Contents

Goodwin College: School of Technology & Professional Studies
2010-2011 Undergraduate Course Descriptions

Biomedical Engineering Technology Courses

BET 301 - Healthcare Technology
An overview of medical equipment used in hospitals and other medical environments to diagnose and treat patients. Sensors and physiological signals will be explained. Equipment found in various hospital departments and medical specialties will also be discussed. Patient safety and regulations will be emphasized.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Pre-Requisites: EET 201 Minimum Grade: D and EET 202 Minimum Grade: D
Repeat Status: Not repeatable for credit

BET 302 - Biomedical Electronics
This course is an introduction to the fundamentals of analog electronics with an emphasis on biomedical applications. Students will be introduced to solid state devices including diodes, transistors, operational amplifiers, oscillators, and mixers and their use in power supplies, amplifiers and active filters.
Credits: 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Pre-Requisites: EET 201 Minimum Grade: D and EET 202 Minimum Grade: D
Repeat Status: Not repeatable for credit

BET 303 - Medical Imaging Systems
Introduces students to physical principles, instrumental design, data acquisition strategies, image reconstruction techniques, and clinical applications of imaging modalities most commonly used in clinical medicine. The particular emphasis is placed on the basic engineering design involved in each modality.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Pre-Requisites: BET 301 Minimum Grade: D
Repeat Status: Not repeatable for credit

BET 305 - Clinical Laboratory Equipment
Clinical laboratory instrumentation and automation is described with emphasis on the demands of clinicians for diagnostic information. Special attention is given to reliability, ease of training, and cost effectiveness.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Pre-Requisites: EET 201 Minimum Grade: D and EET 202 Minimum Grade: D and BET 301 Minimum Grade: D
Repeat Status: Not repeatable for credit

Communications & Applied Technology Courses

CAT 180 - Special Topics in CAT
Special Topics in CAT. Covers special topics related to Communications and Applied Technology. Allows the College to offer new, specialized lower-level topics of interest and relevance to the major.
Credits: 1.00 to 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Repeat Status: Course can be repeated 3 time(s) for 12.00 credit(s)

CAT 200 - Strategies: Lifelong Learning
Strategies for Lifelong Learning. This course introduces students to the skills necessary for successful lifelong learning. Theoretical and practical aspects of learning are explored. Emphasis is placed on critical thinking, study skills, analytical reading, effective writing, reasoning, problem-solving, time management and strategies for management necessary to support learning in a college environment.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Repeat Status: Not repeatable for credit

CAT 201 - Interpersonal Communication
Interpersonal Communication. Interpersonal communication will be studies from the perspective of emotional intelligence. Particular emphasis will be placed on emotional intelligence in the workplace and in leadership. The main objective is to make students aware that intelligence and technological expertise are not enough to be successful in the workplace. This is a writing intensive course.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Repeat Status: Not repeatable for credit

CAT 301 - Project Management

Project Management. This course offers instruction on design, appraisal, planning, and implementation of a project. It provides in-depth discussion and analysis of approaches to managing projects in both the public and private sectors.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not have the following Classification(s):
Freshman
Pre-Requisites:
Repeat Status: Not repeatable for credit

CAT 302 - Cust Service Theory & Practice
Customer Service Theory and Practice. This course focuses on the theory of customer service and the practices that "best in class" companies apply to differentiate themselves from the competition. The course includes practical information and activities designed to teach students how to respond to customers, resolve problems, and provide quality customer service.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

CAT 303 - Client Relations Management
Client Relations Management. This course introduces the skills that facilitate and enhance client relations management. Topics covered include building a trusting relationship, evaluating and managing expectations and needs, managing conflict, understanding the client's perspective, customer life cycle, consulting, serving public sector versus private sector clients, managing client relations managers, and ethical issues.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites:
Repeat Status: Not repeatable for credit

CAT 360 - Appl Organizational Research
Applied Organizational Research. This course presents a systematic approach to managerial methods of conducting organizational research and analysis. Students will undergo the managerial research process of specifying the problem; translating the problem into specific research questions; designing the data collection and methodology; collecting, analyzing, and interpreting data; and reporting research results and recommendations.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites:
Repeat Status: Not repeatable for credit

CAT 380 - Advanced Special Topics in CAT
Covers special topics of interest in Communications and Applied Technology. This course may be repeatable for credit.
Credits: .50 to 12.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Repeat Status: Course can be repeated 3 time(s) for 12.00 credit(s)

CAT 399 - Independent Study in CAT
Independent Study in CAT. Independent study on a topic related to Communications and Applied Technology selected by the students. The independent study is supervised by a faculty member and guided by a plan of study.
Credits: .50 to 6.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 3 time(s) for 18.00 credit(s)

