applications.

Pre-reqs:

Business-Engineering Tech

General Engineering

PIP200 Undergrd,Steam,Hydro Heat

Credit Hours: 6 Contact Hours: 8 Lecture Hours: 4 Lab Hours: 4 Other Hours: 0

This course covers fundamentals and applications of underground, steam and hydronic heating theory and principles. This includes the understanding of when each should be utilized and best practices for the application.

Pre-reqs:

PIP205 Mech Drawing & Layout

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course covers the core concepts of mechanical drawing including concepts such as; front, side, top view. Students will understand hidden lines and orthographic projection. Project piping layout is another concept taught with respect to commercial applications.

Pre-reqs:

PIP210 Torch Cut, Soldering, Brazing

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course covers the concepts of material joining and precise cutting for pipefitting. Safe and effective practice of Oxyacetylene torch cutting will be taught. Joining of pipe and tubing utilizing proper solder and brazing techniques for field applications will be covered.

Pre-reqs:

Business-Engineering Tech

General Engineering

PIP215 Dig Layout,Plangrid,Tube Bend

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course introduces the student to jobsite digital layout software and the basic utilization of it for the pipefitting trade. This course also introduces students to Plangrid software to track construction progress. Another aspect of this course is the basic math and fundamentals of accurate tube bending.

Pre-reqs:

PIP220 Plumbing Code & Welding

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course covers core concepts and applications of Metal Inert Gas (MIG), Tungsten Inert Gas (TIG) and Oxyfuel welding. This course also covers the concepts and applications of plumbing code, specifically the Ohio Plumbing Code Manual.

Pre-reqs:

PIP225 Gas Tungsten Arc Welding

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course teaches the fundamentals of Gas Tungsten Arc Welding. This includes consumable identification and selection. Proper set up of the welding machine for various materials and consumables is also taught.

Pre-reqs:

Business-Engineering Tech

General Engineering

PIP230 Shielded Metal Arc Welding

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course teaches the fundamentals of Shielded Metal Arc Welding. This includes wire identification and selection. Proper set up of the welding machine for various materials and consumables is also taught.

Pre-reqs:

PIP235 Metal Inert Gas Welding

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course teaches the fundamentals of Metal Inert Gas Welding. This includes consumable identification and selection. Proper set up of the welding machine for various materials and consumables is also taught.

Pre-reqs:

PIP241 Adv Controls & Backflow

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course adds to the knowledge base of students by introducing the student to the equipment and devices that control Heating, Ventilation and Air Conditioning equipment, pneumatics, and Direct Digital Controls. The lectures/labs address the function, operation, troubleshooting and service aspects. Students also learn the core concepts of backflow systems application and design.

Pre-reqs:

Business-Engineering Tech

General Engineering

PIP242 Var Refrig Flow Sys & Install

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course covers Variable Refrigerant Flow systems. The students will understand methods to efficiently distribute cooling and heating from a single outdoor unit to multiple indoor zones. This course also teaches the proper installation method for a Variable Refrigerant Flow system.

Pre-reqs:

PIP243 Flame SafeCtrl, SpeRefrig,HVAC

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course teaches students how to safely work utilizing gas systems and flame control. This course also teaches fundamentals of refrigerants and their applications for various commercial uses. Fundamentals and applications of advanced Heating, Ventilation, and Air Conditioning design and uses will be discussed and applied.

Pre-reqs:

UPP106 Plumber/Pipefitter Math Appl

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

In this course, students learn applied math skills for the plumber and pipefitter trade. This includes bend calculations, calculating the appropriate amount of fall for drainage piping and other related contextualized math.

Pre-reqs:

Business-Engineering Tech

General Engineering

UPP107 Torch Cut, Sold/Braz, Drain Sy

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 2 Lab Hours: 4 Other Hours: 0

In this course, students learn identification of the various types of drainage systems and applications. Students also learn the safe and proficient use of Oxyacetylene Torch Cutting. Soldering and brazing techniques used in pipe joining are practiced with the goal of proficient joining of copper pipe by soldering and brazing. Additional joining methods are taught, to include poly vinyl chloride to cast-iron pipe.

Pre-reqs:

UPP108 Fit, Join, Inter Drain Sy, Rig

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course covers pipefitting techniques including mechanical, grooved and pressed fittings. Students properly prepare and fit a butt weld joint, grooved joint and a 90-degree butt weld. Students create and install a complex drainage system from a pre-planned design using the Ohio Plumbing Code. Additionally, students are required to apply the basics of safe rigging and crane signaling as it pertains to pipefitting.

Pre-reqs:

UPP109 Pipe Fit/Fab & Appl, Tube Bend

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 2 Lab Hours: 4 Other Hours: 0

In this course, students apply and demonstrate their fabrication skills in pipefitting. This includes all necessary applied mathematics for fabrication and fit. Methods include tube bending using the sag method, fabrication of pipe using the 57 1/4 method, tube bending fabrication on a jig from a piping and instrumentation drawing.

Pre-reqs:

Business-Engineering Tech

General Engineering

UPP110 Plumb Des/Inst/Stain Semi Cond

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Students design and install a commercial plumbing system based on the Ohio Plumbing Code. This consists of the initial rough in to finish for a complete install. Students also learn the practices and applications involved with piping in the semiconductor industry.

Pre-reqs:

UPP111 Hyd Heat/Cool Pip/Stan Fit

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 2 Lab Hours: 4 Other Hours: 0

Students learn the core principles of how a hydronic system operates and the different types of piping arrangements used while engineering a system. Students apply design, theory and installation of a Hydronic Heating and Cooling System in a commercial setting. This course also covers specific piping applications within the semiconductor manufacturing industry.

Pre-reqs:

UPP112 Adv Plumb Code/BackFlw Test

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 2 Lab Hours: 4 Other Hours: 0

Students learn how to properly size and install a plumbing system, based on the 2017 Ohio Plumbing Code book. Students also properly test and repair a backflow system based on the definition of the Ohio Department of Commerce – Backflow Division. This course prepares a student to sit for the Ohio Backflow Testers License.

Pre-reqs:

Business-Engineering Tech

General Engineering

UPP113 Adv Hyd Heat/Cool Sys Pipe

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 2 Lab Hours: 4 Other Hours: 0

In this course, students learn advanced applications of hydronic systems and will design, fabricate and install a piping system utilizing all the components of a hydronic system.

Pre-reqs:

UPP117 Refrig Inst/Princip Air Flow

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 2 Lab Hours: 4 Other Hours: 0

This course teaches students about the principles and applications of refrigeration systems installation. This course also covers the principles of air flow to include: positive and negative pressure, air changes, and air flows between low and high pressure.

Pre-reqs:

UPP118 Start Test/Bal-Pump Mtce-Boil

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 2 Lab Hours: 4 Other Hours: 0

This course teaches students core concepts of Heating, Ventilation, and Air Conditioning systems, Start Test and Balance. Another core concept that students learn is how to maintain various pumps, including predictive and preventive measures. This course also teaches the basics of how to service a boiler.

Pre-reqs:

Business-Engineering Tech

General Engineering

UPP119 Ind Rig/Sign/Pneum Controls

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 2 Lab Hours: 4 Other Hours: 0

This course teaches students how to safely utilize principles and applications for industrial rigging and signaling. This course also teaches the principles of pneumatics and their applications as well as pneumatic controls.

Pre-reqs:

UPP120 Test Start and Balancing

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course teaches students how to test and balance a commercial building to ensure the proper amount of air ventilation enters the space. This includes proper amount of air changes for the space use and square footage.

Pre-reqs:

UPP121 Boil Serv/Repair/Var RefrigFlw

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 2 Lab Hours: 4 Other Hours: 0

This course teaches students advanced principles of boiler service and repair. This course also teaches students the principles, components and applications of a Variable Refrigerant Flow systems.

Pre-reqs:

Business-Entrepreneurial

Accounting/Finance

Business-Entrepreneurial

Accounting/Finance

ACC121 Introduction to Accounting

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course is an introduction to accounting which covers the accounting cycle and generally accepted accounting principles and practices in financial accounting as applied to business entities. Upon completion of this course, students should be able to analyze and record transactions, prepare financial statements and use financial information in decision making.

Pre-reqs:

ACC128 Acctg Basics for Managers

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

This course is an introduction to the language of accounting, cost concepts and financial reporting. The emphasis is on the use of financial information to understand the operations of a business and to make choices which best position the entity for future success. Upon completion of this course, students should be able to interpret and analyze financial information and use that information in business decision-making.

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Compass Reading - 080

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 246

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

And IDS102

MTH118

Or MTH124

Or MTH125

Business-Entrepreneurial

Accounting/Finance

ACC130 BUSINESS LAW AND ETHICS

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

An examination of the functions of the legal system in the business environment. This course includes the study of traditional business law topics and other basic topics applicable to business. A close examination of the intersection between professional ethical decision-making and the legal system as it applies to business. Upon completion, students should be able to demonstrate competence in the fundamental concepts of business law and ethics. TAG approved course-OBU004 effective spring 2024; CTAG approved CTBU004, effective fall 2023.

Pre-reqs:

ACC131 Taxation I

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

This course is the first in a two-course sequence. The course examines principles of taxation for individuals, partnerships, and S corporations. In-depth analysis of the computation of income and deductions for all three types of entities will be covered. In addition, cost recovery, tax credits, and the overall classifications, filing statuses and reporting requirements are discussed as well as the effects of flow-through tax entities on individuals and businesses. Students will prepare comprehensive tax cases on IRS tax forms to gain applied knowledge. Upon completion of the course, students should be able to analyze complex tax scenarios and determine their impact on the tax liability of individuals, partnerships, and S corporations.

Pre-reqs:

ACC132

ACC132 FINANCIAL ACCOUNTING

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

This course introduces the student to the fundamental processes of accounting through coverage of the accounting cycle consisting of transaction analysis, the recording function and financial statement preparation and analysis. Course coverage continues with a review of receivables; inventory, property, plant and equipment; bonds and stockholder's equity. Emphasis is given to why certain procedures are followed and their financial statement impact. Students may elect to take ACC121, Principles of Accounting, as an introduction to accounting prior to taking this course. TAG approved course-OBU010, effective summer 2015. CTAG approved, effective fall 2023

Pre-reqs:

BUS124 Can be Taken Concurrently

Business-Entrepreneurial

Accounting/Finance

ACC133 MANAGERIAL ACCOUNTING

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

The emphasis in this course is on the use of accounting information as an internal tool for planning and control. Course coverage includes ratios, cost behavior, cost accumulation and reporting, cost-volume-profit analysis, budgeting, and other decision criteria. While primary coverage will be of this material in a manufacturing setting, service and merchandising applications will also be presented. Upon completion of this course, students should be able to apply the fundamental concepts of managerial accounting to a variety of business decisions. TAG approved course- OBU011, effective summer 2015. CTAG approved, effective fall 2023

Pre-reqs:

ACC132

ACC221 INTERMEDIATE ACCT I

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

This course covers the accounting standard setting process and the conceptual framework. It includes a review of the accounting cycle, an in-depth study of the format and presentation of the income statement and balance sheet, the use of time value of money in accounting applications, and accounting and reporting for current and long-term assets. Students will perform accounting research using professional literature. Upon completion of this course, students should be able to demonstrate competence in a variety of financial accounting and reporting areas.

Pre-reqs:

ACC132

ACC222 INTERMEDIATE ACCT II

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This is the second in a two-course sequence. It completes the coverage of the balance sheet accounts with the accounting and reporting for current and long-term liabilities and stockholders' equity. The remainder of the course covers special topics such as earnings per share, investments, revenue recognition, income tax accounting, pensions, leases, and the statement of cash flows. Students will perform accounting research using professional literature. Upon completion of this course, students should be able to demonstrate competence in a variety of financial accounting and reporting areas.

Pre-reqs:

ACC221

Business-Entrepreneurial

Accounting/Finance

ACC223 COST ACCOUNTING

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

This course places an emphasis on manufacturing and service organizations. Course coverage includes job costing, process costing, activity-based costing/activity-based management, standard costing, and analysis of cost variances. Upon completion of this course, the student should be able to apply fundamental concepts of cost accounting in making business decisions.

Pre-reqs:

ACC133

ACC225 AUDITING

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

This course covers higher level accounting topics. It includes an in-depth study of business combinations and the consolidation process. Consolidation topics include: preparation of the entries necessary to prepare the consolidated financial statements focused on inter-company sales of inventory and assets, non-controlling interests, foreign subsidiary companies and investments in affiliate's debt. The remainder of the course covers foreign currency transactions and translated financial statements, derivatives, partnership accounting and data analytics. Upon completion of the course the students should be able to demonstrate competence in consolidation accounting and other higher-level accounting topics.

Pre-reqs:

ACC222 Can be Taken Concurrently

ACC226 ADVANCED ACCOUNTING

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course covers higher level accounting topics including business combinations and consolidations, accounting for partnerships, as well as the fundamentals of derivatives and the accountant's role in estates and trusts. Consolidation topics include an understanding of the entries necessary to prepare consolidated financial statements including elimination entries for inter-company sales, loans, asset and inventory transfers and preparation of consolidated statement of cash flows. Topics also include understanding the international business environment. Upon completion of the course, the student should understand the fundamentals of consolidations, partnerships, derivatives, and estates and trusts.

Pre-reqs:

ACC221 Can be Taken Concurrently

Business-Entrepreneurial

Accounting/Finance

ACC227 Payroll Accounting

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course includes comprehensive coverage of payroll computations and all related taxes. Students will prepare payroll records, payroll journal entries and required tax forms. Upon completion of this course, students should have a functional knowledge of payroll accounting and reporting.

Pre-reqs:

	ACC121	Can be Taken Concurrently
Or	ACC132	Can be Taken Concurrently

ACC229 Acctg Software & Analytics

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course involves recording and reporting accounting information using QuickBooks and an introduction to accounting applications in Enterprise Resource Planning (ERP) tools such as Systems, Applications and Products (SAP). It also includes an introduction to data analytics through Excel and data visualization software. Upon completion of this course, the student should have a functional knowledge of accounting software applications and procedures and basic data analytics applications.

Pre-reqs:

	ACC121	
Or	ACC132	
And	AOT226	Can be Taken Concurrently
Or	ITD122	Can be Taken Concurrently

ACC231 Taxation II

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course is the second in a two-course sequence. The course examines advanced taxation topics including gain and loss transactions and limits on losses for both individuals and business entities. The course will cover advanced basis issues in formation of and distributions from business entities. Students will also be exposed to the basics of tax and reporting issues for exempt entities as well as taxation of trusts and estates. Students will prepare comprehensive tax cases on IRS tax forms to gain applied knowledge. Upon completion of the course, students should be able to analyze complex tax scenarios involving individuals and various forms of business entities, including trusts and estates, and determine their impact on tax liability.

Pre-reqs:

ACC131

Business-Entrepreneurial

Accounting/Finance

ACC232 GOVT AND NOT-FOR-PRFT ACCT

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course introduces students to the accounting requirements for governmental and other not-for-profit entities. Students will gain a working knowledge to prepare and interpret accounting and financial information of various state and local governments under the Governmental Accounting Standards Board (GASB) and not-for-profit organizations under the Financial Accounting Standards Board (FASB) as well as governmental and not-for-profit health care organizations and educational institutions. Upon completion, the student should have a working knowledge of the budgetary and operational accounting and financial reporting of governmental and not-for-profit entities.

Pre-reqs:

ACC221

ACC237 Forensic Acctg & Fraud Exam

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course covers the core foundation related to forensic accounting and fraud examination, providing understanding of the profile and psychology of the fraudster. Students will learn the legal, regulatory, and professional environment for both forensic accounting and fraud examination. Topics covered will include fraud schemes, financial statement fraud, interviewing, evidence gathering, cybercrime, and litigation support. Upon completion of this course, students should be familiar with the basic concepts of forensic accounting and fraud prevention and detection.

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Compass Reading - 080

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 246

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

IDS102

ACC238 Financial Statement Analysis

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course emphasizes the role of financial statement analysis in managerial decision making. Topics include a review of the form and content of the financial statements and various methods of analyzing liquidity, solvency, and profitability using the information in those statements. Upon completion of this course, the student should be able to analyze financial data and apply that analysis to developing effective management strategies.

Pre-reqs:

ACC133

Business-Entrepreneurial

Accounting/Finance

BUS124 Business Analysis

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course is designed to present and facilitate the mastery of the use of analysis in business applications. The applications include percentage computations; payroll; buying, markup and markdowns; simple interest; compound interest including business and consumer loans, ordinary annuities, stocks and bonds. The course also covers accounting concepts that require a mathematical solution such as depreciation, financial statements and ratios and budgeting. Upon successful completion of this course, the student should be able to apply fundamental analysis to business applications to make informed decisions.

Pre-reqs:

Or Test & Score: ACT Math - 19

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer College-level Math - 040

Or Test & Score: Accuplacer Elementary Algebra - 097

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Compass Algebra - 039

Or Test & Score: Compass Reading - 80

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: M022 Transfer Prof/Placement - 3

Or Test & Score: M023 Transfer Prof/Placement - 3

Or Test & Score: M092 Transfer Prof/Placement - 3

Or Test & Score: HS Math and Multiple Measures - 3

Or Test & Score: NextGen Accuplacer AAF Math - 237

Or Test & Score: NextGen Accuplacer Reading - 244

Or Test & Score: NextGen Accuplacer QAS Math - 250

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

Or Test & Score: SAT Mathematics - 510

And IDS102

MTH022

Or MTH023

Or MTH092

Business-Entrepreneurial

Accounting/Finance

FIN110 Personal Finance

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course will address the economic concepts associated with personal financial planning. Topics covered include: preparing a personal financial plan and achieving financial goals; understanding federal tax principles and tax planning; managing personal assets including bank accounts, automobiles, and housing; evaluating and managing the various forms of personal credit; analyzing the need for and cost of life, health, and property insurance; managing various types of investments including a risk versus reward analysis; and, understanding the need for and methods of retirement planning. Upon successful completion of this course, students should be able to apply and demonstrate an understanding of the above topics relative to their personal financial goals. CTAG CTPF001 approved effective summer 2019

Pre-reqs:

FIN220 BUSINESS FINANCE

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course covers topics such as management and analysis of short and long-term assets and equities, their costs and their utilization in optimal corporate financial structures. Upon completion of this course, the student should be able to estimate a firm's cost of capital and discuss the risks and costs associated with the various forms of financing in a corporate setting.

Pre-reqs:

ACC133

FIN221 INVESTMENTS AND SECURITIES

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course provides the student with an understanding of the basics of investing. This includes analyzing investment options, the concept of risk, and using various information sources. Upon completion of this course, the student should be able to research various types of investments and understand trading and investment activities.

Pre-reqs:

ACC132

Business-Entrepreneurial

Accounting/Finance

FIN227 MONEY AND BANKING

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course will address the economic concepts associated with money, financial institutions and monetary policy. Topics covered include: financial markets and interest rates; the structure and management of financial institutions; the structure of central banks and the Federal Reserve System; and, determinants of the money supply and the tools of monetary policy. Upon successful completion of this course, students should be able to apply and demonstrate an understanding of the above topics relative to today's economy.

Pre-reqs:

BUS221 Can be Taken Concurrently

Administrative Srv Off Applion

AOT110 Intro to Admin Assisting

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

This course is designed to introduce the administrative assistant field. Topics covered include traits and skills an administrative assistant should possess, how an administrative assistant supports an organization, areas for employment and job opportunities, professional image and dress, communication, ethical behaviors, and interviewing administrative assistants. Upon completion of this course, students will have an understanding of the administrative assistant field and be able to apply the skills learned in this class to their academic program.

Pre-reqs:

AOT140 Virtual Assistant Fundamentals

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

This course covers the unique skills and qualities that a virtual assistant needs to be successful. Through research and lab projects, the student will explore the roles of a virtual assistant, business planning and operating, establishing a web presence, and many specialty service areas. Emphasis will be placed on providing services remotely for a varied and diverse clientele.

Pre-reqs:

Or Test & Score: Computer Test - 21

Or Test & Score: HS Computer Class - 2

ITD100

Business-Entrepreneurial

Administrative Srv Off Applion

AOT228 Virtual Admin Asst Procedures

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Emphasis will be placed on how to be a successful virtual administrative assistant. Areas covered include creating a business plan, setting up an office, creating a list of services, determining rates, creating a marketing plan, advertising, obtaining clients, handling problems, and developing proper practices and procedures.

Pre-reqs:

AOT140

Automotive

AUT121 AUTOMOTIVE TECH SKILLS

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This is an introductory level course that will provide the student with an understanding of the correct use of precision measuring equipment, hand tools, shop equipment, cutting torches and service repair information. Emphasized throughout the course will be shop safety procedures and the correct handling of hazardous waste materials. Applied physics fundamentals will be introduced, along with repair procedures for basic automotive components such as: fasteners, bolt hole repair, drilling and tapping, heli-coil and time- serts, fastener tensile strength and torque to yield. Classroom learning will be reinforced by lab activities. CTAUT005, effective Spring 2016

Pre-reqs:

AUT122 AUTOMOTIVE SYS AND ENG TEC

Credit Hours: 4 Contact Hours: 7 Lecture Hours: 1 Lab Hours: 6 Other Hours: 0

This course is designed to introduce the student to the technology and terminology of the automotive industry. The various components and systems of the automobile will be surveyed, and the basic operational theory of each will be explained. Special emphasis is placed on understanding the theory, nomenclature, and construction of the automobile engine. Subjects such as energy transformation, combustion, fuel metering, basic fuel injection, and basic emission controls will be presented. Classroom learning will be reinforced by laboratory activities.

Pre-reqs:

AUT121 Can be Taken Concurrently

Business-Entrepreneurial

Automotive

AUT123 ENG DIAGNOSIS AND MAJ SERV

Credit Hours: 4 Contact Hours: 7 Lecture Hours: 1 Lab Hours: 6 Other Hours: 0

This course is designed to give the student knowledge of the procedures used for automobile engine and systems diagnosis and overhaul. During the diagnosis portion of this course, students will learn how to use diagnostic test equipment. Covered also will be customer questioning techniques and information gathering procedures. During the laboratory portion of the course, the student will gain hands-on experience in engine disassembly procedures, failure diagnosis, component inspection, machining processes, measuring, fitting, and reassembly techniques.

Pre-reqs:

AUT121	Can be Taken Concurrently

AUT124 VEHICLE CHASSIS SYSTEMS

Credit Hours: 4 Contact Hours: 7 Lecture Hours: 1 Lab Hours: 6 Other Hours: 0

This course is designed to give the student an in-depth knowledge of today's automotive steering, suspension and braking systems. Operational theory will be reinforced by laboratory periods which will allow the student to gain hands-on experience in diagnosing malfunctions, performing routine maintenance, and in making adjustments and repairs to these systems. Subjects such as vehicle four wheel alignment and base braking systems servicing will be covered. Quality work methods used when diagnosing, adjusting and repairing these safety-related systems are stressed. CTAG approved CTAUT001 and CTAUT004.

Pre-reqs:

AUT121	Can be Taken Concurrently

AUT125 AUTO ELEC'L AND ACCES SYS

Credit Hours: 4 Contact Hours: 7 Lecture Hours: 1 Lab Hours: 6 Other Hours: 0

This course is designed to give the student an understanding of DC electrical principles including Ohm's Law, basic circuits, semiconductors, automotive wiring and common electrical components. Emphasis will be placed on the maintenance, diagnosis and repair of basic automotive electrical systems including starting and charging systems, electrical motors, switches and relays. Laboratory periods will allow the student to develop proficiency in the use of wiring diagrams, diagnostic flow charts and hands-on techniques utilizing DVOM's and other electrical test instruments. CTAG approved CTAUT002.

Pre-reqs:

AUT121	Can be Taken Concurrently

Business-Entrepreneurial

Automotive

AUT126 AUTO HVAC SYSTEMS

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course is designed to give students a sound knowledge of the theory and repair of modern automotive heating and air conditioning systems (HVAC). Before taking this course, the student should have a basic knowledge of automotive fundamentals and electrical equipment, and experience with common shop tools and techniques. Topics include: heat transfer, heating and cooling cycles, air flow management and component identification. System diagnosis, servicing, and repair techniques are demonstrated by the instructor, and lab sessions will enable the students to apply these concepts and procedures to vehicles fitted with the various manufacturers' systems. Laboratory exercises will include recovery and recycling operations required for R-12 and R134a. Special emphasis is placed on the safety aspects related to heating and air conditioning service.

Pre-reqs:

AUT121	Can be Taken Concurrently

AUT128 Auto Diesel Eng Perf

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course covers the theory of operation of automotive diesel engines. The emphasis in this course is placed on the operation and servicing of diesel engine mechanical components, such as turbochargers, superchargers, engine blocks, cylinder heads, crankshafts, camshafts, pistons, and connecting rods. Reference will be made to other types of engine designs, where relevant to the course material. Student learning is reinforced by laboratory exercises emphasizing the correct application of diagnostic procedures and servicing methods.

Pre-reqs:

AUT121	Can be Taken Concurrently

AUT130 AUTO SAFETY AND SHOP STANDARDS

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course is designed to provide students with the knowledge and introductory experience required to safely perform vehicle service procedures in an automotive shop environment. Proper shop equipment operation, adequate shop ventilation practices, appropriate shop attire, and the use of automotive shop safety equipment are covered using industry standards. The proper use and storage of automotive chemicals are also practiced using current Material Safety Data Sheets (MSDS) chemical safety standards. At the completion of this class, students should be able to properly identify and use shop equipment, categorize and properly store shop chemicals, and work safely in an automotive shop environment.

Pre-reqs:

Business-Entrepreneurial

Automotive

AUT131 AUTO DETAILING BUS PRACTICES

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course covers the business side of the detailing profession. With minimal investment, detailing vehicles can start out as a small part-time job and build into a full-time business. This class addresses the questions of: How do I charge for these services, who are my customers, where do I purchase the right products at the right price, what do I need to get started, how can I advertise, and how do I protect myself and my investment? Case studies, guest speakers, and site visits will reinforce the entrepreneurial aspects of running your own detailing business.

Pre-reqs:

AUT132 AUTO EXTERIOR DETAILING

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

This course has been designed to provide students with the knowledge and introductory experience required to detail the exterior of vehicles in the automotive industry. At the completion of this class, students should be able to choose and identify proper tools, cleansers, and other chemicals associated with vehicle exterior detailing. Students will learn the appropriate techniques of washing, cleaning, and waxing of all major exterior components on an automobile. Students are expected to follow all current safety standards including the application of all Material Safety Data Sheets (MSDS) chemical suggestions.

Pre-reqs:

AUT133 AUTO INTERIOR DETAILING

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This class provides students with the knowledge and introductory experience required to detail the interior of vehicles in the automotive industry. At the completion of this class, students should be able to choose and identify proper tools, cleansers, and other chemicals associated with vehicle interior detailing. Students will learn the appropriate techniques of washing interior components, cleaning, and applying proper chemical conditioners on all major interior components in an automobile. Students will also be expected to follow all current safety standards including the application of all Material Safety Data Sheets (MSDS) chemical suggestions.

Pre-reqs:

AUT132	Can be Taken Concurrently

Business-Entrepreneurial

Automotive

AUT134 AUTO UNDER-HOOD/UNDER-CAR DET

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This class provides students with the knowledge and introductory experience required to detail the under-hood and under-car areas of vehicles in the automotive industry. At the completion of this class, students should be able to choose and identify proper tools, cleansers, and other chemicals associated with vehicle under-hood and under-car detailing. Students will learn the appropriate techniques of washing components, cleaning, and applying the proper chemical conditioners on all major under-hood and under-car areas of a vehicle. Students will be expected to follow all current safety standards including the application of all Material Safety Data Sheets (MSDS) chemical recommendations.

Pre-reqs:

AUT132	Can be Taken Concurrently

AUT135 ADV AUTO DETAILING TECH

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

This class provides students with the knowledge, experience, and advanced detailing techniques required to correct and improve imperfections on vehicle painted surfaces, plastic surfaces, and windshields. At the completion of this class, students should be able to use proper polishing techniques and procedures to correct painted surface concerns. Students will also be exposed to techniques and resources used to correct blemishes on vehicle plastic and glass surfaces. Students are expected to follow all current safety standards including the application of all Material Safety Data Sheets (MSDS) chemical suggestions.

Pre-reqs:

AUT132	Can be Taken Concurrently

AUT136 PRACTICAL AUTO DETAIL APPLIC

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

Students will incorporate detailing techniques and critical thinking to real world scenarios while working together in teams on multiple group projects. The groups will access real-life vehicle detailing problems and discuss the proper corrective actions. Students will then execute their plans and evaluate the results. This class requires the students to apply knowledge and skills acquired in previous vehicle detailing classes to complete basic to advanced-level tasks in the detailing industry.

Pre-reqs:

AUT132	Can be Taken Concurrently

Business-Entrepreneurial

Automotive

AUT137 ASE TEST PREPARATION

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course is designed to help the student develop a better understanding of the Automotive Service Excellence (ASE) certification and testing process. Students will access ASE practice tests, instructional videos, technical reference materials, and participate in discussion forums.
Instructor-led discussions will cover Automotive Service Excellence (ASE) certification areas A-1 Engine Repair, A-4 Suspension and Steering, A-5 Brakes, A-6 Electrical/Electronic Systems, and A-7 Heating and Air Conditioning. ASE is the nationally recognized industry standard for automotive technician certification.

Pre-reqs:

AUT138 APPLIED AUTOMOTIVE PRINCIPLES

Credit Hours: 4 Contact Hours: 7 Lecture Hours: 1 Lab Hours: 6 Other Hours: 0

This course is designed to help the student develop greater confidence and better hands-on skills by providing an instructor-guided work experience in an automotive lab environment. By referencing service information and applying a strategy-based diagnostic approach, students will be able to reinforce their existing technical skills and develop new service techniques that will help them to be better prepared to enter the workplace as an automotive technician.

Lab tasks, service information, and instructor-led discussions will cover Automotive Service Excellence (ASE) certification areas A-1 Engine Repair, A-4 Suspension and Steering, A-5 Brakes, A-6 Electrical/Electronic Systems, and A-7 Heating and Air Conditioning. ASE is the nationally recognized industry standard for automotive technician certification.

Pre-reqs:

AUT141 Steer, Susp, & Brak Oper

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course is designed for technicians and students that desire to become dealership technicians. This course is designed to provide the student with a working knowledge of the theory and repair of steering, suspension, and braking systems. Before taking this course, the student should have a basic knowledge of automotive safety practices and experience with common shop tools and techniques. The instructor will demonstrate steering, suspension, and braking system inspection and repair techniques.

Pre-reqs:

Business-Entrepreneurial

Automotive

AUT142 Auto Elect Systems

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course is designed for technicians and students that desire to become dealership technicians. The course is designed to provide the student with an understanding of electrical terms, circuit concepts, and diagnostic techniques through the use of classroom instruction and hands-on training. Digital multi-meter usage is stressed. Instruction is given in wiring repair, batteries, starting, and charging systems. This course will emphasize: basic automotive circuit operation, circuit diagnosis, electrical circuit diagnosis, soldering techniques, wire and connector repair, Ohm's Law, circuit value conversions, wiring schematic interpretation, introduction to semi-conductors, and vehicle body circuits.

Pre-reqs:

AUT143 Heat, Vent, AC Light Veh

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

This course is designed for technicians and students that desire to become dealership technicians. This course is designed to provide the student with a sound knowledge of the theory and repair of heating and air conditioning systems. Before taking this course, the student should have a basic knowledge of automotive and electrical equipment, and experience with common shop tools and techniques. The instructor will demonstrate HVAC system diagnosis, servicing, and repair techniques. Hands-on practice will enable the students to apply these concepts and procedures to vehicles. Special emphasis is placed on the safety aspects related to heating and air conditioning service.

Pre-reqs:

AUT171 INTRODUCTION TO HONDA PACT

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

This course introduces the student to the Honda PACT program and the different methods of instruction that will be used throughout the program. Each students will be issued a user name and password to gain access to the Honda Information System that contains computer- based training modules (CBT) and Honda service information. This course will familiarize the student on how to access and apply Honda service information during repair of Honda vehicles. Prior to hands- on practice, the instructor will demonstrate how to perform a Vehicle Service Inspection and a Honda New-Car Pre-Delivery Inspection.

Pre-reqs:

Business-Entrepreneurial

Automotive

AUT172 HONDA ENGINE MECHANICAL

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course covers Honda-specific diagnostic and repair techniques necessary to service Honda engine mechanical systems. Prior to hands- on practice, the instructor will demonstrate equipment usage, Honda service materials, proper engine mechanical inspection and repair procedures. Hands-on practice will enable the student to apply these concepts to Honda vehicles. Special emphasis is placed on the safety and cleanliness aspects related to automotive engine mechanical service. Information covered in this course should assist the student in reaching a level of understanding necessary to attempt ASE certification in this area.

Pre-reqs:

AUT173 HONDA STEERING AND SUSPENSION

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

This course covers honda-specific diagnostic and repair techniques necessary to service Honda steering and suspension systems. Prior to hands-on practice, the instructor will demonstrate equipment usage, Honda service materials, proper steering and suspension system inspection and repair procedures. Hands-on practice will enable the students to apply these concepts to Honda vehicles. Special emphasis is placed on the safety aspects related to automotive steering and suspension service.

Pre-reqs:

AUT124	Can be Taken Concurrently

AUT174 HONDA BRAKING SYSTEMS

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

This course covers Honda-specific diagnostic and repair techniques necessary to service Honda braking systems. Prior to hands-on practice, the instructor will demonstrate equipment usage, Honda service materials, proper braking system inspection and repair procedures. Hands-on practice will enable the students to apply these concepts to Honda vehicles. Special emphasis is placed on the health and safety aspects related to automotive brake service.

Pre-reqs:

AUT124	Can be Taken Concurrently

Business-Entrepreneurial

Automotive

AUT175 HONDA ELECTRICAL SYSTEMS

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course covers Honda-specific diagnostic and repair techniques necessary to service Honda automotive electrical systems. Prior to hands-on practice, the instructor will demonstrate equipment usage, Honda service materials, proper inspection and repair procedures related to Honda automotive electrical systems. Hands-on practice will enable the students to apply these concepts to Honda vehicles. Special emphasis is placed on the safety aspects related to automotive electrical service.

Pre-reqs:

AUT125	Can be Taken Concurrently

AUT176 HONDA HVAC SYSTEMS

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

This course covers Honda-specific diagnostic and repair techniques necessary to service Honda automotive HVAC systems. Prior to hands-on practice, the instructor will demonstrate equipment usage, Honda service materials, proper HVAC system inspection and repair procedures. Hands-on practice will enable the students to apply these concepts to Honda vehicles. Special emphasis is placed on the environmental and safety aspects related to automotive HVAC service.

Pre-reqs:

AUT125	Can be Taken Concurrently

AUT181 INTRO TO CAT LIFT TRUCKS

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

The purpose of this course is to provide the student with an understanding of the skills and procedures needed to accurately diagnose and repair CAT lift trucks. This course introduces the student to the Caterpillar Lift Truck (CLT) Program and the different methods of instruction that will be used throughout the program. The course text is divided into small modular sections making it easy for the student to absorb and apply the information in a logic manner. Each student will be issued a user name and password to gain access to the CAT Learning Resources Website which contains computer-based training modules (CBT). This course will introduce students to the basics of fork lift trucks, their operation and an overview of the fork lift industry. Students will receive an introduction to CAT Lift Trucks, its history and the formation of the joint venture with MCFA. Each section ends with a student self-assessment worksheet covering the main topics in that section.

Pre-reqs:

AUT121

Business-Entrepreneurial

Automotive

AUT182 CAT OPERATOR SAFETY TRAINING

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

This course will prepare the student for proper forklift truck operation in the workplace. On March 1, 1999, the Occupational Safety and Health Administration (OSHA) revised its previous requirements for powered industrial truck operator training and issued new requirements to improve the training of persons operating powered industrial trucks (forklift trucks). These provisions mandate a training program that bases training on the types of powered industrial trucks the operator will operate in the workplace; the hazards present in the workplace; and the operator's demonstrated ability to operate a powered industrial truck safely.

Pre-reqs:

AUT121	Can be Taken Concurrently

AUT183 CAT SERVICE INFORMATION SYSTEM

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

This course introduces the student to CAT service materials and planned maintenance schedules for fleets using CAT lift trucks. The instructor will demonstrate how to locate CAT technical and parts information. Hands-on practice will enable the students to apply these concepts and procedures to CAT lift trucks. Professional image and customer relations will be stressed and how it relates to customer satisfaction. The course concludes with a self-assessment worksheet to reinforce learning objectives.

Pre-reqs:

AUT121	Can be Taken Concurrently

AUT184 CAT HYDRAULIC SYSTEMS

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

The purpose of this course is to provide the student with an understanding of the skills and procedures necessary to accurately diagnose and repair hydraulic systems used on lift trucks. It covers basic and advanced theories and how these theories apply to lift truck hydraulic systems. The student will be able to identify components and explain their operation. The course also includes a brief description of industry standard symbols. The course will also cover safety-related tasks before attempting to service the hydraulic system. Hands-on practice will enable the students to apply these concepts and procedures to CAT lift trucks. The course concludes with a description of routine maintenance procedures, troubleshooting guidelines, and a self-assessment worksheet to reinforce learning objectives.

Pre-reqs:

AUT121

Business-Entrepreneurial

Automotive

AUT185 CAT INTERNAL COMBUSTION ENGINE

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

The purpose of this course is to allow the students to build the skills necessary to accurately diagnose and repair CAT lift truck internal combustion engines. The course covers component descriptions, fuel systems used, how 4 cycle engines work, compression ratios, air filters and PCV valves and basic troubleshooting guidelines. Fuel, ignition, and cooling system service and operation are also covered. Major emphasis is placed on in-unit service and repair of CAT (IC) engine systems. The instructor will demonstrate CAT (IC) engine diagnosis, servicing, and repair techniques. Hands-on practice will enable the students to apply these concepts and procedures to CAT lift trucks. The course concludes with a self-assessment worksheet to reinforce learning objectives.

Pre-reqs:

AUT121	Can be Taken Concurrently

AUT186 CAT MASTS AND LIFT MECHANISMS

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

The purpose of this course is to provide the student with an understanding of the skills and procedures necessary to accurately diagnose and repair masts used on lift trucks. It covers the purpose of the mast as it relates to powered industrial trucks. The student will be able to identify components and explain their function and operation. The course includes basic steps to visually inspect the mast and diagnose and correct problems with the mast assembly. Hands-on practice will enable the students to apply these concepts and procedures to CAT lift trucks. The course concludes with a description of routine maintenance procedures, troubleshooting guidelines, and a self-assessment worksheet to reinforce learning objectives.