CAT 491 - Senior Project CAT I
Senior Project CAT I. Covers planning and execution of a professional project that integrates the academic and practical knowledge the student has acquired in his or her major. Requires a formal written report and a formal oral presentation. This is part one of a two-course sequence.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must have the following Classification(s):
Senior
Pre-Requisites: STAT 201 Minimum Grade: D and CAT 301 Minimum Grade: D and CAT 360 Minimum Grade: D and COM 230 Minimum

Grade: D and COM 270 Minimum Grade: D and ORGB 300 Minimum Grade: D
Repeat Status: Not repeatable for credit

CAT 492 - Senior Project CAT II
Senior Project CAT II. Covers planning and execution of a professional project that integrates the academic and practical knowledge the student has acquired in his or her major. Requires a formal written report and a formal oral presentation. This is part two of a two-course sequence.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must have the following Classification(s):
Senior
Pre-Requisites: CAT 491 Minimum Grade: C
Repeat Status: Not repeatable for credit

Computing Technology Courses

CT 100 - Microcomputer Hardware
This course imparts to the student knowledge of microcomputer hardware by providing instruction on system configuration, installation, upgrades, diagnosis, repair, preventive maintenance, and safety.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

CT 120 - Microcomputer Operating System
Prepares students for DOS/Windows and a brief introduction to networking. Students learn installation procedures, dealing with legacy systems, creating and using emergency boot diskettes, managing printers and other devices. Students install Windows operating systems, manage Windows devices, use the FDISK utility, perform backups, manage system files, configure networks, configure Internet access, and troubleshoot operating system errors.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: CT 100 Minimum Grade: D
Repeat Status: Not repeatable for credit

CT 140 - Network Administration I
Students gain an understanding of terminology, technology, and issues involved in implementing networks. Topic include: understanding the OSI 7 layer model; concepts of servers and clients; network hardware/software functions; basics of TCP/IP protocol, main types of network topologies (bus, ring, star and mesh); and share and access network resources (files, printers, etc.).
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: CT 100 Minimum Grade: C
Repeat Status: Not repeatable for credit

CT 200 - Server I
Topics include advanced PC hardware and server issues, including RAID, SCSI, troubleshooting and problem determination, upgrading, configuration, and disaster recovery. The second part of this course is an introduction to Apache Server 2.0 concepts and topics include: installation; configuration; and administration in both a window and Linux environment.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Co-Requisites: CT 100
Pre-Requisites:
Repeat Status: Not repeatable for credit

CT 210 - Linux I
The purpose of this course is to introduce the student to the principles and practices of Linux server. Upon successful completion of this course, students will be able to use RPM to install, verify, query, erase, and update packages; access Resources on other systems; install and configure NFS; integrate Linux systems with other operating system platforms; examine basic networking concepts; configure xinetd, DNS, and TCP/IP network administration; examine system scripts and configure cron; configure boot options; configure the X Server; implement and administer security issues; install and configure mail services.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

CT 212 - Computer Forensics
This course presents the theory, methodology and hands-on labs necessary for students to become competent in the basics of computer forensics. Topics covered include: Understanding Computer Investigations; The Investigators; Laboratory; Current Computer Forensic Tools; Digital Evidence Controls; and a Processing Crime.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi

Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

CT 213 - Forensic Data Recovery Technology
Provides students with practical knowledge in the field of Computer Forensic Data Recovery. Topics include forensics evidence, handling evidence, forensic recovery of deleted files, drive images, forensic software tools, the investigator's laboratory, computer forensics tools, and digital evidence controls.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

CT 220 - Database I
Extensive introduction to data server technology, concepts of relational databases and SQL. Best engineering practices utilizing DFD, ERD, CRUD, TIC charts. Data-dictionary utilization, use of primary keys, and the first three forms of normalization. Students are expected to create and maintain database objects and to store, retrieve, and manipulate data.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must be enrolled in one of the following College(s)/School(s):
School of Tech & Prof Studies
Repeat Status: Not repeatable for credit

CT 222 - Security and Info Warfare
This course presents the theory and methodology of Information Warfare and Security. Topics covered include: intellectual property crimes; computer fraud; harassment; embezzlement; eavesdropping; sabotage; surveillance; identity theft; incident handling; terrorism; and the protection of critical infrastructure. The course requires critical thinking and analysis of topics.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

CT 225 - Data Mining Technology for Security
The course focuses on data mining technology used to combat crime. Students learn the theory of various searching techniques and criminal detection tactics and acquire fundamental knowledge of investigative data mining techniques.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

CT 230 - Web Development I
This course begins with an overview of the history of the internet. We examine how the Internet has changed modern society. Using XHTML, students acquire the skills needed to develop, design and create web pages. This course develops functional knowledge of microcomputer use beyond computer literacy, and examines fundamental networking concepts like TCP/IP, HTTP, FTP, SMTP, IMAP, etc.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must be enrolled in one of the following College(s)/School(s):
School of Tech & Prof Studies
Repeat Status: Not repeatable for credit