Pre-reqs:

AUT121	Can be Taken Concurrently

AUT187 CAT ELECTRICAL SYSTEMS

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

The course is designed to provide the student with an understanding of electrical terms, circuits concepts, and diagnostic techniques on CAT lift trucks. Digital multi-meter usage is stressed, with the students urged to bring their own meter. Instruction is given in wiring repair with time allotted for supervised practice. Also, batteries, starting, charging systems, ignition systems, lighting, and safety systems are covered in depth to insure accurate diagnosis and repair of those systems. The course will emphasize: circuit operation, circuit diagnosis, proper equipment usage for electrical circuit diagnosis, proper soldering techniques, wire and connector repair, Ohm's Law, circuit value conversions, and wiring schematic interpretation. The instructor will demonstrate CAT electrical system diagnosis and repair techniques. Hands-on practice will enable the students to apply these concepts and procedures to CAT lift trucks.

Pre-reqs:

AUT121	Can be Taken Concurrently

Business-Entrepreneurial

Automotive

AUT188 CAT STEERING SYSTEMS

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

This course is designed to provide the student with a working knowledge of the theory and repair of CAT lift truck steering systems. Descriptions of drag line and hydrostatic steering systems are included with emphasis on hydrostatic. Before taking this course, the student should have basic knowledge of automotive/lift truck safety practices and experience with common shop tools and techniques. Hands-on practice will enable the students to apply these concepts and procedures to CAT lift trucks. The course concludes with a description of routine maintenance procedures, troubleshooting guidelines, and a self-assessment worksheet to reinforce learning objectives.

Pre-reqs:

AUT121

AUT189 CAT BRAKING SYSTEMS

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

This course is designed to provide the student with a working knowledge of the theory and repair of CAT lift truck braking systems. Before taking this course, the student should have a basic knowledge of automotive/lift truck safety practices and experience with common shop tools and techniques. The instructor will demonstrate CAT braking system inspection and repair techniques. Hands-on practice will enable the students to apply these concepts and procedures to CAT lift trucks. The course concludes with a description of routine maintenance procedures, troubleshooting guidelines, and a self-assessment worksheet to reinforce learning objectives.

Pre-reqs:

AUT121 Can be Taken Concurrently

AUT191 Automotive Co-op 1

Credit Hours: 2 Contact Hours: 24 Lecture Hours: 0 Lab Hours: 24 Other Hours: 0

Cooperative work experience opportunities are available to students enrolled in Automotive Department programs. Students may contact the Automotive Department Program Coordinator for specific information regarding co-op opportunities. During this course students will gain practical work experience by performing automotive general maintenance and light repair at a sponsoring automotive repair facility.

Pre-reqs:

Business-Entrepreneurial

Automotive

AUT192 Automotive Co-op 2

Credit Hours: 2 Contact Hours: 24 Lecture Hours: 0 Lab Hours: 24 Other Hours: 0

Cooperative work experience opportunities are available to students enrolled in Automotive Department programs. Students may contact the Automotive Department Programs Coordinator for specific information regarding co-op opportunities. During this course, students will gain practical work experience by working on steering, suspension, and braking systems. Students will also be expected to perform battery, starting and charging system testing and repair, as well as engine mechanical diagnosis and repairs. Under special circumstances, sponsoring automotive repair facility and the instructor can determine specific tasks to be performed during the co-op.

Pre-reqs:

AUT193 Automotive Co-op 3

Credit Hours: 2 Contact Hours: 24 Lecture Hours: 0 Lab Hours: 24 Other Hours: 0

Cooperative work experience opportunities are available to students enrolled in Automotive Department programs. Students may contact the Automotive Department Programs Coordinator for specific information regarding co-op opportunities. During this course, students will gain practical work experience by diagnosing and repairing HVAC concerns, diagnosing electrical faults, and diagnosing and servicing manual transmission systems. Under special circumstances, sponsoring automotive repair facility and the instructor can determine specific tasks to be performed during the co-op.

Pre-reqs:

AUT194 Automotive Co-op 4

Credit Hours: 2 Contact Hours: 24 Lecture Hours: 0 Lab Hours: 24 Other Hours: 0

Cooperative work experience opportunities are available to students enrolled in Automotive Department programs. Students may contact the Automotive Department Programs Coordinator for specific information regarding co-op opportunities. During this course, students will gain practical work experience by diagnosing and repairing engine drivability concerns, advanced electrical concerns, and diagnosing and repairing automatic transmission faults. Under special circumstances, sponsoring automotive repair facility and the instructor can determine specific tasks to be performed during the co-op.

Pre-reqs:

Business-Entrepreneurial

Automotive

AUT221 FUEL AND EMISSIONS MGT SYS

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

The operation, diagnosis and servicing of fuel management and emission control systems is covered by lecture and demonstration. Emphasis is placed on the identification and servicing of specific manufacturers' systems using specialized test equipment, 4 and 5-gas analyzers will be used to reinforce student learning. Laboratory activities include diagnosis and repair of throttle body, port fuel injection systems, and emission control devices such as those utilized with EGR, AIR, and EVAP systems.

Pre-reqs:

AUT125

AUT222 ENGINE SYS PER DIAGNOSIS

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

This course presents the techniques used for correct analysis of engine performance and driveability problems. Emphasis is placed on interpretation of manufacturers' product service information and technical service bulletins. Laboratory assignments utilizing automotive diagnostic equipment will reinforce student learning. CTAG approved CTAUT003.

Pre-reqs:

AUT125 Can be Taken Concurrently

AUT223 ADV AUTO ELECTRONICS

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

This course provides the student with the knowledge and skills required to diagnose, service, and repair body electrical systems. Students will learn how to diagnose problems and will develop skills utilizing proper diagnosis procedures. Skills developed in this course, electric and electronics systems A6, will correlate to the ASE task list. This course is an in-depth lab study of electrical/electronics, electronic information retrieval, circuit protection devices, wiring, circuit operation and diagnosis procedures of controls including, but not limited to, single and multiple contact switches, relays, transistors and computers, will promote equipment usage and personal safety for the more sensitive and complex components presented in AUT 227.

Pre-reqs:

AUT125

Business-Entrepreneurial

Automotive

AUT224 Auto Diesel Perf Sys

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

Covered by lecture and practical demonstration is the theory of operation of automotive diesel auxiliary equipment such as fuel injection pumps, filtration systems, glow plugs and controllers, and diesel emission control systems. The emphasis in this course is placed on the operation and servicing of fuel delivery equipment as fitted to many domestic automotive diesels. Reference will be made to other types of fuel systems where relevant to the course material. Student learning is reinforced by laboratory exercises emphasizing the correct application of diagnostic procedures and servicing methods.

Pre-reqs:

AUT121

AUT225 AUTO DRIVETRAIN 1

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

This course precedes, but is taught in conjunction with, Automotive Drivetrain II. The purpose of this course is to give the student a sound knowledge of the operation of vehicle transmission and drivetrain systems. The course is divided into three sections: (1) Clutches and Flywheels; (2)Manual Transmissions; and (3) Final Drive Assemblies. Included in the course is student laboratory experience in the (a) identification and diagnosis; (b) dismantling and repair; and (c) reassembly and adjustment of all components used in modern manual transmission systems.

Pre-reqs:

AUT121 Can be Taken Concurrently

AUT226 AUTO DRIVETRAIN 2

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

This course is taught in conjunction with Automotive Drivetrain I (AUT-225). The purpose of this course is to give the student a sound knowledge of the operation, diagnosis, and repair of automatic transmission and driveline systems. Included in the course is student laboratory experience in the techniques of diagnosis, disassembly and repair, reassembly and adjustment of all components used in modern automatic transmissions.

Pre-reqs:

AUT121 Can be Taken Concurrently

Business-Entrepreneurial

Automotive

AUT227 COMPUTERIZED VEH CONTROL

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

The purpose of this course is to give the student instruction on the operations of an automotive computerized system. Lab activities will include problem solving skills with diagnosis in servicing of computerized fuel, ignition, and emission control management systems. Testing of these systems will be accomplished with the use of specialized diagnostic testing equipment such as DVOM's, scanners, and voltage tracing scopes. This course will use the past knowledge that the student learned in the previous electrical and engine classes.

Pre-reqs:

AUT125

AUT228 AUTO SERVICE MANAGEMENT

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

The purpose of this course is to make the student aware of the Service Manager's/Service Advisor's role and what is entailed in doing the job in a professional manner. This course provides an introduction to the theory and practice of an important mid-management position in the automotive service field. Topics will include: customer-employee relations; scheduling and dispatching; legal and ethical responsibilities; consumer affairs and financial aspects; and quality assurance programs. The course will help the student gain experience in using customer contact skills, etc. by providing real-world experience in a service department through the field service component.

Pre-reqs:

AUT230 TECHNICAL PROJECT

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This is an independent study course in which the student will create an automotive-oriented project that utilizes skills learned in previous Automotive Technology courses. The student will select an approved subject which may include functions such as research, construction and testing. Progress and performance will be evaluated throughout the semester.

Pre-reqs:

Business-Entrepreneurial

Automotive

AUT231 SPECIALIZED ELEC TRAIN

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

This is an elective course for automotive students that covers the fundamental laws of electricity, electrical schematic reading, wire repair, digital multimeter operation, service manual usage and electrical diagnosis of GM vehicles. Students participate in hands-on activities dealing with the vehicle electrical systems including: power windows, power door locks, wipers, HVAC, chime module, charging and starting, audio and ECM/PCM. This course emphasizes GM's strategy based diagnosis of electrical systems.

Pre-reqs:

AUT125

AUT232 FUEL INJECTION-EFI/PFI

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

EFI/PFI is an automotive elective course that discusses the various types of the throttle body and multiport fuel injection systems used with GM passenger cars and light trucks. Detailed descriptions of components and the operation of the fuel management systems are given by lecture and practical demonstration. The interrelationship of fuel system/emission controls devices operation and vehicle drivability problems is also covered. Special emphasis is placed on the correct application of diagnostic flowchart information. Student learning is reinforced by participation in laboratory exercises utilizing Scantools and other specialized diagnostic equipment.

Pre-reqs:

AUT223

AUT233 AUTO DIAGNOSTIC APPLIC

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

Auto Diagnostic Applications is an advanced-level course that serves as a capstone for the Automotive Technology program. It is a final assessment of student knowledge and technical skills. Students integrate previously learned principles and concepts with practical field experiences and use specialized diagnostic equipment such as computer scan tools and lab oscilloscopes to evaluate the performance of vehicle systems and components. Under the guidance of an instructor and through an independent study component, students' diagnostic and hands-on skills are further developed and measured while performing component replacement and adjustment procedures to vehicles in a service department setting. The practical application of quality assurance techniques to automotive service work is strongly emphasized. This course also supports and reinforces knowledge required to pass the ASE Automotive Technician Certification examinations.

Pre-reqs:

AUT223 Can be Taken Concurrently

Business-Entrepreneurial

Automotive

AUT234 ALT FUELS & ADV AUTO TECH

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course is designed to provide the student with an understanding of alternative automotive fuels and the advanced technologies associated with fuel conversion and hybrid propulsion systems. Technologies addressed in the course will include diesel, compressed natural gas (CNG), liquid petroleum gas (LPG), methanol, ethanol, E-85 (bi-fuel vehicles), hydrogen, solar, electric propulsion, hybrid propulsion, and fuel cells. The description, application, and characteristics of alternative fuels will be covered. The course presents the history, legislation, regulations, safety, and the environmental impact associated with alternative fuels and those anticipated in the near future. Vehicle design and modification as it relates to alternative fuel systems will be studied as well as the storage and distribution of alternative fuels.

Pre-reqs:

AUT223

AUT241 BODY CONTROL SYSTEMS

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course reviews the advanced concepts and applications of multiple body controllers with multiple inputs and outputs. Communication languages, multiplexing, and complex networks in automotive applications are also presented.

Pre-reqs:

AUT253 Computerized Eng Cntrl Sys

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course is designed for technicians and students that desire to become dealership technicians. The purpose of this course is to provide the student with an understanding of the skills and procedures needed to accurately diagnose and repair computerized engine control systems.

Pre-reqs:

Business-Entrepreneurial

Automotive

AUT254 AUTO AFTERMKT VEH INT MOD

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

This class provides students with the preparatory experience required to perform vehicle interior modifications. Students will be exposed to current automotive aftermarket industry standards. Attention to detail is reinforced throughout student projects. This course concentrates on the modification of vehicle interior electrical systems, lighting systems, instrument cluster, HVAC, window controls, seating, sound systems, and visual appeal through the application of automotive aftermarket accessories and practices.

Pre-reqs:

AUT125

AUT255 AUTO AFTERMKT VEH EXTERIOR MOD

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

This course provides students with the preparatory experience required to perform vehicle exterior modifications. Students will be exposed to current automotive aftermarket industry standards. Attention to detail is reinforced throughout student projects. This course concentrates on the modification of vehicle body aerodynamics, exterior lighting, and visual appeal through the application of automotive aftermarket accessories and practices.

Pre-reqs:

AUT125

AUT256 AUTO AFTERMKT VEH POWERTRN MOD

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

This course provides students with the preparatory experience required to perform vehicle powertrain modifications. Students will be exposed to current automotive aftermarket industry standards. Attention to detail is reinforced throughout student projects. This course concentrates on the modification of engine volumetric efficiency, final drive ratios, transmission shifting controls, fuel management systems, engine and transmission cooling devices, exhaust systems, and under-hood visual appeal through the application of automotive aftermarket accessories and practices.

Pre-reqs:

AUT123

Business-Entrepreneurial

Automotive

AUT257 AUTO AFTERMKT VEH CHASSIS MOD

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

This course provides students with the preparatory experience required to perform vehicle chassis modifications. Students will be exposed to current automotive aftermarket industry standards. Attention to detail is reinforced throughout student projects. This course concentrates on the modification of vehicle suspension geometry, ride height, alignment angles, tire and wheel combinations, springs, and suspension dampening components through the application of automotive aftermarket accessories and practices.

Pre-reqs:

AUT124

AUT271 HONDA FUEL AND EMISSION SYSTEM

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

This course covers Honda-specific diagnosis, theory and repair techniques necessary to service Honda fuel and emission systems. Prior to hands-on practice, the instructor will demonstrate equipment usage, Honda service materials, proper fuel and emission system inspection and repair procedures. Hands-on practice will enable the students to apply these concepts to Honda vehicles. Special emphasis is placed on the environmental concerns and engine performance aspects that are related to automotive emission system service.

Pre-reqs:

AUT221 Can be Taken Concurrently

AUT273 HONDA ADVANCED DIAGNOSTIC APPS

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

This course covers Honda-specific diagnostic and repair techniques necessary to service air bag systems (SRS) and anti-lock braking systems (ABS) on Honda vehicles. Prior to hands-on practice, the instructor will demonstrate equipment usage, Honda service materials, proper system inspection and repair procedures. Hands-on practice will enable the students to apply these concepts to Honda vehicles. Special emphasis is placed on the safety aspects related to air bag systems (SRS) and anti-lock braking systems (ABS).

Pre-reqs:

AUT223 Can be Taken Concurrently

Business-Entrepreneurial

Automotive

AUT275 HONDA MANUAL TRANSMISSIONS

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

This course covers Honda-specific diagnostic and repair techniques necessary to service Honda manual transmissions. Prior to hands-on practice, the instructor will demonstrate equipment usage, Honda service materials, proper manual transmission inspection and repair procedures. Hands-on practice will enable the students to apply these concepts to Honda vehicles.

Pre-reqs:

AUT225	Can be Taken Concurrently

AUT276 HONDA AUTOMATIC TRANSMISSIONS

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

This course covers Honda-specific diagnostic and repair techniques necessary to service Honda automatic transmissions. Prior to hands-on practice, the instructor will demonstrate equipment usage, Honda service materials, proper automatic transmission inspection and repair procedures. Hands-on practice will enable the students to apply these concepts to Honda vehicles.

Pre-reqs:

AUT226	Can be Taken Concurrently

AUT277 HONDA COMPUTERIZED ENGINE

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course covers Honda-specific diagnostic and repair techniques necessary to service Honda computerized engine control systems. Prior to hands-on practice, the instructor will demonstrate equipment usage, Honda service materials, proper computerized engine control systems inspection and repair procedures. Hands-on practice will enable the students to apply these concepts to Honda vehicles.

Pre-reqs:

AUT223	Can be Taken Concurrently

Business-Entrepreneurial

Automotive

AUT281 CAT DIFFRNTILS AND FRONT AXLES

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

The purpose of this course is to provide the student with an understanding of the skills and procedures necessary to accurately diagnose and repair drive axles and differentials used on lift trucks. The course covers component identification, precision measurements of components, proper setup and adjustment, and functions of these components. The instructor will demonstrate CAT differential and axle diagnosis, servicing, and repair techniques. Hands-on practice will enable the students to apply these concepts and procedures to CAT lift trucks. The course concludes with a description of routine maintenance procedures, troubleshooting guidelines, and a self- assessment worksheet to reinforce learning objectives.

Pre-reqs:

AUT121	Can be Taken Concurrently

AUT282 CAT TRANSMISSIONS

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

The purpose of this course is to teach students about the purpose and operation of transmissions used in lift trucks, specifically powershift and hydrostatic. The course covers component identification, power flow, precision measurements of components, and functions of these components. The instructor will demonstrate CAT transmission diagnosis, servicing, and repair techniques. Hands-on practice will enable the students to apply these concepts and procedures to CAT lift trucks. The course concludes with a description of routine maintenance procedures, troubleshooting guidelines, and self-assessment worksheet to reinforce learning objectives.

Pre-reqs:

AUT121	Can be Taken Concurrently

AUT283 CAT FUEL SYSTEMS (LP/GASOLINE)

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course is designed to provide the student with an understanding of the skills and procedures necessary to accurately diagnose and repair gasoline and LP fuel systems used on CAT lift trucks. Included in this course are K21-K-25, GM4.3L, and TB45 fuel systems. On-unit diagnosis of mechanical and electronic fuel control systems will include the use of traditional fuel diagnostic equipment and CAT-fuel system specialty tools. The importance of safety and proper handling of LP and gasoline fuel system components will be stressed in every segment of this class. The instructor will demonstrate CAT LP and gasoline system diagnosis, servicing, and repair techniques. Hands-on practice will enable the students to apply these concepts and procedures to CAT lift trucks. The course concludes with a self- assessment worksheet to reinforce learning objectives.

Pre-reqs:

AUT121	Can be Taken Concurrently

Business-Entrepreneurial

Automotive

ETD222 ENGINEERING CO-OP

Credit Hours: 2 Contact Hours: 20 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

Co-op opportunities are available to students enrolled in Engineering Technologies. Students may contact their faculty advisors or Career Services for more information.

Pre-reqs:

ETD224 ENGINEERING CO-OP

Credit Hours: 4 Contact Hours: 40 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

Co-op opportunities are available to students enrolled in Engineering Technologies. Students may contact their faculty advisors or Career Services for more information.

Pre-reqs:

TOY101 Intro to Toyota T-TEN

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

This course is the introductory course for the Toyota T-TEN program. Throughout the class students will receive a general understanding of the automotive industry and more specifically what the roll of an automotive service technician is at a Toyota dealership. Shop safety, proper tool and equipment usage, precision measurement, fasteners, fastener repair, and proper shop attire will all be covered in this course. Students will be enrolled into the Toyota T-TEN online learning system as apprentice technicians and will be required to utilize the Toyota service information system as well as the Toyota online training portal. This course is a prerequisite for all other Toyota T-TEN classes.

Pre-reqs:

Business-Entrepreneurial

Automotive

TOY102 Toyota Electrical Systems I

Credit Hours: 5 Contact Hours: 9 Lecture Hours: 1 Lab Hours: 8 Other Hours: 0

This course is designed to give the student an understanding of DC electrical principles including Ohm's Law, basic circuits, semiconductors, automotive wiring and common electrical components. Emphasis will be placed on the maintenance, diagnosis and repair of basic automotive electrical systems including battery, starting, and charging systems, electrical motors, switches and relays. Students will also be introduced to computerized vehicle control systems. Laboratory periods will allow the student to develop proficiency in the use of wiring diagrams, diagnostic flow charts and hands-on techniques utilizing DVOM's and other electrical test instruments. The students will learn the Toyota six step diagnostic procedure and utilize it during laboratory activities to determine various faults on vehicles.

Pre-reqs:

TOY101	Can be Taken Concurrently

TOY103 Toyota Steer, Susp, & Handl

Credit Hours: 5 Contact Hours: 9 Lecture Hours: 1 Lab Hours: 8 Other Hours: 0

This course will cover diagnosis, service and repair of the steering, suspension, and handling systems on Toyota vehicles. Upon completion of the class students will have removed and replaced suspension components like: struts, springs, control arms, and steering knuckles. Students will be required to properly diagnose alignment concerns and align vehicles with several different suspension systems. The proper procedures for inspecting, repairing, or changing tire and wheel assembles will be taught in this course. Hydraulic and electronic power steering systems, computer controlled suspension and handling systems will also be covered in this course. Students will be required to validate their understanding of the topics in this class through hands on competency based lab activities. Upon completion of this course students will be prepared to take ASE test A-4 (Steering and Suspension).

Pre-reqs:

TOY102	Can be Taken Concurrently

TOY104 Toyota Engine Diagnosis/Rep

Credit Hours: 5 Contact Hours: 9 Lecture Hours: 1 Lab Hours: 8 Other Hours: 0

This course will cover the diagnosis, service, and repair of Toyota internal combustion engines. Upon completion of the class students will be able to state the four strokes of an internal combustion engine and explain the importance of each stroke. Students will develop the knowledge and skills to diagnose mechanical engine faults. They will be able to remove and reinstall an engine from the vehicle; and will gain experience repairing and rebuilding engines. Students will also learn how engine cooling systems and lubrication systems operate and how to diagnosis system faults. Students will be required to validate their understanding of the topics in this class through hands on competency based lab activities. Upon completion of this course students will be prepared to take ASE test A-1 (Engine Repair).

Pre-reqs:

TOY101

Business-Entrepreneurial

Automotive

TOY105 Toyota Engine Controls I

Credit Hours: 5 Contact Hours: 9 Lecture Hours: 1 Lab Hours: 8 Other Hours: 0

This course will introduce students to the Toyota engine control system which includes all necessary computer inputs, information processing, and outputs which control engine operation. Students will learn the relationship between air, fuel, spark and compression and how the engine control system manages these. Students will be able to identify engine control inputs and outputs and describe their operation. Upon completion of this course student should have the knowledge and skills necessary to diagnose and repair concerns related to the computerized vehicle control system. Students will be required to validate their understanding of the topics in this class through hands on competency based lab activities. Upon completion of this class students will be prepared to take ASE test A-8 (Engine Performance).

Pre-reqs:

TOY104

TOY106 Toyota ManTrans & Drivetrains

Credit Hours: 5 Contact Hours: 9 Lecture Hours: 1 Lab Hours: 8 Other Hours: 0

This class will teach students the skills necessary to service and repair Toyota manual transmission and four wheel drive systems. Students will perform inspections, service, and repairs on clutch systems. They will also overhaul a manual transmission, manual transaxle, front differential, rear differential, and a transfer case. Students will also learn to diagnose and repair Toyota electronic four wheel drive control systems. Students will be required to validate their understanding of the topics in this class through hands on competency based lab activities. Upon completion of the course students will be prepared to take the ASE test A-3 (Manual Drivetrain and Axle).

Pre-reqs:

TOY102

TOY201 Toyota Electrical Systems II

Credit Hours: 5 Contact Hours: 9 Lecture Hours: 1 Lab Hours: 8 Other Hours: 0

In this course, students will learn to diagnose and repair advanced electrical faults including shorts, opens, and high resistance faults in Toyota multiplex computer networks. In order to diagnose these concerns students will learn how to utilize the advanced features of the Toyota scan tool. Students will also learn to use advanced diagnostic equipment and procedures. Upon completion of this course students will be able to diagnose and repair the most advanced electrical problems. Students will be required to validate their understanding of the topics in this class through hands on competency based lab activities. Students completing this course are prepared to take ASE test A-6 (Electrical and Electronic Systems).

Pre-reqs:

TOY102

Business-Entrepreneurial

Automotive

TOY202 Toyota Automotive Braking Sys

Credit Hours: 5 Contact Hours: 9 Lecture Hours: 1 Lab Hours: 8 Other Hours: 0

This course will cover diagnosis, service and repair of the braking systems on Toyota vehicles. Upon completion of the class, students will have experience performing braking system service including: brake pad replacement, rotor resurface and replacement, caliper service and replacement, shoe replacement, drum resurface and/or replacement, parking brake cable replacement and adjustment, hose replacement, master cylinder replacement, and hydraulic control valve service and replacement. Students will also learn the knowledge and skills necessary to diagnose, service, and repair advanced anti-lock brake system faults. Students will be required to validate their understanding of the topics in this class through hands on competency based lab activities. Upon successful completion of this course students will be prepared to take ASE test A-5 (Brakes).

Pre-reqs:

TOY201	Can be Taken Concurrently

TOY203 Toyota HVAC Systems

Credit Hours: 5 Contact Hours: 9 Lecture Hours: 1 Lab Hours: 8 Other Hours: 0

This course will cover diagnosis, service and repair of the Toyota heating, ventilation, and air conditioning (HVAC) systems. They will understand how to connect and interpret air conditioning gauge set readings. HVAC system performance tests will be performed to determine if systems are functioning as designed. All major components of the HVAC system will be located, identified, defined, removed and reinstalled. Advanced climate control systems will also be covered in this class. Students will learn to diagnose climate control faults using schematics, specifications, and procedures retrieved from the Toyota Information System. Students will also use the Toyota scan tools, digital volt ohm meters, and other required diagnostic equipment during this class. Students will be required to validate their understanding of the topics in this class through hands on competency based lab activities. Upon successful completion of this course students will be prepared to take ASE test A-7 (Heating, Ventilation, and Air Conditioning).

Pre-reqs:

TOY201

TOY204 Toyota Engine Controls II

Credit Hours: 5 Contact Hours: 9 Lecture Hours: 1 Lab Hours: 8 Other Hours: 0

This course is designed to increase the student's understanding and diagnostic skills related to advanced Toyota engine control systems. Major areas to be covered are the identification, operation, function, and diagnosis of the following: Electronic Control Module (ECM); fuel injection systems; engine control system sensors and actuators; ignition systems; electronic throttle control systems, evaporative emission systems, variable valve timing, direct fuel injection systems, and EGR systems. Emphasis will be on solving advanced drivability concerns using all available resources: Toyota Information Systems, DVOM, oscilloscope, Toyota scan tool, and any related special service tools. In this course students will learn students will be required to validate their understanding of the topics in this class through hands on competency based lab activities. Upon successful completion of this course students will be prepared to take ASE tests A-8 (Engine Performance) and L-1 (Advanced Engine Performance).

Pre-reqs:

TOY105

Business-Entrepreneurial

Automotive

TOY205 Toyota Automatic Transmission

Credit Hours: 5 Contact Hours: 9 Lecture Hours: 1 Lab Hours: 8 Other Hours: 0

This course covers the diagnosis, service and repair of Toyota automatic transmissions. Participants will learn how to analyze automatic transmission power flow, learn how to select the proper automatic transmission fluid, and how to check fluid levels for transmissions with and without fluid dipsticks. Students will be required to use the proper Toyota Information System reference materials, test procedures, and specifications to diagnose transmission failures. Students will learn to evaluate proper transmission operation and to perform diagnostic tests to determine necessary repair requirements. Complete transmission overhauls will be performed during this class as well. Students will be required to validate their understanding of the topics in this class through hands on competency based lab activities. Upon completion of this course students will be prepared to take ASE test A-2 (Automatic Transmissions).

Pre-reqs:

TOY204

Business Mgt/Entrep

BUS121 BUSINESS ADMINISTRATION

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

A survey course designed to develop a comprehension of business theories and principles. Students will examine the following: American business development, management and organization, human resources, marketing, information for business strategy, decision making, finance and investment. Upon completion, students should be able to demonstrate an understanding of the above topic areas and have a foundation for studying other business subjects.

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Compass Reading - 080

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 246

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

IDS102

Business-Entrepreneurial

Business Mgt/Entrep

BUS122 BASIC ECONOMICS

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

A survey course designed to introduce students to basic economic concepts and principles of modern micro- and macro-economics. Major topic areas will include supply and demand, price system, market economies, monetary and fiscal policy and global economic issues. Upon completion, students should be able to demonstrate an understanding of the above topic areas. TMSBS Approved effective Autumn 2008. OT36-TMSBS, effective summer 2023

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Compass Reading - 080

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 246

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

IDS102

BUS221 MICROECONOMICS

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

An in-depth study of microeconomic concepts and principles such as supply and demand, price elasticity, production costs, different market structures, income distribution, marginal analysis, and other issues relating to global economics. Upon completion of this course, students should be able to demonstrate an understanding of these topics and be able to apply them to business. TAG OSS004 approved Spring 2012. OT36 approved TMSBS, effective summer 2022

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Compass Reading - 080

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 246

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

IDS102

Business-Entrepreneurial

Business Mgt/Entrep

BUS222 MACROECONOMICS

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

An in-depth study of macro-economic concepts and principles such as market supply and demand, unemployment and inflation, monetary and fiscal policy, national income accounting and Classical and Keynesian models. Upon completion, students should be able to apply and demonstrate an understanding of the above topics relative to today's economy. TAG approved course- OSS005 effective Fall 2005. OT36-TMSBS, effective summer 2023

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Compass Reading - 080

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 246

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

IDS102

CUL119 Culinary ServSafe

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

This class prepares the student to earn the ServSafe Food Protection Manager Certification sponsored by the National Restaurant Association Educational Foundation. The training will cover the concepts of: food safety and handling, good personal hygiene, time and temperature control, prevention of cross contamination, cleaning and sanitizing, safe food preparation, receiving and storing of food, methods of food handling, HACCP, food safety regulations and food borne illness. Upon completion of the course, the student will be able to take the Food Protection Manager Certification Exam.

Pre-reqs:

CUL120 Sanitation and Safety

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course prepares the student to use a Food Protection Certification. The training will cover the concepts of: food safety and handling, good personal hygiene, time and temperature control, prevention of cross contamination, cleaning and sanitizing, safe food preparation, receiving and storing of food, methods of food handling, HACCP, food safety regulations and food borne illness with emphasis on application in a professional kitchen. CTAG approved CTCF001 effective Spring 2018 ITAG approved ITCF001, effective summer 2022

Pre-reqs:

Business-Entrepreneurial

Business Mgt/Entrep

CUL122 FOOD FUNDAMENTALS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

The Food Fundamentals course is an introduction to the development and application of fundamental cooking and techniques. The course introduces the student to entry-level fundamentals such as recipe interpretation, integrated culinary math, culinary terminology, knife skills, large and small equipment identification and use, careers in culinary arts and food service, industry professionalism and entry-level cooking procedures, practices, and techniques. CTCF005 effective fall 2018

Pre-reqs:

CUL119	Can be Taken Concurrently
And CUL120	Can be Taken Concurrently

CUL123 FUNDAMENTAL COOKING-PREP I

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course addresses the development and application of cooking practices, procedures and techniques. The students will understand the techniques of preparation and prepare soups, stocks, sauces, and dairy items. They will use dry heat methods of cooking, moist heat cooking methods, prepare pantry items and perform garde manger (cold food preparation) duties.

Pre-reqs:

CUL122

CUL124 Meat & Fish-Prep II

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course will provide training and skill development in preparing meat and fish dishes used in a culinary arts environment. Students will use a variety of preparation and cooking methods to demonstrate ability to work with meat and fish products.

Pre-reqs:

CUL123

Business-Entrepreneurial

Business Mgt/Entrep

CUL125 Culinary Nutrition/Menu Plan

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course covers key concepts of menu planning including: design, writing, costing of menu items, marketing and merchandising of a menu. Also included is basic culinary nutrition information as well as research, surveys and sales analysis that are key to menu planning.

Pre-reqs:

CUL119

And CUL120

CUL126 FOOD PURCHASING-INVENTORY CONT

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course will provide Culinary Arts students with coverage of the essential concepts of purchasing, storeroom operations and fiscal responsibilities in a culinary operation. The students will be able to create market and distribution systems, design storeroom operation and inventory control procedures, determine cost controls and research product information. CTCF009 effective fall 2018

Pre-reqs:

CUL122

And ITD122

CUL221 Bakery & Pastry-Prep III

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course is designed to offer baking and pastry preparation information and techniques. Students will focus on an introduction to baking, use of baking equipment and tools, principles of cake baking and decoration, preparation of pastries and desserts as well as career opportunities in baking.

Pre-reqs:

CUL122

And ITD122

Business-Entrepreneurial

Business Mgt/Entrep

CUL222 Advanced Cookery-Prep IV

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course provides students the opportunity to develop advanced cooking skills and use advanced techniques in food preparation. Students will study cooking methods and food preparation of other cultures to develop an understanding in depth of flavors and techniques used in more complex recipes.

Pre-reqs:

CUL124 Can be Taken Concurrently

CUL223 Catering, Beverage & Food Serv

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course will provide information for students to be able to plan, coordinate and execute catering jobs, set up and manage buffets, and schedule and plan events as well as manage the events. Classical and contemporary service styles will be discussed and practiced. Students will learn to coordinate the "front of the house" and "back of the house" activities to conduct a well-planned event which is catered on or off premise. Students will understand the responsible and profitable service of alcohol in the food service industry. This course will include the Alcohol Servsafe certification.

Pre-reqs:

CUL122

CUL225 Adv Portfolio Mgmt

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course provides students the opportunity to refine and improve advanced cooking techniques. Students will produce and document complex recipes and develop individual portfolios including self-critique and visual documentation that can be presented to future potential employers.

Pre-reqs:

CUL124

And CUL221

Business-Entrepreneurial

Business Mgt/Entrep

CUL226 Pantry and Garde Manger

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course provides students the opportunity to learn and practice techniques and methods in cold food production. Students will produce and critique several categories of cold food including the safe production of salads, dressings, and charcuterie. Students will study methods and techniques used in both classic and contemporary kitchens.

Pre-reqs:

CUL122

CUL230 Culinary Practicum

Credit Hours: 5 Contact Hours: 9 Lecture Hours: 1 Lab Hours: 8 Other Hours: 0

This is a capstone experience designed for the student to put their learning into practice. The student will work with a mentor in a food service operation to gain practical experience and work in a wide range of culinary areas. The course will be a blend of work experience, job performance and a series of designated face to face meetings.

Pre-reqs:

ENT120 ENTREPRENEURSHIP

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course is designed to introduce students to the entrepreneurial process from conception to birth of a new venture. Students will examine elements in the entrepreneurial process--personal, sociological, and environmental--that give birth to a new enterprise. Critical factors for starting a new enterprise such as alternative career prospects, family, friends, role models, the state of the economy and the availability of resources will be explored. Students will be introduced to practical tools they can use to further their careers in business, both in entrepreneurship and in more traditional company environments. This course simulates the experiences that entrepreneurs undergo in conceiving, launching, and operating new businesses. The courses enables students to evaluate an entrepreneurial career for themselves. In doing so, it provides want- to-be entrepreneurs with a framework for selecting, funding, and starting their own new ventures. CTENTR001, effective Spring 2016.

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Compass Reading - 080

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 246

Or Test & Score: Reading Proficiency - 3

Business-Entrepreneurial

Business Mgt/Entrep

ENT120 ENTREPRENEURSHIP

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course is designed to introduce students to the entrepreneurial process from conception to birth of a new venture. Students will examine elements in the entrepreneurial process--personal, sociological, and environmental--that give birth to a new enterprise. Critical factors for starting a new enterprise such as alternative career prospects, family, friends, role models, the state of the economy and the availability of resources will be explored. Students will be introduced to practical tools they can use to further their careers in business, both in entrepreneurship and in more traditional company environments. This course simulates the experiences that entrepreneurs undergo in conceiving, launching, and operating new businesses. The courses enables students to evaluate an entrepreneurial career for themselves. In doing so, it provides want- to-be entrepreneurs with a framework for selecting, funding, and starting their own new ventures. CTENTR001, effective Spring 2016.

Pre-reqs:

Or Test & Score: SAT Verbal - 480

Or ENG102

IDS102

ENT124 MANAGNG ENTREPRENEURIAL GROWTH

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course is designed for students who want to manage growing companies in an increasingly professional manner while still maintaining the entrepreneurial spirit that brought the company to its current growth position and for students who want to manage larger companies to emphasize innovation and the management of opportunities rather than to concentrate on the efficient management of ongoing operations. Upon successful completion of this course, students should be able to measure economic performance and obtain information for management decision-making, management control systems for innovative companies, short-and long-run planning in owner-managed businesses, and entrepreneurship in managing growing companies.

Pre-reqs:

ENT120

ENT223 ENTREPRENEURSHIP PRACTICUM

Credit Hours: 3 Contact Hours: 15 Lecture Hours: 1 Lab Hours: 14 Other Hours: 0

This is the capstone experience where the students put their business plan into practice. The students will work with mentors to start to apply their entrepreneurial knowledge to a new venture and evaluate a concept's feasibility. This course is based on the concept of exposing students to an entrepreneurial process by facilitating a thorough market strategy and a balanced mentorship.

Pre-reqs:

Business-Entrepreneurial

Business Mgt/Entrep

ENT225 GLOBAL ENTREPRENEURSHIP

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course examines how entrepreneurs create and manage emerging ventures in other countries and create and manage start-up emerging ventures which are global in at least one important aspect. The case analyses and classroom discussions sraw on and integrate multidisiplinary concepts, skills,and insights. - marketing, operations, finance, control, decision-making, leadership, ethics, governance, negotiations - all in the service of starting and managing entrepreneurial ventures. Upon successful completion of this course, students should be able to identify and assess business models for international start-ups, venture valuation, sources of financing, deal structuring, cross-cultural issues in entrepreneurship, creating strategic alliances, managing/ leading a small multinational organization, international acquisitions, managing entrepreneurial ventures in situations of financial distress and under changing contexts, and managing global expansions of ventures.

Pre-reqs:

ENT120

MGT121 PRINCIPLES OF MANAGEMENT

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course provides an in-depth, balanced overview of management through coverage of basic management functions: planning, organizing, staffing, directing and controlling. Presents the current insights of open-systems theory, contingency theory, organization theory, organizational behavior and contemporary management science. Upon completion, students should be able to demonstrate an understanding of the above topic areas. TAG OBU012 approved effective Summer 2018.

Pre-reqs:

BUS121

Or ENT120

MGT221 SUPERVISION

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course is organized around the employee in order to emphasize the importance of working with others. Some specific areas covered are: the role of the supervisor, basic concepts of office functions, management of information, motivation, sources of power and authority, work simplification and group dynamics. Upon completion, students should be able to apply current management theory to situations that occur at the supervisory level.

Pre-reqs:

MGT121

Business-Entrepreneurial

Business Mgt/Entrep

MGT222 SMALL BUSINESS MGT

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course focuses on launching and operating a small business. Developing a business plan is an integral part of the coursework. Upon completion of the course, students will have an understanding of the multitude of issues involved in owning a small business and how to develop and utilize a business plan in a small business.

Pre-reqs:

ACC128

Or ACC133

And MGT121

MGT223 BUSINESS DECISION MAKING

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

This course utilizes a multitude of managerial business decision making skills that culminates your business management classroom experience. It involves an actual competitive team-based decision making computer simulation. The course includes in-depth analysis and research into production, inventory, finance, research and development, pricing, product placement, and industry competitiveness decisions. The course requires teamwork and an understanding of all the areas of business decision making to successfully manage a corporation. Upon completion of this course a student should have a greater understanding of the impact of teamwork, functional department interactiveness, and competitive market analysis on everyday business decisions.

Pre-reqs:

And ACC128

Or ACC133

MGT121

MGT224 HUMAN RESOURCE MGT

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Introduction to the effective management of human resources in today's organizations. Emphasis is on the policies and programs necessary to attract, retain and motivate employees. Subjects covered include the legal framework of human resource management, staffing, human resource development, motivation and leadership, compensation, appraisal systems, safety and labor, and management relations. Upon completion, students should be able to demonstrate an understanding of the management of the human resource.

Pre-reqs:

MGT121

Business-Entrepreneurial

Business Mgt/Entrep

MGT227 OPERATIONS MANAGEMENT

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

This course examines the concepts for designing, planning and improving manufacturing and service organizations. It covers many of the computational techniques applied to problems of efficiently converting inputs into outputs. The areas covered include: project management, forecasting, capacity planning, work measurement, quality and statistical quality control, supply chain, plant location, layout scheduling, materials management and maintenance. Upon completion , students should be able to demonstrate an understanding of operations management principles.

Pre-reqs:

MGT121

And MTH118

Or MTH124

Or MTH125

MGT232 INTERNATIONAL BUSINESS

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course focuses on the economic, social and cultural considerations of doing business overseas. The globalization of markets and the growth of overseas business ventures is explored. The need to develop varied techniques for managing people from other cultural backgrounds, the means of minimizing risks in financial transactions, and development of systems for coordinating and controlling operations will be stressed. Techniques to overcome international business barriers are covered. Upon completion, students should be able to demonstrate an understanding of the economic, social and cultural considerations of doing business worldwide.

Pre-reqs:

BUS121

MGT236 Sports & Ethics

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course is designed to assist students in examining and developing philosophies, values and moral reasoning skills to make ethical decisions in the sports management field. This course examines topics including violence, doping, racial and gender equity, coaching, commercialization, enhancing stimulants, eligibility, violence, sportsmanship and code of ethics in sports. Students will examine current and historical events in sports, rules, laws and governing organizations.

Pre-reqs:

Business-Entrepreneurial

Business Mgt/Entrep

MGT237 Safety & Health Mgmt

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 0 Lab Hours: 0 Other Hours: 0

This course provides a comprehensive study of occupational safety and health in a contemporary workplace. Content will emphasize risk management, legal issues surrounding work health and safety, and workplace hazard reduction. Students will apply updated OSHA standards to topics such as workplace violence, natural disasters, and terrorism.

Pre-reqs:

MGT224

MGT238 Strategic Staffing

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 0 Lab Hours: 0 Other Hours: 0

This course develops a thorough understanding of strategic staffing. Students will acquire the knowledge base necessary to identify, attract, select, and retain quality staff. The course will provide education on legal and regulatory issues surrounding staffing while reinforcing competitive business practices in the current global economy.

Pre-reqs:

MGT224

MGT239 Compensation & Benefits

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 0 Lab Hours: 0 Other Hours: 0

This course is a comprehensive study of the theoretical and legal perspectives governing the practical application of compensation and benefits. Emphasis for the course will be on job evaluations, wage surveys, incentives, pay equity, insurances, and worker's compensation.

Pre-reqs:

MGT224

Business-Entrepreneurial

Business Mgt/Entrep

MKT121 PRINCIPLES OF MARKETING

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course is an introduction to the important role that marketing plays in the successful operation of various enterprises that operate in both the domestic and international arenas. Emphasis is on developing marketing strategies needed to compete effectively in today's rapidly changing competitive environment. Customer buying behavior, market segmentation, quality customer service, the elements of product, distribution, pricing and promotion strategies are examined. Upon completion, students should be able to demonstrate an understanding of the above topic areas. OBU006

Pre-reqs:

BUS221

MKT221 SALES

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

The selling process is introduced in detail. Securing and opening the sales interview, delivering the sales presentation, answering objections and closing the sale are all incorporated during the semester. The student will be required to give a sales presentation in class. Upon completion, students should understand the selling process and be able to make an effective sales presentation.

Pre-reqs:

MKT121

MKT222 ADVERTISING

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Provides an overview of the field of advertising, including its place in marketing, media considerations, design principles, budgeting and planning. Included is a project consisting of the design of a total campaign. Upon completion, students should be able to demonstrate an understanding of the field of advertising. OCM012 TAG approved Spring 2012.

Pre-reqs:

MKT121

Business-Entrepreneurial

Business Mgt/Entrep

MKT226 SUPPLY CHAIN MANAGEMENT

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

An introduction to the processes and activities associated with cost-effective industrial procurement and the internal management of all materials and equipment needed by a manufacturer to produce products or provide services. Upon completion, students should be able to demonstrate an understanding of the processes and activities associated with cost effective purchasing. effective Summer 2016: CTSCM001

Pre-reqs:

MKT121

MKT227 CONSUMER BEHAVIOR

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course provides in-depth knowledge of consumer buying behavior. It includes the study of the various cultural, social, personal and psychological factors that influence consumer market behavior and strategy. Upon completion, students should be able to demonstrate an understanding of the factors that influence consumer behavior.

Pre-reqs:

MKT121

MKT229 MARKET PLANNING

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

This is a capstone course that focuses on the significant procedures, processes and analysis that leads the student through the comprehensive market planning process. Methodology includes market research, company and industry analysis, and the development of the processes required in the completion and presentation of the market plan. Upon completion, students should be able to demonstrate an understanding of the creation, analysis, and preparation in the completion of the market planning process.

Pre-reqs:

MKT121

Business Studies

Business-Entrepreneurial

Business Studies

BTD201 BUS INDEPENDENT STUDY

Credit Hours: 1 Contact Hours: 10 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

An independent study may be arranged through the Business Technology Division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisory and dean for Business Technologies will determine course content, meeting schedules and credit hours.

Pre-reqs:

BTD202 BUS INDEPENDENT STUDY

Credit Hours: 2 Contact Hours: 20 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

An independent study may be arranged through the Business Technology Division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisory and dean for Business Technologies will determine course content, meeting schedules and credit hours.

Pre-reqs:

BTD203 BUS INDEPENDENT STUDY

Credit Hours: 3 Contact Hours: 30 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

An independent study may be arranged through the Business Technology Division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisory and dean for Business Technologies will determine course content, meeting schedules and credit hours.

Pre-reqs:

Business-Entrepreneurial

Business Studies

BTD204 BUS INDEPENDENT STUDY

Credit Hours: 4 Contact Hours: 40 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

An independent study may be arranged through the Business Technology Division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for Business Technologies will determine course content, meeting schedules and credit hours.

Pre-reqs:

BTD222 BUSINESS CO-OP

Credit Hours: 2 Contact Hours: 20 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

Co-op opportunities are available to students enrolled in Business Technologies. Students may contact their faculty advisors or Career Services for more information.

Pre-reqs:

BTD223 BUSINESS CO-OP

Credit Hours: 3 Contact Hours: 30 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Co-op opportunities are available to students enrolled in Business Technologies. Students may contact their faculty advisors or Career Services for more information.

Pre-reqs:

Business-Entrepreneurial

Business Studies

BTD224 BUSINESS CO-OP

Credit Hours: 4 Contact Hours: 40 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

Co-op opportunities are available to students enrolled in Business Technologies. Students may contact their faculty advisors or Career Services for more information.

Pre-reqs:

BTD225 SPECIAL TOPICS

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Special topics in Business Technology Division. Repeat registration permitted.

Pre-reqs:

BTD226 SPECIAL TOPICS

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

Special topics in Business Technology Division. Repeat registration permitted.

Pre-reqs:

Business-Entrepreneurial

Business Studies

BTD227 SPECIAL TOPICS

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Special topics in Business Technology Division. Repeat registration permitted.

Pre-reqs:

BTD228 SPECIAL TOPICS

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

Special topics in Business Technology Division. Repeat registration permitted.

Pre-reqs:

Business-Information Tech

Administrative Srv Off Applion

AOT101 ALPHANUMERIC KEYBOARDING

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

This course covers the working knowledge and basic skills of alphanumeric touch keyboarding. No prior knowledge of keyboarding is required. Upon completion, students should be able to use the proper techniques for alphanumeric keyboarding.

Pre-reqs:

Business-Information Tech

Administrative Srv Off Applion

AOT107 DIGITAL TECHNOLOGIES

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

This course explores various digital technologies used in the modern office. Specific topics include review of current desktop, cloud, and web technologies and the analysis and selection of the proper tool for a business situation. Students will explore and practice using various products to gain proficiency in selection and use of the proper tools.

Pre-reqs:

Or Test & Score: Computer Test - 21

Or Test & Score: HS Computer Class - 2

ITD100

AOT121 KEYBOARDING/FORMATTING

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Knowledge of keyboard is required. This course is designed to refine the fundamentals of "touch" control of the keyboard and proper keyboarding techniques. Major objectives are to build speed and accuracy at the keyboard and to apply keyboarding skills in the formatting of business correspondence, tables and reports. Upon completion, students should be able to format a variety of business documents using a popular word processing package and achieve a minimum keyboarding skill.

Pre-reqs:

Test & Score: Keyboarding Proficiency Exam - 1

Or AOT101

AOT127 WP-MICROSOFT WORD

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course covers the concepts, functions, and features of the Microsoft Word program. Creating, editing and storing text are emphasized. Upon completion of this course, the student should be able to produce a variety of professional-looking documents.

Pre-reqs:

Test & Score: Computer Test - 21

Or Test & Score: HS Computer Class - 2

Or ITD100

Business-Information Tech

Administrative Srv Off Applion

AOT128 Doc Devel & Web Mtce

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course covers the concepts and applications of print and electronic publishing and website maintenance. Emphasis is placed on the creation of various types of high-quality documents and website maintenance. Upon completion, students should be able to design, produce, and maintain professional business publications and websites.

Pre-reqs:

Or Test & Score: Computer Test - 21

Or Test & Score: HS Computer Class - 2

ITD100

AOT129 Keyboard Skill Building

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

This course is designed to give students an opportunity to further develop and refine keyboarding skills, along with reinforcing the necessary skills to produce business correspondence. Emphasis on prescriptive keyboarding drills and other typing exercises are to improve keyboarding speed and accuracy. Upon completion, students should be able to diagnose their specific areas of weakness on the keyboard and properly format business documents.

Pre-reqs:

AOT121

Or OAD121

AOT130 Editing, Proofreading & Lang

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course emphasizes the elements of written communication and implements advanced review in grammar, punctuation, editing, proofreading, and critical thinking skills to prepare for work in administrative, legal, and judicial reporting environments. Upon completion, students should be able to use accurate grammar, punctuation, editing, and proofreading skills in written communications.

Pre-reqs:

Business-Information Tech

Administrative Srv Off Applion

AOT132 RECORDS MANAGEMENT

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course is an introduction to the fundamentals of a records and information management program. Emphasis is placed on learning and applying standard rules for alphabetic storage and retrieval; including the subject, numeric, and geographic filing methods. Also covered are basic concepts of a records management program and its system components as well as current electronic trends. Upon completion, students should be able to demostrate an understanding of the components of a records management program and competence in applying the generally accepted standard filing rules.

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Compass Reading - 080

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 244

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

IDS102

AOT134 FORM DESIGN ESSENTIALS

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

This course is designed to introduce entry-level skills in creating effective form development. Topics discussed are forms analysis, layout, design, sequence of information, column design, electronic forms, hard copy forms, and web-based forms. Upon successful completion of this course, students should have a greater knowledge base of how to create electronic and print forms for any organization.

Pre-reqs:

AOT127

AOT224 LEGAL OFFICE PROCEDURES

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course is an introduction to the unique characteristics of law office organization and management with an emphasis on computer applications in law. A general introduction to nonlitigation responsibilities and fundamentals of grammar, style and letter writing are covered. Upon completion, students should be able to demonstrate an understanding of concepts and procedures in a law office.

Pre-reqs:

Or AOT121

Business-Information Tech

Administrative Srv Off Applion

AOT224 LEGAL OFFICE PROCEDURES

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course is an introduction to the unique characteristics of law office organization and management with an emphasis on computer applications in law. A general introduction to nonlitigation responsibilities and fundamentals of grammar, style and letter writing are covered. Upon completion, students should be able to demonstrate an understanding of concepts and procedures in a law office.

Pre-reqs:

And AOT130

OAD121

Or OAD130

AOT226 SHRSHEET MICROSFT EXCEL

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course increases knowledge and skills to create and edit worksheets, use formulas and functions, sort and filter detail data visually, and present summary information in a consumable and professional format. Students have the opportunity to master the advanced functionality of Microsoft Excel and to apply those skills to business and personal applications. Although the basic functions of Excel will be covered, areas of focus include creating graphs and charts, using financial functions and analytical tools, linking worksheets and workbooks, importing and manipulating data, using macros (automation of tasks), and using auditing tools. Upon completion, students should be able to demonstrate proficiency in using Microsoft Excel.

Pre-reqs:

Test & Score: Computer Test - 21

Or Test & Score: HS Computer Class - 2

Or ITD100

AOT227 ADMIN PROCEDURES AND SYSTEMS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Emphasis will be placed on an administrative office setting. Areas covered include keyboarding and composing of various office correspondences, processing mail, dealing with visitors, maintaining an office calendar, and making travel arrangements. Office problems, practices, and procedures are also emphasized. CTAPS001 effective fall 2018

Pre-reqs:

AOT121

Or AOT127

Or AOT129

And AOT130

And ITD122

Business-Information Tech

Administrative Srv Off Applion

AOT232 AOT PRACTICUM

Credit Hours: 2 Contact Hours: 8 Lecture Hours: 1 Lab Hours: 7 Other Hours: 0

Students work a total of 105 hours for businesses outside of the college or for college faculty and/or staff. Weekly instructor-guided activities are part of this course, which may include required class attendance. Upon completion, students should be able to demonstrate proficiency in administrative tasks and skills in a work environment.

Pre-reqs:

AOT227

Or AOT228

Or AOT237

AOT235 LEGAL RESEARCH AND WRITING

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course introduces the student to the basics of legal writing, document drafting skills and legal research strategies used in assisting lawyers in the preparation of legal documents.

Pre-reqs:

AOT236 DB APP MICROSOFT ACCESS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course covers database applications on the microcomputer using the Microsoft Access program. Upon completion, students should be able to demonstrate proficiency in using MS Access to solve common business problems.

Pre-reqs:

Test & Score: Computer Test - 21

Or Test & Score: HS Computer Class - 2

Or ITD100

Business-Information Tech

Administrative Srv Off Applion

AOT237 LEGAL OFFICE APPLICATIONS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course is designed for students to gain practical experience in preparing legal documents selected from actual cases, review general information about the tasks assigned, follow established procedures and learn the job responsibilities of a legal assistant through simulated activities. Fundamentals of grammar and punctuation skills, as well as the formatting of legal documents, are emphasized. Upon completion, students should be able to perform legal office responsibilities and produce a variety of legal documents using word processing, spreadsheet, database, and presentation software packages.

Pre-reqs:

And AOT224

AOT239

AOT239 LEGAL TRANSCRIPTION

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course is designed to prepare students to perform legal transcription in a law office or other legal settings. Classroom instruction will be provided in the different areas of law, the judicial system and legal terminology. Provide students with the knowledge, terminology and background needed to prepare legal documents. Upon completion, students should be able to proficiently transcribe and format a variety of legal documents.

Pre-reqs:

And AOT129 Can be Taken Concurrently

AOT130

ENG1111 CLARK-English

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Writing and revising process, academic and argumentative essays; literary examples of descriptive, narrative, expository, and persuasive modes; language issues and library skills. Writing intensive. Primary focus on formal, written work, composed for a variety of audiences.

Pre-reqs:

Business-Information Tech

Administrative Srv Off Applion

ENG2211 CLARK-Business Communication

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Preparing and analyzing business documents using fundamental business communication principles and standards, technology, critical thinking skills, and research techniques in preparation for the workplace. Substantial focus on customs and traditions of a nonEnglish-speaking country and the impact of those customs and traditions on expanding American business to that country. Development of oral communication skills using appropriate technology, strategy, and methods. Use of digital recording and PowerPoint slide projection equipment in online sections.

Pre-reqs:

ITD100 COMPUTER APP-WIND & CONCPTS

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

This course introduces students to basic computer concepts and the Windows operating system. Upon completion, students should be able to demonstrate an understanding of how the computer functions, applications for which it is used and graphical user interfaces.

Pre-reqs:

ITD102 Computer Applications - Word

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

This course covers the use, styles and features of word processing programs. Upon completion, students should be able to utilize MS Word as a basic business tool. ITAG approved ITMSOS003, effective fall 2023

Pre-reqs:

Test & Score: Computer Test - 21

Or Test & Score: HS Computer Class - 2

Or ITD100

Business-Information Tech

Administrative Srv Off Applion

ITD104 Computer Applications - PPT

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

This course covers the use, styles and features of graphic presentation programs. Upon completion, students should be able to utilize MS PowerPoint as a basic business tool.

Pre-reqs:

Test & Score: Computer Test - 21

Or Test & Score: HS Computer Class - 2

Or ITD100

ITD105 Computer Applications - Excel

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

This course covers the use, styles and features of spreadsheet programs. Upon completion, students should be able to utilize MS Excel as a basic business tool. ITAG approved ITMSOS005, effective fall 2023

Pre-reqs:

Test & Score: Computer Test - 21

Or Test & Score: HS Computer Class - 2

Or ITD100

ITD106 Computer Applications - Access

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

This course covers the use, styles and features of database application programs. Upon completion, students should be able to utilize MS Access as a basic business tool. ITAG approved ITMSOS004, effective fall 2023

Pre-reqs:

Test & Score: Computer Test - 21

Or Test & Score: HS Computer Class - 2

Or ITD100

Business-Information Tech

Administrative Srv Off Applion

ITD108 Microsoft Outlook

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

This course covers the use, style, and features of the Microsoft Outlook program. Upon completion, students should be able to utilize Microsoft Outlook as a communication and business tool.

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

Test & Score: Compass Reading - 080

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 244

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

Or IDS102

ITD122 COMPUTER APP FOR PROFESSNL

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Computer Applications for Professionals familiarizes students with major Windows-based applications software and introduces the Windows operating system, the Windows networking environment, and practices file and folder maintenance. The focus of the course is to provide students with basic understanding and competence in industry-standard word processing, spreadsheet, database, and presentation software applications that are used to solve scientific, business, and engineering problems. TAG OBU003 approved, effective summer 2021.

Pre-reqs:

Test & Score: Computer Test - 21

Or Test & Score: HS Computer Class - 2

Or ITD100

Business-Information Tech

Administrative Srv Off Applion

ITD140 Digital Project Management

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course provides the foundation of basic project management concepts and terminology and the skills to effectively plan, implement, and control projects using an electronic project system. The basics of using a project management system are covered including creating a project schedule, using various views, producing useful reports, and managing project information, resources, and costs.

Pre-reqs:

Or Test & Score: Computer Test - 21

Or Test & Score: HS Computer Class - 2

ITD100

JCR1001 CLARK-Realtime Theory I

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 2 Lab Hours: 3 Other Hours: 0

Writing, reading, and translating the written and spoken word by means of a National Court Reporters Association (NCRA) approved, conflict-free realtime theory. Emphasis on mastery of beginning machine shorthand principles, speed development of 40 words per minute (wpm) on dictation of familiar material, and rapid and accurate reading of steno notes. Introduction to realtime career opportunities, professional organizations, ethics of the realtime profession, the National Court Reporters Association (NCRA) code of Professional Ethics, certifications, and life-long learning.

Pre-reqs:

JCR1002 Realtime Theory II

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 2 Lab Hours: 3 Other Hours: 0

Advanced writing, reading, and translating the written and spoken word by means of a National Court Reporters Association (NCRA) approved, conflict-free realtime theory. Emphasis on mastery of advanced machine shorthand principles, speed development of 60 words (wpm) on dictation of familiar material, and rapid and accurate reading of steno notes.

Pre-reqs:

JCR1001

Business-Information Tech

Administrative Srv Off Applion

JCR1003 CLARK-Realtime Theory Apps

Credit Hours: 3 Contact Hours: 7 Lecture Hours: 1 Lab Hours: 6 Other Hours: 0

CLARK STATE COMMUNITY COLLEGE
Application of realtime theory foundation. Emphasis on mastery of brief forms, phrases, basic realtime editing functions, speed development of 60 words per minute (wpm) on dictation of unfamiliar material, and rapid and accurate reading of steno notes.

Pre-reqs:

JCR1101 CLARK-Skill Building I

Credit Hours: 3 Contact Hours: 7 Lecture Hours: 1 Lab Hours: 6 Other Hours: 0

CLARK STATE COMMUNITY COLLEGE
Development of writing skills, readback and analysis of shorthand notes, proofreading skills, and quality practice habits. Dictation in literary, jury charge, and testimony material for development of skill and accuracy in speeds ranging from 50-100 words per minute (wpm). Monitored realtime transcription of speed dictation tests in each of the areas of dictation completed within 70 minutes immediately following recorded dictation. Student analysis of vocabulary, grammar, spelling, and punctuation. Use of online, computer-aided transcription technology with teacher interaction. Designed for competency-based modular instruction.

Pre-reqs:

JCR1102 Skill Building II

Credit Hours: 3 Contact Hours: 7 Lecture Hours: 1 Lab Hours: 6 Other Hours: 0

Further development of writing skills, readback and analysis of shorthand notes, proofreading skills, and quality practice habits. Dictation in literary, jury charge, and two-voice testimony material for development of skill and accuracy in speeds ranging from 70-120 words per minute (wpm). Introduction to multivoice dictation, use of speaker IDs, and computer-integrated courtroom setup. Monitored transcription of speed dictation tests in each of the areas of dictation concentration completed within 70 minutes immediately following recorded dictation. Student analysis of vocabulary, grammar, spelling, and punctuation. Production of one-page unedited realtime transcript of unfamiliar material with accuracy rate of 96 percent. Use of online, computer-aided transcription technology with teacher interaction. Designed for competency-based modular instruction.

Pre-reqs:

JCR1101

Business-Information Tech

Administrative Srv Off Applion

JCR131 Legal Terminology

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Instruction in legal terminology in civil law; criminal; and the discovery, trial, and appellate processes. Upon completion, students should be able to comprehend, appreciate, and use legal terms.

Pre-reqs:

JCR2103 CLARK-Skill Building III

Credit Hours: 3 Contact Hours: 7 Lecture Hours: 1 Lab Hours: 6 Other Hours: 0

CLARK STATE COMMUNITY COLLEGE
Application of writing skills, readback and analysis of shorthand notes, proofreading skills, and quality practice habits. Dictation in literary, jury charge, and two-voice testimony material for development of skill and accuracy in speeds ranging from 90-160 words per minute (wpm). Development of writing skill in multivoice dictation and use of speaker IDs. Application of computer-integrated courtroom setup knowledge. Monitored transcription of speed dictation tests in each of the areas of dictation concentration completed within 70 minutes immediately following recorded dictation. Student analysis of vocabulary, grammar, spelling, and punctuation. Production of two-page unedited realtime transcript of unfamiliar material with accuracy rate of 96 percent. Use of online, computer-aided transcription technology with teacher interaction. Designed for competency-based modular instruction.

Pre-reqs:

JCR2104 Skill Building IV

Credit Hours: 3 Contact Hours: 7 Lecture Hours: 1 Lab Hours: 6 Other Hours: 0

Further application of writing skills, readback and analysis of shorthand notes, proofreading skills, and quality practice habits. Dictation in literary, jury charge, and two-voice testimony material for development of skill and accuracy in speeds ranging from 110-180 words per minute (wpm). Application of writing skill in multivoice dictation and use of speaker IDs. Demonstrate knowledge of computer-integrated courtroom setup. Exposure to current events tools. Monitored transcription of speed dictation tests in each of the areas of dictation concentration completed within 70 minutes immediately following recorded dictation. Student analysis of vocabulary, grammar, spelling, and punctuation. Production of three-page unedited realtime transcript of unfamiliar material with accuracy rate of 96 percent. Use of online, computer-aided transcription technology with teacher interaction. Designed for competency-based modular instruction.

Pre-reqs:

JCR2103

Business-Information Tech

Administrative Srv Off Applion

JCR2105 CLARK-Skill Building V

Credit Hours: 3 Contact Hours: 7 Lecture Hours: 1 Lab Hours: 6 Other Hours: 0

CLARK STATE COMMUNITY COLLEGE
Implementation of writing skills, readback and analysis of shorthand notes, proofreading skills, and quality practice habits. Dictation in literary, jury charge, and two-voice testimony material for development of skill and accuracy in speeds ranging from 130-200 words per minute (wpm). Development of writing skill in medical terminology. Execution of writing skill in multivoice dictation and use of speaker IDs. Application of current events tools. Monitored transcription of speed dictation tests in each of the areas of dictation concentration completed within 70 minutes immediately following recorded dictation. Student analysis of vocabulary, grammar, spelling, and punctuation. Production of four-page unedited realtime transcript of unfamiliar material with accuracy rate of 96 percent. Use of online, computer-aided transcription technology with teacher interaction. Designed for competency-based modular instruction.

Pre-reqs:

JCR2106 Skill Building VI

Credit Hours: 3 Contact Hours: 7 Lecture Hours: 1 Lab Hours: 6 Other Hours: 0

Demonstrate quality writing skills, readback and analysis of shorthand notes, proofreading skills, strong practice habits, and knowledge of current events tools. Dictation in literary, jury charge, and two-voice testimony material for development of skill and accuracy in speeds ranging from 150-225 words per minute (wpm), with course completion goal of required graduation speeds at 225 wpm testimony, 200 wpm jury charge, and 180 wpm literary at a minimum of 95 percent accuracy. Application of writing skill in medical terminology, multivoice dictation, and use of speaker IDs. Monitored transcription of speed dictation tests in each of the areas of dictation concentration completed within 70 minutes immediately following recorded dictation. Student analysis of vocabulary, grammar, spelling, and punctuation. Production of five-page unedited realtime transcript of unfamiliar material with accuracy rate of 96 percent. Use of online, computer-aided transcription technology with teacher interaction. Designed for competency-based modular instruction.

Pre-reqs:

JCR2105

JCR2200 CLARK-Realtime Business Proced

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

CLARK STATE COMMUNITY COLLEGE
Role of the realtime court reporter in trials, depositions, and administrative hearings with application of the National Court Reporters Association (NCRA) Guidelines for Professional Practice for Court Reporters; overview of transcript preparation and production; development of office management skills; overview of broadcast captioning and Communication Access Realtime Translation (CART) including the psychology of on-air captions, Federal Communications Commission (FCC) regulations, broadcast news production, pre-scripting, the NCRA CART Provider's Manual, NCRA Guidelines for Professional Practice for Captioners and CART Providers, and the Americans with Disabilities Act (ADA); overview of interview process; professional development in dress and conduct; involvement in professional associations and appreciation of continuing education.

Pre-reqs:

Business-Information Tech

Administrative Srv Off Applion

JCR2300 CLARK-CAT Transcript Prod

Credit Hours: 2 Contact Hours: 4 Lecture Hours: 1 Lab Hours: 3 Other Hours: 0

CLARK STATE COMMUNITY COLLEGE
Application of principles of transcript editing and production techniques using computer-aided transcription (CAT) software with a focus on CAT terminology, proper scoping and proofreading skills, applying correct grammar rules, dictionary management, parenthetical creation and application, and template file usage in preparation for employment.

Pre-reqs:

JCR2400 JCR Internship

Credit Hours: 2 Contact Hours: 6 Lecture Hours: 1 Lab Hours: 5 Other Hours: 0

Judicial court reporting practice in both the official and freelance areas, with a minimum of 60 writing hours and 15 observation hours under the supervision of a practicing court reporter using machine technology. Dictation in literary, jury charge, and two-voice testimony material for demonstration of required graduation skill speeds of 180 words per minute (wpm) literary, 200 wpm jury charge, and 225 wpm two-voice testimony at 95 or 96 percent accuracy. Simulated Registered Professional Reporter (RPR) examination. Upon graduation, students should be prepared to pass the National Court Reporters Association's (NCRA) RPR examination.

Pre-reqs:

MST1105 CLARK-Medical Terminology

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

Language of medicine. Medical prefixes, suffixes, root words, singular/plural forms constructed to form medical terminology. Definition, spelling, and pronunciation of terms related to organization of the body, body systems, pathology, diagnostic and treatment procedures, pharmacology and medical specialists. Standard medical abbreviations.

Pre-reqs:

Business-Information Tech

Administrative Srv Off Applion

MTH1060 CLARK-Business Mathematics

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Application of fundamental problem solving concepts, techniques, and skills relating to the quantitative aspects of business. Topics covered include bank reconciliations, percentages, simple and compound interest, depreciation, markups and markdowns, trade and cash discounts, sales and property taxes, promissory notes, insurance, loan amortization, mortgages, and business statistics.

Pre-reqs:

PDE1402 CLARK-Digital Editing Applicat

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

Application of digital editing skills to real-world scenarios. Professional editing techniques with proficiency utilizing Computer-Aided Transcription (CAT) software; application of CAT editing commands; application of include and parenthetical files; interpretation of digital reporter annotations; application of save/upload/download of files to appropriate destinations; CAT system troubleshooting; audio file synchronization with CAT; production of verbatim transcripts; secure delivery of digital files; archival/disposal of audio and transcript files; application of marketing strategies; management of job scheduling/tracking/invoicing; preparation for professional certification.

Pre-reqs:

PDR1501 CLARK-Digital Rptg Concepts

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

Principles and ethics using hardware and software recording options in digital reporting; proficiency in system components, setup, and functionality; annotation file creation and usage; file naming conventions; upload/download files to directories, cloud-based sites, and external storage devices; test audio for various professional venues; troubleshoot software, hardware, and peripherals; speaker designations and parenthetical creation/usage; search and audio playback; examination of verbatim transcripts; secure digital file transmission; archival/disposal process of audio and transcript files.

Pre-reqs:

Business-Information Tech

Administrative Srv Off Applion

PDR1502 Digital Reporting Applications

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

Digital reporting practice providing for application of digital reporting skills to real-world scenarios encapsulating learning objectives of the digital reporting major: employing professional reporting techniques in various venues with proficiency in digital reporting unit (DRU) setup and utilization; application of speaker designation conventions and annotation files; saving and uploading/downloading files to appropriate destination; performing DRU system and peripherals troubleshooting; providing audio playback; producing verbatim transcripts; archiving and disposing of audio and transcript files; applying marketing strategies; managing job scheduling/tracking/invoicing; and preparing for professional digital reporting certification.

Pre-reqs:

PDR1501

Computer Science

AIN121 Intro to Artificial Intell

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course introduces students to the emerging field of Artificial Intelligence (AI) and its applications. Students will explore the many ways that AI can be used and will be able to describe the types of Artificial Intelligence technologies that exist, including but not limited to Machine Learning, Neural Networks, Computer Vision, and Natural Language Processing. Using hands-on modeling tools, students will build a model to make predictions. Students will also engage in discussions regarding ethical concerns and responsibilities unique to AI technologies. This course will examine and discuss the impacts of AI in the world, in the student's daily lives, and the potential impacts to their careers.

Pre-reqs:

CIS121 HELP DESK AND COMP SUP CONCEPT

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course provides the student with essential topics to support Windows client devices in an enterprise network. Topics include supporting client applications in the cloud, security, basic computer networking, data storage, remote connections, shared resources, and system recovery. There are numerous hands-on labs to practice implementing computer support concepts in a real-world situation. Upon completion, students will have critical-thinking and decision-making acumen needed for success as a support specialist. CTAG approved CTIT006, effective fall 2018.

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Compass Reading - 080

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 244

Or Test & Score: Reading Proficiency - 3

Business-Information Tech

Computer Science

CIS121 HELP DESK AND COMP SUP CONCEPT

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course provides the student with essential topics to support Windows client devices in an enterprise network. Topics include supporting client applications in the cloud, security, basic computer networking, data storage, remote connections, shared resources, and system recovery. There are numerous hands-on labs to practice implementing computer support concepts in a real-world situation. Upon completion, students will have critical-thinking and decision-making acumen needed for success as a support specialist. CTAG approved CTIT006, effective fall 2018.

Pre-reqs:

Or Test & Score: SAT Verbal - 480

IDS102

CIS125 DATA ANALYSIS AND DECISION MAK

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course focuses on key technological areas used for the analysis and transforming of data into actionable information. Students will learn advanced database and data manipulation concepts relating to the storage, retrieval, and analysis of information. Popular tools will be utilized to evaluate various data sources, define business dimensions, store transactions, produce results and transfer data. Upon successful completion of this course, students will be prepared to leverage the power of these tools to perform data analysis.

Pre-reqs:

CPD121

CIS126 FUNDAMENTALS OF INFO SYSTEMS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course is designed to familiarize students with core information systems principles and practices. Topics include, but are not limited to, types of information systems, hardware and software, data modeling, database systems, internet technologies, systems development, careers, global and social impacts, and industry trends.

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Compass Reading - 080

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 244

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

Business-Information Tech

Computer Science

CIS126 FUNDAMENTALS OF INFO SYSTEMS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course is designed to familiarize students with core information systems principles and practices. Topics include, but are not limited to, types of information systems, hardware and software, data modeling, database systems, internet technologies, systems development, careers, global and social impacts, and industry trends.

Pre-reqs:

IDS102

CIS221 GENERATING RPTS DECSN MAKING

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course provides students with exposure to various tools used to connect to databases, retrieve and modify raw data, and then generate various types of reports. Topics will include, but not limited to, the generation of various types of reports and extensive use of pivot tables, calculations, program logic, and SQL statements. Upon completion of this course, students will be able to use a variety of software tools to manipulate data and generate meaningful reports.

Pre-reqs:

Or CPD121

ECA253

CIS222 DATA ACQUISITION AND ANALYSIS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

The course is designed to build skills and confidence in data analysis and report writing. A substantial part of this time is spent analyzing data/datasets and producing a report using the techniques learned in the course. Using a workshop type learning atmosphere, the instructor advises participants in the analysis of the datasets and preparation of reports. Topics include frequency distributions, measures, and graphical presentation.

Pre-reqs:

CIS125

Business-Information Tech

Computer Science

CIS223 IT PROJECT MANAGEMENT

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

In this course students learn about IT-related projects and the five project management process groups associated with project planning. Topics will include areas from Project Integration Management, Scope Management, Time Management, Cost Management, Quality Management, Communication Management, Risk Management, Procurement Management, and Stakeholder Management. Students will use software to help build and manage projects. Upon completion, students will have skills to explore, in greater detail, various project management tools.

Pre-reqs:

ITD140

CIS224 Advanced Help Desk

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course broadens student customer service skill set. The course continues to build on end user communication methods, both oral and written. Students will be exposed to Information Technology Infrastructure Library (ITIL) and Help Desk Institute (HDI) best practices.

Pre-reqs:

CIS121

CPD121 DATA MODELING AND DATABSE DSGN

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course introduces database concepts and describes how to properly design, create and interface with a relational database. The course begins with definition of important terms. It demonstrates the specific rules that one must follow to design and create a normalized relational database. SQL is also an important topic. Students complete a collection of hands-on labs to learn how to apply the techniques presented.

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Computer Test - 21

Or Test & Score: Compass Reading - 080

Or Test & Score: HS Computer Class - 2

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 244

Or Test & Score: Reading Proficiency - 3

Business-Information Tech

Computer Science

CPD121 DATA MODELING AND DATABSE DSGN

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course introduces database concepts and describes how to properly design, create and interface with a relational database. The course begins with definition of important terms. It demonstrates the specific rules that one must follow to design and create a normalized relational database. SQL is also an important topic. Students complete a collection of hands-on labs to learn how to apply the techniques presented.

Pre-reqs:

Or Test & Score: SAT Verbal - 480

IDS102

And ITD100

CPD123 Structured Query Language

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course introduces database technology, relational database concepts, and the powerful SQL programming language. This course provides the students with the essential SQL skills of querying the database and the metadata along with creating database objects. Demonstrations and hands-on practice reinforce the concepts. Upon completion, the student should have the confidence and skill to develop, maintain, and utilize SQL scripts and code.

Pre-reqs:

CPD121

CPD224 ADV MICROSFT SQL SRVR DTBSE

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

In this course students will gain the knowledge and skills to design server-side solutions for Microsoft SQL Server. The course focuses on teaching students the skills of database developers who are individuals who work in enterprise environments to identify and place database technologies during design to achieve a suitable solution that meets the needs of an organization. Students will also learn to consider the solution from a system-wide view instead of from a single database or server perspective.

Pre-reqs:

Or CPD122

CPD123

Or CPD222

Business-Information Tech

Computer Science

CSE121 MOBILE DEVELOP ARCHITECTURE

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course introduces the student to the overall methodologies of developing applications for mobile and handheld devices. The design, architecture, and techniques of mobile and handheld devices will be analyzed. Upon completion of the course, students should have an understanding of the mobile application development process.