CT 240 - Web Development II
This course will focus on building an understanding of JavaScript and Cascading Style Sheets. Students will learn the basics of each language and apply them to the development of interactive and versatile page designs. The class culminates in a web site that integrates the use of both technologies that offers two different layouts, one ¿standard¿ and one ¿accessible¿ with JavaScript used to control which is displayed in the browser window. The course also has an overview of the foundations and theory of XML and XLST.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must be enrolled in one of the following College(s)/School(s):
School of Tech & Prof Studies
Pre-Requisites: CT 230 Minimum Grade: C
Repeat Status: Not repeatable for credit

CT 290 - Client Side Programming
This course emphasizes becoming productive quickly as an Object-Oriented client-side programmer. Students learn how to create real-world Object-Oriented GUI applications using Java or Visual BASIC.Net. Topics include: Programming Environment; Fundamental Programming Structures; Objects and Classes; Inheritance; Interface Components; Event Handling; Applets; Debugging; and Graphics Programming.
Credits: 3.00
College: School of Tech & Prof Studies

Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites:
Repeat Status: Not repeatable for credit

CT 295 - Public Key Infrastructure Technology
Practical knowledge of public key infrastructure. Topics include: symmetric & asymmetric cryptography, hashes, digital signatures and certificates, PKI basics & services, key and certificate life cycles, PKIX, protocols and formatting standards, trust models, authentication methods and deployment.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: CT 320 Minimum Grade: D
Repeat Status: Not repeatable for credit

CT 300 - Security Technology Models and Architecture I
Presents theory and techniques utilized by IT Security professionals to secure a wide range of diversified platforms. Focuses on solutions for securing web servers, code, communications, applications, and databases.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: CT 380 Minimum Grade: D
Repeat Status: Not repeatable for credit

CT 310 - Linux II
Topics Covered: Continuing Linux to meet requirements. Shell environment, Customization of the Environment, Shell Program Structure, Shell Program Execution, Shell Variables, Positional Parameters, Special Shell Variables, Shell Programming Statements, Conditional Statements, Looping Constructs, Interrupt Handling, and Debugging Tools.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: CT 210 Minimum Grade: D
Repeat Status: Not repeatable for credit

CT 312 - Access Control & Intrusion Detection Technology
Fundamental theory and methodology of intrusion detection systems. Using intrusion detection systems to secure corporate and personal networks against attacks. Hands-on laboratory experience using an in-depth, open-source network intrusion detection system.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Junior
Sophomore
Pre-Requisites: CT 420 Minimum Grade: C
Repeat Status: Not repeatable for credit

CT 315 - Security Management Practice
Managerial issues involved in the daily operations of an IT Security department. Topics include staffing, budgets, job descriptions, long term planning, resource allocation, training of security personnel, motivational techniques, interaction with other departments including upper management.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Junior
Sophomore
Repeat Status: Not repeatable for credit

CT 320 - Server II
This course is designed to introduce the student to the Microsoft Windows 2003 Server operating system. Upon successful completion of the course, the student will be able to implement, administer and troubleshoot in a network environment. The course will cover installation, administration of resources, monitoring and optimizing system performance, implementing, manage and troubleshooting hardware device drivers, managing data storage, setting up and configuring users, groups, policies and resources.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: CT 200 Minimum Grade: C
Repeat Status: Not repeatable for credit

CT 325 - OS Security Architecture I
This course provides requisite knowledge to perform network security within a Windows based computing environment. Topics include: how Assets are Attacked and Secured, Trusted Computing Bases, Cryptography, Protecting Web Servers, Security for Web Browsers, Database Security, Protecting DNS, Security Policies and Procedures.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Junior
Sophomore
Repeat Status: Not repeatable for credit

CT 326 - OS Security Architecture II
Provides students with the knowledge necessary to design a security framework for small, medium and enterprise networks utilizing Windows based computing technologies. Design and implementation of an effective network security plan based on an organization's business needs. Topics include: GPO's, AD, and Auditing.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Junior
Sophomore
Pre-Requisites: CT 320 Minimum Grade: D
Repeat Status: Not repeatable for credit

CT 330 - Network Administration II
Course covers both theoretical knowledge and hands-on exercises for networking using CISCO hardware. Topics include: Extending Switched Networks with VLANS; Determining IP Traffic with Access Lists; Establishing Point-to-Point Connections; and Establishing Frame Relay Connections.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: CT 140 Minimum Grade: C
Repeat Status: Not repeatable for credit