Pre-reqs:

Or	CSE122	Can be Taken Concurrently
Or	CSE122	
Or	CSE122A	
And	CSE122B	
	ECA127	Can be Taken Concurrently

CSE122 PROGRAMMING LOGIC & PROB SOLV

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course introduces students to program logic and problem solving techniques. Primary emphasis is on achieving familiarity with structured programming principles through awareness and application of structured programming and object-oriented concepts and techniques. Upon course completion, students will develop the logic to solve programming solutions using structured flowcharts and pseudocode. CTAG approved CTPROG001, effective fall 2017 TAG approved OIT001, effective summer 2023

Pre-reqs:

Or	Test & Score: ACT Reading - 18
Or	Test & Score: Accuplacer Reading - 070
Or	Test & Score: Computer Test - 21
Or	Test & Score: Compass Reading - 080
Or	Test & Score: HS Computer Class - 2
Or	Test & Score: GED Reasoning Through Lang Art - 1
Or	Test & Score: IDS Transfer Prof/Placement - 3
Or	Test & Score: NextGen Accuplacer Reading - 246
Or	Test & Score: Reading Proficiency - 3
Or	Test & Score: SAT Verbal - 480
	IDS102
And	ITD100

Business-Information Tech

Computer Science

CSE122A PROGRAMMNG LOGIC & PROB SOLV A

Credit Hours: 1.5 Contact Hours: 2 Lecture Hours: 1 Lab Hours: 1 Other Hours: 0

This course introduces the student to program logic and problem solving techniques. Primary emphasis is on achieving familiarity with algorithm development, variables, sequential statements, and conditional statements. Upon completion students should have an understanding of the following concepts: algorithms, variables and data types, basic sequential statements, conditional logic and how to use them in program coding.

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

And Test & Score: Computer Test - 21

Or Test & Score: Compass Reading - 080

Or Test & Score: HS Computer Class - 2

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 246

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

IDS102

Or ITD100

CSE122B PROGRAMMNG LOGIC &PROB SOLV B

Credit Hours: 1.5 Contact Hours: 2 Lecture Hours: 1 Lab Hours: 1 Other Hours: 0

This course introduces the student to program logic and problem solving techniques. Primary emphasis is on achieving familiarity with the coding of iterations, arrays, procedures and programming constructs. Upon completion students should have an understanding of the following constructs: iterations, arrays, procedures and how to use them in program coding.

Pre-reqs:

Or CSE122A

ECA127A

Business-Information Tech

Computer Science

CSE221 ANDROID DEVELOPMENT 1

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course covers how to build mobile applications for the Google Android platform. The history and architecture of the Android operating system will be analyzed. Upon completion of the course, students will be able to create simple Android applications and also have an understanding of Android SDK Tools.

Pre-reqs:

CSE231

Or ECA223

CSE222 IOS DEVELOPMENT I

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course covers how to build mobile application for the Apple iOS. The history and architecture of iOS will be analyzed. Upon completion of the course, students will be able to create simple iOS applications and also have an understanding of the various tools available with the iOS SDK.

Pre-reqs:

CSE122

CSE224 ANDROID DEVELOPMENT 2

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course covers advanced mobile applications for the Google Android development. Android best practices will be discussed along with other in-depth Android programming topics. Upon completion of this course, students will demonstrate the ability to create advanced Android applications and the ability to package the applications for deployment in the Android marketplace.

Pre-reqs:

CSE221

Business-Information Tech

Computer Science

CSE226 XAML Development

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course provides an overview of application development and the lifecycle for programs created using XAML and C#. In this course, students will create basic applications with XAML to run on various platforms. Students will also learn how to use available emulation environments to run and test their applications.

Pre-reqs:

Or CSE231

ECA223

CSE229 .Net Development

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course addresses designing, developing, testing, and deploying desktop software applications using the Microsoft.Net programming languages. Upon completion of this course, the student should be able to develop a desktop application with a graphical user interface, write code using .Net control structures, properly validate user input, and test and debug the application.

Pre-reqs:

Or CSE122

Or CSE122A

And CSE122B

ECA127

CSE230 Adv .Net Development

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course examines advanced features of the.NET languages and the .NET Framework. The course also examines object-oriented programming topics, including controlled inheritance and the use of cross-language inheritance. Comprehensive hands-on lab exercises using .NET languages reinforce instructor lectures and build direct competence in the topics presented throughout the course. Upon completing this course, the student should be able to create applications utilizing data connections, datasets, and datatables.

Pre-reqs:

Or CSE229

ECA128

Business-Information Tech

Computer Science

CSE231 JAVA PROGRAMMING

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

The course covers the fundamentals of Java such as creating and executing Java programs that apply sequential, conditional and repetitive logic constructs. Students will also learn best programming practices through application of structured programming principles and object-oriented concepts. Arrays, classes, methods, and application of object-oriented techniques are also central topics. Upon completion, students will have an understanding of the Java language and the skills to develop solutions for intermediate-level programming problems. CTAG approved CTPROG002 effective fall 2017

Pre-reqs:

Or CSE122

ECA127

CSE231A JAVA PROGRAMMING A

Credit Hours: 1.5 Contact Hours: 2 Lecture Hours: 1 Lab Hours: 1 Other Hours: 0

This course introduces students to software programming logic and problem-solving techniques using the Java programming language. Sequential, conditional and repetitive logic constructs are central topics. Upon completion, students should have an understanding of the Java language and the skills to develop the logic to solve programming problems.

Pre-reqs:

Or CSE122

Or CSE122B

ECA127

CSE231B JAVA PROGRAMMING B

Credit Hours: 1.5 Contact Hours: 2 Lecture Hours: 1 Lab Hours: 1 Other Hours: 0

This course introduces students to software programming logic and problem solving techniques using the Java programming language. Primary emphasis is on achieving familiarity with proper programming practices through awareness and application of structured programming principles and object-oriented concepts. Students learn how to write Abstract Data Types as a part of the object-oriented presentations. Upon completion, students should have an understanding of the Java language and the skills to develop the logic to solve advanced programming problems.

Pre-reqs:

CSE231A

Business-Information Tech

Computer Science

CSE232 ADVANCED JAVA PROGRAMMING

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course delves into advanced object-oriented topics such as inheritance, exception handling, graphical user interface, recursion, collections, file manipulation, and searching and sorting. Using a collection of practical application and hands-on labs, students will learn advanced aspects of an object-oriented language. Upon completion, students should have an understanding of the Java language and the skills to develop the logic to solve advanced programming problems.

Pre-reqs:

Or CSE231

Or CSE231A

And CSE231B

ECA223

CSE233 C++ PROGRAMMING

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course focuses on software engineering concepts, control structures, functions, arrays, pointers and strings found in C++. In addition, the course also examines data abstraction, classes, and operator overloading in C++. Principles of good software engineering are emphasized. Hands-on labs prepare students to solve real-world problems. CTAG approved CTPROG003 effective fall 2017

Pre-reqs:

Or CSE122

Or CSE122A

And CSE122B

ECA127

CSE233A C++ PROGRAMMING A

Credit Hours: 1.5 Contact Hours: 2 Lecture Hours: 1 Lab Hours: 1 Other Hours: 0

This course focuses on software engineering concepts, control structures, and functions found in C++. Principles of good software engineering are emphasized. Hands-on labs prepare students to solve real-world problems.

Pre-reqs:

CSE122

Or CSE122B

Business-Information Tech

Computer Science

CSE233B C++ Programming B

Credit Hours: 1.5 Contact Hours: 2 Lecture Hours: 1 Lab Hours: 1 Other Hours: 0

This course focuses on software engineering concepts, arrays, pointers, and strings found in C++. In addition, the course also examines data abstraction, classes, and operator overloading in C++. Principles of good software engineering are emphasized. Hands-on labs prepare students to solve real-world problems.

Pre-reqs:

CSE233A

CSE234 ADVANCED C++ PROGRAMMING

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Students will complete a collection of hands-on lab exercises to create software using the Visual C++ programming language. Students will take advantage of the object-oriented approach to design, develop and utilize components using the Microsoft Component Object Model.

Pre-reqs:

Or CSE233

ECA222

CSE235 PYTHON DEVELOPMENT

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course will introduce students to basic programming and syntax, object-oriented techniques, and GUIs using the Python development environment. Control structures, functions, classes, and inheritance will be covered. Additionally, the practical application of Python programming will be examined. Upon completion of the course, students should understand how to create functional programs using the Python programming language.

Pre-reqs:

Or CSE122

ECA127

Business-Information Tech

Computer Science

CSE236 ANLYZNG SFTWRE REQ AND DEV SOL

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

Students will work in teams to investigate, analyze, design, and implement a computer software solution to a simulated or actual real-world business problem. Components that are emphasized are preliminary investigations, systems request, fact finding, systems requirements, logical modeling, input and output design principles, and the use of various applications for documentation, design, and development. Upon completion, students will be able to demonstrate an understanding of the software development life cycle.

Pre-reqs:

CIS221
And CPD123
Or CSE229
Or CSE231
Or CSE233
Or CSE235
Or WDD221
Or WDD222
Or WDD224
Or WDD225
Or WDD226

CSE237 Advanced Python Development

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

In this course students will learn more complex Python concepts and push the limits of their abilities through practical exercises and assignments using Python. By building on fundamental Python principles, students will learn to confidently experiment with the scripts they write and to produce exciting, functional results. Upon completion of this course students will know how to use applications that interact with Python.

Pre-reqs:

CSE235

Business-Information Tech

Computer Science

EET245 TECH PROJ-ELECC TELECOM

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

A course designed to allow the student to use the capabilities developed in the telecommunications program courses to carry a project from concept to completion.

Pre-reqs:

EET260 COMPUTER FORENSICS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course presents computer crime investigations. Demonstrations and hands-on practice will reinforce topics such as computer crime, programming in the network monitoring platform, trap and trace techniques and patch level enumeration. Upon completion, the students will be able to provide detailed descriptions of computer crimes and understand the technology related to a response team.

Pre-reqs:

Or CAP121

ECA127

And EET131

EET261 ADVCD NETWKG AND SECURTY TPC

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Session hijacking, trojans, virii, input validation and other types of attacks are covered in this class. Ghost Mail, NetCat and war dialers will be used as tools to provide counter measures against the computer criminal.

Pre-reqs:

ECA129

And ECA130

And EET131

And EET141

Business-Information Tech

Computer Science

SGE121 GAME DESIGN

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course provides a broad overview of the game design process. Students explore the game design process by inventing the concept and design of their own board/video game. Students walk through the process of creating their own game design document and use it to guide them as they work on their game project. The course explores a variety of game design concepts while students work through their game project including game worlds, character development, core mechanics and game balance. Students are also introduced to the magic circle and level design.

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Compass Reading - 080

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 244

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

IDS102

SGE221 ADV GAMING AND SIMULATN TOPICS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course is divided into three sections. The first section deals with physics and has students use rigidbodies, colliders, and hinges to create different physics effects. The second section of this course focuses on the user interface (UI) and building game menus and information to the screen in a clear manner to the player. The third section of the course is about artificial intelligence (AI) and designing different ways to have the games' enemies patrol and attack.

Pre-reqs:

SGE222

SGE222 3D GAME DESIGN AND DEV

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course focuses on 3D game development. The student will create movement scripts, design maze levels, create inventory systems, and script basic artificial intelligence (AI) for enemy players. Students create triggers to open doors and spawn events and non-player characters (NPCs). Students also learn how to script triggers that import images from third party websites into their game when players activate them, which can be used to add advertising or give the player directions.

Pre-reqs:

ECA281

Business-Information Tech

Computer Science

SGE222 3D GAME DESIGN AND DEV

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course focuses on 3D game development. The student will create movement scripts, design maze levels, create inventory systems, and script basic artificial intelligence (AI) for enemy players. Students create triggers to open doors and spawn events and non-player characters (NPCs). Students also learn how to script triggers that import images from third party websites into their game when players activate them, which can be used to add advertising or give the player directions.

Pre-reqs:

Or SGE223

SGE223 2D GAME DESIGN AND DEVELP

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course has students build a complete first level of a 2D game similar to the original Mario Brothers game. Students build title screens, option menus, and other user interface (UI) elements such as health meters and coin counters. Students create triggers to spawn enemies, create moving platforms and obstacles for the player to get around. Students script basic artificial intelligence (AI) for enemy non-player characters (NPCs) and create an end condition to trigger the completion of the level.

Pre-reqs:

CSE122

And SGE121

SGE224 Game Programming I

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course develops the students' understanding of simulation and game production and implementation. Activities are focused upon understanding of advanced concepts and implementation techniques central to game development. Lab activities are focused upon the writing of code for games in a high-level programming language. Upon completion, the student will be able to code for advanced gaming methods and procedures.

Pre-reqs:

CSE122

Business-Information Tech

Computer Science

SGE225 Assets for Games

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course covers the use of game assets in the Unity game engine. Students will learn how to find assets in the Unity asset store as well as how to import pre-made assets from other sources outside the Unity asset store. These assets will include 3D art, animated characters as well as music and sound effects. Students will be shown several sites that offer these pre-made assets and the different licensing issues with these assets will be discussed.

Pre-reqs:

SGE121

SGE226 Game Programming II

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course further develops the students' understanding of the simulation/gaming production and implementation process. Class activities are focused upon understanding of more advanced concepts and implementation techniques central to the game and simulation development process. Lab activities are focused upon the writing of simple, yet complete, interactive programs in a high-level programming language.

Pre-reqs:

SGE224

SGE230 Game Portfolio

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course is the capstone experience in video game design and development. The project experience will synthesize previously covered techniques by allowing the students to design and develop an entire simulation/game project. The students will, under the guidance of faculty mentors, take a complete project from idea to proposal to development to product in a diverse team environment. The project sequence culminates with the completion and formal presentation of a completed working interactive 3D simulation/game.

Pre-reqs:

SGE221 Can be Taken Concurrently

Business-Information Tech

Computer Science

WDD121 Internet Design & Development

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course introduces the student to the overall methodologies of developing web sites. The history of the Internet, fundamentals of web design, and the HTML and CSS markup languages will be studied. Upon completion of this course, students should have an understanding of the web design and development process and be capable of hand coding a static website. CTAG approved CTIM004 effective fall 2017

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

And Test & Score: Computer Test - 21

Or Test & Score: Compass Reading - 080

Or Test & Score: HS Computer Class - 2

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 244

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

IDS102

Or ITD100

WDD121 INTERNET/INTRANET DES & DEV A

Credit Hours: 1.5 Contact Hours: 2 Lecture Hours: 1 Lab Hours: 1 Other Hours: 0

This course introduces the student to the overall methodologies of developing web sites. The history of the Internet, fundamentals of web design, the HTML markup language, and the CSS style sheet language will be studied. Specific topics covered include the basic HTML webpage, configuring text and color with CSS, adding images, and best practices in web design. Upon completion of this course, students should have an understanding of the web design and development process and be capable of hand coding a basic static website.

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Computer Test - 21

Or Test & Score: Compass Reading - 080

Or Test & Score: HS Computer Class - 2

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 244

Business-Information Tech

Computer Science

WDD121 INTERNET/INTRANET DES & DEV A

Credit Hours: 1.5 Contact Hours: 2 Lecture Hours: 1 Lab Hours: 1 Other Hours: 0

This course introduces the student to the overall methodologies of developing web sites. The history of the Internet, fundamentals of web design, the HTML markup language, and the CSS style sheet language will be studied. Specific topics covered include the basic HTML webpage, configuring text and color with CSS, adding images, and best practices in web design. Upon completion of this course, students should have an understanding of the web design and development process and be capable of hand coding a basic static website.

Pre-reqs:

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

IDS102

And ITD100

WDD121 INTERNER/INTRANET DES & DEV B

Credit Hours: 1.5 Contact Hours: 2 Lecture Hours: 1 Lab Hours: 1 Other Hours: 0

This course introduces the student to the overall methodologies of developing web sites. The history of the Internet, basics of web design, the HTML markup language, and the CSS style sheet language will be studied. Upon completion of this course, students should have an understanding of the web design and development process and be capable of hand coding a basic static website. Specific topics covered include page layout with CSS, tables, forms, and web multimedia.

Pre-reqs:

WDD121A

WDD122 WEB GRAPHICS DESIGN

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course covers creating and editing backgrounds and graphics for use on the internet. Students will learn appropriate design skills and techniques, design language and study color relationships through demonstrations and hands-on practice in order to reinforce the concepts as they use various leading edge technologies to create graphics. Upon completion of this course, students will be able to analyze web graphics and design; develop web graphics; optimize images for the web and understand the concepts of design as they relate to the web.

Pre-reqs:

ECA228

Or WDD121

Or WDD121A

And WDD121B

Business-Information Tech

Computer Science

WDD122 WEB DESIGN GRAPHICS A

Credit Hours: 1.5 Contact Hours: 2 Lecture Hours: 1 Lab Hours: 1 Other Hours: 0

This course covers creating and editing backgrounds and graphics for use on the internet. Students will learn appropriate design skills and techniques, design language and study color relationships through demonstrations and hands-on practice in order to reinforce the concepts as they use various leading edge technologies to create graphics. Upon completion of this course, students will be able to analyze web graphics and design.

Pre-reqs:

ECA228

Or WDD121

Or WDD121A

And WDD121B

WDD122 WEB GRAPHICS DESIGN B

Credit Hours: 1.5 Contact Hours: 2 Lecture Hours: 1 Lab Hours: 1 Other Hours: 0

This course covers in-depth web page layouts and how to create full web page designs using photo software. Students will be able to develop page layouts based on industry best-practices for design and optimization. Upon completion of this course, students will be able to develop web graphics; optimize images for the web and understand the concepts of design as they relate to the web as they use various leading edge technologies to create graphics.

Pre-reqs:

WDD122A

WDD221 Web Development w/ JavaScript

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course introduces students to JavaScript along with current web technologies such as AJAX, jQuery, and JSON. Students will develop interactive websites using these technologies which provide for an excellent portfolio piece. Various assignments enhance the student's ability to master JavaScript along with many web development components. Hands-on labs are utilized to reinforce the presented materials.

Pre-reqs:

CSE122

And WDD121

Business-Information Tech

Computer Science

WDD222 ADVD CASCADING STYLE SHEETS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course focuses on developing web pages with the latest design and development techniques such as web pages created entirely using a CSS layout. Usability is emphasized as well as web site documentation. Hands-on labs are utilized to reinforce the presented materials.

Pre-reqs:

ECA228
Or WDD121
Or WDD121A
And WDD121B

WDD223 Content Mgt System Des & Dev

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course teaches students to set up, design, and customize various open-source content management systems. In addition, students will be instructed on the various ways to add shopping cart functionality to those systems. Upon completion, students will be able to make customizations to various open-source content management systems.

Pre-reqs:

Or CPD121
And ECA228
ECA253
Or WDD121
Or WDD121B

WDD224 ACTIVE SERVER PAGE DEV

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course focuses on server side programming with ASP.Net. Students learn to connect to a database, add, update, and delete from the database, create user controls, master pages, XML driven site navigation and login pages. ASP.Net web controls are emphasized. Hands-on labs are utilized to reinforce the presented materials.

Pre-reqs:

Or CSE122
Or CSE122B

Business-Information Tech

Computer Science

WDD224 ACTIVE SERVER PAGE DEV

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course focuses on server side programming with ASP.Net. Students learn to connect to a database, add, update, and delete from the database, create user controls, master pages, XML driven site navigation and login pages. ASP.Net web controls are emphasized. Hands-on labs are utilized to reinforce the presented materials.

Pre-reqs:

And ECA127
ECA228
Or WDD121
Or WDD121B

WDD225 ASP.Net MVC Development

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course covers advanced topics in the ASP.Net technology from Microsoft. Topics covered will be ADO.net, Converting data back and forth from XML, building custom controls and N-tier development. Several complete applications will be developed.

Pre-reqs:

CSE122
And WDD121

WDD226 WEB DEV WITH PHP AND MYSQL

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Students learn to develop server side scripts with PHP including developing various web applications and connecting to a MySQL database. Additional topics include the development and design of the MySQL database. Upon completion, students will be capable of utilizing PHP to develop web applications and connect to a MySQL database. Hands-on labs are utilized to reinforce the presented materials.

Pre-reqs:

Or CSE122
Or CSE122B
And ECA127
ECA228
Or WDD121

Business-Information Tech

Computer Science

WDD226 WEB DEV WITH PHP AND MYSQL

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Students learn to develop server side scripts with PHP including developing various web applications and connecting to a MySQL database. Additional topics include the development and design of the MySQL database. Upon completion, students will be capable of utilizing PHP to develop web applications and connect to a MySQL database. Hands-on labs are utilized to reinforce the presented materials.

Pre-reqs:

Or WDD121B

WDD229 ADVANCED WEB DESIGN

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course focuses on creating and coding advanced web designs with HTML and CSS. Advanced graphic techniques are introduced. Hands-on projects take the student from an initial concept to a graphic mockup and finally to a complete web page.

Pre-reqs:

ECA138

Or WDD122

Computer Security

CFS136 PRINC OF INFORMATION SECURITY

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course examines the current standard of due care and best business practice in information security. Demonstrations and hands-on practice will reinforce topics such as evaluation and selection of security models, risk management, threat analysis, organizational technology evaluation, security implementation, disaster recovery planning and security policy formation and implementation. Upon completion, the students will be able to examine security technology, methodologies and practices. CTAG approved CTCYBR001, effective fall 2019

Pre-reqs:

Business-Information Tech

Computer Security

CFS137 COMPUTER CRIME AND INVESTIGATN

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course provides an overview of cyber crime and computer related crime issues facing businesses and the criminal justice system. Demonstrations and hands-on practice will reinforce topics such as how computers are used in crime, interview techniques, search warrants, evidence handling, chain of custody, identification and recovery of computer data, report writing, case preparation, and courtroom testimony. Upon completion, the students will be able to understand government response to cyber crime issues from a law enforcement perspective.

Pre-reqs:

Or ECA145

NET120

CFS175 WHITE COLLAR CRIME

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course will familiarize students with the various types of white collar crimes committed in the banking, health care and financial industry. Emphasis will be placed on recognition and investigation of white collar crime particularly those involving the use of information system resources.

Pre-reqs:

CFS210 Cyber Defense Fundamentals

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course provides students the opportunity to expand on the knowledge, skills, and practical exercises they have been exposed to in prior classes to prevent, detect, and respond to a cyber-attack. Students will expand their exposure to and use of open-source network tools for network monitoring and analysis. Successful completion of this course maps to the CompTIA Cybersecurity Analyst Certification (CySA+)

Pre-reqs:

CFS136

And NET220

Business-Information Tech

Computer Security

CFS250 Cyber Sec & Dig Foren Prac

Credit Hours: 2 Contact Hours: 8 Lecture Hours: 1 Lab Hours: 7 Other Hours: 0

Students will complete practical assignments to facilitate locating an internship position to complete a total of 105 hours in an approved cyber security, digital forensics, or information technology setting (physical or virtual) to apply the skills learned in the program. Students will submit assignments to promote lessons learned from the experience and pass these along to their peers throughout the process and in a final presentation.

Pre-reqs:

CFS256

And CFS275

CFS256 DISASTR RCVRY AND INCIDENT PLN

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course is a detailed examination of the aspects of contingency planning operations. Demonstrations and hands-on practice will reinforce topics such as incident response-prevention, detection, reaction, disaster recovery, and business continuity. Upon completion, the students will be able to provide documentation for a disaster recovery plan.

Pre-reqs:

CFS257 FILE SYSTEMS ANALYSIS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course is a comprehensive overview of contemporary volume and file systems. Topics include, discovering hidden evidence, recovering deleted data, data structures, and tool validation. Students will analyze example disk images, and participate in advanced investigation scenarios.

Pre-reqs:

Or CFS137

ECA137

Business-Information Tech

Computer Security

CFS258 CYBER FORENSCS AND DATA RECRVY

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course presents methods to properly conduct a computer forensics investigation while mapping to the objectives of the International Association of Computer Investigative Specialist (IACIS) certification. Demonstrations and hands-on practice will reinforce topics such as finding evidence in file metadata, analyzing partitions and data structures, and identifying hidden data on a disk's Host Protected Area. Upon completion, the students will be able to gather evidence from disk images document findings.

Pre-reqs:

CFS257

Or ECA257

CFS275 ETHICAL HACKING

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

In this course, students learn to discover weaknesses in operating environments using the well known hacking methods. Students will acquire the knowledge to systemically test and exploit internal and external defenses. Students will learn the countermeasures used to mitigate and reduce risk to enterprise networks. Students will be taught how to crack security systems so they can advise organizations on how to protect their systems.

Pre-reqs:

Or ECA145

Or ECA277

NET120

And NET220

CFS280 DIGITAL MEDIA FORENSICS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

The student will understand the methods and tools used in preserving, duplicating, imaging and validating data from peripheral devices such as cellular phones, PDAs, IPODs, and Blackberrys. In addition to this, attention will be given to the gathering of evidence from both hard wired and wireless networks devices. Students will practice the gathering of information from these devices using the appropriate methods and software to allow the information to be admissible in court.

Pre-reqs:

CFS137

Or ECA137

Business-Information Tech

Computer Security

CFS286 UNIX/LINUX FORENSICS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course covers typical methods of collecting, examining, and recovering data from typical UNIX style file systems. Methods for imaging and mounting file systems without changing data will be studied. Ways of monitoring system events and tracking intruders.

Pre-reqs:

Or ECA277

NET220

CFS287 NETWORK FORENSICS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course is designed to teach students the skills required to identify, acquire, and analyze data gathered from network devices using both passive and active tools. Emphasis will be placed on the use of open-source security tools to conduct an analysis of network activity to gather information relative to an investigation.

Pre-reqs:

CFS137

And NET121

And NET220

DPH280 Photography Portfolio

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This capstone course will focus on developing a highly effective and professional quality photography portfolio from concept to final presentation. A portfolio is required.

Pre-reqs:

IMT263

Business-Information Tech

Computer Security

IMT121 INTERACTIVE MEDIA

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course examines communication and storytelling through a variety of media, including visual design, sketching, storyboarding, 3D modeling, and sound design. Upon completion, students will present a previsualization of an original story idea through a series of audio, video, and design projects. CTAG CTMDA001 approved, effective spring 2022

Pre-reqs:

IMT122 GRAPHIC ARTS DESIGN

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Topics include effective communication through design from thought to finished process. Upon completion students will be able to effectively use Adobe Photoshop to create computer graphics. CTAG approved CTGRPH001 effective fall 2019

Pre-reqs:

Or Test & Score: Computer Test - 21

Or Test & Score: HS Computer Class - 2

ITD100

IMT122A GRAPHIC ARTS DESIGN A

Credit Hours: 1.5 Contact Hours: 2 Lecture Hours: 1 Lab Hours: 1 Other Hours: 0

Students successfully completing the Graphic Arts Design A (IMT122A) course will acquire a working knowledge of the concepts, components and composition necessary in the design of print media. They will learn effective communication through design, beginning with the concept and concluding with the finish product.

Pre-reqs:

Business-Information Tech

Computer Security

IMT122B GRAPHIC ARTS DESIGN B

Credit Hours: 1.5 Contact Hours: 2 Lecture Hours: 1 Lab Hours: 1 Other Hours: 0

Students completing the course will obtain functional and foundational knowledge of Adobe Photoshop CS3 and will use that software in the design materials for the course. Knowledge of the concepts and the software taught in this course are necessary for students interested in pursuing careers in Graphic Design, 3-D Design, Desktop Publishing and Animation.

Pre-reqs:

IMT122A

IMT125 3D GRAPHICS MODELING

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Topics include 3D modeling, texturing, lighting, and rendering. Upon successful completion, students will be able to effectively use 3D software to create and render 3D objects and scenes. CTAG approved - CTIM007 effective spring 2015.

Pre-reqs:

IMT129 DIGITAL AUDIO RECG AND EDITING

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course introduces the basics of audio recording and digital sound manipulation. Specific topics include waveform characteristics, basic recording techniques, and audio editing and mixing. Upon completion, students will be able to capture and modify audio to create music and sound designs for a variety of media including TV, radio, web, and game design. TAG approved Summer 2012 OCM007. CTAG approved effective summer 2012 CTMDA002

Pre-reqs:

Business-Information Tech

Computer Security

IMT131 COLOR THEORY AND DESIGN

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course introduces the elements and principles of two-dimensional design, including the study of graphic design history, color theory and the elements and principles of design as it applies to the visual arts. Coursework will consist of lectures and discussions involving critiques on color theory and design concepts and applications. Class assignments emphasize creative problem solving techniques with specific limitations and specifications. CTAG approved CTVDI002, effective fall 2018.

Pre-reqs:

IMT132 DIGTL PHOTOGRAPHY/GRAPHC&MEDIA

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course teaches the student the principles of digital still photography and enhances student skills in digital image manipulation. Topics covered include: focus, exposure, composition and lighting. Students must provide their own digital camera for the duration of the course. TAG approved course- OAH002

Pre-reqs:

IMT134 TECHNICAL MUSICIANSHIP

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course covers ear-training, sight-singing, basic keyboard techniques, and arranging. Upon completion, students will have developed the skills necessary to compose and arrange music using MIDI controllers and notation software.

Pre-reqs:

IMT135	Can be Taken Concurrently

Business-Information Tech

Computer Security

IMT135 MUSIC THEORY AND COMPOSITION I

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course introduces the basics of pitch and rhythm in music. Specific topics include meter, scales, keys, and intervals. Upon completion, students will have developed skills in diatonic ear-training, analysis, and notation.

Pre-reqs:

IMT136 PRINCIPLES OF ANIMATION

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course teaches students established animation principles in a traditional 2D environment, bringing more life and appeal to any animation projects. These principles can directly applied to various animation technologies such as 3D, motion graphics, and web animation.

Pre-reqs:

IMT137 DRAWING BASICS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course covers foundational drawing principles. Students will apply these principles by drawing a variety of subjects from both reference and memory. Students will also learn to use a variety of physical and digital drawing mediums.

Pre-reqs:

Business-Information Tech

Computer Security

IMT141 Typography Fundamentals

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course introduces students to the practice of letterforms and typography as they apply to designs and visual communications. Students will learn the technical and aesthetic aspects of type as an integral design element and how to apply typographical concepts to page layouts. CTAG approved CTVDI001, effective Summer 2017.

Pre-reqs:

IMT223 DIGITAL VIDEO RECORDING & EDIT

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course covers the production of digital video. Studio practice will include topics such as camera operation, lighting, and digital video editing. Working independently and in groups, students work on projects including documentary, short subject narratives, and editing exercises. TAG approved Summer 2012 OCM008. CTAG approved effective fall 2012, CTMDA003

Pre-reqs:

Or Test & Score: Computer Test - 21

Or Test & Score: HS Computer Class - 2

ITD100

IMT227 3D GRAPHICS ANIMATION

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Students learn to create and render animations in a 3D development envrionment while exploring basic concepts such as Basic Keyframing, Curve Editors, and Object Hierarchy. Upon completion, the student will understand more advanced techniques such as the use of Constraints/Controllers, Bones Systems, and Facial Animation.

Pre-reqs:

And IMT125

IMT136

Business-Information Tech

Computer Security

IMT230 WEBCASTING AND MUSIC PUBLISHNG

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

The goal of this course is for students to learn how market their music as widely and effectively as possible. The course covers the pros and cons of various file formats and how to create professional-quality files for distribution. The course also seeks to further the students' understanding of the details of music as a business. Aspects covered include preparing media for the web, distribution and synchronizing rights, licensing and copyright, and publishing in the internet age.

Pre-reqs:

IMT129

IMT237 COMPOSITING

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Students learn how to create special effects using the green screen, mattes, alpha channels and masks, using special effects software. Upon completion, students will be able to effectively create special effects in various formats. Students will gain these skills through a series of labs and projects utilizing Adobe After Effects.

Pre-reqs:

IMT223

IMT238 ADVANCED VIDEO PRODUCTION

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course expands on the skills and techniques learned in IMT242. There will be more focus on the creation of professional-level video productions. Student projects will be used to explore the latest techniques in the video industry. TAG approved Summer 2012 OCM010.

Pre-reqs:

IMT242

Business-Information Tech

Computer Security

IMT239 MUSIC SYNTHESIS I

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course introduces the basics of music synthesis. Specific topics include synthesizers, waveform processing, MIDI, MIDI controllers, sequencing, and composing. Upon completion, students will have developed skills in creating music and sound using sample libraries, synthesizers, and sequencing software.

Pre-reqs:

And IMT129

IMT247

IMT240 ADVANCED 3D GRAPHIC MODELING

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course provides the student with opportunities to learn and refine the 3D modeling, texturing, lighting, and rendering skills learned in earlier courses. Upon completion, the student will be able to effectively use the 3D software to interface to create and render various 3D graphic objects and characters.

Pre-reqs:

IMT125

IMT242 LIGHTING AND CINEMATOGRAPHY

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course covers the topics necessary to design videos from script to screen. Studio practice will reinforce topics such as exposure, composition, framing, and single camera production. Lighting topics include studio and field lighting techniques, artistic and functional lighting design and applications. Upon completion, the student will be able to plan, shoot, and edit short form videos in a variety of genres.

Pre-reqs:

IMT223

Business-Information Tech

Computer Security

IMT243 ADVANCED COMPOSITING

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course covers the design and integration of motion graphics with video. Studio projects will reinforce topics such as integration of 3D graphics with video, advanced animation techniques, filters, and footage repair. Techniques learned will apply equally to game design and movie special effects. Students will gain these skills through a series of hands-on projects using compositing and 3D software packages.

Pre-reqs:

IMT237

IMT244 DIGITAL PAGE LAYOUT AND DESIGN

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course is a project-focused, portfolio-building page layout course. Includes lessons on typography, design theory, print terminology, and images. Students will independently create a select number of industry standard projects such as: flyers, brochures, menus, newsletters, and magazines.

Pre-reqs:

IMT122

And IMT131

And IMT141

IMT245 GRAPHIC ARTS DESIGN II

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course expands on the skills and techniques learned in Graphic Arts Design. Additionally, there will be more focus on photographic enhancements; working with filters and other tools and options available to enhance graphics in this course. Upon completion of this course, students will develop further understanding and abilities to design and enhance both print and web media. Demonstrations and hands-on projects are implemented on the computer using Adobe Photoshop.

Pre-reqs:

IMT122

Business-Information Tech

Computer Security

IMT246 APPLIED MUSIC TECHNOLOGY

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

A practical application of the student's knowledge of music, music technology, and computer software/hardware technology. The student will create a number of musical compositions assisted by MIDI software/hardware interfaces and merge these compositions with web sites, training videos, marketing presentations and other practical applications of software engineering technology.

Pre-reqs:

IMT250

IMT247 MUSIC THEORY COMPOSITION II

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course covers the basics of harmony, form, and composition in music. Specific topics include triads and seventh chords, the harmonic system, church modes, part-writing, ear-training, basic chromaticism, and musical forms. Upon completion, students will be able to create 16 to 48-bar compositions in four-voice structure.

Pre-reqs:

IMT135

IMT249 TEXTURES FOR 2D AND 3D

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course covers the creation of professional-quality textures for both 2D and 3D design. Upon completion of this course, students will learn the art and design in the creation of these textures and effects, including basic designs, shortcuts and creating environmental textures. Design skills covered in this course will allow students to proceed to designing textures for 3D gaming among other applications. Learning will be facilitated through a series of projects using current application design software.

Pre-reqs:

And IMT122

IMT125

Business-Information Tech

Computer Security

IMT250 MUSIC TECHNOLOGY

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Building on the understanding of audio recording developed in IMT129, Music Technology emphasizes commercial music production with advanced discussions and implementation of mixers, digital recording devices, duplicators and software in a lab-based environment. Upon completion, the student will be able to analyze music production needs and create simple, viable presentations of their own projects.

Pre-reqs:

IMT129

IMT253 GRAPHICS FOR ILLUSTRATION

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Vector Graphics focuses on the creation and editing of resolution independent images. Students use digital drawing techniques to create vector graphics for the use in other interactive media projects or as independent compositions. Topics range from the creation of vector graphics through choosing the appropriate output method for their intended use. CTAG approved - CTGRPH002 effective fall 2019

Pre-reqs:

IMT122

IMT254 PORTFOLIO DEVELOPMENT-IMT

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This capstone course will focus on developing and completing complex print design projects and a portfolio. These projects are used to assess the students competencies and proficiencies acquired in the program. A portfolio is required.

Pre-reqs:

IMT244

And IMT245

And IMT253

Business-Information Tech

Computer Security

IMT255 ADVANCED ILLUSTRATION

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course is a project-focused, portfolio-building advanced vector graphics course. Includes lessons on various digital drawing techniques. Students will independently create a select number of industry-standard projects in areas of vector drawings, information graphics, logos, page, and screen compositions.

Pre-reqs:

Or ECA243

IMT253

IMT256 DIGITAL IMAGING

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course focuses on both vector and raster graphics for screen based graphics. Course focuses include: graphics for video, graphics for presentations, image formatting, digital photo editing, pattern and texture creation, image optimization, and vector raster graphic integration techniques. Upon the completion of this students will understand of how to merge design technologies to create professional quality screen graphics.

Pre-reqs:

IMT122

And IMT132

IMT259 MUSIC SYNTHESIS II

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This capstone course provides students with the skills and tools necessary to build advanced-level work in music synthesis. Upon completion, students will have completed three portfolio projects showcasing their skills in composing and arranging using synthesis, MIDI, and sequencing software.

Pre-reqs:

IMT239

Business-Information Tech

Computer Security

IMT260 LIVE SOUND

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Live Sound Technology studies the needs of audio reinforcement for the music venue. The student will study all aspects of live sound through advanced discussions and implementation of mixers, processors, and amplifiers in a lab-based environment. Upon completion, the student will be able to analyze music production needs and set-up and operate a sound system.

Pre-reqs:

IMT129

IMT261 ADVANCED MUSIC TECHNOLOGY

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Advanced Music Technology requires students to utilize the skills they have developed throughout the Music Technology and Applied Music Technology classes. Students will refine their skills as music producers and engineers by completing regular homework assignments and four large-scale projects, designed to build professional-standard portfolios.

Pre-reqs:

IMT239

And IMT246

IMT262 ADVANCED DIGITAL PHOTOGRAPHY

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Continues the study of aesthetic and technical theories and techniques of digital photography. Topics include intermediate level exposure, composition, lighting, creativity and image editing and correction techniques. Projects require exploration and experimentation. Students will begin to develop a personal photographic style. Digital SLR camera required.

Pre-reqs:

IMT132

Business-Information Tech

Computer Security

IMT263 PHOTOGRAPHIC LIGHTING

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course gives students an in-depth understanding of light in photography and how to use different lighting equipment and techniques to achieve desired effects in a final image. Topics of instruction include: correct exposure, lighting ratios, basic portraiture lighting, and studies in composition of commercial photographs.

Pre-reqs:

IMT132

IMT264 IMAGE MANAGMENT

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Students learn the essentials of professional digital photography for managing, adjusting and publishing small and larger volumes of digital photographs. This hands-on course takes students through a non-destructive professional editing workflow to fine tune photos with precise management tools and methods.

Pre-reqs:

IMT132

IMT265 MOTION GRAPHICS PORTFOLIO

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This capstone course will focus on developing and completing complex production projects and a portfolio. These projects are used to assess the student's competencies and proficiencies acquired in the program. A portfolio is required.

Pre-reqs:

IMT268

Business-Information Tech

Computer Security

IMT266 FILM THEORY AND PRACTICE

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

The course will evaluate and dissect film from historical pictures to the modern day 3-D films. The course also covers the ideology and technology of film throughout history until the present day It allows critical thinking about how and why the film was made in addition to practicing those techniques and replicating them using today's post-processing software. Students will reconstruct the films that they study using today's technology.

Pre-reqs:

IMT121

IMT268 ADVANCED VIDEO EDITING

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course will begin with the history and significance and editing through the development of new technologies and nonlinear editing. It will cover theory and practice utilizing the industry standard editing software proram. The course will introduce advanced methods of editing and effects for the students, including multi-camera editing, color correction, and transitions.

Pre-reqs:

IMT223

NET120 PC UPGRADING AND MAINTENANCE

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

The student will be working with various operating systems such as DOS, Windows 98, 2000 and XP. Student will also have hands-on experience building and repairing PC's in a lab environment. Hardware topics include: system board, microprocessors, busses, memory, disk drives, and power supplies.

Pre-reqs:

Business-Information Tech

Computer Security

NET121 INTRO TO COMP NETWORKING

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course covers the architecture, structure, functions and components of the Internet and other computer networks. Students achieve a basic understanding of how networks operate and how to build simple local area networks (LAN), perform basic configurations for routers and switches, and implement Internet Protocol (IP). CTAG approved CTIT017, effective summer 2022 ITAG approved ITITN017, effective summer 2022 TAG approved OIT002, effective summer 2023

Pre-reqs:

NET131 MICROSOFT CLIENT OPERATNG SYS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Course includes installing and administering the Windows Operating Systems. It also covers security issues, installation troubleshooting, desktop issues, and desktop configuration.

Pre-reqs:

Or ECA145

Or ECA146

NET120

And NET121

NET137 CCNA Phase 2

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course covers the architecture, components, and operations of routers and switches in small networks and introduces wireless local area networks (WLAN) and security concepts. Students learn how to configure and troubleshoot routers and switches for advanced functionality using security best practices and resolve common issues with protocols in both IPv4 and IPv6 networks. CTAG approved CTIT018, effective summer 2022 ITAG approved ITITN018, effective summer 2022

Pre-reqs:

NET121

Business-Information Tech

Computer Security

NET220 UNIX/LINUX OPERATING ENVIRONMT

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course covers working at the Unix/Linux shell command line, customizing the shell environment, understanding basic filesystem structure and permissions, file management tools, basic shell scripting techniques, vi text editor, data processing tools, Xserver, Xwindows, remote machine access using SSH & FTP, compiling C programs under Unix, and formation of make files and the make command.

Pre-reqs:

NET120

And NET121

NET244 MICROSOFT NETWORKING I

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Course covers installing and configuring a Microsoft server operating system. Students will demonstrate skills necessary to implement a core infrastructure into an existing enterprise environment. Topics include working with Active Directory, implementing local storage, implementing file and print services, and implementing server virtualization with Hyper-V.

Pre-reqs:

Or ECA144

Or ECA145

NET120

And NET121

NET245 MICROSOFT NETWORKING II

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Course covers administering a Microsoft server operating system. Students will demonstrate skills necessary to administer an infrastructure in an enterprise environment. Topics include implementing group policies, managing user accounts, managing domain services, DNS, and remote access.

Pre-reqs:

Or ECA244

NET244

Business-Information Tech

Computer Security

NET246 MICROSOFT NETWORKING III

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Course covers configuring advanced Microsoft server services. Students will master skills necessary to administer an infrastructure in an enterprise environment. Topics include implementing advanced network services, advanced file services, dynamic access control, network load balancing, failover clustering, and disaster recovery.

Pre-reqs:

Or ECA244

NET244

NET253 SEC NTWK SWITCH AND ROUTERS

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course will introduce students to security topics and best practices on switches and routers. Demonstration and hands-on practice will reinforce topics including secure communications using IPSec and VPNs, Cisco IOS security, and identity based services. Upon completion, students will be able to implement layer 2 and 3 security, create secure lines of communication, and deploy threat defense using the Cisco IOS.

Pre-reqs:

NET137 Can be Taken Concurrently

NET256 CCNA Phase 3

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course describes the architecture, components, operations, and security to scale for large, complex networks, including wide area network (WAN) technologies. The course emphasizes network security concepts and introduces network virtualization and automation. Students learn how to configure, troubleshoot, and secure enterprise network devices and understand how application programming interfaces (API) and configuration management tools enable network automation. CTAG approved CTIT019, effective summer 2022 ITAG approved ITITN019, effective summer 2022

Pre-reqs:

NET137

Business-Information Tech

Computer Security

NET264 UNIX/LINUX SYS ADMIN

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course covers administration and configuration of UNIX and/or LINUX operating systems. Topics include: adding/maintaining user accounts, bootup, shutdown, runlevels, daemons, backup and restoring files, basic network configuration, policies and ethic, process control, file systems, log files. During the lab, the student will install LINUX on a personal harddrive and be the administrator of their personal system. Students will add users, schedule cron jobs, add file systems to their system, etc.

Pre-reqs:

Or ECA277

NET220

NET281 FIREWALL AND NETWORK SECURITY

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course provides the technology essentials for a web developer to design and develop secure E-Commerce solutions. Techniques such as the Luhn Algorithm and 128 bit encryption will be explored and implemented.

Pre-reqs:

NET137

Health and Human Services

Criminal Justice

CJS121 INTRO TO CRIMINAL JUSTICE

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This introductory course provides an overview of the American criminal justice system, covering its three main components: policing, the courts, and corrections. Topics include historical development of the criminal justice system, theoretical explanations of criminal behavior; measuring crime statistics, strategies and models of law enforcement, criminal law and procedure, sentencing and punishment, and the juvenile justice system. TAG approved Spring 2012 OSS031. CTAG approved STCJ001 effective Spring 2012

Pre-reqs:

Health and Human Services

Criminal Justice

CJS124 POLICING

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course examines the role of local, state, and federal law enforcement in American society. Topics include the structure and functions of police organizations; the historical development of policing; methodology; models of policing, including community policing; and current issues in law enforcement. TAG approved Spring 2012 OSS032.

Pre-reqs:

CJS121

CJS129 CORRECTIONS

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course examines community and institutional corrections in the United States. Topics include the history and goals of punishment, supervised release, intermediate sanctions, institutional administration, and issues in corrections. TAG approved Spring 2012 OSS033.

Pre-reqs:

CJS121

CJS140 LAW ENFORCEMENT ACADEMY I

Credit Hours: 12 Contact Hours: 16 Lecture Hours: 8 Lab Hours: 8 Other Hours: 0

This course is part of the Ohio Peace Officer's Basic Training curriculum. The course provides an overview of the American criminal justice system and focuses on Ohio criminal law, criminal procedure for the law enforcement professional, general and investigative report writing, law enforcement driving techniques, and physical conditioning.

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Compass Reading - 080

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 244

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

IDS102

Health and Human Services

Criminal Justice

CJS221 CRIMINOLOGY

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course examines theories and patterns of criminal behavior. Topics include types and causes of crime, crime rates, and punishment. TAG approved Spring 2012 OSS034.

Pre-reqs:

CJS121

CJS222 CRIMINAL LAW IN THE US

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course examines criminal law in the U.S. Topics include the structure and functions of the legal system, the historical development of the criminal law, and elements of major crimes and defenses.

Pre-reqs:

CJS121

CJS223 Criminal Procedure

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course examines criminal procedure and related concepts. Topics include the constitutional protections of the 4th, 5th and 6th amendments to the U.S. Constitution as well as the criminal justice process from arrest to conclusion.

Pre-reqs:

CJS121

Health and Human Services

Criminal Justice

CJS240 LAW ENFORCEMENT ACADEMY II

Credit Hours: 12 Contact Hours: 16 Lecture Hours: 8 Lab Hours: 8 Other Hours: 0

This course is part of the Ohio Peace Officer's Basic Training curriculum. The course focuses on firearms training, patrol administration, traffic enforcement, criminal investigation, intermediate subject control techniques and physical conditioning, and human relations.

Pre-reqs:

CJS140

PSC122 Intro Law and Legal System

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course introduces students to the American legal system and the criminal, civil, and administrative components of that system. Topics include the organization of the courts, the origins of law, the adversarial system, legal procedures, an introduction to legal ethics, and several principles of the civil law, including tort and contract law.

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Compass Reading - 080

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 244

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

IDS102

PSC123 Government & Legal Ethics

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course explains the rules and standards of ethical and professional responsibility for attorneys, policy makers, and government employees, with emphases on the Ohio Code of Professional Responsibility and Ohio Ethics Law for public officials and employees. Topics include competency, confidentiality, conflicts of interest, financial disclosure, and impartiality.

Pre-reqs:

Or Test & Score: ACT Reading - 18

Health and Human Services

Criminal Justice

PSC123 Government & Legal Ethics

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course explains the rules and standards of ethical and professional responsibility for attorneys, policy makers, and government employees, with emphases on the Ohio Code of Professional Responsibility and Ohio Ethics Law for public officials and employees. Topics include competency, confidentiality, conflicts of interest, financial disclosure, and impartiality.

Pre-reqs:

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Compass Reading - 080

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 244

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

IDS102

PSC130 Intro to Public Administration

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This introductory course provides an overview of the theory and practice of public administration. The course reviews the history of public administration as a discipline, including the legal environment for public management and ethics. Topics include personnel, budgeting, and planning.

Pre-reqs:

PSC140 Comparative Gov & Politics

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course introduces students to the rich diversity of political life outside the United States. This course examines basic concepts, approaches to and comparisons of different political systems, including institutions and political processes, political cultures, ideologies, participation, and interest groups of six selected countries: China, Iran, Mexico, Nigeria, Russia, and the United Kingdom. Students compare the effectiveness of approaches to many global issues by examining how different governments solve similar problems. They will also engage in disciplinary practices that require them to read and interpret data, make comparisons and applications, and develop evidence-based arguments.

Pre-reqs:

Health and Human Services

Criminal Justice

PSC230 Intro to Political Thought

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course introduces students to the major concepts and themes of Western political thought.

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Compass Reading - 080

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 244

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

IDS102

SSC201 Study Away: Experiential Lrng

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

This course will apply critical thinking skills, as well as academic knowledge and concepts, to real-life experiences by exposing students to communities, cultural activities, historical sites, agencies and/or institutions outside the traditional classroom setting and beyond the local community. Due to the nature of the subject matter and travel requirements, academic and eligibility standards may apply.

Pre-reqs:

Dental Hygiene

DAS121 DENTAL ASSISTING TECH I

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

The student will be introduced to the fundamentals of working in a dental office as a chairside assistant. Concepts and techniques of basic equipment, four-handed dentistry, oral evacuation, instrument identification, and proper use are discussed. Oral examination, charting, medical/dental histories, sterilization, and infection control procedures are emphasized.

Pre-reqs:

Health and Human Services

Dental Hygiene

DAS121 DENTAL ASSISTING TECH I

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

The student will be introduced to the fundamentals of working in a dental office as a chairside assistant. Concepts and techniques of basic equipment, four-handed dentistry, oral evacuation, instrument identification, and proper use are discussed. Oral examination, charting, medical/dental histories, sterilization, and infection control procedures are emphasized.

Pre-reqs:

DAS122 DENTAL ASSISTING RADIOGRAPHY

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course focuses on the principles of radiology, x-ray production, radiation safety, practices and hazards. Radiographic techniques, interpretation mounting and evaluation process are presented. Radiographic processing procedures, chemicals, and equipment are emphasized.

Pre-reqs:

DAS123 DENTAL ASSISTING TECH II

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Builds on knowledge gained in DAS121. Health and Safety considerations for basic infection control, dental emergencies, common drugs used in dentistry, and oral disease processes are emphasized. Principles and skills of chairside assisting are further developed through demonstration and partner practice. Ethics and jurisprudence is also covered.

Pre-reqs:

DAS121	Can be Taken Concurrently

Health and Human Services

Dental Hygiene

DAS124 DENTAL ASSISTING MATERIALS

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course focuses on the physical and chemical properties of various materials used in the dental office. Emphasis is placed on manipulation and practical application of dental materials chair side and in the laboratory.

Pre-reqs:

DAS125 DENTAL ASSISTING SPECIALTY

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 2 Lab Hours: 3 Other Hours: 0

This course offers the dental assisting student practical experience and knowledge in one of three common specialty areas.
Option A: Clinical Practice
This specialty option provides the student with an opportunity for practical application of dental principles and skills of basic qualified personnel.
Option B: Community Dentistry
This specialty option provides the student with an opportunity for advance knowledge and practice in preventative dental services and public health dentistry.
Option C: Administrative Dental Personnel
This specialty option is designed to provide the student with an opportunity to learn basic administrative and business procedures common in the dental practice.

Pre-reqs:

Although each student will select one major area of focus, it is expected that each student will gain knowledge of all major fields through discussion and clinical experience.

DAS123

DAS128 INTRO TO DENTAL TERM AND ANAT

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course will introduce basic concepts in dental terminology and head and neck anatomy necessary for preparation for beginning technical studies of dental auxiliary procedures.

Pre-reqs:

Health and Human Services

Dental Hygiene

DAS129 Fund of the Dental Prof

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course is an introduction to the fundamentals of working in a dental office as a Dental Practice Coordinator within the dental team. This course provides an introduction to infection control, dental health safety, medical and dental histories, HIPAA policy, communication skills, dental procedures, treatment options, and materials used. Aspects of treatment planning, restorative charting, periodontal charting, prevention techniques, and radiography as they relate to the role of a Dental Practice Coordinator are emphasized. Students must acquire a Healthcare provider CPR certification as a requirement in this course.

Pre-reqs:

DAS130 Can be Taken Concurrently

DAS130 Dental Practice Coor I

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course focuses on the application of dental software. It also introduces management of the dental office including dental office procedures and techniques, written, verbal, and electronic communications, dental software and computer use, dental insurance, introduction to CDT coding, inventory control, accounts receivable, accounts payable, recall systems, scheduling, marketing, and staff and patient management. Concepts of the business of dentistry as a service profession, legal and ethical issues are covered.

Pre-reqs:

DAS129 Can be Taken Concurrently

DAS131 Dental Insurance

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course will focus on dental insurance coding, insurance verification, preparing and submitting preauthorization to dental insurance companies, submitting dental claims, and treatment plan presentations. Scheduling and confirming appointments will be included with the treatment plan appointment and sequence of appointments. Tracking treatment progress and communicating with patients, the dental team, and insurance companies regarding financial arrangements will be part of the course. Finally, accepting and posting payments for treatment will be completed utilizing industry standard dental software.

Pre-reqs:

DAS130

Health and Human Services

Dental Hygiene

DAS132 Dental Practice Coord II

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This capstone course enhances the dental office experience permitting the student to serve as a non-paid dental practice coordinator in offices affiliated with Stark State College. Observation of dental practice functions as well as completing a variety of dental practice coordination tasks is part of this course. Students will participate in didactic instruction related to their experiences, employment strategies, interviewing techniques for the interviewer and interviewee, and work ethic. Management of medical and dental emergencies are emphasized. Students will create an office policy manual in this course.

Pre-reqs:

DAS130

DAS225 Dental Morphology for EFDA

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course will introduce EFDA students to the specific morphology associated with reproducing proper dental form and function during restorative dental procedures, while communicating appropriately with other dental professionals utilizing proper terminology.

Pre-reqs:

DAS226 EXPANDED DENTAL ASSISTING I

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course will cover basic concepts in head, neck and basic dental anatomy, terminology, tooth physiology/morphology to support the restorative dental auxiliary functions. Additional topics include laws and ethics, ergonomics, instrumentation/application techniques, isolation, occlusion, dental materials (including amalgam, resins, bases/liners, and intra-coronal temporary materials/ procedures).

Pre-reqs:

Health and Human Services

Dental Hygiene

DAS227 EXPANDED DENTAL ASSISTING II

Credit Hours: 4 Contact Hours: 7 Lecture Hours: 1 Lab Hours: 6 Other Hours: 0

This course will serve to teach competency in the basic restorative procedures allowed to expanded function dental auxiliary candidates.

Pre-reqs:

DAS228 DIRECTED CLINICAL PRACTICE

Credit Hours: 5 Contact Hours: 13 Lecture Hours: 1 Lab Hours: 6 Other Hours: 6

This course is a directive practice course, where under the supervision of a faculty dentist, expanded functions auxiliary students will provide restorative patient care as allowed by the EFDA certification. Students will be required to participate in onsite and offsite clinical rotations.

Pre-reqs:

DAS225

And DAS226

And DAS227

DHY121 HEAD/NECK AND ORAL ANATOMY

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

The course addresses gross anatomy of the head and neck, tooth morphology and physiology of occlusion.

Pre-reqs:

Health and Human Services

Dental Hygiene

DHY122 ORAL HIST AND EMBRYOLOGY

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Embryological development and histologic characteristics of the orofacial organs and structures is presented.

Pre-reqs:

DHY123 DENTAL RADIOGRAPHY

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 2 Lab Hours: 3 Other Hours: 0

This course is designed to introduce the student to fundamental knowledge of radiographic principles and safety considerations. Skill development in image production, mounting techniques and radiographic interpretation is emphasized.

Pre-reqs:

DHY124 PERIODONTICS I

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

Introduction to the etiology, diagnosis, and prevention of diseases affecting the tissues that support, attach, and surround the teeth. Basic periodontic terminology and concepts utilized for dental hygiene care to include patient periodontal assessment and treatment modalities. Term and concepts applied in the clinical setting in DHY 133.

Pre-reqs:

DHY122

Health and Human Services

Dental Hygiene

DHY125 DENTAL MATERIALS

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 2 Lab Hours: 3 Other Hours: 0

Course design covers fundamental knowledge of the dental materials commonly used in contemporary dental practice including their physical, chemical and manipulative characteristics. Skill development in correctly using these materials is emphasized.

Pre-reqs:

DHY131

DHY126 PATHOLOGY

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

Diseases of development and growth including neoplasms, diseases of microbial origin, injury and repair, disturbances of metabolism and diseases of specific systems is presented.

Pre-reqs:

DHY122

DHY131 FUND DENTAL HYGIENE PRAC

Credit Hours: 4 Contact Hours: 10 Lecture Hours: 1 Lab Hours: 9 Other Hours: 0

An introduction to dentistry, the dental hygiene profession, and ethical and professional patient care, terminology and basic skills utilized in the contemporary practice of dental hygiene, including infection control procedures and patient assessment and treatment are covered. Concepts are applied in a preclinical setting with manikins and student partners.

Pre-reqs:

Health and Human Services

Dental Hygiene

DHY132 DENTAL HYGIENE THEORY I

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course builds upon fundamentals to provide further study of dental hygiene practices including introduction to the dental hygiene process of care related to patient needs, management of medical/dental emergencies, health communication and dental specialties.

Pre-reqs:

DHY131

DHY133 CLINICAL DENTAL HYG I

Credit Hours: 2 Contact Hours: 8 Lecture Hours: 0 Lab Hours: 8 Other Hours: 0

Supervised clinical patient care experiences which reinforce fundamentals, correlate with, and allow the application of, dental procedures and concepts presented in Dental Hygiene Theory I. Emphasis on application of basic skills and professionalism.

Pre-reqs:

And DHY123

DHY131

DHY134 CLINICAL DENTAL HYG IA

Credit Hours: 1 Contact Hours: 4 Lecture Hours: 0 Lab Hours: 4 Other Hours: 0

Supervised clinical patient care experiences which allow further development of clinical skills and application of concepts. Emphasis on patient management and effective communications.

Pre-reqs:

DHY133

Health and Human Services

Dental Hygiene

DHY221 NUTRITION IN DENTISTRY

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Basic concepts of nutrition and the effects on general as well as oral health are presented. The role of nutrition in dentistry for disease prevention and health promotion is emphasized. Dietary analysis and counseling methodologies are discussed and practiced.

Pre-reqs:

DHY132

DHY222 DENTAL PHARMACOLOGY

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

General principles of drug regulation and prescribing, action and handling and adverse reactions is covered. Body systems, medical histories and their impact on drugs used in dentistry and their potential to alter dental treatment is discussed. Drugs used to manage medical emergencies are emphasized.

Pre-reqs:

BIO221

And DHY126

DHY223 Community Oral Health

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

This course focuses on program planning models, incorporation of research methods into program development and evaluation and offers practical application of community health concepts. Concepts of research design and methodology in community program planning are discussed. Learning experiences emphasize reading and reviewing scientific literature, understanding statistical reporting and the levels of public health prevention and administration. Assessing, planning, implementing and evaluating the oral health of various populations in a community setting are presented. Field experience required.

Pre-reqs:

DHY134

Health and Human Services

Dental Hygiene

DHY224 PERIODONTICS II

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

The fundamentals of periodontics are reinforced and clinical assessment, disease classification, and treatment options are discussed using clinical case applications. Current advances in periodontal research and therapy is presented including oral-systemic connections.

Pre-reqs:

DHY124

DHY225 ANESTHESIA AND PAIN CONTROL

Credit Hours: 2 Contact Hours: 4 Lecture Hours: 1 Lab Hours: 3 Other Hours: 0

This course will teach the basic concepts of anesthesia and pain control as they relate to patient management in the provision of comprehensive dental hygiene care. Lecture will focus on theory of pain control, selection of pain control modalities and implications of local anesthesia. Topics will utilize knowledge and review of anatomy, physiology and pharmacology. Lab includes competency based practice of the administration of pain control modalities.

Pre-reqs:

BIO122

And DHY121

And DHY132

DHY231 DENTAL HYGIENE THEORY II

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

This course is designed to further explore treatment modalities and dental hygiene services such as oral health indices and supplemental care procedures. It focuses on the incorporation of all phases of assessment and development of more complex dental hygiene care plans and case presentations focusing on individual patient care. Required lab performed in the clinical setting with manikins and student partners include ultrasonic/sonic instrumentation, air polishing, suture removal, periodontal dressing placement, and advanced instrumentation techniques.

Pre-reqs:

DHY132

Health and Human Services

Dental Hygiene

DHY232 CLINICAL DENTAL HYG II

Credit Hours: 4 Contact Hours: 12 Lecture Hours: 0 Lab Hours: 12 Other Hours: 0

Supervised clinical patient care experiences which refine fundamentals, correlate with, and allow application of, dental hygiene procedures and lecture concepts presented in Dental Hygiene Theory II. Emphasis on total patient care and treatment planning, including judgment and decision-making. Off site clinical experiences required.

Pre-reqs:

DHY134

DHY233 DENTAL HYGIENE THEO III

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

The course further explores treatment modalities and adjunct procedures. The course focuses on transitions to practice including principles of office management, jurisprudence, ethics and current issues in dental hygiene.

Pre-reqs:

DHY231

DHY234 CLINICAL DENTAL HYG III

Credit Hours: 5 Contact Hours: 16 Lecture Hours: 0 Lab Hours: 16 Other Hours: 0

Supervised clinical patient care experiences that correlate with, and allow application of, dental hygiene procedures and lecture concepts presented in Dental Hygiene Theory III. Development of proficiency in implementing treatment plans to meet individual patient's oral health needs. Emphasis on self-evaluation and quality assurance.

Pre-reqs:

DHY232

Health and Human Services

Dental Hygiene

HTD221 HLTH INDEP STUDY-DENTL HYGIENE

Credit Hours: 1 Contact Hours: 10 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

This independent study provides remediation of dental hygiene skills used in the treatment of patients with emphasis on patient management and effective communications. Students will be required to demonstrate competency in assigned skills and documentation to assure adequate knowledge and proficiency before continuation in the program.

Pre-reqs:

HTD222 HLTH INDEP STUDY-DENTL HYGIENE

Credit Hours: 2 Contact Hours: 20 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This independent study provides remediation of dental hygiene skills used in the treatment of patients. Students will participate in supervised clinical patient care experiences which reinforce fundamentals, correlate with, and allow the application of dental procedures and concepts related to entry level dental hygiene theory. Special emphasis is placed on application of basic skills and professionalism. Students will be required to demonstrate competency in assigned skills and documentation to assure adequate knowledge and proficiency before continuing in the program.

Pre-reqs:

HTD223 HLTH INDEP STUDY-DENTL HYGIENE

Credit Hours: 3 Contact Hours: 30 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This independent study provides remediation of dental hygiene skills used in the treatment of patients with special focus on total patient care and treatment planning, and judgment and decision-making. Students will participate in supervised clinical patient care experiences which refine fundamentals, correlate with, and allow application of, dental hygiene procedures and lecture concepts presented in Dental Hygiene Theory II. Students will be required to demonstrate competency in assigned skills and documentation to assure adequate knowledge and proficiency before continuing in the program.

Pre-reqs:

Health and Human Services

Dental Hygiene

HTD224 HLTH INDEP STUDY-DENTL HYGIENE

Credit Hours: 4 Contact Hours: 40 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

This independent study provides remediation of dental hygiene skills used in the treatment of patients placing emphasis on self-evaluation, quality assurance, and the development of proficiency in implementing treatment plans to meet individual patient's oral health needs. Students will participate in clinical patient care experiences that correlate with and allow application of dental hygiene procedures and lecture concepts presented in Dental Hygiene Theory III. Students will be required to demonstrate competency in assigned skills and documentation to assure adequate knowledge and proficiency for continuation in the program.

Pre-reqs:

Dietary Management

DMA135 Food Oper Directed Practice

Credit Hours: 1 Contact Hours: 5 Lecture Hours: 0 Lab Hours: 5 Other Hours: 0

Under the supervision of a registered/licensed dietitian, registered dietetic technician, certified dietary manager or other approved foodservice professional, the student will complete 75 hours of directed practice in a foodservice setting and/or through approved alternate activities and assignments. The student will participate in a variety of functions of a foodservice operation with particular emphasis on safety, sanitation, and the flow of food throughout the operation. Working with the preceptor, the student will apply the knowledge gained from required prior or concurrent coursework.

Pre-reqs:

NTR130 Can be Taken Concurrently

DMA145 Nutrition Mgmt Directed Prac

Credit Hours: 1 Contact Hours: 5 Lecture Hours: 0 Lab Hours: 5 Other Hours: 0

Under the supervision of a registered/licensed dietitian or registered dietetic technician, the student will complete 75 hours of directed practice in a health care setting and/or through approved alternate activities and assignments. The student will participate in a variety of functions for management of nutritional care and services in a health care setting. Working with the preceptor, the student will apply the knowledge gained from the previous and current coursework.

Pre-reqs:

NTR121

And NTR122 Can be Taken Concurrently

Health and Human Services

Dietary Management

DMA155 Dietary Systems Directed Pract

Credit Hours: 1 Contact Hours: 5 Lecture Hours: 0 Lab Hours: 5 Other Hours: 0

Under the supervision of a registered/licensed dietitian, registered dietetic technician, certified dietary manager or other approved foodservice professional, the student will complete 75 hours of directed practice in a foodservice setting and/or through approved alternate activities and assignments. The student will participate in a variety of functions of a foodservice operation with particular emphasis on management responsibilities for the food system. Working with the preceptor, the student will apply the knowledge gained from required prior and concurrent coursework.

Pre-reqs:

DTR228 Can be Taken Concurrently

DTR121 FOOD SCIENCE PRINCIPLES

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

The course provides an overview of fundamental biological, chemical and physical scientific principles associated with the study of foods. Topics include food composition and functional properties, food additives and regulations/laws, food safety and microbiology, toxicology, food processing, food engineering, food biotechnology, sustainability, product development, and sensory evaluation. In addition, the coursework includes discussion of the role of food technology in world health, environmental, and nutritional concerns. CTFSC001 effective fall 20018

Pre-reqs:

DTR122 LIFE CYCLE NUTRITION

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Normal nutritional needs for individuals throughout the life cycle from conception through end of life are examined, including factors that impact nutritional status. Specialized needs and interventions for key nutrition-related conditions or diseases are also discussed.

Pre-reqs:

NTR121

Health and Human Services

Dietary Management

DTR223 Med Nutr/Prof Directed Prac

Credit Hours: 2 Contact Hours: 10 Lecture Hours: 0 Lab Hours: 0 Other Hours: 10

Under the supervision of a registered/licensed dietitian or registered, dietetic technician, the student will complete at least 160 hours of directed practice in a health care setting and/or through approved alternate activities and assignments. The student will participate in the Nutrition Care Process, including required data collection and documentation for patient care. The student will collaborate with others in appropriate interventions for a variety of diseases and conditions. The student will also participate in an assortment of activities to develop and demonstrate professionalism.

Pre-reqs:

DTR236 Can be Taken Concurrently

DTR225 COMMUNITY NUTRITION

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Explore the concept of community, the role of nutrition in health promotion and perspectives for resolving community nutrition problems, including nutrition education. The role of the community needs assessment is discussed in the context of program planning, intervention, and evaluation. The course includes a review of community nutrition assistance programs for various life stages, determinants of health outcomes, measurement of nutrition and health status, food and nutrition policy and legislative issues, and management of community programs.

Pre-reqs:

NTR121

DTR226 COMM NUTRITION DIR PRACTICE

Credit Hours: 2 Contact Hours: 10 Lecture Hours: 0 Lab Hours: 0 Other Hours: 10

Under the supervision of a registered/licensed dietitian or other qualified preceptor, the student will complete 160 hours of directed practice in a community setting and/or through approved alternate activities and assignments. The student will observe, participate and demonstrate competence for standards related to food, nutrition and professionalism within diverse community settings. Student learning activities may include funding and policy impacts, nutrition education, individual and population health, and food security.

Pre-reqs:

DTR225 Can be Taken Concurrently

Health and Human Services

Dietary Management

DTR228 DIETARY SYSTEMS

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course utilizes a foodservice systems approach to explore the interactions of a variety of processes, controls, inputs, and environmental factors in the effective management of a food operation. Consideration is given to factors, such as equipment selection, kitchen layout, and the oversight of procurement, production, distribution, sustainability, safety, and sanitation. Principles of management theories and functions of the food operation manager are examined, including hiring, training, scheduling, controlling budgets, and monitoring quality and customer satisfaction.

Pre-reqs:

DTR229 PROFESSIONAL DIETETICS

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

The capstone course in the Dietetic Technician program integrates a variety of topics to promote career readiness, professionalism, and preparedness for the Commission on Dietetic Registration credential exam. Emphasis is placed on ethics; leadership characteristics and self-assessment; professional scope of practice and advocacy; and career preparation in dietetics and healthcare.

Pre-reqs:

DTR231 FOODSERVICE DIRECTED PRACTICE

Credit Hours: 2 Contact Hours: 10 Lecture Hours: 0 Lab Hours: 0 Other Hours: 10

Under the supervision of a registered/licensed dietitian or other qualified foodservice preceptor, the dietetic technician student will complete 160 hours of directed practice in a foodservice setting, within a 16-week semester. The student will participate in all of the stations involved in foodservice in order to understand the workings of a kitchen. During this directed practice the student will work with the Foodservice Director and apply the knowledge and skills that have been learned from previous coursework.

Pre-reqs:

And DTR228 Can be Taken Concurrently
NTR130
And NTR130L

Health and Human Services

Dietary Management

DTR235 Medical Nutrition Therapy I

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Students will develop an understanding of the steps of the Nutrition Care Process (assessment, diagnosis, intervention, and monitoring and evaluation), which will be systematically utilized to explore nutrition-related problems. Coursework includes the nutritional implications of pathological conditions and alterations to diet for specific health issues or disorders, including but not limited to diseases of energy imbalance, cardiovascular system, upper gastrointestinal tract, and the endocrine system.

Pre-reqs:

NTR122

DTR236 Medical Nutrition Therapy II

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

The steps of the Nutrition Care Process (assessment, diagnosis, intervention, and monitoring and evaluation) will be systematically utilized to explore nutrition-related problems. Coursework includes nutritional implications of pathological conditions and alterations to diet for specific health issues or disorders, including but not limited to diseases or disorders of the lower gastrointestinal tract, gallbladder, liver, hematological, renal and respiratory systems. Additional topics include nutritional management of cancers, musculoskeletal, neurological, metabolic disorders, and the use of enteral and parenteral support as a means of nutritional intervention.

Pre-reqs:

NTR121 Nutrition for Health

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course focuses on the essentials of nutrition as required for health. The composition of foods, as well as the functions, sources and interactions of essential nutrients within the role of the human body's metabolic system are discussed. Assessment of nutritional health risks, along with health promotion and disease prevention is discussed. The influence of age, growth and normal development of the life stages are discussed in terms of the nutritional requirements. Methods of meeting dietary needs and sources of reliable nutritional information are addressed along with current nutritional issues and research. TAG approved OHL016, effective Summer 2017.

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Compass Reading - 080

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 244

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

IDS102

Health and Human Services

Dietary Management

NTR122 Intro Medical Nutr Therapy

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

This course builds on foundation knowledge of basic nutrition fundamentals and introduces skills for basic medical nutrition therapy, as it relates to nutritional screening, client interviewing and data gathering, nutrition-related calculations, modification of selected diet plans, implementing nutrition care and basic nutrition education, and documentation of relevant nutrition data. Federal and state regulations, including client/patient rights and documentation compliance, as it relates to nutritional care, will be reviewed.

Pre-reqs:

NTR121

NTR130 Food Operations

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course integrates the principles of foods, foodservice operations, and food safety. A foundation of a variety of food categories is presented, including basic food science, classification, purchasing, preparation, and storage. Managerial accountability for menu planning, procurement, receiving, storage, and quantity production of food is examined. ServSafe coursework is included, reflecting managerial oversight of food safety and sanitation through all phases of the food operation. The course incorporates the National Restaurant Association ServSafe Food Protection Manager Certification Examination.

Pre-reqs:

NTR130L Food Operations Lab

Credit Hours: 1 Contact Hours: 3 Lecture Hours: 0 Lab Hours: 3 Other Hours: 0

This lab coincides with the Food Operations course, NTR130 for Dietetic Technician majors only. The student will prepare foods using safety and sanitation methods learned in lecture and apply fundamental concepts of foods and recipe management. Basic food science principles will be discussed in the context of various food groups. Food preparation to include all major food categories, cultural food meal, and a basic modified diet for health.

Pre-reqs:

NTR130 Can be Taken Concurrently

Fire and EMS

Health and Human Services

Fire and EMS

EMS121 EMERGENCY MEDICAL TECHNICIAN

Credit Hours: 7 Contact Hours: 11 Lecture Hours: 5 Lab Hours: 6 Other Hours: 0

The Emergency Medical Technician (EMT) course provides theory and practical skills training for managing medical and traumatic situations at the EMT level and follows the objectives as listed in the Ohio Administrative Code. CTAG approved course CTEMTB002, effective Summer 2013. MTAG approved course CTEMS 002, effective fall 2016

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Compass Reading - 080

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 244

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

IDS102

EMS122 PARAMEDIC I

Credit Hours: 7 Contact Hours: 9 Lecture Hours: 6 Lab Hours: 3 Other Hours: 0

This course is the first course in a four-course sequence. This course follows the objectives for paramedic education according to the Ohio Administrative Code 4765 and includes the knowledge and skills required to perform patient assessment, airway management, pharmacology, fluid administration, and understand medico-legal issues. Students will learn management of medical emergencies by performing rapid assessment, interpretation of data and advanced intervention for patients of all ages from neonates to geriatric. effective Summer 2016: STEMS004

Pre-reqs:

BIO101

And EMS121

And EMS124 Can be Taken Concurrently

Health and Human Services

Fire and EMS

EMS124 Paramedic I Clinical

Credit Hours: 1 Contact Hours: 6 Lecture Hours: 0 Lab Hours: 6 Other Hours: 0

This course is a co-requisite to Paramedic I. It consists of the clinical and field internship component relative to the course content and skills of Paramedic I, EMS122, including but not limited to medication administration, initiation of IV therapy and advanced airway techniques. CTAG CTEMS004 approved, effective summer 2020

Pre-reqs:

And BIO101

EMS121

And EMS122 Can be Taken Concurrently

EMS221 PARAMEDIC II

Credit Hours: 7 Contact Hours: 9 Lecture Hours: 6 Lab Hours: 3 Other Hours: 0

This course is the second course in a four-course sequence. This course follows the objectives for paramedic education according to the Ohio Administrative Code 4765 and includes the knowledge and skills required to perform patient assessment and management of medical and cardiac emergencies. Students will learn rhythm interpretation and dysrhythmia treatment for patients of all ages from neonates to geriatric. effective Summer 2016: STEMS004

Pre-reqs:

EMS122

And EMS124

And EMS223 Can be Taken Concurrently

EMS222 PARAMEDIC III

Credit Hours: 5 Contact Hours: 7 Lecture Hours: 4 Lab Hours: 3 Other Hours: 0

This course is the third course in a four-course sequence. This course follows the objectives for paramedic education according to the Ohio Administrative Code 4765 and includes the knowledge and skills required to perform patient assessment and management of trauma. Students will learn management of traumatic emergencies by performing rapid assessment, interpretation of data and advanced intervention for patients of all ages from neonates to geriatric. effective Summer 2016: CTEMS004

Pre-reqs:

EMS221

And EMS223

Health and Human Services

Fire and EMS

EMS223 PARAMEDIC II CLINICAL

Credit Hours: 2 Contact Hours: 12 Lecture Hours: 0 Lab Hours: 12 Other Hours: 0

This course is a co-requisite to Paramedic II. It consists of the clinical and field internship component relative to the course content and skills of Paramedic II, EMS221, including but not limited to cardiac monitoring and ECG interpretation, advanced airway skills and advanced trauma management. CTAG CTEMS004 approved, effective summer 2020

Pre-reqs:

EMS122

And EMS124

And EMS221 Can be Taken Concurrently

EMS224 PARAMEDIC IV

Credit Hours: 6 Contact Hours: 8 Lecture Hours: 5 Lab Hours: 3 Other Hours: 0

This course is the fourth course in a four-course sequence. This course follows the objectives for paramedic education according to the Ohio Administrative Code 4765 and includes the knowledge and skills required to perform patient assessment and management of medical and traumatic emergencies by performing rapid assessment, interpretation of data and advanced intervention for patients of all ages from neonates to geriatrics. This course places emphasis on team leadership in the clinical and field setting. Demonstration of terminal competencies and preparation for paramedic psychomotor competency testing is included. effective Summer 2016: CTEMS004

Pre-reqs:

EMS222

And EMS225 Can be Taken Concurrently

And EMS226

EMS225 Paramedic IV Clinical

Credit Hours: 1 Contact Hours: 6 Lecture Hours: 0 Lab Hours: 6 Other Hours: 0

This capstone course is a co-requisite to Paramedic IV. It consists of the clinical and field internship component relative to course content and skills of Paramedic IV, EMS224. Focus is on evaluation of team leadership in the field setting. CTAG CTEMS004 approved, effective summer 2020

Pre-reqs:

EMS222

And EMS224 Can be Taken Concurrently

And EMS226

Health and Human Services

Fire and EMS

EMS226 Paramedic III Clinical

Credit Hours: 1 Contact Hours: 6 Lecture Hours: 0 Lab Hours: 6 Other Hours: 0

This course is a co-requisite to EMS222 Paramedic III. It consists of the clinical and field internship component relative to the course content and skills of EMS222 Paramedic III, including but not limited to, cardiac monitoring and ECG interpretation, advanced airway skills, and advanced trauma management. CTAG CTEMS004 approved, effective summer 2020

Pre-reqs:

EMS221
And EMS222 Can be Taken Concurrently
And EMS223

FST128 VOLUNTEER FIREFIGHTER

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0.5 Lab Hours: 1.5 Other Hours: 0

Pre-reqs:

FST129 FIREFIGHTER 1

Credit Hours: 7 Contact Hours: 11 Lecture Hours: 5 Lab Hours: 6 Other Hours: 0

This course meets the requirement in the Ohio Revised Code regarding the certification of Firefighter level 1. Instruction includes topic areas taken from NFPA 1001 Fire Fighter 1. This course can be used as the first step in a two-step process in becoming a Firefighter trained to Firefighter level 2. Successful completion of this course is required to take the state certification test at Firefighter level 1. CTAG approved CTFF002, effective Spring 2018..