CT 336 - IP Security and VPN Technology
Technological components of IP Security and underlying architecture. Theory of symmetric-key cryptographic algorithms, including AES, CAST, Blowfish, IDEA, RC2, RC5, and Skipjack. Understanding of PKI infrastructure and the managed certificate protocol. Implementing VPN solutions in a variety of scenarios.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: CT 140 Minimum Grade: C and CT 420 Minimum Grade: C
Repeat Status: Not repeatable for credit

CT 340 - Operating Sys Arch I
Students learn to set up and support MS Windows 200 Professional operating system. Students gain experience in installing, administering, implementing TCP/IP network protocol and troubleshooting this desktop environment. Explain data system security through Group Policy and Encryption of Files system.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

CT 350 - Network Administration III
This class gives successful student important knowledge and skills necessary to select, connect, configure, and troubleshoot the various CISCO networking devices. Topics include: Extending Switched Networks with VLANS; Determining IP Routes; Managing IP Traffic with Access Lists; Establishing Point-to-Point Connections; and Establishing Frame Relay Connections.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: CT 330 Minimum Grade: C
Repeat Status: Not repeatable for credit

CT 355 - Wireless Network Security Technology
Theory, methodology and hands-on labs relating to the unique security issues of Wireless Networks. Limitations and risks of Wireless Networks. Use of audit and exploit tools to discover security flaws. Protocol and signal vulnerabilities. Methods to secure such vulnerabilities.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CT 420 Minimum Grade: C
Repeat Status: Not repeatable for credit

CT 360 - Operating Sys Arch II
The knowledge base and skill sets presented in this course are foundations for support professional who are new to the Microsoft Windows O/S architecture and/or who will be responsible for installing, configuring, managing, and supporting a network infrastructure that uses the Microsoft Windows Server products.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: CT 320 Minimum Grade: C and CT 340 Minimum Grade: C
Repeat Status: Not repeatable for credit

CT 362 - Network Auditing Tools
Theory, methodology and hands-on labs relating to Network Auditing. The course relies on advanced multi-functional network auditing tools to uncover Network Security problems, with the purpose of eliminating these vulnerabilities.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CT 420 Minimum Grade: C
Repeat Status: Not repeatable for credit

CT 370 - OO Systems Analysis
This course is designed to increase knowledge of the software development process with a focus on requirements gathering and documentation. UML notation is used. In addition to object-oriented analysis, techniques include the use of conceptual object models, use cases, and business process modeling.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

CT 375 - Database II
This course examines inserting, updating and deleting data. Subqueries are explored in detail along with the use of many Oracle intrinsic single row and group functions. Joints, merge, views, foreign keys, and compound primary keys are all studied in depth.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must be enrolled in one of the following College(s)/School(s):
School of Tech & Prof Studies
Pre-Requisites: CT 220 Minimum Grade: C
Repeat Status: Not repeatable for credit

CT 380 - Operating Sys Arch III
Students learn network administration skills including: how to configure and troubleshoot client computers; network printing; Active Directory; file sharing; Internet connection and services; remote access; and network security.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: CT 360 Minimum Grade: C
Repeat Status: Not repeatable for credit

CT 382 - Applied Cryptography
This course presents the theory, methods, strengths, weaknesses, and effective strategies necessary for students to acquire a fundamental knowledge of Cryptography and Stenography. This is a hands-on course utilizing several tools and software programs. Emphasis is placed on formulating effective strategies, such as when and how to protect computer data.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

CT 385 - Web Development III
Students will acquire skills to develop, design and produce Web pages using Dreamweaver and Flash. Using software, students will construct a multimedia website, incorporating Flash movie elements, interactivity, and sounds.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must be enrolled in one of the following College(s)/School(s):
School of Tech & Prof Studies
Pre-Requisites: CT 240 Minimum Grade: C
Repeat Status: Not repeatable for credit

CT 388 - Topics Computing Technology I

This course will cover special topics of interest to students in the Computing Technology Major. May be repeated for credit.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Course can be repeated 4 time(s) for 12.00 credit(s)

CT 389 - Topics Computing Technology II
This course will cover special topics of interest to students in the Computing Technology Major. May be repeated for credit.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Course can be repeated 4 time(s) for 12.00 credit(s)

CT 390 - Server Side Programming
This class is designed to provide students with intensive hands-on experience in using server-side technology to develop Web applications. Server-side programming, sometimes called servlets, is a powerful hybrid of the Common Gateway Interface (CGI) and lower-level server APU programming such as NSAPI from Netscape and ISAPI from Microsoft.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: CT 290 Minimum Grade: C
Repeat Status: Not repeatable for credit