Pre-reqs:

Or Test & Score: ACT Reading - 18
Or Test & Score: Accuplacer Reading - 070
Or Test & Score: IDS Transfer Prof/Placement - 3
Or Test & Score: NextGen Accuplacer Reading - 246
Or Test & Score: Reading Proficiency - 3
Or Test & Score: SAT Verbal - 480
IDS102

Health and Human Services

Fire and EMS

FST224 LGL ASPECTS OF FIRE SERV

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

The focus of this course is on the legal rights, duties, liability concerns and responsibilities of the fire and EMS service and their employees while carrying out their functions. Courtroom presentations, procedures, and case studies will be included.

Pre-reqs:

FST228 FIREFIGHTER 1 & 2

Credit Hours: 11 Contact Hours: 17 Lecture Hours: 8 Lab Hours: 9 Other Hours: 0

This course meets the requirement in the Ohio Revised Code regarding the certification of a full-time paid Firefighter. Instruction includes topic areas taken from NFPA 1001 Firefighter 1 and 2. This is the highest level of Firefighter certification offered in the State of Ohio. Successful completion of this course is required to take the state certification test at Firefighter level 2. CTAG approved CTFF003, effective Spring 2018.

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 246

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

IDS102

FST229 Firefighter 1 Transition

Credit Hours: 6 Contact Hours: 8 Lecture Hours: 5 Lab Hours: 3 Other Hours: 0

This course meets the requirement in the Ohio Revised Code regarding the certification of a level 1 Firefighter. Instruction includes topic areas taken from NFPA 1001 Firefighter 1. This course can be used as the second step in a two-step process in becoming a Firefighter trained to the Firefighter level 1. Successful completion of this course is required to take the state certification test at Firefighter level 1. A student must have a volunteer level Firefighter certification to register for this course.

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: IDS Transfer Prof/Placement - 3

Health and Human Services

Fire and EMS

FST229 Firefighter 1 Transition

Credit Hours: 6 Contact Hours: 8 Lecture Hours: 5 Lab Hours: 3 Other Hours: 0

This course meets the requirement in the Ohio Revised Code regarding the certification of a level 1 Firefighter. Instruction includes topic areas taken from NFPA 1001 Firefighter 1. This course can be used as the second step in a two-step process in becoming a Firefighter trained to the Firefighter level 1. Successful completion of this course is required to take the state certification test at Firefighter level 1. A student must have a volunteer level Firefighter certification to register for this course.

Pre-reqs:

Or Test & Score: NextGen Accuplacer Reading - 246

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

FST128

And IDS102

FST230 Firefighter 2 Transition

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 3 Lab Hours: 3 Other Hours: 0

This course meets the requirement in the Ohio Revised Code regarding the certification of level 2 Firefighter. Instruction includes topic areas taken from NFPA 1001 Fire Fighter 2. This course can be used as the second step in a two-step process in becoming a Firefighter trained to the Firefighter level 2. Successful completion of this course is required to take the state certification test at Firefighter level 2. A student must have a Firefighter level 1 certification to register for this course.

Pre-reqs:

Or FST128

FST129

And FST229

General Health

HTH121 INTRO TO HEALTH CAREERS

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

The course is an introduction to the health care delivery system and the associated career opportunities within it. The course provides the student with the opportunity to explore career choices including educational, occupational, and professional requirements, employer expectations, job outlooks and related industry trends.

Pre-reqs:

Health Information

Health and Human Services

Health Information

HIT101 Intro to Medical Billing

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course helps develop a broader understanding of professional billing careers by delving into the intricacies of Managed Care Organizations and the differences among them. The course covers the foundations of insurance, billing, coding, and reimbursement.

Pre-reqs:

HIT102 Medical Claims Methodology

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 2 Lab Hours: 4 Other Hours: 0

This course focuses on the completion of medical claims forms and resolution of claim rejection using government billing guidelines for inpatient, outpatient, and physician services with a dedicated focus on Medicare, Medicaid, TRICARE, and workers compensation claim submission using the UB-04 or CMS-1500 billing forms. The student will understand the appeal process, Explanation of Benefits form, Electronic Remittance Advice form, Medicare Fee schedule, and revenue based hospital billing. The course requires the use of problem-solving and communication skills to answer questions and to write letters of appeal for denied claims. Students will be able to accurately complete claims forms without omission of data.

Pre-reqs:

HIT101

HIT121 HTLH DATA MGT AND DELIVRY SYSM

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 2 Lab Hours: 4 Other Hours: 0

Organization of health care delivery in the United States including providers and professionals; role of government and external agencies; accreditation and regulatory requirements and issues; structure and function of the American Health Information Management Association; the functions of an HIM department; emphasis on the content and structure of health records and documentation requirements; introduction to electronic health records and use of HIM application software. CTHIM001 effective Spring 2016

Pre-reqs:

HIT123 Can be Taken Concurrently

Health and Human Services

Health Information

HIT122 ALTERNATVE HLTH RECS AND REGST

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Structure and function of non-acute healthcare facilities; accreditation and regulatory requirements; reimbursement and funding; content and structure of health records and documentation requirements; information management and the role of the HIM professional; overview of health registries with emphasis on cancer registry; students will spend observation time in a non-acute healthcare setting.

Pre-reqs:

HIT121

HIT123 HLTHCRE LEGAL AND ETHICAL ISS

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

Legal aspects of health information management practice; overview of judicial system and processes; importance of the health record as a confidential and legal document; practice in the release of information function; record retention and destruction of records are studied; current legal issues, compliance, privacy and security; professional and practice related ethical issues and laws are discussed. TAG approved Spring 2012 OHL021. CTAG approved - CTHIM002 effective Spring 2012.

Pre-reqs:

Or HIT121 Can be Taken Concurrently

HIT230

HIT124 CLINICAL CLASSIFICATNS SYS I

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 2 Lab Hours: 4 Other Hours: 0

ICD coding systems and the professional standards for coding and reporting diagnostic inpatient and outpatient services and inpatient procedure services; coding characteristics, conventions and guidelines will be applied in identifying and accurately assigning codes; manual and electronic applications and coding references will be utilized in the coding process; study of various nomenclature and classification systems used in the healthcare field.

Pre-reqs:

And BIO124 Can be Taken Concurrently

HIT121

Health and Human Services

Health Information

HIT221 CLINICAL CLASSIFICATNS SYS II

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

CPT/HCPCS coding system and its application in coding procedures; applying coding guidelines with accuracy and completeness using manual and computerized encoding systems; applying coding guidelines of previously learned coding principles; review of the outpatient prospective payment system.

Pre-reqs:

BIO222

And HIT124

HIT222 HLTHCRE STATSTICS AND RESEARCH

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Collection, organization, analysis and presentation of healthcare data; vital and public health statistics; computation and interpretation of healthcare statistics; data retrieval of clinical information from specialized databases; abstracting and maintaining data; importance of data quality and validity; reviewing Institutional Review Board processes.

Pre-reqs:

HIT124

And HIT224 Can be Taken Concurrently

HIT223 HIM SUPERVSN:CONCPTS AND PRACT

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Introduction to the concepts and practices of management and the role of the supervisor as it relates to the Health Information Management department; strategic planning and developing goals and objectives; importance of leadership and working in teams; orientation and training; monitoring resources and budgeting; study of practical problems in supervision.

Pre-reqs:

HIT224

Health and Human Services

Health Information

HIT224 QUALITY MGT IN HEALTHCARE

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

Components of quality management in healthcare including quality assessment and improvement; utilization review; risk management and credentialing; use of quality improvement tools and techniques to assess, monitor, and report performance improvement activities; accreditation and regulatory requirements; outcome measures and patient safety.

Pre-reqs:

HIT222 Can be Taken Concurrently

HIT226 PROFESSIONAL PR I/SEM I

Credit Hours: 2 Contact Hours: 8 Lecture Hours: 1 Lab Hours: 7 Other Hours: 0

Supervised professional practice experience in a healthcare facility which is designed to allow students to apply HIM technical knowledge and skills learned in the classroom. Students complete additional assignments and meet in seminar to discuss the HIM profession and share practicum experiences.

Pre-reqs:

HIT227 PROFESSIONAL PR II/SEMII

Credit Hours: 2 Contact Hours: 8 Lecture Hours: 1 Lab Hours: 7 Other Hours: 0

Supervised professional practice experience in a healthcare facility which is designed to allow students to apply advanced HIM technical knowledge and skills learned in the classroom. Students complete additional assignments and meet in seminar to discuss issues and trends in the healthcare field which impact HIM practice; career management strategies and preparing for the national RHIT examination.

Pre-reqs:

Health and Human Services

Health Information

HIT229 HLTH INFO SYSTEMS AND TECH

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Use of information technology in healthcare; computer concepts, communication and network technology; data quality and databases; data security; planning, evaluation and selection of information systems; HIM specialty systems, healthcare information systems; emerging technologies; emphasis on the electronic health record.

Pre-reqs:

Or CIS126

Or ECA180

HIT224

And ITD122

HIT230 HLTH CARE DELIVERY IN THE US

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course focuses on the structure and process of health care in the United States. Topics include the historical development of the health care delivery system; types of facilities, services, agencies and personnel that constitute the system, critical policy and regulatory issues the system confronts; health care financing and reimbursement; and the role of government in health care.

Pre-reqs:

HIT231 VIRTUAL PROF. PRAC LAB

Credit Hours: 1 Contact Hours: 3 Lecture Hours: 0 Lab Hours: 3 Other Hours: 0

This virtual coding lab allows the student to apply previously learned coding skills in a simulated workplace setting; under direction of coding experts in the field, the student will practice technical, research and auditing skills while building accuracy and speed; coding a variety of authentic paper, electronic and hybrid records, using electronic applications and work processes.

Pre-reqs:

HIT124

Health and Human Services

Health Information

HIT232 HLTHCRE REIMBURSEMENT METHODOL

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

Healthcare reimbursement methodologies in health care settings; healthcare insurance plans and reimbursement systems; applying methodologies such as DRG's, APC's, RBRVS, etc.; the billing process as it relates to health information management; charge master, revenue cycle management; coding compliance and data quality. TAG approved OHL022 effective spring 2018

Pre-reqs:

HIT121

HIT233 CLINICAL CLASSIFICTION SYS III

Credit Hours: 2 Contact Hours: 4 Lecture Hours: 1 Lab Hours: 3 Other Hours: 0

Applying coding guidelines of previously learned coding principles through advanced coding practices with accuracy and completeness, using manual and computerized encoding systems; clinical coding and applying reimbursement methodologies; health information management; coding compliance and data quality.

Pre-reqs:

HIT124

Human Services

CDC121 CHEM DEP:ASSESSMT AND TRTMT PL

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course provides specific content in orientation, screening, intake, assessment, treatment planning, and counseling with adults and adolescents with substance abuse/dependency disorders. Topics include: culturally sensitive practices in interviewing and assessment, diagnosis of substance abuse/dependency disorders, diverse models of treatment, case management, crisis intervention, and referral to appropriate levels of care. Other topics include discharge planning, relapse prevention, confidentiality, and roles of mutual self-help groups.

Pre-reqs:

SWK125

Health and Human Services

Human Services

CDC122 FUND OF CHEM DEP PRACT I

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course provides students with an understanding of theories and practices in the field of chemical dependency. Students learn to integrate theories with practical application to serve persons with abuse and dependency diagnoses. They develop knowledge of the different frameworks for viewing chemical dependency and determine the models that develop from the frameworks and effective use of the models. They continue to develop knowledge of how different drugs impact individuals. Students learn to document interventions and outcomes.

Pre-reqs:

SWK125

CDC221 CHEM DEPENDNCY AND THE FAM

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course provides an overview of how chemical dependency impacts individual family members and the family unit. The course emphasizes how to define co-dependency and treatment of family members. Students explore developmental aspects of the family, family roles, and the ways in which addiction alters family functioning. Students are exposed to a variety of family treatment models as well as 12-Step/mutual self-help programs for family members. Students are required to attend one 12-Step meeting for families with addicted members and complete a related assignment.

Pre-reqs:

SWK125

CDC222 FUND OF CHEM DEP PRACT II

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course provides students with advanced individual and group strategies to match the needs of clients. Students develop knowledge to evaluate the effectiveness of treatment based upon the client's progress towards mutually agreed upon goals. Stuents learn to develop a continuum of recovery plan in order to strengthen the client's potential for obtaining and maintaining a healthy lifestyle. Students develop knowledge and skills to work effectively with specific populations such as women, adolescents, and persons with co-occurring disorders.

Pre-reqs:

CDC122

Health and Human Services

Human Services

CDC223 CHEMICAL DEPENDENCY AND PREVNT

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

This course provides specific content in preventing and delaying the onset of alcohol and other addictive substance use, abuse, and dependency. Students learn prevention strategies and programs that help individuals, families, and communities promote safe and healthy behavior and lifestyles.

Pre-reqs:

SWK125

CDC224 CHEMICAL DEPENDENCY AND ETHICS

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

This course provides students with specific content in the legal and ethical issues pertaining to chemical dependency counseling. Students develop skills related to obligations and procedures that encourage ethical conduct. Students use The State of Ohio Code of Ethics for Chemical Dependency Counselors as a guide for professional behavior. Topics include: responsibility to comply with The Code of Ethics, ethical complaints, sanctions, and impairment of chemical dependency counselors. Students develop skills in recognizing and finding solutions for ethical dilemmas.

Pre-reqs:

SWK125

HJS250 Human Serv-Justice Prac/Sem

Credit Hours: 3 Contact Hours: 15 Lecture Hours: 1 Lab Hours: 14 Other Hours: 0

The practicum component of this course is an individual placement of the student into a selected, relevant agency for an educationally supervised learning experience. Students will complete 210-220 hours at the placement site (220 hours required for the State of Ohio's Chemical Dependency Counselor Assistant certification, 210 hours required for all other majors). The required seminar component of this course is taught concurrently with the student's practical internship experience. The course will emphasize the integration of the practical learning experience with the student's academic coursework.

Pre-reqs:

Or CDC222

CJS240

Or GLS123

Or SWK130

Health and Human Services

Human Services

SWK121 INTRO TO SOCIAL WELFARE

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course provides an overview of the social welfare system spanning the last two hundred years. The dynamics of the various social, political, and philosophical ideas are examined as they have affected the social welfare system in the United States and social work as a profession. Students become familiar with the structure and function of current social service delivery systems. Students are required to volunteer for 15 hours in a social service setting and complete required documentation. Students are required to complete a background check during the semester in which the class is taken. TAG OSS030 approved Spring 2012.

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: ACT Composite - 22

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Compass Reading - 080

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 2

Or Test & Score: NextGen Accuplacer Reading - 244

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

IDS102

SWK124 METHODS IN PRACTICE I

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Fosters development of focused and group interviewing skills and examines principles and practices relating to the entire case management process. Assessment and documentation cover a diverse range of professional human and social service settings, emphasizing compliance to professional and governmental standards.

Pre-reqs:

SWK121

SWK125 SUBSTANCE ABUSE

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course provides students with an understanding of the impact of alcohol and drugs on American society and the role of the social service professional in educating, supporting and assisting clients with treatment options/resources. Topics include common stereotypes, myths, attitudes, interventions, treatment options and co-dependency. To successfully complete this course, students are required to attend two (2) 12-step meetings and complete the written assignments related to the meetings. CTAG approved CTBH002, effective summer 2022

Pre-reqs:

Health and Human Services

Human Services

SWK125 SUBSTANCE ABUSE

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course provides students with an understanding of the impact of alcohol and drugs on American society and the role of the social service professional in educating, supporting and assisting clients with treatment options/resources. Topics include common stereotypes, myths, attitudes, interventions, treatment options and co-dependency. To successfully complete this course, students are required to attend two (2) 12-step meetings and complete the written assignments related to the meetings. CTAG approved CTBH002, effective summer 2022

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: ACT Composite - 22

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Compass Reading - 080

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 244

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

IDS102

SWK126 HUMAN BEHAVIOR & SOC ENV

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course provides a comprehensive study of human behavior from a life span perspective. A systems approach is used with special attention to the role of the social service professional and the social service system.

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: ACT Composite - 22

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Compass Reading - 080

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 2

Or Test & Score: NextGen Accuplacer Reading - 244

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

IDS102

Health and Human Services

Human Services

SWK127 GROUP PROCESSES

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Group theory, structure and interaction are explored, with emphasis on personal insight into how the individual is affected by and influences the group process. Facilitation of team-building, group life stages and factors that impede/enhance group effectiveness are examined. An experiential format requires application of course principles to group activities.

Pre-reqs:

SWK130 METHODS IN PRACTICE II

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course focuses on the assessment and documentation processes practiced in a diverse range of human and social services settings. Students will apply the theory and practice skills from Methods I through exercises using focused and group interviewing skills. Students will apply documentation skills using traditional written case notes and computer based formats.

Pre-reqs:

SWK124

SWK224 POVERTY IN THE US

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

An examination of the historical, social, cultural, organizational and political factors related to poverty in the U.S. and their impact on social service programs. Social and personal dimensions of life and poverty in urban and rural areas will be explored.

Pre-reqs:

And ENG124

SWK121

Health and Human Services

Human Services

SWK225 VICTIM AND CRISIS INTERVENTION

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Course provides students with the basic understanding of victimization and theories and practice of intervention. Issues such as risk factors, legal issues, and intervention strategies of child abuse, spousal abuse, elder abuse and co-dependency will be introduced.

Pre-reqs:

ENG124

SWK226 SOCIAL SERVICE LAW

Credit Hours: 3 Contact Hours: 6 Lecture Hours: 3 Lab Hours: 0 Other Hours: 3

This course provides comparisons of the theoretical basis of social work and law. Basic terminology, principles, organization and procedures of law will be explored along with the relationships of the two professions-law and social work.

Pre-reqs:

SWK230 SOCIAL SERV FOR ELDERLY

Credit Hours: 3 Contact Hours: 13 Lecture Hours: 3 Lab Hours: 0 Other Hours: 10

This course provides information on national, state, and local social services that meet the needs of the elderly, their families, their communities and the institutions serving them and their families. Includes an examination of current societal policy and programs to meet the needs of the elderly and a basic orientation to the roles of various personnel in agencies. Students are required to complete 10 observation hours in settings that serve the elderly.

Pre-reqs:

ENG124

Massage Therapy

Health and Human Services

Massage Therapy

MAS121 MASSAGE THERAPY I

Credit Hours: 5 Contact Hours: 7 Lecture Hours: 3 Lab Hours: 4 Other Hours: 0

This course introduces students to Massage Therapy as a health care profession. Studied are the history and benefits of Massage Therapy and Massage procedures necessary to complete a full-body, therapeutic massage. Laboratory exercises permit students to practice the individual movements that make up a full-body massage.

Pre-reqs:

MAS122 MASSAGE THERAPY II

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course is a continuation of Massage Therapy I. Students continue to practice procedures necessary to complete a full-body therapeutic massage with an introduction to clinical applications. Students perform massage in a supervised, clinical setting.

Pre-reqs:

MAS121

And MAS123

MAS123 MASSAGE THERAPY A & P I

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Guided study of human anatomy and physiology including the eleven body systems with an emphasis on the primary components and general functions of each system as it applies to manual therapy practitioners.

Pre-reqs:

Health and Human Services

Massage Therapy

MAS124 MASSAGE THERAPY A & P II

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Guided study of Human Pathophysiology with an emphasis on massage specific information. The eleven body systems will be studied with specific disorders a massage therapist may encounter in their practice. Indications and contraindications for treatment will be discussed.

Pre-reqs:

And	BIO122	Can be Taken Concurrently
	BIO123	Can be Taken Concurrently
	MAS123	

MAS223 MASSAGE THERAPY REVIEW

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course contains a review of human anatomy and physiology in preparation for the licensing exam for Massage Therapy as a Limited Medical Practice in the State of Ohio.

Pre-reqs:

	BIO122	
Or	BIO123	
And	MAS226	Can be Taken Concurrently

MAS224 MASSAGE THERAPY III

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

In this course the students continue to study the practice of Massage Therapy in both a general and clinical setting.

Pre-reqs:

MAS121

Health and Human Services

Massage Therapy

MAS225 MASSAGE THERAPY IV

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

In this course students continue to study the practice of Massage Therapy in both a general and clinical setting.

Pre-reqs:

MAS121

MAS226 MASSAGE THERAPY V

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

In this course, students will examine various Massage Therapy Practices in the clinical setting. Massage procedures from various disciplines will be used in the study of treatment of systemic and musculoskeletal dysfunctions. This course also provides a licensing exam review for Massage Therapy as a Limited Medical Practice in the State of Ohio.

Pre-reqs:

MAS124

And MAS225

MAS227 MASSAGE THERAPY PROCEDURES

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

Students will learn procedures to evaluate applicability of massage therapy to a variety of conditions, treatment of those conditions and the integrating of those skills into a medically oriented office. SOAP notes, record keeping for therapeutic applications and insurance billing will be taught. Ethical issues related to Massage Therapy will also be dicussed.

Pre-reqs:

MAS121

Health and Human Services

Massage Therapy

MAS228 PROFESSONAL PRACTCE & EVALUATN

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Application of massage therapy skills to course instructor in order to demonstrate minimally acceptable competency followed by a comprehensive evaluation of student performance by course instructor.

Pre-reqs:

MAS122

MAS229 CLINIC OPERATIONS

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course permits the student to apply learned skills to the clinical setting. Students will perform intake and assessment of clients based on subjective and objective information and physical assessment determining indications and contraindications for application of massage therapy. Students will design and implement treatment plans and document treatments in SOAP notes. Students will learn the skills necessary to manage a professional practice. Examination of the therapeutic relationship between the massage professional and the client will also be covered.

Pre-reqs:

MAS225

MAS231 Sports Massage

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course will present a unique focus on the use of basic sports massage, myofascial, neuromuscular and lymphatic facilitation to enhance an athlete's performance potential and treat common athletic injuries and conditions.

Pre-reqs:

MAS121

Medical Assisting

Health and Human Services

Medical Assisting

MAT100 Medical Assisting I

Credit Hours: 5 Contact Hours: 7 Lecture Hours: 3 Lab Hours: 4 Other Hours: 0

Medical Assisting I introduces the students to the profession of Medical Assisting and their responsibilities in the clinical area of the health care facility. Emphasis is placed on communication skills and the clinical techniques employed by the medical assistant. Pathophysiology and medications are presented as related procedures. Electronic Health Records will be implemented throughout the course.

Pre-reqs:

MAT101	Can be Taken Concurrently

MAT101 Medical Office Procedures

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

This course is designed to prepare students for advanced medical office administrative procedures. Hands-on projects will allow students to experience appointment scheduling, telephone screening, written communication, billing and collection techniques, general banking, and accounts payable. Students will demonstrate the ability to organize their work, set priorities, and make decisions. Electronic health records and accounts receivable software are used in this course.CTAG approved, CTMMS001, effective summer 2017

Pre-reqs:

MAT100	Can be Taken Concurrently

MAT102 Medical Assisting II

Credit Hours: 5 Contact Hours: 7 Lecture Hours: 3 Lab Hours: 4 Other Hours: 0

Medical Assisting II focuses on performing and assisting with advanced clinical skills, EKG monitoring, and patient communication and education. Proper documentation of clinical procedures is covered using electronic medical records. Pathophysiology is presented as related to the procedures. Electronic Health Records will be implemented throughout the course.

Pre-reqs:

MAT100	Can be Taken Concurrently

Health and Human Services

Medical Assisting

MAT103 Medical Law and Ethics

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course will focus on developing an understanding of ethics and various points of view on current ethical issues. Students will learn and discuss how legal issues are applied to the medical office.

Pre-reqs:

MAT200 Med Lab Proc for Med Asstg

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

This course introduces the student to basic medical laboratory techniques used in the physician's office. Our lab is run in compliance with OSHA/CLIA standards. Laboratory tests taught represent all departments of a clinical lab and include spirometry and EKG. Electronic Health Records will be implemented throughout the course.

Pre-reqs:

MAT102

MAT201 Insurance for Medical Asstg

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course focuses on developing knowledge of private, government and managed care insurances. Students will learn to code and complete electronic claim forms from CPT and ICD codebooks. Students will learn basic bookkeeping terminology, and post payments from Remittance Advice forms. This course covers risk management for reimbursement issues, following up on unpaid claims, and appealing disallowed claims. Electronic Health Records will be implemented in the course.

Pre-reqs:

MAT102 Can be Taken Concurrently

Health and Human Services

Medical Assisting

MAT202 Pharmacolog/Medications

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

This course focuses on specific drug classifications including the action and usage with direct relationship to diseases and disorders; mathematical units of measure and dosage calculations; methods for preparing and administering oral, intramuscular, subcutaneous, and intradermal medications used in the physician's office; and managing the office drug inventory. Pathophysiology is presented as related to medications. Electronic Health Records will be implemented throughout this course.

Pre-reqs:

MAT102	Can be Taken Concurrently

MAT204 Medical Office Management

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course focuses on creating a Policy and Procedure Manual that includes management principles, policies and procedures, financial management, marketing the practice, human relations and safety and disaster plans.

Pre-reqs:

MAT200	
And MAT201	
And MAT203	Can be Taken Concurrently
And MAT205	Can be Taken Concurrently
And MAT206	Can be Taken Concurrently

MAT205 Medical Assisting Seminar

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

This course will teach students how to prepare resumes, write cover letters and develop interview skills. Students will also prepare for the practicum.

Pre-reqs:

MAT200	
And MAT201	
And MAT203	Can be Taken Concurrently
And MAT204	Can be Taken Concurrently
And MAT206	Can be Taken Concurrently

Health and Human Services

Medical Assisting

MAT206 Medical Assisting Practicum

Credit Hours: 2 Contact Hours: 14 Lecture Hours: 0 Lab Hours: 14 Other Hours: 0

The student is placed in a medical facility for 210 hours of practical application of all skills learned in the classroom and for additional instruction in the actual operation and management of the health care facility. The student works under the close observation and supervision of the physician and office staff.

Pre-reqs:

MAT200
And MAT201
And MAT203 Can be Taken Concurrently
And MAT204 Can be Taken Concurrently
And MAT205 Can be Taken Concurrently

MAT225 EMERGENCY MEDICAL PROCEDURES

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course is designed to enable students to become certified in American Red Cross Professional Rescuer and Standard First Aid. In addition, supplementary information is presented covering manual resuscitation with Ambu bags, administering oxygen, crash carts, and incident reports. Study of the disease process is integrated with illnesses, injuries, and treatment covered in the course.

Pre-reqs:

MAT122

MAT228 OPHTHALMOLOGY I

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Focuses on anatomy and physiology of the eye; disease pathology, including systemic diseases with ocular manifestation; introduction to optics; pharmacology and microbiology; ocular emergencies and medical care; ophthalmic office procedures; medicolegal aspects of care; and preliminary workup for the ophthalmology patient.

Pre-reqs:

MAT121

Health and Human Services

Medical Assisting

MAT229 OPHTHALMOLOGY II

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Focuses on visual field testing; ocular motility; contact lenses, including insertion and removal instruction, care of, advantages and disadvantages of soft and rigid contacts; instrument maintenance and calibration; glaucoma and tonometry, including medical, surgical and laser treatment methods; and clinical optics. Forty hours of clinical externship are required in the ophthalmology office to apply ophthalmology skills, to receive credit for the ophthalmology course, and to receive a certificate of completion.

Pre-reqs:

MAT228

MAT231 REIMBURSEMENT FR HLTH CARE SER

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course is designed to introduce students to health care reimbursement. Content covers insurance terminology, legal considerations, third party guidelines, reimbursement methods and managed care reimbursement. It also includes an overview of national insurance plans and coding issues that affect reimbursement. There will also be emphasis on tracking and follow-up of processed claims.

Pre-reqs:

MAT234 INTRODUCTION TO PHLEBOTOMY

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course focuses on phlebotomy and microcapillary puncture skills, collection/handling of specimens, quality assurance, infection control, safety and law and ethics.

Pre-reqs:

Or Test & Score: ACT Reading - 18

Or Test & Score: Accuplacer Reading - 070

Or Test & Score: Compass Reading - 080

Or Test & Score: GED Reasoning Through Lang Art - 1

Or Test & Score: IDS Transfer Prof/Placement - 3

Or Test & Score: NextGen Accuplacer Reading - 244

Or Test & Score: Reading Proficiency - 3

Or Test & Score: SAT Verbal - 480

IDS102

Health and Human Services

Medical Lab

HTD213 HLTH INDEP STUDY-MED LAB

Credit Hours: 1 Contact Hours: 3 Lecture Hours: 0 Lab Hours: 3 Other Hours: 0

This independent study provides remediation of medical laboratory procedures used in the clinical laboratory. Students enrolled in the independent study will review and practice previously completed competencies. Students will be required to demonstrate competency in assigned skills to assure adequate knowledge and proficiency before readmission into the program and/or clinical setting.

Pre-reqs:

MLT121 FUNDAMENTALS OF LAB TECH

Credit Hours: 2 Contact Hours: 4 Lecture Hours: 1 Lab Hours: 3 Other Hours: 0

This course is designed to expose the student to basic skills and techniques used in the clinical laboratory. Topics to include: lab safety, lab units of measurement and calculations, preparation of solutions, care and use of lab equipment, pipetting and concepts of quality control. Phlebotomy, obtaining blood specimens by venipuncture and skin puncture is part of this course. TAG approved course- OHL008 effective Summer 2018

Pre-reqs:

MLT122 URINALYSIS AND BODY FLUIDS

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 2 Lab Hours: 3 Other Hours: 0

Course is structured to expose the student to the analysis of urine by macroscopic, chemical and microscopic techniques to determine the presence of soluble, insoluble substances and their relationship to disease. The class uses urine specimens, prepared slides and case histories. Course introduces topics of information, composition, and function of synovial, cerebrospinal, serous, amniotic, and seminal fluids. Course will describe the methods used in the routine analysis of these fluids, along with correlation of results with normal and disease states. TAG OHL010 approved Spring 2012.

Pre-reqs:

MLT124

Health and Human Services

Medical Lab

MLT123 HEMATOLOGY I

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

This course covers basic hematological procedures. Topics include automated and manual blood cell counting techniques, red cell indices and morphology, reticulocyte counts, total eosinophil counts, platelet counts, erythrocyte sedimentation rates, normal white blood cell differentials and abnormal white blood cell differentials by using unknown blood samples, prepared abnormal slides, kodachromes and case histories. Also, reinforcement of venipuncture and finger stick techniques. Course will introduce the basic principles of hemostasis (coagulation) and the tests used to screen for disorders of hemostasis. TAG OHL009 approved Spring 2012. Must complete MLT123 & MLT124 to obtain TAG approval.

Pre-reqs:

MLT124 HEMATOLOGY II

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 2 Lab Hours: 3 Other Hours: 0

Course is designed to reinforce hematological techniques previously learned by the student in Hematology I. Emphasis is placed on white blood cell differentials with blood cell morphology and associated disease states. Other topics, with clinical application, include: cerebral spinal fluid cell counts, sickle-cell preps, the leukemias, infectious mononucleosis and other blood dyscrasias by prepared microscopic slide collection, kodachromes and case histories, and coagulation studies. TAG OHL009 approved Spring 2012. Must complete MLT123 & MLT124 to obtain TAG approval.

Pre-reqs:

MLT123

MLT125 IMMUNOHEMATOLOGY

Credit Hours: 5 Contact Hours: 7 Lecture Hours: 3 Lab Hours: 4 Other Hours: 0

This course introduces the concepts of basic genetics of red cell antigens. The student will study the significance of the blood cell antigens and antibodies. The course includes ABO and Rh typing, crossmatching procedures, antibody detection and identification. A study of hemolytic disease of the newborn, its treatment and detection is included. Other topics in the course are composition and use of the specific blood component, overview of donor requirements.

Pre-reqs:

MLT126

Health and Human Services

Medical Lab

MLT126 IMMUNOLOGY/SEROLOGY

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

The course introduces the immune system and the concepts of the immunologic response in health and in disease, as well as how serologic techniques are used in the clinical laboratory testing. Topics include the cells and components involved in the immune response, which will include the immunoglobulins and complement system. Abnormal immune responses such hypersensitivity and autoimmunity and their clinical significance will be discussed. Common serologic techniques which utilize antigen-antibody reactions for diagnostic testing are presented. The laboratory activities will include dilutions, agglutination, and other antigen-antibody serologic techniques.

Pre-reqs:

MLT222 CLINICAL CHEMISTRY

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 3 Lab Hours: 3 Other Hours: 0

The course is designed to introduce the student to the principles of laboratory instrumentation, clinical chemistry procedures and quality control concepts. The course covers renal and liver function; carbohydrate, lipid and protein metabolism; hormones; electrolytes and mineral balance; blood gases; and clinical enzymes and therapeutic drug monitoring. The class uses lecture, case studies and laboratory procedures.

Pre-reqs:

BIO122
Or BIO123
And CHM243 Can be Taken Concurrently
And MLT121
And MLT122

MLT223 CLINICAL MICROBIOLOGY

Credit Hours: 5 Contact Hours: 9 Lecture Hours: 3 Lab Hours: 6 Other Hours: 0

The student will study the morphology and identification of microorganisms commonly found in humans, their relationship to disease states and their susceptibility to antibiotics. Topics include: basic structures and functions of bacteria; culture, growth and development requirements; classification of microbes; infectious disease; control of disease; laboratory safety; unknowns for identification from ATCC (American Type Culture Collection) seeded cultures; videotapes and kodachromes. Other topics include mycology, parasitology and virology.

Pre-reqs:

BIO221
And MLT126

Health and Human Services

Medical Lab

MLT225 MLT APPLICATIONS

Credit Hours: 3 Contact Hours: 9 Lecture Hours: 0 Lab Hours: 9 Other Hours: 0

Under supervision of MLT Program faculty, the student has the opportunity to practice the manual procedures from the previous MLT courses. In preparation for the affiliated hospital experience, the student will organize his/her daily workload to maximize productivity and attain competence in the manual methods. Emphasis is placed on manual hematology, normal and abnormal blood smears, routine urinalysis, body fluid cell counts and cytospins, routine serology, blood banking using tube and gel techniques.

Pre-reqs:

And MLT125

And MLT222

MLT223

MLT226 MLT DIRECTED PRACTICE

Credit Hours: 6 Contact Hours: 30 Lecture Hours: 0 Lab Hours: 30 Other Hours: 0

Students are assigned to an affiliated clinical laboratory and have the opportunity to perform clinical laboratory testing using modern equipment, under the supervision of a practicing laboratorian. Students rotate through the main laboratory departments which include: hematology and hemostasis, blood bank, microbiology, chemistry. Experiences include operating and maintaining sophisticated laboratory analyzers, evaluation of test results, refining phlebotomy skills, interaction with the clinical laboratory staff, with other health care professionals, and with the patient.

Pre-reqs:

MLT225	Can be Taken Concurrently
And MLT227	Can be Taken Concurrently

MLT227 MLT SEMINAR

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Topics include professional development, creating resumes and cover letters, discussions of experiences at the clinical sites, discussions of problems that occur in the workplace and problem resolution. The topics of the certification process, professional ethics in the laboratory, and other related topics are included.

Pre-reqs:

MLT223	
And MLT225	Can be Taken Concurrently
And MLT226	Can be Taken Concurrently

Nursing

Health and Human Services

Nursing

HTD201 HLTH INDEP STUDY-Surg Tech

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

This independent study provides remediation of surgical technology skills used in the surgical technology laboratory and clinical setting. Students enrolled in the independent study will review and practice previously completed competencies. Students will be required to demonstrate competency in assigned skills to assure knowledge and proficiency before readmission into the program and/or clinical setting.

Pre-reqs:

NSG100 Fund Concepts Lifespan Lecture

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course provides an overview of fundamental concepts important to the practice of nursing including those related to patient-centered nursing, the healthcare environment and professional nursing practice. Includes care of patients with a focus on wellness and health promotion. Application of knowledge and skills occurs in the nursing laboratories and clinical settings. Students must register for the lab and clinical co-requisites and successfully complete all components. CTADNUR002 effective spring 2018

Pre-reqs:

And	NSG100C	Can be Taken Concurrently
	NSG100L	Can be Taken Concurrently
And	NSG101	Can be Taken Concurrently

NSG100C Fund Concept Lifespan Clinical

Credit Hours: 2 Contact Hours: 6 Lecture Hours: 0 Lab Hours: 6 Other Hours: 0

This course provides an overview of fundamental concepts important to the practice of nursing including those related to patient-centered nursing, the healthcare environment and professional nursing practice. Includes care of patients with a focus on wellness and health promotion. Application of knowledge and skills occurs in the nursing laboratories and clinical settings. Students must register for the lab and lecture co-requisites and successfully complete all components.