CT 392 - Web Development IV
Students will acquire skills to develop, design, and produce a functional dynamic Web site on ASP. An e-commerce web site is developed in the classroom to apply dynamic theory and practice. In addition, exploration of intellectual property, copyright, trademark, and privacy issues as they relate to web development are included.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must be enrolled in one of the following College(s)/School(s):
School of Tech & Prof Studies
Pre-Requisites: CT 385 Minimum Grade: C
Repeat Status: Course can be repeated 1 time(s) for 3.00 credit(s)

CT 393 - IT Security Risk Assessment
This course addresses risk management methodology, the specific procedures for determining assets valuation, vulnerabilities, and threats. Risk migration methods that security professional use to protect valuable IT assets will also be studies. Issues, designed to foster critical thinking, are explored, as well as the standardized approaches to risk management.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

CT 395 - IT Security I
This class is a hands-on introduction of key security concepts such as authentication, malware and attacks, security in transmissions (including wireless). Cryptography, PKI and security analysis and planning (including risk management). Security policy, law on computer security violations.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

CT 400 - Network Security
This class focuses on the security aspects of networks. Topics covered: Intrusion detection, VPN, and Firewalls. This course is designed to provide students with the necessary skills and information to pass the Securing Cisco IOS Networks (SECUR).
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: CT 350 Minimum Grade: C
Repeat Status: Not repeatable for credit

CT 402 - Network Security II
Theory, methodology of Security firewalls, Topics include: firewall models, user interfaces, feature sets, interfaces, routing, IP addressing services, IP multicast support, monitoring with SNMP, authentication, authorization, and accounting, address translation, traffic content filtering, application inspection, traffic shunning, and firewall failover.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):

Freshman
Sophomore
Pre-Requisites: CT 400 Minimum Grade: D
Repeat Status: Not repeatable for credit

CT 405 - Enterprise Programming
This course covers the main aspects of Enterprise Component Architecture to build reliable, scalable and portable enterprise-wide distributed application. All architecture discussions, examples and exercises are described according to Object-oriented Analysis & Design (OOAD) principles and using the Unified Modeling Language (UML) notation OOAD and UML are briefly introduced, too.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: CT 390 Minimum Grade: C
Repeat Status: Not repeatable for credit

CT 407 - Network Security III
In-depth coverage of VPN technology, using different encryption schemes, certificates (PKI Theory, certificate creation and implementation), integration with routers, router management, advanced techniques in encryption and virtual private networking, user defined tracking, load balancing and firewall synchronization.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CT 402 Minimum Grade: D
Repeat Status: Not repeatable for credit

CT 410 - Linux III
All the key core elements of the Linux operating system: network configurations, recovery planning. TCP/IP, DHCP, DNS, Apache, Security, and email. These are the typical day-to-day administrative and maintenance issues and tasks commonly faced by Linux system administrators.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: CT 310 Minimum Grade: D
Repeat Status: Not repeatable for credit

CT 412 - IT Security Policies
This course presents the theory and legal issues necessary for students to acquire fundamental knowledge of Computer Policies for information Security. Topics covered include: E-mail, Employee Privacy, Labor Organization Activities (Fair Use), Avoiding Discrimination and Harassment, Copyright, Defamation, Spamming, Trade Secrets & Confidential Information, Attorney-Client communication via E-mail, Computer Security, Preventing Waste of a Computer Resources, Essentials for Good Policy, and Ensuring Compliance.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites:
Repeat Status: Not repeatable for credit

CT 415 - Disaster Recovery & Continuity Planning
Disaster Recovery & Continuity Planning specific to Emergency Recovery Procedures. Techniques for development of disaster recovery plans, procedures and testing methods. Strategies used by businesses to assure that sensitive data will not be lost in the event of a disaster. Techniques used to manage potential risk within multiple environments.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

CT 420 - IT Security II
This course focuses on network security. Students will gain hands-on experience in the areas of Internet vulnerabilities, analyzing intrusion signatures, risk analysis, designing and configuring firewall systems, router security, Attack and Defense Techniques, IP and Packet structure and analysis, creating a security policy, operating system security for Windows and Linux.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: CT 395 Minimum Grade: C
Repeat Status: Not repeatable for credit

CT 422 - Incident Response Best Practices
Theory and legal issues necessary for students to acquire fundamental knowledge of how to design an effective Incident Response Policy. Topics include forming and Incident Response Team, types of responses, legal issues, training employees, selecting tools, honey pots, computer attacks, and the cost of an incident.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

CT 425 - Database III
This course is an introduction to Oracle's PL/SQL programming language. Anonymous blocks, PL/SQL constructs, stored procedures and functions are examined in depth.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must be enrolled in one of the following College(s)/School(s):
School of Tech & Prof Studies
Pre-Requisites: CT 375 Minimum Grade: C
Repeat Status: Not repeatable for credit

CT 427 - E-Commerce & Web Security Technology
In-depth understanding of security problems and risks specific to e-Commerce on web servers. Implementation of advanced security technologies specific to e-Commerce. Design of secure Web Sites, mobile commerce applications, electronic payment systems, address communication security. Web- and Java-related security issues.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CT 420 Minimum Grade: D
Repeat Status: Not repeatable for credit

CT 430 - Database IV
This course introduces packages along with program unit dependencies. Triggers and Oracle-supplied packages are examined in detail. Time is also allocated for performance tuning specifically utilizing the Oracle tables.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must be enrolled in one of the following College(s)/School(s):
School of Tech & Prof Studies
Pre-Requisites: CT 425 Minimum Grade: C
Repeat Status: Not repeatable for credit

CT 431 - Project Management
This course teaches how to develop project management plans; develop an understanding of the risks inherent in project development; and be able to evolve coping strategies to deal effectively with projects that go off track. Areas covered include: Project Definition, Project Risk, Project Planning, Risk Assessment, Critical Path, and Cost Management.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must have the following Classification(s):
Junior
Senior
Repeat Status: Not repeatable for credit

CT 432 - IT Security Systems Audits
This course presents the theory, methodology, procedures and hands-on labs necessary for students to acquire a fundamental working knowledge of IT System Audits. Students learn how to discover system vulnerabilities with proper audit procedures, and how to document their findings properly for upper management.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: CT 420 Minimum Grade: C
Repeat Status: Not repeatable for credit

CT 435 - Database V
Students with a foundation in the Oracle database continue their student of the application and how to insure its functionality. Topics in this course include: backup and recovery analysis and options, recovery structures and processes, backup configuration, manual backup, automated backup, archiving, utilities, Recovery Manger catalog design and maintenance, RMAN, standby databases, Alert and Trace files, dynamic performance, cache, logs, I/O, shared pool, blocks, rollbacks, optimizing sort operations and multithreaded server tuning.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: CT 430 Minimum Grade: C
Repeat Status: Not repeatable for credit

CT 438 - Database VI
This course provides instruction in the operations of the Oracle database. It presents the day-to-day duties of the database administration, from initialization parameters and table space storage, to data integrity, constraints, and user profiles.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter
Pre-Requisites: CT 435 Minimum Grade: C
Repeat Status: Not repeatable for credit

CT 472 - Security Defense Countermeasures
Theory, methodology and hands-on labs relating to Defense Countermeasures. Understanding the reasons that lead to system vulnerabilities and how criminals exploit those vulnerabilities. Labs that utilize security software to conduct penetration testing, audits, and system vulnerability tests will be taught.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: CT 420 Minimum Grade: C
Repeat Status: Not repeatable for credit

CT 491 - Senior Project I
This course is an independent project which small student teams determines and scopes an appropriate computing technology project that can be completed within the constraints of time and resources under faculty guidance. The objective of the course is to provide specifications and requirements for the team project.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must have the following Classification(s):
Senior
Repeat Status: Not repeatable for credit

CT 496 - Senior Project II
This course is a continuation of Senior Project I. In this course, student-teams are required to implement theirs project specifications and requirements developed in the previous course.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must have the following Classification(s):
Senior
Pre-Requisites: CT 491 Minimum Grade: C
Repeat Status: Not repeatable for credit

Construction Management Courses

CMGT 101 - Introduction to Construction Management
This course will introduce the basic history and management concepts of the construction industry to students with the expectation that upon completion students will have an overview of the industry. Career choices, industry firms, and key players in the Construction Management process will be explored.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Junior
Senior
Repeat Status: Not repeatable for credit

CMGT 161 - Building Materials & Construction Methods I
This course is designed to explore the range of building materials in use today and their interrelationships in a construction project. Topics will include a study of the major components of construction materials, the selection process, specification, alternatives, procurement, placement and quality management for the building systems covered. Foundations, excavations, wood framing and steel construction and the role these materials play in the success of a project once chosen will be considered and evaluated.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Repeat Status: Not repeatable for credit

CMGT 162 - Building Materials & Construction Methods II
Continues CMGT 161. Covers concrete, reinforced concrete, site cast and pre-cast concrete, brick and concrete masonry, reinforced masonry, and properties of these materials and construction methods associated with them.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Pre-Requisites: CMGT 161 Minimum Grade: D
Repeat Status: Not repeatable for credit

CMGT 163 - Building Materials & Construction Methods III
Continues CMGT 162. Covers roofing systems, glass, glazing, windows, doors, cladding systems, interior finishes, the properties of these materials and construction methods associated with each of them.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):

Continuing Education
Pre-Requisites: CMGT 162 Minimum Grade: D
Repeat Status: Not repeatable for credit