Pre-reqs:

	NSG100	Can be Taken Concurrently
And	NSG100L	Can be Taken Concurrently
And	NSG101	Can be Taken Concurrently

Health and Human Services

Nursing

NSG100L Fund Concepts Lifespan Lab

Credit Hours: 1 Contact Hours: 3 Lecture Hours: 0 Lab Hours: 3 Other Hours: 0

This course provides an overview of fundamental concepts important to the practice of nursing including those related to patient-centered nursing, the healthcare environment and professional nursing practice. Includes care of patients with a focus on wellness and health promotion. Application of knowledge and skills occurs in the nursing laboratories and clinical settings. Students must register for the lecture and clinical co-requisites and successfully complete all components.

Pre-reqs:

NSG100	Can be Taken Concurrently
And NSG100C	Can be Taken Concurrently
And NSG101	Can be Taken Concurrently

NSG101 Clinical Reason Curr Practice

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course introduces the learner to clinical reasoning used in nursing. In this course the student learns to use critical thinking skills and strategies that underscore the thinking represented in the nursing process as well as dealing with aspects of the healthcare system for safe practice in the current healthcare environment. This course forms the basis for the thinking processes applied throughout all nursing courses.

Pre-reqs:

NSG100	Can be Taken Concurrently
And NSG100C	Can be Taken Concurrently
And NSG100L	Can be Taken Concurrently
Or NSG122	Can be Taken Concurrently
And NSG122C	Can be Taken Concurrently
And NSG122L	Can be Taken Concurrently
Or NSG123	Can be Taken Concurrently
And NSG123C	Can be Taken Concurrently
And NSG123L	Can be Taken Concurrently

Health and Human Services

Nursing

NSG121 Concept Nur Care Adult Patient

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course builds on fundamentals for the acquisition and application of concepts of nursing applied to the care of patients experiencing uncomplicated conditions with a focus on wellness. Application of knowledge and skills occurs in the nursing laboratories and a variety of clinical settings. Students must register for the lab and clinical co-requisites and successfully complete all components. CTADNUR002 effective spring 2018

Pre-reqs:

And	BIO121	
Or	BIO123	
And	NSG100	
And	NSG100C	
And	NSG100L	
And	NSG101	
And	NSG121C	Can be Taken Concurrently
	NSG121L	Can be Taken Concurrently

NSG121C Concept Nur Care Adult Clinic

Credit Hours: 1.5 Contact Hours: 4.5 Lecture Hours: 0 Lab Hours: 4.5 Other Hours: 0

This course builds on fundamentals for the acquisition and application of concepts of nursing applied to the care of patients experiencing uncomplicated conditions with a focus on wellness. Application of knowledge and skills occurs in the nursing laboratories and a variety of clinical settings. Students must register for the lab and lecture co-requisites and successfully complete all components.

Pre-reqs:

And	BIO121	
Or	BIO123	
And	NSG100	
And	NSG100C	
And	NSG100L	
And	NSG101	
	NSG121	Can be Taken Concurrently
And	NSG121L	Can be Taken Concurrently

Health and Human Services

Nursing

NSG121L Concept Nur Adult Patient Lab

Credit Hours: 0.5 Contact Hours: 1.5 Lecture Hours: 0 Lab Hours: 1.5 Other Hours: 0

This course builds on fundamentals for the acquisition and application of concepts of nursing applied to the care of patients experiencing uncomplicated conditions with a focus on wellness. Application of knowledge and skills occurs in the nursing laboratories and a variety of clinical settings. Students must register for the lecture and clinical co-requisites and successfully complete all components.

Pre-reqs:

And	BIO121	
Or	BIO123	
And	NSG100	
And	NSG100C	
And	NSG100L	
And	NSG101	
	NSG121	Can be Taken Concurrently
And	NSG121C	Can be Taken Concurrently

NSG122 Transition Paramedic Lecture

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

The course builds on the existing knowledge of the paramedic and provides an overview of fundamental concepts important to the practice of nursing including those related to patient-centered nursing, the healthcare environment, and professional nursing practice. It also provides the acquisition and concepts of nursing applied to the care of patients experiencing uncomplicated conditions with a focus on wellness and health promotion. Application of knowledge and skills occurs in the nursing laboratories and clinical settings. Students must register for the lab and clinical co-requisites and successfully complete all components.

Pre-reqs:

And	NSG101	Can be Taken Concurrently
And	NSG122C	Can be Taken Concurrently
	NSG122L	Can be Taken Concurrently

NSG122C Trans for Paramedic Clinical

Credit Hours: 1.5 Contact Hours: 4.5 Lecture Hours: 0 Lab Hours: 4.5 Other Hours: 0

The course builds on the existing knowledge of the paramedic and provides an overview of fundamental concepts important to the practice of nursing including those related to patient-centered nursing, the healthcare environment, and professional nursing practice. It also provides the acquisition and concepts of nursing applied to the care of patients experiencing uncomplicated conditions with a focus on wellness and health promotion. Application of knowledge and skills occurs in the nursing laboratories and clinical settings. Students must register for the lecture and clinical co-requisites and successfully complete all components.

Pre-reqs:

Health and Human Services

Nursing

NSG122C Trans for Paramedic Clinical

Credit Hours: 1.5 Contact Hours: 4.5 Lecture Hours: 0 Lab Hours: 4.5 Other Hours: 0

The course builds on the existing knowledge of the paramedic and provides an overview of fundamental concepts important to the practice of nursing including those related to patient-centered nursing, the healthcare environment, and professional nursing practice. It also provides the acquisition and concepts of nursing applied to the care of patients experiencing uncomplicated conditions with a focus on wellness and health promotion. Application of knowledge and skills occurs in the nursing laboratories and clinical settings. Students must register for the lecture and clinical co-requisites and successfully complete all components.

Pre-reqs:

And	NSG101	Can be Taken Concurrently
	NSG122	Can be Taken Concurrently
And	NSG122L	Can be Taken Concurrently

NSG122L Transition for Paramedic Lab

Credit Hours: 0.5 Contact Hours: 1.5 Lecture Hours: 0 Lab Hours: 1.5 Other Hours: 0

This course builds on fundamentals for the acquisition and application of concepts of nursing applied to the care of patients experiencing uncomplicated conditions with a focus on wellness. Application of knowledge and skills occurs in the nursing laboratories and a variety of clinical settings. Students must register for the lecture and clinical co-requisites and successfully complete all components.

Pre-reqs:

And	NSG101	Can be Taken Concurrently
	NSG122	Can be Taken Concurrently
And	NSG122C	Can be Taken Concurrently

NSG123 Transition for LPN Lecture

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

The course builds on the existing knowledge of the LPN with a focus on the transition from LPN practice to RN practice. It also provides the acquisition of additional concepts and application of concepts of nursing applied to the care of patients experiencing uncomplicated conditions with a focus on wellness and health promotion. Application of knowledge and skills occurs in the nursing laboratories and clinical settings. Students must register for the lab and clinical co-requisites and successfully complete all components.

Pre-reqs:

And	NSG101	Can be Taken Concurrently
And	NSG123C	Can be Taken Concurrently
	NSG123L	Can be Taken Concurrently

Health and Human Services

Nursing

NSG123C Transitiion for LPN Clinical

Credit Hours: 1.5 Contact Hours: 4.5 Lecture Hours: 0 Lab Hours: 4.5 Other Hours: 0

The course builds on the existing knowledge of the LPN with a focus on the transition from LPN practice to RN practice. It also provides the acquisition of additional concepts and application of concepts of nursing applied to the care of patients experiencing uncomplicated conditions with a focus on wellness and health promotion. Application of knowledge and skills occurs in the nursing laboratories and clinical settings. Students must register for the lab and lecture co-requisites and successfully complete all components.

Pre-reqs:

And	NSG101	Can be Taken Concurrently
	NSG123	Can be Taken Concurrently
And	NSG123L	Can be Taken Concurrently

NSG123L Transition for LPN Lab

Credit Hours: 0.5 Contact Hours: 1.5 Lecture Hours: 0 Lab Hours: 1.5 Other Hours: 0

The course builds on the existing knowledge of the LPN with a focus on the transition from LPN practice to RN practice. It also provides the acquisition of additional concepts and application of concepts of nursing applied to the care of patients experiencing uncomplicated conditions with a focus on wellness and health promotion. Application of knowledge and skills occurs in the nursing laboratories and clinical settings. Students must register for the lecture and clinical co-requisites and successfully complete all components.

Pre-reqs:

And	NSG101	Can be Taken Concurrently
	NSG123	Can be Taken Concurrently
And	NSG123C	Can be Taken Concurrently

NSG141 Concept Patient Mental Lecture

Credit Hours: 1.5 Contact Hours: 1.5 Lecture Hours: 1.5 Lab Hours: 0 Other Hours: 0

This course builds on the first semester courses to further refine the concepts of nursing practice with application to the care of patients with conditions related to mental health issues. Application of knowledge and skills occurs in the nursing laboratories and a variety of mental health facilities. Students must register for the lab and clinical co-requisites and successfully complete all components.

Pre-reqs:

And	BIO121
Or	BIO123
And	NSG100
And	NSG100C
And	NSG100L

Health and Human Services

Nursing

NSG141 Concept Patient Mental Lecture

Credit Hours: 1.5 Contact Hours: 1.5 Lecture Hours: 1.5 Lab Hours: 0 Other Hours: 0

This course builds on the first semester courses to further refine the concepts of nursing practice with application to the care of patients with conditions related to mental health issues. Application of knowledge and skills occurs in the nursing laboratories and a variety of mental health facilities. Students must register for the lab and clinical co-requisites and successfully complete all components.

Pre-reqs:

Or NSG122
And NSG122C
And NSG122L
Or NSG123
And NSG123C
And NSG123L
And NSG141C Can be Taken Concurrently
NSG141L Can be Taken Concurrently

NSG141C Concept Patient Mental Clinic

Credit Hours: 1 Contact Hours: 3 Lecture Hours: 0 Lab Hours: 3 Other Hours: 0

This course builds on the first semester courses to further refine the concepts of nursing practice with application to the care of patients with conditions related to mental health issues. Application of knowledge and skills occurs in the nursing laboratories and a variety of mental health facilities. Students must register for the lab and lecture co-requisites and successfully complete all components.

Pre-reqs:

And BIO121
Or BIO123
And NSG100
And NSG100C
And NSG100L
Or NSG122
And NSG122C
And NSG122L
Or NSG123
And NSG123C
And NSG123L
NSG141 Can be Taken Concurrently

Health and Human Services

Nursing

NSG141C Concept Patient Mental Clinic

Credit Hours: 1 Contact Hours: 3 Lecture Hours: 0 Lab Hours: 3 Other Hours: 0

This course builds on the first semester courses to further refine the concepts of nursing practice with application to the care of patients with conditions related to mental health issues. Application of knowledge and skills occurs in the nursing laboratories and a variety of mental health facilities. Students must register for the lab and lecture co-requisites and successfully complete all components.

Pre-reqs:

And	NSG141L	Can be Taken Concurrently

NSG141L Concept Patient Mental Lab

Credit Hours: 0.5 Contact Hours: 1.5 Lecture Hours: 0 Lab Hours: 1.5 Other Hours: 0

This course builds on the first semester courses to further refine the concepts of nursing practice with application to the care of patients with conditions related to mental health issues. Application of knowledge and skills occurs in the nursing laboratories and a variety of mental health facilities. Students must register for the lecture and clinical co-requisites and successfully complete all components.

Pre-reqs:

And	BIO121	
Or	BIO123	
And	NSG100	
And	NSG100C	
And	NSG100L	
Or	NSG122	
And	NSG122C	
And	NSG122L	
Or	NSG123	
And	NSG123C	
And	NSG123L	
	NSG141	Can be Taken Concurrently
And	NSG141C	Can be Taken Concurrently

Health and Human Services

Nursing

NSG221 Concept Repro-Devel Family Lec

Credit Hours: 2.5 Contact Hours: 2.5 Lecture Hours: 2.5 Lab Hours: 0 Other Hours: 0

This course builds on the previous nursing courses to further refine and apply the concepts of nursing practice in the care of the reproducing and developing family. Application of knowledge and skills occurs in the nursing laboratories and a variety of clinical settings in maternal/newborn and pediatric environments. Students must register for the lab and clinical co-requisites and successfully complete all components.

Pre-reqs:

And	NSG141	
And	NSG141C	
And	NSG141L	
And	NSG221C	Can be Taken Concurrently
	NSG221L	Can be Taken Concurrently

NSG221C Concept Repro-Devel Fam Clinic

Credit Hours: 1 Contact Hours: 3 Lecture Hours: 0 Lab Hours: 3 Other Hours: 0

This course builds on the previous nursing courses to further refine and apply the concepts of nursing practice in the care of the reproducing and developing family. Application of knowledge and skills occurs in the nursing laboratories and a variety of clinical settings in maternal/newborn and pediatric environments. Students must register for the lab and lecture co-requisites and successfully complete all components.

Pre-reqs:

And	NSG141	
And	NSG141C	
And	NSG141L	
	NSG221	Can be Taken Concurrently
And	NSG221L	Can be Taken Concurrently

NSG221L Concept Repro-Devel Fam Lab

Credit Hours: 0.5 Contact Hours: 1.5 Lecture Hours: 0 Lab Hours: 1.5 Other Hours: 0

This course builds on the previous nursing courses to further refine and apply the concepts of nursing practice in the care of the reproducing and developing family. Application of knowledge and skills occurs in the nursing laboratories and a variety of clinical settings in maternal/newborn and pediatric environments. Students must register for the lecture and clinical co-requisites and successfully complete all components.

Pre-reqs:

And	NSG141	

Health and Human Services

Nursing

NSG221L Concept Repro-Devel Fam Lab

Credit Hours: 0.5 Contact Hours: 1.5 Lecture Hours: 0 Lab Hours: 1.5 Other Hours: 0

This course builds on the previous nursing courses to further refine and apply the concepts of nursing practice in the care of the reproducing and developing family. Application of knowledge and skills occurs in the nursing laboratories and a variety of clinical settings in maternal/newborn and pediatric environments. Students must register for the lecture and clinical co-requisites and successfully complete all components.

Pre-reqs:

And	NSG141C	
And	NSG141L	
	NSG221	Can be Taken Concurrently
And	NSG221C	Can be Taken Concurrently

NSG241 Concept Patient Stable/Unsta

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course further refines the concepts of nursing practice with application to the care of adult patients with stable and unstable acute conditions. Application of knowledge and skills occurs in the nursing laboratories and a variety of clinical settings. Students must register for the lab and clinical co-requisites and successfully complete all components.

Pre-reqs:

And	BIO122	
And	NSG141	
And	NSG141C	
And	NSG141L	
And	NSG241C	Can be Taken Concurrently
	NSG241L	Can be Taken Concurrently

NSG241C Concept Patient Stable/Un Clin

Credit Hours: 1.5 Contact Hours: 4.5 Lecture Hours: 0 Lab Hours: 4.5 Other Hours: 0

This course further refines the concepts of nursing practice with application to the care of adult patients with stable and unstable acute conditions. Application of knowledge and skills occurs in the nursing laboratories and a variety of clinical settings. Students must register for the lab and lecture co-requisites and successfully complete all components.

Pre-reqs:

And	BIO122	

Health and Human Services

Nursing

NSG241C Concept Patient Stable/Un Clin

Credit Hours: 1.5 Contact Hours: 4.5 Lecture Hours: 0 Lab Hours: 4.5 Other Hours: 0

This course further refines the concepts of nursing practice with application to the care of adult patients with stable and unstable acute conditions. Application of knowledge and skills occurs in the nursing laboratories and a variety of clinical settings. Students must register for the lab and lecture co-requisites and successfully complete all components.

Pre-reqs:

And	NSG141	
And	NSG141C	
And	NSG141L	
	NSG241	Can be Taken Concurrently
And	NSG241L	Can be Taken Concurrently

NSG241L Concept Patient Stable/Un Lab

Credit Hours: 0.5 Contact Hours: 1.5 Lecture Hours: 0 Lab Hours: 1.5 Other Hours: 0

This course further refines the concepts of nursing practice with application to the care of adult patients with stable and unstable acute conditions. Application of knowledge and skills occurs in the nursing laboratories and a variety of clinical settings. Students must register for the lecture and clinical co-requisites and successfully complete all components.

Pre-reqs:

And	BIO122	
And	NSG141	
And	NSG141C	
And	NSG141L	
	NSG241	Can be Taken Concurrently
And	NSG241C	Can be Taken Concurrently

NSG261 Concept Nurs Prac Lifespan

Credit Hours: 5 Contact Hours: 5 Lecture Hours: 5 Lab Hours: 0 Other Hours: 0

This course builds on all previous nursing courses to further refine and apply the concepts of nursing practice to the care of patients with complex conditions. Application of knowledge and skills occurs in the nursing laboratories and a variety of clinical settings. Students must register for the lab and clinical co-requisites and successfully complete all components.

Pre-reqs:

Health and Human Services

Nursing

NSG261 Concept Nurs Prac Lifespan

Credit Hours: 5 Contact Hours: 5 Lecture Hours: 5 Lab Hours: 0 Other Hours: 0

This course builds on all previous nursing courses to further refine and apply the concepts of nursing practice to the care of patients with complex conditions. Application of knowledge and skills occurs in the nursing laboratories and a variety of clinical settings. Students must register for the lab and clinical co-requisites and successfully complete all components.

Pre-reqs:

And	BIO221	
And	NSG221	
And	NSG221C	
And	NSG221L	
And	NSG241	
And	NSG241C	
And	NSG241L	
And	NSG261C	Can be Taken Concurrently
	NSG261L	Can be Taken Concurrently
And	PSY123	

NSG261C Concpt Nurs Prac Lifespan clin

Credit Hours: 3 Contact Hours: 9 Lecture Hours: 0 Lab Hours: 9 Other Hours: 0

This course builds on all previous nursing courses to further refine and apply the concepts of nursing practice to the care of patients with complex conditions. Application of knowledge and skills occurs in the nursing laboratories and a variety of clinical settings. Students must register for the lab and lecture co-requisites and successfully complete all components.

Pre-reqs:

And	BIO221	
And	NSG221	
And	NSG221C	
And	NSG221L	
And	NSG241	
And	NSG241C	
And	NSG241L	
	NSG261	Can be Taken Concurrently
And	NSG261L	Can be Taken Concurrently
And	PSY123	

Health and Human Services

Nursing

NSG261L Concept Nurs Prac Lifespan lab

Credit Hours: 1 Contact Hours: 3 Lecture Hours: 0 Lab Hours: 3 Other Hours: 0

This course builds on all previous nursing courses to further refine and apply the concepts of nursing practice to the care of patients with complex conditions. Application of knowledge and skills occurs in the nursing laboratories and a variety of clinical settings. Students must register for the lecture and clinical co-requisites and successfully complete all components.

Pre-reqs:

And	BIO221	
And	NSG221	
And	NSG221C	
And	NSG221L	
And	NSG241	
And	NSG241C	
And	NSG241L	
	NSG261	Can be Taken Concurrently
And	NSG261C	Can be Taken Concurrently
And	PSY123	

NUR121 FUND CONCEPTS IN NURSING

Credit Hours: 6 Contact Hours: 12 Lecture Hours: 3 Lab Hours: 9 Other Hours: 0

This course introduces concepts basic to nursing with an emphasis on the nursing process and assessment skills. Technical nursing skills to maintain, restore, and/or promote basic health care are presented. The health care needs of the older adult are examined. Content also includes an explanation of the historical perspectives of nursing as it impacts on the present associate degree nurse as a member within the profession of nursing and the health care delivery system. Select legal, ethical and social issues affecting nursing are addressed. CTAG CTADNUR002 approved Spring 2012.

Pre-reqs:

STN100 State Tested Nurse Aide

Credit Hours: 3 Contact Hours: 6 Lecture Hours: 1.5 Lab Hours: 4.5 Other Hours: 0

This course is designed to prepare the student for STNA Testing. There are two parts to the nurse aide competency test a multiple-choice written/oral test and a skills test. The completer of this course should understand the standards related to nurse aide knowledge and skills and can competently and safely perform the job of an entry-level nurse aide. Application of knowledge occurs in the laboratory and clinical setting.

Pre-reqs:

Health and Human Services

Nursing

STN100 State Tested Nurse Aide

Credit Hours: 3 Contact Hours: 6 Lecture Hours: 1.5 Lab Hours: 4.5 Other Hours: 0

This course is designed to prepare the student for STNA Testing. There are two parts to the nurse aide competency test a multiple-choice written/oral test and a skills test. The completer of this course should understand the standards related to nurse aide knowledge and skills and can competently and safely perform the job of an entry-level nurse aide. Application of knowledge occurs in the laboratory and clinical setting.

Pre-reqs:

Occupational Therapy

HTD209 HLTH INDEP STUDY-OCC THERAPY

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

This independent study provides remediation of occupational therapy skills used in the treatment of patients with deficits in functional performance with everyday tasks and occupations. Students enrolled in the independent study will review and practice previously completed competencies. Students will be required to demonstrate competency in assigned skills and documentation to assure adequate knowledge and proficiency before readmission into the program and/or fieldwork setting.

Pre-reqs:

HTD210 HLTH INDEP STUDY-OCC THERAPY

Credit Hours: 2 Contact Hours: 4 Lecture Hours: 0 Lab Hours: 4 Other Hours: 0

This independent study provides remediation of occupational therapy skills used in the treatment of patients with deficits in functional performance with everyday tasks and occupations. Students enrolled in the independent study will review and practice previously completed competencies. Students will be required to demonstrate competency in assigned skills and documentation to assure adequate knowledge and proficiency before readmission into the program and/or fieldwork setting.

Pre-reqs:

Health and Human Services

Occupational Therapy

OTA121 FOUNDATIONS OF OT

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 2 Lab Hours: 2 Other Hours: 0

Explains the profession of occupational therapy, the roles and functions of occupational therapy personnel, the areas of occupational performances and the theoretical basis of using goal-directed activities. Observation in local occupational therapy clinics is scheduled.

Pre-reqs:

OTA122 THERAPEUTIC MEDIA

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 1 Lab Hours: 4 Other Hours: 0

Skill development in selected activities, screening and assessments with the emphasis on psychosocial, pediatric and geriatric performance use of equipment, individual and small group teaching, analysis of activities, use of O.T. Frames of Reference and O.T. Frameworks.

Pre-reqs:

OTA123 PSYCHOSOCIAL ASPECTS OF OT

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

Introduction to various health-promoting and inhibiting factors as they relate to occupational therapy practice. Provide training related to one-on-one and group treatment for individuals with psychiatric and/or social impairments. Emphasis on utilizing therapeutic use of self, adapted activities, and the environment as the primary means of promoting psychological well-being and enhancing occupational performance.

Pre-reqs:

OTA121
And OTA122
And PSY121
And PSY221 Can be Taken Concurrently

Health and Human Services

Occupational Therapy

OTA124 PSYCHOSOCIAL CLINICAL EX

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 1 Lab Hours: 2 Other Hours: 1

Skill development in group processes and didactic interactions. Supervised work experience and interactions with persons who have psychological dysfunctions.

Pre-reqs:

OTA121

And OTA122

OTA221 DEVELOP ASPECTS IN OT

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

Identification and description of handicapping conditions existing from birth or through adulthood. Instruction in occupational therapy theories and treatment for individuals with developmental and learning impairments. Emphasis on therapeutic techniques to enhance occupational performance from birth through adulthood.

Pre-reqs:

Or BIO122

And BIO123

OTA123

And OTA124

And OTA223 Can be Taken Concurrently

And PTA226 Can be Taken Concurrently

OTA222 DEV CLINICAL EXPERIENCE

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 1 Lab Hours: 2 Other Hours: 1

Training of transfer techniques, range of motion, inhibition and facilitating techniques. Training in the use of self-maintenance skills and assistive devices. Supervised work experience in a school, hospital or workshop servicing clients with developmental disabilities.

Pre-reqs:

Or BIO122

BIO123

And OTA123

Health and Human Services

Occupational Therapy

OTA222 DEV CLINICAL EXPERIENCE

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 1 Lab Hours: 2 Other Hours: 1

Training of transfer techniques, range of motion, inhibition and facilitating techniques. Training in the use of self-maintenance skills and assistive devices. Supervised work experience in a school, hospital or workshop servicing clients with developmental disabilities.

Pre-reqs:

And	OTA124	
And	OTA223	Can be Taken Concurrently
And	PTA226	Can be Taken Concurrently

OTA223 LIFE SPAN DEVELOPMENT

Credit Hours: 5 Contact Hours: 5 Lecture Hours: 5 Lab Hours: 0 Other Hours: 0

The study of human growth and development from birth through old age. Focus is on a multi-theoretical approach defining organic and environmental determinants of illness vs. wellness. Students explore therapeutic treatment implications related to application of developmental principles in working with various patient populations.

Pre-reqs:

ENG124

OTA224 OT IN PHYSICAL DYSFUN

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

Instruction in occupational therapy theories, assessment and screening and treatment for individuals and physical impairments and high risk medical conditions. Emphasis on use of therapeutic activities to restore, maintain and/or facilitate physical well-being and independence.

Pre-reqs:

And	BIO124	Can be Taken Concurrently
	OTA221	
And	OTA222	

Health and Human Services

Occupational Therapy

OTA225 PHYS DYSFUNTION CLINIC

Credit Hours: 3 Contact Hours: 4 Lecture Hours: 1 Lab Hours: 2 Other Hours: 1

Skill development in selected activities with emphasis on work simplification, fabrication of orthotics and routine evaluation procedures. Supervised work experience in a hospital or clinic setting treating individuals with neurological, orthopedic and other medical conditions.

Pre-reqs:

And OTA221

OTA222

OTA226 OT ASST SEMINAR

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

Examination and discussion of the professional roles and responsibilities of the occupational therapy assistant. Includes exploration of traditional and non-traditional roles, certification, conflict resolution, collaboration of OTR and COTA, ethics and legal aspects of treatment.

Pre-reqs:

OTA224

And OTA225

OTA227 CLINICAL APPLICATIONS I

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 0 Lab Hours: 0 Other Hours: 3

Supervised field work placement designed to provide in-depth experience in and responsibility for delivery of services to patients/clients. Emphasizes the application of academically-acquired knowledge leading to the performance level expected of an entry-level occupational therapy assistant.

Pre-reqs:

OTA224

And OTA225

Health and Human Services

Occupational Therapy

OTA228 CLINICAL APPLICATIONS II

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 0 Lab Hours: 0 Other Hours: 3

Supervised field work placement designed to provide in-depth experience and responsibility for delivery of services to patients/clients. Emphasizes the application of academically-acquired knowledge leading to the performance level expected of an entry-level occupational therapy assistant.

Pre-reqs:

OTA224

And OTA225

Ophthalmology

OPH100 Intro to Ophthalmology Prof

Credit Hours: 3 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course introduces the roles and responsibilities of ophthalmic medical professionals, with major emphasis on patient care and office administrative skills. A review of microbiology and medical terminology as it relates to the field is provided. Students are also introduced to medical ethics, safety, and community health eye care.

Pre-reqs:

OPH101 Ophthalmic Procedures I

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 2 Lab Hours: 4 Other Hours: 0

This course covers the basic clinical skills of ophthalmology including: vital signs, visual acuity, external eye examination, visual fields, papillary assessment, lensometry, keratometry, tonometry, and other supplementary tests. Students will be introduced to the use and maintenance of clinical equipment and supplies.

Pre-reqs:

Health and Human Services

Ophthalmology

OPH102 Ocular Anatomy & Physiology

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course focuses on the normal anatomy of the eye and visual pathway, as well as the physiology of ocular movements and vision.

Pre-reqs:

OPH103 Ophthalmic Procedures II

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 2 Lab Hours: 4 Other Hours: 0

This course focuses on clinical optics and basic ophthalmic procedures such as biometry, low vision, refractometry, retinoscopy, basic ophthalmic imaging, contact lenses, spectacle skills, and surgical assisting.

Pre-reqs:

OPH102

OPH104 Ophthalmology Practicum I

Credit Hours: 3 Contact Hours: 21 Lecture Hours: 0 Lab Hours: 21 Other Hours: 0

The student is placed in a medical facility for 315 hours of practical application of all basic ophthalmology skills learned in the classroom/lab and for additional instruction in the actual operation and management of the health care facility. This is a non-paid practicum. The student works under the close observation and supervision of the physician and office staff. Students will also participate in a seminar sharing clinical experiences.

Pre-reqs:

OPH103 Can be Taken Concurrently

Health and Human Services

Ophthalmology

OPH105 Ocular Diseases

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course focuses on the common ocular disorders and reviews systemic diseases relating to ocular conditions.

Pre-reqs:

OPH106 Ocular Pharmacology

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course focuses on ocular pharmacology including delivery, indications, contraindications, potential side effects, drug interactions, and patient education of common agents used in the diagnosis and treatment of eye disorders.

Pre-reqs:

OPH107 Ophthalmology Practicum II

Credit Hours: 2 Contact Hours: 14 Lecture Hours: 0 Lab Hours: 14 Other Hours: 0

The student is placed in a medical facility for 210 hours of practical application of basic and intermediate level ophthalmology skills learned in the classroom/lab. This is a non-paid practicum. The student works under the close observation and supervision of the physician and office staff. Students will also participate in a seminar sharing clinical experiences.

Pre-reqs:

OPH104

Health and Human Services

Ophthalmology

OPH200 Ophthalmic Procedures III

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 2 Lab Hours: 4 Other Hours: 0

This course focuses on intermediate and basic advanced ophthalmic skills including pupillary assessment, lensometry, keratometry, retinoscopy, tonometry, visual assessment, visual fields, ocular motility, spectacle skills, electrophysiology and advanced supplementary tests.

Pre-reqs:

OPH103

OPH201 Ophthalmology Practicum III

Credit Hours: 2 Contact Hours: 14 Lecture Hours: 0 Lab Hours: 14 Other Hours: 0

The student is placed in a medical facility for 210 hours of practical application of intermediate and basic advanced level ophthalmology skills learned in the classroom/lab. This is a non-paid practicum. The student works under the close observation and supervision of the physician and office staff. Students will also participate in a seminar sharing clinical experiences.

Pre-reqs:

OPH107

OPH202 Ophthalmic Procedures IV

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 2 Lab Hours: 4 Other Hours: 0

This course focuses on intermediate and basic advanced skills in ophthalmologic imaging, surgical assisting and special diagnostic testing.

Pre-reqs:

OPH200

Health and Human Services

Ophthalmology

OPH203 Ophthalmology Practicum IV

Credit Hours: 3 Contact Hours: 21 Lecture Hours: 0 Lab Hours: 21 Other Hours: 0

The student is placed in a medical facility for 315 hours of practical application of intermediate and basic advanced level ophthalmology skills learned in the classroom/lab. This is a non-paid practicum. The student works under the close observation and supervision of the physician and office staff. Students will also participate in a seminar sharing clinical experiences.

Pre-reqs:

OPH201

Physical Therapy

EXS110 Anatomy of Exercise

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Introduction to the structure and function of the skeletal, neuromuscular, and cardiopulmonary/vascular systems as they apply to exercise and rehabilitation. Students must register for the lab co-requisite and successfully complete both lecture and lab components.

Pre-reqs:

	BIO122	Can be Taken Concurrently
Or	BIO123	Can be Taken Concurrently
And	EXS110L	Can be Taken Concurrently

EXS110L Anatomy of Exercise Lab

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

Laboratory applications related to the structure and function of the skeletal, neuromuscular, and cardiopulmonary/vascular systems as they apply to exercise and rehabilitation. Students must register for the lecture co-requisite and successfully complete both lecture and lab components.

Pre-reqs:

	EXS110	Can be Taken Concurrently

Health and Human Services

Physical Therapy

EXS120 Exercise Applications

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

Reinforces and expands principles, applications, and theories of exercise science and its role in prevention, wellness and/or rehabilitation. Includes instruction in and rationale for selected testing procedures and exercise applications. Students must register for the lab co-requisite and successfully complete both lecture and lab components.

Pre-reqs:

EXS110

And EXS120L Can be Taken Concurrently

EXS120L Exercise Applications Lab

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

Laboratory procedures related to principles, applications, and theories of exercise science and its role in prevention, wellness and/or rehabilitation. Includes instruction in and rationale for selected testing procedures and exercise applications. Students must register for the lecture co-requisite and successfully complete both lecture and lab components.

Pre-reqs:

EXS120 Can be Taken Concurrently

PTA110 Therapy Sciences

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

This course presents to the students a basic study of common scientific concepts related to the provision of physical therapy. Content includes the study of different tissues and their response to stress, injury, inflammation, their resultant healing and recovery, and the related clinical stages of rehabilitation. Basic neurological structures relating to motor control, sensory feedback, and pain are also presented.

Pre-reqs:

PTA118 Can be Taken Concurrently

Health and Human Services

Physical Therapy

PTA118 Principles of Patient Care

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Introduction to the field of health care, basic standards of health care management, medical terminology and abbreviations, and patient care skills. Instruction includes data collection and interventions for individuals having selected conditions, vital signs, infection control procedures, body mechanics, patient positioning and draping, transfer techniques, gait training using selected assistive devices, and other selected patient care topics. Physical Therapist Assistant students must register for the lab co-requisite and successfully complete both lecture and lab components.

Pre-reqs:

And	PTA110	Can be Taken Concurrently
	PTA118L	Can be Taken Concurrently

PTA118L Principles of Patient Care Lab

Credit Hours: 2 Contact Hours: 4 Lecture Hours: 0 Lab Hours: 4 Other Hours: 0

Laboratory applications related to the field of health care, basic standards of health care management, medical terminology and abbreviations, and basic patient care skills. The student will practice data collection and interventions for individuals having selected conditions and treatments, vital signs, infection control procedures, body mechanics, patient positioning and draping, transfer techniques, gait training using selected assistive devices, and other selected patient care topics. Physical Therapist Assistant students must register for the lecture co-requisite and successfully complete both lecture and lab components.

Pre-reqs:

PTA119 Professional Values & Ethics

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

An overview of the history of physical therapy and its professional association. Topics include: foundational values and ethics of the profession, roles and responsibilities of the PT and the PTA within the patient care model, program expectations regarding student professionalism in the classroom and during clinical performance, and issues relating to patient confidentiality, diversity, and respect. An introduction to clinical documentation will be presented.

Pre-reqs:

Health and Human Services

Physical Therapy

PTA120 Introduction to Orthopedics

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

Review structure and function of articulations. Introduce biomechanical principles related to human motion and locomotion, including articulations, gait analysis, regional, and neuromuscular relationships. Students must register for the lab co-requisite and successfully complete both lecture and lab components.

Pre-reqs:

	PHY101	
And	PTA120L	Can be Taken Concurrently
And	PTA128	Can be Taken Concurrently

PTA120L Intro to Orthopedics Lab

Credit Hours: 1 Contact Hours: 3 Lecture Hours: 0 Lab Hours: 3 Other Hours: 0

Laboratory applications related to structure and function of articulations. Introduce biomechanical principles related to human motion and locomotion, including articulations, gait analysis, regional, and neuromuscular relationships. Students must register for the lecture co-requisite and successfully complete both lecture and lab components.

Pre-reqs:

	PTA120	Can be Taken Concurrently

PTA121 FUNDAMENTALS OF PT

Credit Hours: 4 Contact Hours: 6 Lecture Hours: 3 Lab Hours: 3 Other Hours: 0

The student is introduced to the field of physical therapy, basic standards of practice, current professional issues and interactions with patients and other health professionals. The student is instructed in monitoring vital signs, infection control procedures, principles of body mechanics, patient positioning and draping, transfer techniques, range of motion, girth measurements, therapeutic massage and selected conditions and treatments. Laboratory activities, written assignments, and competencies are required components of this course.

Pre-reqs:

Health and Human Services

Physical Therapy

PTA125 PROF CLIN PRACT FOR PTA

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

This course will focus on development of the professional clinical skills including critical thinking and clinical decision-making. The students will apply didactic concepts learned in prior coursework to clinical situations.

Pre-reqs:

PTA119

And PTA138 Can be Taken Concurrently

PTA128 PTA Procedures I Clinic Interv

Credit Hours: 4 Contact Hours: 8 Lecture Hours: 2 Lab Hours: 6 Other Hours: 0

This course will present a comprehensive study of principles of biophysical agents used in physical therapy. Content includes the rationale, effects, adverse effects, contraindications, precautions, application, and documentation of such agents. Laboratory activities, written assignments, and lab testing are required components of this course. Students may perform selected therapeutic interventions with patients or other students under direct PT/PTA supervision as part of the laboratory components of this course. A study of selected impairments, functional limitations, and interventions associated with orthopedic conditions, neurological conditions, integumentary conditions, and pulmonary conditions are also included.

Pre-reqs:

PTA110

And PTA118

And PTA120 Can be Taken Concurrently

PTA136 Neuro Found for Rehab

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Introduction to basic structure and function of central, peripheral and autonomic nervous systems as they relate to rehabilitation, normal neurologic developmental sequence, and milestones. Presents selected impairments, functional limitations, disabilities, data collection and therapeutic interventions related to neurologic pathologies.

Pre-reqs:

BIO122

Or BIO123

Health and Human Services

Physical Therapy

PTA138 Data Collection

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Introduction to data collection and documentation skills associated with patient care. Topics include, but are not limited to: medical history taking for common medical concerns, arousal, mentation, and cognition, anthropometric measurements, vital signs, thoracoabdominal movement and breathing patterns, integumentary integrity and sensation, goniometry, joint play, muscle testing and tone, posture, alignment and balance, gait, and environmental analysis. Students must register for the lab co-requisite and successfully complete both lecture and lab components.

Pre-reqs:

And	PTA125	Can be Taken Concurrently
	PTA128	
And	PTA138L	Can be Taken Concurrently

PTA138L Data Collection Lab

Credit Hours: 2 Contact Hours: 4 Lecture Hours: 0 Lab Hours: 4 Other Hours: 0

Laboratory applications related to data collection and documentation skills. Topics include, but are not limited to: medical history taking for common medical concerns, arousal, mentation, and cognition, anthropometric measurements, vital signs, thoracoabdominal movement and breathing patterns, integumentary integrity and sensation, goniometry, joint play, muscle testing and tone, posture, alignment and balance, gait, and environmental analysis. Students must register for the lecture co-requisite and successfully complete both lecture and lab components.