CMGT 261 - Construction Safety
Covers OSHA liability, general safety, hazard communication, fire, material handling, tools, welding, electricity, scaffolding, fall protection, cranes, heavy equipment, excavation, concrete, ladders and stairways, confined space entry, personal protective equipment, and health hazards. Course approved by the osha Training Institute.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Architectural Engineering
Architecture
Civil Engineering
Construction Management
Electrical Engineering
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

CMGT 262 - Building Codes
Familiarizes students with the content of the boca International Building Code (emphasizing the non-structural provisions), the purpose and intent of code requirements, and how to apply the code to structures and occupancies. Examines how the code is used as a tool in design and construction and prepares students for the advent of a single model building code planned for the nation.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Architectural Engineering
Architecture
Civil Engineering
Construction Management
Electrical Engineering
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

CMGT 263 - Understanding Construction Drawings
This course examines a variety of construction documents, including drawings, details, graphic standards, sections, and quantities for competitive bidding and execution of projects. Both residential and commercial construction documents will be examined.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following Major(s):
May not have the following Classification(s):
Pre-Requisites: CMGT 161 Minimum Grade: D and CMGT 162 Minimum Grade: D
Repeat Status: Not repeatable for credit

CMGT 264 - Const Mgmt of Field Operations
This course is intended to equip students with the requisite knowledge and skills required to successfully manage and support construction field operations. Knowledge areas include contract administration, project engineering, site superintendence, and other topics critical to field operations.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following Major(s):
May not have the following Classification(s):
Freshman
Pre-Requisites: CMGT 101 Minimum Grade: D and CMGT 163 Minimum Grade: D and CMGT 263 Minimum Grade: D
Repeat Status: Not repeatable for credit

CMGT 265 - Information Technologies in Construction
The objective of this course is to expose students to a large variety of information technologies in construction and will discuss the impact of these technologies on work environments, processes, and work quality. Students will investigate a variety of issues surrounding IT in construction including implementation, standards, integration, knowledge management and the underlying technology.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

CMGT 266 - Building Systems I
This course covers construction management and design concepts relating to heating, ventilation, and air conditioning systems and the integration of these systems into the building design and construction process.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):

Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PHYS 182 Minimum Grade: D
Repeat Status: Not repeatable for credit

CMGT 267 - Building Systems II
Continues CMGT 266. This course covers construction management concepts relating to electrical systems, wiring, lighting, signal and data systems, and transportation systems and the integration of these into the building design and construction process.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: CMGT 266 Minimum Grade: D
Repeat Status: Not repeatable for credit

CMGT 361 - Contracts And Specifications I
Analyzes construction contracts, specifications, and practices with regard to business law and liability. Required for construction management students. Elective for others. Fall.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

CMGT 362 - Contracts & Specs II
Continues CMGT 361. Examines contractor, architect, and engineer responsibilities through case studies and class discussions. Winter.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: CMGT 361 Minimum Grade: D
Repeat Status: Not repeatable for credit

CMGT 363 - Estimating I
Covers discussion of the estimating function and review and applications of material quantity survey techniques used in estimating costs of construction projects. Includes types of approximate and precise methods of estimating and their uses, and computer applications. Required for construction management students.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Pre-Requisites: MATH 110 Minimum Grade: D and CMGT 263 Minimum Grade: D
Repeat Status: Not repeatable for credit

CMGT 364 - Estimating II
Covers pricing and bidding of construction work including cost factors, labor and equipment, productivity factors, prices databases, job direct and indirect costs, methods of estimating time, materials, equipment, subcontractors' work, general expenses, and profit, bid preparations and submission, and computer applications.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Pre-Requisites: CMGT 363 Minimum Grade: D
Repeat Status: Not repeatable for credit

CMGT 365 - Soil Mechanics in Construction
Gives an overview of the types of problems encountered in geotechnical construction. Subjects covered will be composition, groundwater fundamentals, settlement and consolidation, stability of earth slopes, types of foundations and behavior of difficult soils.
Credits: 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Junior
Senior
Pre-Requisites: CMGT 161 Minimum Grade: D and MATH 102 Minimum Grade: D and PHYS 182 Minimum Grade: D
Repeat Status: Not repeatable for credit

CMGT 366 - Construction Accounting and Financial Management
This course brings together all of the key principles from general business accounting, financial management, and engineering economics needed by construction managers vis-a-vis the unique characteristics of the construction industry, and addresses how these principles are specifically applied in the construction industry, and how they should interact effectively to ensure the efficient and profitable management of construction projects and companies.
Credits: 3.00

College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: ACCT 116 Minimum Grade: D and CMGT 364 Minimum Grade: D and CIVE 240 Minimum Grade: D
Repeat Status: Not repeatable for credit

CMGT 371 - Structural Aspects in Construction I
The first of two course series designed specifically for construction management majors. The sequence addresses the interactions of different kinds of loads with common structural elements and design considerations for typical construction materials. This course places emphasis on the design of wood framed construction.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Junior
Senior
Pre-Requisites: CMGT 161 Minimum Grade: D and MATH 102 Minimum Grade: D and PHYS 182 Minimum Grade: D
Repeat Status: Not repeatable for credit

CMGT 372 - Structural Aspects in Construction II
The second part in a two-course sequence for Construction Management majors. The course places emphasis on the design and analysis of concrete and steel frame construction.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CMGT 371 Minimum Grade: D
Repeat Status: Not repeatable for credit

CMGT 380 - Spec Top Construction Mgt
Examines a variety of topics in the construction industry. Past topics have included real estate.
Credits: 12.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

CMGT 451 - Heavy Construction Principles & Practices
This course is intended to provide students an introduction to the principles and practices employed in heavy construction. The course content is presented from a practical perspective focusing on actual field applications.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Repeat Status: Not repeatable for credit

CMGT 461 - Construction Management I
Covers construction management concepts and practices, the management system, construction planning and programming, project control, environmental management, total quality management, and ethics in construction management. Winter.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

CMGT 463 - Value Engineering I
Covers the value concept, value engineering job plan, and techniques of project selection. Includes applications and case studies. Required for construction management students. Elective for others. Fall.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

CMGT 465 - Marketing Construct Services
Applies marketing principles to the construction industry. Includes understanding the roles of market research, business development planning, and networking techniques. Students will acquire the skills and techniques to prepare a winning presentation.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education

May not have the following Classification(s):
Freshman
Sophomore
Repeat Status: Not repeatable for credit

CMGT 467 - Techniques of Project Control
This course covers construction planning, scheduling, network systems, and communications required for project control, diagram logic, and claims prevention.
Credits: 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Junior
Sophomore
Pre-Requisites: CMGT 163 Minimum Grade: D and CMGT 263 Minimum Grade: D
Repeat Status: Not repeatable for credit

CMGT 468 - Real Estate
Overview of the development process including site selection, residential densities, market analysis and cash flow analysis.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

CMGT 469 - Construction Seminar: Contemporary Issues
This course is intended to prepare students for professional practice through a survey of the current and future state of the industry.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Junior
Pre-Junior
Sophomore
Repeat Status: Not repeatable for credit

CMGT 499 - CM Independent Study - Project
This course is a capstone course intended to be a culminating experience in the Construction Management Program.
Credits: .50 to 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Senior
Repeat Status: Course can be repeated 2 time(s) for 8.00 credit(s)

Creativity Studies Courses

CRTV 301 - Foundations in Creativity
This course provides a foundation in creativity including leading creativity theorists and their ideas, and introduction to creativity in many fields. Students will explore basic creative characteristics including originality, fluency, flexibility, elaboration, resistance to premature closure, and tolerance of ambiguity. Sets the foundation for acquiring tools and applying creativity.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

CRTV 302 - Tools & Techniques in Creativity
This hands-on course provides tools for enhancing creative strengths including role-play, simulation, brainstorming together with synectics, and creative problem solving. A second focus is the role of inspiration in how creativity, personal maturity, and spirituality inter-relate and how this interaction expands our repertoire of tools and techniques in creativity.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not have the following Classification(s):
Freshman
Pre-Requisites:
Repeat Status: Not repeatable for credit

CRTV 303 - Creativity in the Workplace
This course focuses on how creative ideas happen and how they become innovations to reveal a set of principles for infusing creativity into every aspect of an organization. Examples from a wide range of settings demonstrate how to build systemic creativity at the individual, team, and leadership levels.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi

Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites:
Repeat Status: Not repeatable for credit

Culinary Arts Courses

CULA 115 - Culinary Fundamentals
Introduces culinary principles and procedures used in commercial food preparation and practical application of classical culinary techniques.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Major(s):
Hospitality Management
Hotel and Restaurant Mgmt
Pre-Requisites:
Repeat Status: Not repeatable for credit

CULA 120 - Techniques & Traditions I
In this foundation culinary course, students will learn the fundamentals of a professional kitchen through lecture, demonstration and production. Classical and contemporary techniques are emphasized for development of cooking methods, knife skills, and food and kitchen safety and sanitation.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites:
Repeat Status: Not repeatable for credit

CULA 121 - Techniques & Traditions II
A continuation of CULA 120. Students will further develop their kitchen skills with application to recipe and menu development and plate design. Service to the public will be executed through various preparation techniques and types of service.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CULA 120 Minimum Grade: D
Repeat Status: Not repeatable for credit

CULA 125 - Found of Professional Baking
This course offers study and practice of the fundamentals of baking science. Course content includes related terminology, equipment identification and utilization, formulas and recipe conversions, and accurate ingredient scaling. Final products are