Pre-reqs:

	PTA138	Can be Taken Concurrently

PTA222 PTA PROCEDURES II

Credit Hours: 5 Contact Hours: 7 Lecture Hours: 3 Lab Hours: 4 Other Hours: 0

This course will present to the students the impairments, disabilities, functional limitations, and interventions of selected musculoskeletal, rhematological and cardiovascular conditions including spinal disorders and amputation. Also included, will be an overview of CNS anatomy, physiology, and pathology, sensory integration, motor development and motor control. Laboratory activities, written assignments and competencies, are required components of this course. Students will perform selected therapeutic interventions with patients under direct PT/PTA supervision as part of laboratory component of this course.

Pre-reqs:

And	BIO124	
	PTA124	
And	PTA125	
And	PTA228	Can be Taken Concurrently
And	PTA229	Can be Taken Concurrently

Health and Human Services

Physical Therapy

PTA223 PTA PROCEDURES III

Credit Hours: 2 Contact Hours: 3 Lecture Hours: 1 Lab Hours: 2 Other Hours: 0

This course will present to the students the impairments, disabilities, functional limitations, and interventions of selected neuromuscular disorders and will include, but not limited to spinal cord injuries, traumatic brain injuries, strokes, and developmental disabilities. Laboratory activities, written assignments, and competencies are required components of this course. Students will perform selected therapeutic interventions under direct PT/PTA supervision as part of the laboratory component of this course.

Pre-reqs:

PTA224

And PTA225

PTA224 PTA PROCEDURES II ORTHO

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 2 Lab Hours: 3 Other Hours: 0

This course presents the impairments, disabilities, functional limitations, data collection and therapeutic interventions of selected orthopedic, integumentary, rheumatological and cardiovascular conditions. Also included is study of the anatomy, physiology and pathology of the selected conditions. Laboratory activities, written assignments and competencies are required components of this course. Students will perform selected data collection and interventions as a part of this course.

Pre-reqs:

BIO124

And EXS120

And PTA120

PTA225 PTA PROCEDURES II NEURO

Credit Hours: 3 Contact Hours: 5 Lecture Hours: 2 Lab Hours: 3 Other Hours: 0

This course presents the impairments, disabilities, functional limitations, data collection and therapeutic interventions of selected cardiovascular, integumentary, neurological, developmental, and traumatic conditions. Also included is study of the anatomy, physiology and pathology of the selected conditions. Laboratory activities, written assignments and competencies are required components of this course. Students will perform selected data collection and interventions as a part of this course.

Pre-reqs:

BIO124

And PTA136

And PTA248 Can be Taken Concurrently

Health and Human Services

Physical Therapy

PTA226 FUNCTIONAL ANATOMY

Credit Hours: 4 Contact Hours: 5 Lecture Hours: 3 Lab Hours: 2 Other Hours: 0

An in-depth study of the musculoskeletal system with particular attention paid to the movement of joints, motions of the spine and extremities, as well as prime movers involved in these motions. Application of the knowledge of human anatomy with emphasis on biomechanics and functions relative to the neuromusculo-skeletal system. Motion of the human body is studied as a basis for therapeutic exercise and function.

Pre-reqs:

Or BIO122

BIO123

PTA228 SEMINAR I

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Presentation of topics related to clinical practice to include ethics and professional development.

Pre-reqs:

PTA125

And PTA247 Can be Taken Concurrently

PTA230 SEMINAR II

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Presentation of diverse clinical issues and approaches to patient management.

Pre-reqs:

PTA228

And PTA257 Can be Taken Concurrently

And PTA267 Can be Taken Concurrently

Health and Human Services

Physical Therapy

PTA247 Clinical Experience I

Credit Hours: 1 Contact Hours: 7 Lecture Hours: 0 Lab Hours: 7 Other Hours: 0

Clinical experience in various physical therapy departments under direct supervision.

Pre-reqs:

PTA125

And PTA228 Can be Taken Concurrently

PTA248 Multisystems

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

Introduction to impairments, functional limitations, disabilities, data collection and therapeutic interventions related to selected integumentary, cardiovascular, lymphatic, endocrine, gastrointestinal, and urological conditions. Management of complex medical conditions affecting patients in physical therapy will be presented. Students must register for the lab co-requisite and successfully complete both lecture and lab components.

Pre-reqs:

PTA138

And PTA225 Can be Taken Concurrently

And PTA248L Can be Taken Concurrently

PTA248L Multisystems Lab

Credit Hours: 1 Contact Hours: 3 Lecture Hours: 0 Lab Hours: 3 Other Hours: 0

Laboratory applications related to the study of impairments, functional limitations, disabilities, data collection and therapeutic interventions related to selected integumentary, cardiovascular, lymphatic, endocrine, gastrointestinal, and urological conditions. Management of complex medical conditions affecting patients in physical therapy will be presented. Students must register for the lecture co-requisite and successfully complete both lecture and lab components.

Pre-reqs:

PTA248 Can be Taken Concurrently

Health and Human Services

Physical Therapy

PTA257 Clinical Experience II

Credit Hours: 1 Contact Hours: 7 Lecture Hours: 0 Lab Hours: 7 Other Hours: 0

Clinical experience in various physical therapy departments under direct supervision.

Pre-reqs:

And	PTA230	Can be Taken Concurrently
	PTA247	

PTA267 Clinical Experience III

Credit Hours: 2 Contact Hours: 14 Lecture Hours: 0 Lab Hours: 14 Other Hours: 0

Clinical experience in various physical therapy departments under direct supervision.

Pre-reqs:

Practical Nursing

PNC100 Nursing 1

Credit Hours: 4 Contact Hours: 5 Lecture Hours: 3 Lab Hours: 1 Other Hours: 1

This course focuses on the beginning knowledge and skills that form the foundation of basic nursing care. Some of the topics included are hygiene, vital signs, medical asepsis, health and wellness, communications, the basic principles of nutrition as it relates to wellness and the promotion of health, developmental changes as they occur from young adulthood to senescence, and gender identity/sexual orientation. The student applies classroom theory of basic nursing skills to both the practice and clinical laboratory settings. This course also presents ethical, legal, and social issues that will affect the practical nurse during his/her nursing career. A study of nursing history and current health care trends is presented to give a sense of heritage and future. CTAG CTLPRN001 approved, effective spring 2022 ITAG approved ITLPRN001, effective summer 2022

Pre-reqs:

	BIO101	Can be Taken Concurrently
And	PNC101	Can be Taken Concurrently

Health and Human Services

Practical Nursing

PNC101 Pharmacology 1

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course is an introduction into pharmacology. Topics include the history of drugs, the legal aspects of medication administration, pharmacodynamics, math calculations, intravenous drip rates, and the basic principles for preparing and administering medications. CTAG CTLPRN001 approved, effective spring 2022 ITAG approved ITLPRN001, effective summer 2022

Pre-reqs:

And	BIO101	Can be Taken Concurrently
	PNC100	Can be Taken Concurrently

PNC120 Nursing 2

Credit Hours: 5 Contact Hours: 7 Lecture Hours: 3 Lab Hours: 2 Other Hours: 2

This course builds on basic nursing knowledge. Topics such as immunity; catheterizations and irrigations; death and dying; and the care of the HIV, surgical, cancer, and mental health patient are discussed using the nursing process to identify appropriate nursing interventions. In addition, this course prepares the student to be certified in intra-venous (IV) therapy covering topics such as understanding the rules and laws governing infusion practices for LPN's in Ohio, initiating and maintaining an IV infusion, complication of IV infusions, and considerations for the geriatric population. Skills necessary to implement identified nursing interventions will be taught in the practice laboratory. Clinical experience will be offered in adult acute care, long-term care, and rehabilitation facilities. CTAG CTLPRN001 approved, effective spring 2022 ITAG approved ITLPRN001, effective summer 2022

Pre-reqs:

And	BIO101	Can be Taken Concurrently
	PNC100	
And	PNC101	
And	PNC121	Can be Taken Concurrently

PNC121 Pharmacology 2

Credit Hours: 3 Contact Hours: 3.5 Lecture Hours: 2.5 Lab Hours: 1 Other Hours: 0

This course focuses on the role of the practical nurse in the preparation and administration of medications. The classifications of medications will be taught focusing on the pathophysiology, nursing implications, and patient/family teaching. Issues related to self-medication will also be discussed. During the practice laboratory, the student will have the opportunity to prepare and administer medications using the theory base that has been presented.

Pre-reqs:

And	BIO101	Can be Taken Concurrently
	PNC100	
And	PNC101	
And	PNC120	Can be Taken Concurrently

Health and Human Services

Practical Nursing

PNC130 Nursing 3

Credit Hours: 9 Contact Hours: 12 Lecture Hours: 6 Lab Hours: 2 Other Hours: 4

This course focuses on nursing care of patients with disorders of the cardiovascular, respiratory, neurologic, endocrine, gastrointestinal, and the genitourinary systems. Each system is studied through the collection of data using the nursing process to observe patient behavior, plan patient care, identify nursing interventions, and evaluate patient outcomes.

Pre-reqs:

PNC120

And PNC121

PNC140 Nursing 4

Credit Hours: 8 Contact Hours: 12 Lecture Hours: 4 Lab Hours: 2 Other Hours: 6

This course focuses on the nursing care of patients with disorders of the musculoskeletal, sensory, and reproductive systems as well as the nursing care of individuals during pregnancy, labor, delivery, and postpartum. Nursing care of newborn and pediatric patients with a focus on growth and development from infancy through adolescence is discussed. Common pediatric conditions and the impact of change/crisis on the family's ability to adapt are included in the clinical component. This course also prepares the student for the NCLEX State Board of Nursing test.

Pre-reqs:

PNC130

Respiratory Therapy/MIST

HTD233 HLTH INDEP STUDY-RESPIRATORY

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

This independent study provides remediation of respiratory care procedures used in the treatment of patients with cardiopulmonary disease. Students enrolled in the independent study will review and practice previously completed competencies. Students will be required to demonstrate competency in assigned skills to assure adequate knowledge and proficiency before readmission into the program and/or clinical setting.

Pre-reqs:

Health and Human Services

Respiratory Therapy/MIST

HTD234 HLTH INDEP STUDY-RESPIRATORY

Credit Hours: 2 Contact Hours: 4 Lecture Hours: 0 Lab Hours: 4 Other Hours: 0

This independent study provides remediation of respiratory care procedures used in the treatment of patients with cardiopulmonary disease. Students enrolled in the independent study will review and practice previously completed competencies. Students will be required to demonstrate competency in assigned skills to assure adequate knowledge and proficiency before readmission into the program and/or clinical setting.

Pre-reqs:

HTD235 HLTH INDEP STUDY-RESPIRATORY

Credit Hours: 3 Contact Hours: 6 Lecture Hours: 0 Lab Hours: 6 Other Hours: 0

This independent study provides remediation of respiratory care procedures used in the treatment of patients with cardiopulmonary disease. Students enrolled in the independent study will review and practice previously completed competencies. Students will be required to demonstrate competency in assigned skills to assure adequate knowledge and proficiency before readmission into the program and/or clinical setting.

Pre-reqs:

HTD236 HLTH INDEP STUDY-RESPIRATORY

Credit Hours: 4 Contact Hours: 8 Lecture Hours: 0 Lab Hours: 8 Other Hours: 0

This independent study provides remediation of respiratory care procedures used in the treatment of patients with cardiopulmonary disease. Students enrolled in the independent study will review and practice previously completed competencies. Students will be required to demonstrate competency in assigned skills to assure adequate knowledge and proficiency before readmission into the program and/or clinical setting.

Pre-reqs:

Health and Human Services

Respiratory Therapy/MIST

MIS123 INTRO TO SURGICAL TERM/MCROBIO

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course provides the student with an exposure to terms specific to the field of central service/medical instrument sterilization with special emphasis on surgical terminology and microbiology pertinent to the surgical arena. Emphasis is placed on understanding the relation- ships between medical products and instruments, how they are used, and the factors in disease transmission that compromise surgical patient outcomes.

Pre-reqs:

MIS124

MIS124 MEDICAL INSTR STERILIZATION I

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 0 Lab Hours: 0 Other Hours: 0

This course presents the student with an overview of the technical functions of the field of central service processing/medical instrument sterilization and its application to hospital/surgical center environments. Topics include orientation to the work environment, decontamination procedures, infection control, disinfection, surgical instrumentation and standards of practice.

Pre-reqs:

BIO101

MIS125 MIS I/DIRECTED PRACTICE

Credit Hours: 2 Contact Hours: 10 Lecture Hours: 0 Lab Hours: 10 Other Hours: 0

This course provides the student the technical competency skills in identification of surgical implementation, standards of practice, decontamination procedures, infection control, and disinfection. This directed practice orients the student to the work environment in the central service processing area of the hospital/surgery center.

Pre-reqs:

And	BIO125	Can be Taken Concurrently
	MIS124	Can be Taken Concurrently

Health and Human Services

Respiratory Therapy/MIST

MIS126 MEDICAL INSTR STERILIZATION II

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

This course presents the student with an exposure to the technical functions of the field of central service processing/medical instrument sterilization with emphasis on surgical instrumentation, assembly of instruments, sterilization procedures, standards of practice, operations, inventory, distribution and product standardization.

Pre-reqs:

MIS124

MIS127 MIS II/DIRECTED PRACTICE

Credit Hours: 3 Contact Hours: 15 Lecture Hours: 0 Lab Hours: 15 Other Hours: 0

This course provides the student the technical competency skills in sterilization procedures, assembly of instruments, standards of practice, operations, inventory, distribution and product standardization. Students gain technical skills through exposure to the central service processing area in a hospital/surgery center.

Pre-reqs:

MIS125

And MIS126 Can be Taken Concurrently

MIS222 Medical Inst Sterilization III

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course reinforces the technical functions of the field of central service processing/medical instrument sterilization with the review of decontamination, assembly, sterilization, distribution and storage. Other topics include credentialing exam preparation and job readiness skills.

Pre-reqs:

MIS123

And MIS126

Health and Human Services

Respiratory Therapy/MIST

MIS223 MIS III/Directed Practice

Credit Hours: 1 Contact Hours: 5 Lecture Hours: 0 Lab Hours: 5 Other Hours: 0

This course reinforces the technical competency skills in decontamination, assembly, sterilization, distribution and storage. Students will demonstrate competency by working more independently in the central service processing area in a hospital/surgery center.

Pre-reqs:

MIS127

And MIS222 Can be Taken Concurrently

RCT121 Intro to Respiratory Care

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

An introduction to the field of respiratory care: the job functions of the respiratory therapy profession, orientation to charting techniques, patient positioning, vital sign and physical assessment, aerosolized delivery of medication, incentive spirometry, basic life support techniques, cleaning and sterilization, isolation techniques, and other procedures required for entry into the hospital setting. Application of knowledge and skills occurs in the respiratory care laboratory. Students must register for the lab co-requisite and successfully complete both components.

Pre-reqs:

BIO122

Or BIO123

And RCT121L Can be Taken Concurrently

RCT121L Intro to Respiratory Care Lab

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

An introduction to the field of respiratory care: the job functions of the respiratory therapy profession, orientation to charting techniques, patient positioning, vital sign and physical assessment, aerosolized delivery of medication, incentive spirometry, basic life support techniques, cleaning and sterilization, isolation techniques, and other procedures required for entry into the hospital setting. Application of knowledge and skills occurs in the respiratory care laboratory. Students must register for the lecture co-requisite and successfully complete both components.

Pre-reqs:

Health and Human Services

Respiratory Therapy/MIST

RCT122 MED GAS ADMINISTRATION

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

An introduction to the basics of oxygen administration, aerosol and humidification therapy. Application of knowledge and skills occurs in the respiratory care laboratory. Students must register for the lab co-requisite and successfully complete both components.

Pre-reqs:

RCT122L Medical Gas Administration Lab

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

An introduction to the basics of oxygen administration, aerosol and humidification therapy. Application of knowledge and skills occurs in the respiratory care laboratory. Students must register for the lecture co-requisite and successfully complete both components.

Pre-reqs:

RCT123 AIRWAY MANAGEMENT PROCED

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

An introduction to the therapeutic and diagnostic modalities used in the treatment and assessment of pulmonary diseases to include hyperinflation techniques, bronchial hygiene, artificial airways, airway clearance techniques including suctioning and tracheostomy care, and arterial punctures. Application of knowledge and skills occurs in the respiratory care laboratory. Students must register for the lab co-requisite and successfully complete both components.

Pre-reqs:

RCT124

Health and Human Services

Respiratory Therapy/MIST

RCT123L Airway Mgmt Procedures Lab

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

An introduction to the therapeutic and diagnostic modalities used in the treatment and assessment of pulmonary diseases to include hyperinflation techniques, bronchial hygiene, artificial airways, airway clearance techniques including suctioning and tracheostomy care, and arterial punctures. Application of knowledge and skills occurs in the respiratory care laboratory. Students must register for the lecture co-requisite and successfully complete both components.

Pre-reqs:

RCT124 Resp Care Pharmacology

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

An orientation to pharmacology including drug classifications, dosage calculations, indications, side effects, and administration. Emphasis is placed on those drugs used in the treatment and management of cardiopulmonary disease including: bronchodilators, mucolytics, steroids, anti-infective agents, smoking cessation aids, central nervous system and cardiac medications and other miscellaneous drugs.

Pre-reqs:

RCT125 Practicum I Seminar

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

The seminar component of Practicum I consists of an orientation to diagnostic testing that will be encountered in the clinical setting when assessing patients. Students will receive instruction and participate in discussion of clinical application of the following topics: chest x-ray interpretation; special radiologic tests; laboratory testing; arterial blood gas interpretation; and quality control of arterial blood gas sampling.

Pre-reqs:

Health and Human Services

Respiratory Therapy/MIST

RCT125C Practicum I Clinical

Credit Hours: 2 Contact Hours: 14 Lecture Hours: 0 Lab Hours: 14 Other Hours: 0

Clinical experiences provided include an introduction to basic patient care skills such as: medical asepsis, vital sign monitoring, physical assessment, charting, patient chart review, isolation, and resuscitation. Also included are experiences in medical gas administration, aerosol therapy, and hyperinflation and bronchial hygiene techniques.

Pre-reqs:

RCT124

RCT126 CRITICAL CARE

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

An introduction of the principles related to the care of the critically ill patient with an emphasis on mechanical ventilation. Application of knowledge and skills occurs in the respiratory care laboratory. Students must register for the lab co-requisite and successfully complete both components.

Pre-reqs:

RCT123

RCT126L Critical Care Laboratory

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

An introduction of the principles related to the care of the critically ill patient with an emphasis on mechanical ventilation. Application of knowledge and skills occurs in the respiratory care laboratory. Students must register for the lecture co-requisite and successfully complete both components.

Pre-reqs:

Health and Human Services

Respiratory Therapy/MIST

RCT128 Practicum II Seminar

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

The seminar component of Practicum II consists of an orientation to conducting, interpreting, and quality control of pulmonary function testing. Students will perform pulmonary function testing and participate in discussion of clinical application and interpretation of data.

Pre-reqs:

RCT128C Practicum II Clinical

Credit Hours: 1 Contact Hours: 7 Lecture Hours: 0 Lab Hours: 7 Other Hours: 0

Clinical experiences are provided in the area of airway management, aerosol therapy, hyperinflation and bronchial hygiene techniques, arterial punctures, and tracheobronchial suctioning. Experiences are also provided in specialty care areas of respiratory care.

Pre-reqs:

RCT123

And RCT125C

RCT129 RESPIRATORY DISEASES

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

A review of diseases affecting the patients that are encountered by the respiratory care practitioner. Included is the physical assessment and evaluation of the patient with respiratory complications.

Pre-reqs:

RCT124

Health and Human Services

Respiratory Therapy/MIST

RCT220 CARDIOPULMONARY A & P

Credit Hours: 4 Contact Hours: 4 Lecture Hours: 4 Lab Hours: 0 Other Hours: 0

This course introduces students to the anatomy and physiology of the respiratory and cardiovascular systems. It also includes the application of cardiopulmonary physiology related to the diagnosis, monitoring, and care of the critically ill respiratory patient. Application topics include advanced mechanical ventilator management, capnography, patient positioning, metabolic measurements, advanced arterial blood gas interpretation, and cardiopulmonary calculations.

Pre-reqs:

And BIO122

Or BIO123

RCT126

RCT223 PATIENT ASSMNST AND MONITOR

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

Exposure to various procedures and techniques associated with the monitoring and evaluation of the patient with cardiopulmonary disease, with particular focus on hemodynamic monitoring of the critically ill patient.

Pre-reqs:

RCT220

RCT224 Practicum III Seminar

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

The seminar component of Practicum III consists of an introduction to cardiac testing and monitoring seen in the clinical setting. Students will learn to interpret and perform EKG's.

Pre-reqs:

Health and Human Services

Respiratory Therapy/MIST

RCT224C Practicum III Clinical

Credit Hours: 2 Contact Hours: 14 Lecture Hours: 0 Lab Hours: 14 Other Hours: 0

Clinical experiences provided include an exposure to invasive and non-invasive ventilatory management and other procedures related to the care of the critically ill patient. Experiences are also provided in specialty care areas of respiratory care.

Pre-reqs:

RCT126

And RCT128C

RCT225 Practicum IV Seminar

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

This course prepares students for the work field. Clinical experiences provided include management of the critically ill adult, pediatric, and newborn patient. Students also participate in a clinical simulation capstone experience and advanced cardiac life support certification courses. In the computer laboratory component, students will participate in computer based practice sessions in preparation for the NBRC credentialing examinations required to become a registered respiratory therapist. The seminar component consists of a guest speaker series covering specialty topics in healthcare. Students must register for the lab and clinical co-requisites and successfully complete all components.

Pre-reqs:

RCT225C Practicum IV Clinical

Credit Hours: 3 Contact Hours: 21 Lecture Hours: 0 Lab Hours: 21 Other Hours: 0

This course prepares students for the respiratory care work field. Clinical experiences provided include management of the critically ill adult, pediatric, and newborn patient. Students also participate in a clinical simulation capstone experience and advanced cardiac life support certification courses. In the computer laboratory component, students will participate in computer based practice sessions in preparation for the NBRC credentialing examinations required to become a registered respiratory therapist. The seminar component consists of a guest speaker series covering specialty topics in healthcare. Students must register for the lab and seminar co-requisites and successfully complete all components.

Pre-reqs:

RCT224C

And RCT226

And RCT227

Health and Human Services

Respiratory Therapy/MIST

RCT225L Practicum IV Laboratory

Credit Hours: 1 Contact Hours: 3 Lecture Hours: 0 Lab Hours: 3 Other Hours: 0

This course prepares students for the respiratory care work field. Clinical experiences provided include management of the critically ill adult, pediatric, and newborn patient. Students also participate in a clinical simulation capstone experience and advanced cardiac life support certification courses. In the computer laboratory component, students will participate in computer based practice sessions in preparation for the NBRC credentialing examinations required to become a registered respiratory therapist. The seminar component consists of a guest speaker series covering specialty topics in healthcare. Students must register for the clinical and seminar co-requisites and successfully complete all components.

Pre-reqs:

RCT226 Adv Resp Care Procedures Lab

Credit Hours: 1 Contact Hours: 3 Lecture Hours: 0 Lab Hours: 3 Other Hours: 0

An orientation and practice of advanced respiratory care procedures such as intubation, noninvasive ventilation, assisting with special procedures, and respiratory care specialty areas.

Pre-reqs:

RCT126

RCT227 Neonatal/Peds Respiratory Care

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

An introduction to the respiratory care principles and practices related to the care of neonatal and pediatric patients, including a review of neonatal and pediatric cardiopulmonary diseases, mechanical ventilation, special procedures, bronchopulmonary hygiene techniques, and assessment and monitoring. Application of knowledge and skills occurs in the respiratory care laboratory. Students must register for the lab co-requisite and successfully complete both components.

Pre-reqs:

RCT126

Health and Human Services

Respiratory Therapy/MIST

RCT227L Neonatal/Peds Resp Care Lab

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

An introduction to the respiratory care principles and practices related to the care of neonatal and pediatric patients, including a review of neonatal and pediatric cardiopulmonary diseases, mechanical ventilation, special procedures, bronchopulmonary hygiene techniques, and assessment and monitoring. Application of knowledge and skills occurs in the respiratory care laboratory. Students must register for the lecture co-requisite and successfully complete both components.

Pre-reqs:

Surgical

SUA100 Intro to Surgical Assisting

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course provides an introduction to the surgical assisting profession. The course will provide an overview of ethical and moral responsibilities, all hazards preparation, surgical microbiology, and the role of the Surgical Assistant related to anesthesia as well as postoperative management.

Pre-reqs:

	SUA102	Can be Taken Concurrently
And	SUA102L	Can be Taken Concurrently

SUA102 Princ of Surgical Assist

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course explores the areas of wound healing, perioperative management and perioperative skills. Students will learn skills related to evaluation and assessment of the surgical patient prior to and during surgery. Techniques of knot tying, wound dressings, positioning, skin preparation, and operative site exposure will be discussed and practiced. Patient management of acute trauma will also be addressed. Application of knowledge and skills occurs in the surgical assisting laboratory. Students must register for the laboratory co-requisite and successfully complete both components.

Pre-reqs:

	SUA100	Can be Taken Concurrently
And	SUA102L	Can be Taken Concurrently

Health and Human Services

Surgical

SUA102L Princ of Surgical Assist Lab

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

This course explores the areas of wound healing, perioperative management and perioperative skills. Students will learn skills related to evaluation and assessment of the surgical patient prior to and during surgery. Techniques of knot tying, wound dressings, positioning, skin preparation, and operative site exposure will be discussed and practiced. Patient management of acute trauma will also be addressed. Application of knowledge and skills occurs in the surgical assisting laboratory. Students must register for the lecture co-requisite and successfully complete both components.

Pre-reqs:

SUA102 Can be Taken Concurrently

SUA104 Adv Surg Anat & Phys

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course focuses on regional anatomy with surgical anatomy being the critical component. This course also explores an in-depth advanced approach to anatomical knowledge which is applied to surgical diagnosis and procedures.

Pre-reqs:

SUA106 Surgical Assisting Procedures

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course explores surgical specialties including general, obstetric gynecology, genitourinary, ophthalmic, otorhinolaryngologic, orthopedic, plastic/reconstructive, neurosurgery, cardiothoracic, and peripheral vascular. An in-depth focus of all surgeries and the assistants' role will be covered. Application of knowledge and skills occurs in the surgical assisting laboratory. Students must register for the laboratory co-requisite and successfully complete both components.

Pre-reqs:

SUA102
And SUA102L
And SUA106L Can be Taken Concurrently

Health and Human Services

Surgical

SUA106L Surgical Assist Procedures Lab

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

This course explores surgical specialties including general, obstetric gynecology, genitourinary, ophthalmic, otorhinolaryngologic, orthopedic, plastic/reconstructive, neuro, cardiothoracic, and peripheral vascular. An in-depth focus of all surgeries and the assistants' role will be covered. Application of knowledge and skills occurs in the surgical assisting laboratory. Students must register for the lecture co-requisite and successfully complete both components.

Pre-reqs:

SUA102

And SUA102L

And SUA106 Can be Taken Concurrently

SUA108 Surg Ast Direct Practice I Sem

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

The seminar component of Surgical Assisting Directed Practice I consists of sharing of clinical experiences. Students are required to keep a log of the surgical cases completed. Discussion forums and case studies are used to share information, discuss problems, and answer questions regarding the assigned surgical cases. Students must register for the clinical co-requisite and successfully complete both components.

Pre-reqs:

SUA108C Can be Taken Concurrently

SUA108C Surg Ast Directed Practice I

Credit Hours: 3 Contact Hours: 15 Lecture Hours: 0 Lab Hours: 15 Other Hours: 0

This course provides students with surgical clinical experience in the surgical assisting role. Specific surgical cases in general and specialty areas are assigned. The main surgery focus is on general, OB/GYN, genitourinary, otorhinolarynogology, and orthopedics. Students are required to complete an accumulative total of 140 cases during Surgical Assisting Directed Practice I and II. Students must register for the seminar co-requisite and successfully complete both components.

Pre-reqs:

SUA102

And SUA102L

And SUA108 Can be Taken Concurrently

Health and Human Services

Surgical

SUA110 Surg Asst Clin Prac II Seminar

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

The seminar component of Surgical Assisting Clinical Practicum II consists of sharing of clinical experiences. Students are required to keep a log of the surgical cases completed. Discussion forums and case studies are used to share information, discuss problems, and answer questions regarding the assigned surgical cases. Students must register for the clinical co-requisite and successfully complete both components.

Pre-reqs:

SUA110C	Can be Taken Concurrently

SUA110C Surg Asst Clin Prac II

Credit Hours: 2 Contact Hours: 14 Lecture Hours: 0 Lab Hours: 14 Other Hours: 0

This course provides students with surgical clinical experience in the surgical assisting role. Specific surgical cases in general and specialty areas are assigned. The main surgery focus is on oral and maxillofacial, plastic and reconstructive, ophthalmic, cardiothoracic, peripheral vascular, and neurosurgery procedures. Students are required to complete an accumulative total of 140 cases during Surgical Assisting Directed Practice I and Clinical Practicum II. Students must register for the seminar co-requisite and successfully complete both components.

Pre-reqs:

SUA108C	
And SUA110	Can be Taken Concurrently
And SUA112	Can be Taken Concurrently

SUA112 Surg Asst Spec Capstone

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course is an in-depth analysis of the students' clinical experiences. Students will complete and present case studies based on their surgical cases. Guest speakers will provide lectures covering general and other surgical specialty areas. In addition, students will participate in credentialing exam preparation activities.

Pre-reqs:

SUA110C	Can be Taken Concurrently

Health and Human Services

Surgical

SUA114 Surg Asst Adv Pathophy

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course provides an overview of surgical site infections, causes, and risk factors. The topics of antimicrobial use, wound classifications, anatomy of skin, and wound healing will be covered. This course also explores electrolyte/fluid balance and hematologic principles of surgery.

Pre-reqs:

SUA104

SUR102 Principles of Surgery I

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course reviews the role of the surgical technologist pre-operatively. Proper patient identification, methods of patient transport, transfer of equipment, body mechanics, surgical skin prep, urinary catheterization, surgical hand scrub technique, disinfection, microbiology, sterilization, electricity, information technology, professionalism, ethics, and communication skills are covered. Preoperative case management skills will be introduced. Application of knowledge and skills occurs in the surgical technology laboratory, in addition to recognition of general surgery instrumentation in major and minor surgical trays. Students must register for the laboratory co-requisite and successfully complete both components.

Pre-reqs:

SUR102L Can be Taken Concurrently

SUR102L Principles of Surgery I Lab

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

This course reviews the role of the surgical technologist pre-operatively. Proper patient identification, methods of patient transport, transfer of equipment, body mechanics, surgical skin prep, urinary catheterization, surgical hand scrub technique, disinfection, microbiology, sterilization, electricity, information technology, professionalism, ethics, and communication skills are covered. Preoperative case management skills will be introduced. Application of knowledge and skills occurs in the surgical technology laboratory, in addition to recognition of general surgery instrumentation in major and minor surgical trays. Students must register for the theory co-requisite and successfully complete both components

Pre-reqs:

SUR102 Can be Taken Concurrently

Health and Human Services

Surgical

SUR104 Surgical Pharmacology

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course is an introduction to pharmacological agents used in surgery including the administration of anesthesia and pre-operative medications, types of anesthesia, complications, and alternative methods to anesthesia. The role of the surgical technologist during administration, as well as the care and handling of medications and solutions, will be covered.

Pre-reqs:

	BIO122	Can be Taken Concurrently
Or	BIO123	Can be Taken Concurrently

SUR105 Surg Anatomy & Pathology

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course reviews surgical anatomy and pathology. The anatomy and pathology for each body system will be covered as it relates to surgical procedures and interventions. Emphasis on human anatomy and understanding the body in its three dimensions and the relationships of parts to one another will be emphasized with each surgical specialty.

Pre-reqs:

And	BIO121
Or	BIO123
	SUR102

SUR106 Principles of Surgery II

Credit Hours: 3 Contact Hours: 3 Lecture Hours: 3 Lab Hours: 0 Other Hours: 0

This course focuses on the scrub and circulating role of the surgical technologist with a strong emphasis on the intra-operative and post-operative roles. Diagnostic procedures, hemostasis, suture material, surgical needles, stapling equipment, dressings, and post-operative wound care are covered. Preoperative case management will continue with transition into intraoperative and post-operative case management skills. Application of knowledge and skills occurs in the surgical technology laboratory, in addition to recognition of instrumentation found in laparoscopic, gynecological, and general surgery major and minor surgical trays. Students must register for the laboratory co-requisite and successfully complete both components.

Pre-reqs:

	SUR102	
And	SUR106L	Can be Taken Concurrently

Health and Human Services

Surgical

SUR106L Principles of Surgery II Lab

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

This course focuses on the scrub and circulating role of the surgical technologist with a strong emphasis on the intra-operative and post-operative roles. Diagnostic procedures, hemostasis, suture material, surgical needles, stapling equipment, dressings, and post-operative wound care are covered. Preoperative case management will continue with transition into intraoperative and post-operative case management skills. Application of knowledge and skills occurs in the surgical technology laboratory, in addition to recognition of instrumentation found in laparoscopic, gynecological, and general surgery major and minor surgical trays. Students must register for the theory co-requisite and successfully complete both components.

Pre-reqs:

SUR102L

And SUR106 Can be Taken Concurrently

SUR200 Surgical Specialties I

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course will cover the procedural steps, instrumentation, supplies, patient positioning used for various surgeries in specialties such as; general, OB/GYN, genitourinary, otorhinolaryngology, oral and maxillofacial, plastics and reconstructive, and robotic surgery. Pathology for these specialty areas include topics such as; disease processes, tumors, fluids, hemodynamic abnormalities, inflammation and infection. Application of knowledge and skills occurs in the surgical technology laboratory. Students must register for the laboratory co-requisite and successfully complete both components.

Pre-reqs:

SUR106

And SUR200L Can be Taken Concurrently

SUR200L Surgical Specialties I Lab

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

This course will cover the procedural steps, instrumentation, supplies, patient positioning used for various surgeries in specialties such as; general, OB/GYN, genitourinary, otorhinolaryngology, oral and maxillofacial, plastics and reconstructive, and robotic surgery. Pathology for these specialty areas include topics such as; disease processes, tumors, fluids, hemodynamic abnormalities, inflammation and infection. Application of knowledge and skills occurs in the surgical technology laboratory. Students must register for the theory co-requisite and successfully complete both components.

Pre-reqs:

SUR106L

And SUR200 Can be Taken Concurrently

Health and Human Services

Surgical

SUR201 Surgical Clinic Prac I Sem

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

The seminar component of Practicum I consists of sharing of clinical experiences. Students are required to keep a log of the surgical cases completed. Discussion forums and case studies are used to share information, discuss problems, and answer questions regarding the assigned surgical cases. Students must register for the clinical co-requisite and successfully complete both components.

Pre-reqs:

SUR201C — Can be Taken Concurrently

SUR201C Surgical Clinic Prac I

Credit Hours: 3 Contact Hours: 21 Lecture Hours: 0 Lab Hours: 21 Other Hours: 0

This course provides students with surgical clinical experience in the first and second scrub roles. Specific surgical cases in general and specialty areas are assigned. The main focus is on general, OB/GYN, genitourinary, otorhinolaryngology, and orthopedic procedures. Students are required to complete an accumulative total of 120 cases during Surgical Clinical Practicum I and II. Students must register for the seminar co-requisite and successfully complete both components.

Pre-reqs:

SUR200
And SUR200L
And SUR201 — Can be Taken Concurrently

SUR202 Surgical Specialties II

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course covers the procedural steps, instrumentation, supplies and patient positioning used for various surgeries in specialties such as; ophthalmic, orthopedics, cardiovascular, peripheral vascular, and neurosurgery. Pathology for these specialty areas include topics such as; disease processes, tumors, fluids, hemodynamic abnormalities, inflammation, and infection. Application of knowledge and skills occurs in the surgical technology laboratory. Students must register for the laboratory co-requisite and successfully complete both components.

Pre-reqs:

SUR200
And SUR202L — Can be Taken Concurrently

Health and Human Services

Surgical

SUR202L Surgical Specialties II Lab

Credit Hours: 1 Contact Hours: 2 Lecture Hours: 0 Lab Hours: 2 Other Hours: 0

This course covers the procedural steps, instrumentation, supplies and patient positioning used for various surgeries in specialties such as; ophthalmic, orthopedics, cardiovascular, peripheral vascular, and neurosurgery. Pathology for these specialty areas include topics such as; disease processes, tumors, fluids, hemodynamic abnormalities, inflammation, and infection. Application of knowledge and skills occurs in the surgical technology laboratory. Students must register for the theory co-requisite and successfully complete both components.

Pre-reqs:

SUR200L

And SUR202 Can be Taken Concurrently

SUR203 Surgical Clinc Prac II Sem

Credit Hours: 1 Contact Hours: 1 Lecture Hours: 1 Lab Hours: 0 Other Hours: 0

The seminar component of Practicum II consists of sharing of clinical experiences. Students are required to keep a log of the surgical cases completed. Discussion forums and case studies are used to share information, discuss problems, and answer questions regarding the assigned surgical cases. Students must register for the clinical co-requisite and successfully complete both components.

Pre-reqs:

SUR203C Can be Taken Concurrently

SUR203C Surgical Clinic Prac II

Credit Hours: 4 Contact Hours: 28 Lecture Hours: 0 Lab Hours: 28 Other Hours: 0

This course provides students with surgical clinical experience in the first and second scrub roles. Specific surgical cases in general and specialty areas are assigned. The main focus is on oral and maxillofacial, plastic and reconstructive, ophthalmic, cardiothoracic, peripheral vascular, and neurosurgery procedures. Students are required to complete an accumulative total of 120 cases during Clinical Practicum I and II. Students must register for the seminar co-requisite and successfully complete both components.

Pre-reqs:

SUR201C

And SUR203 Can be Taken Concurrently

And SUR204 Can be Taken Concurrently

Health and Human Services

Surgical

SUR204 Surgical Technology Capstone

Credit Hours: 2 Contact Hours: 2 Lecture Hours: 2 Lab Hours: 0 Other Hours: 0

This course is an in-depth analysis of the students' clinical practicum experiences. Students will discuss surgical cases with classmates, as well as complete and present patient surgical case studies. Students will also develop a professional portfolio to aid in obtaining employment. In addition, this course will prepare students to take the certification exam to become a Certified Surgical Technologist upon graduation.

Pre-reqs:

SUR203C	Can be Taken Concurrently

No Major

No Major

AMZ999 Amazon Car Choice Placeholder

Credit Hours: 0 Contact Hours: 0 Lecture Hours: 0 Lab Hours: 0 Other Hours: 0

Amazon Car Choice Placeholder

Pre-reqs: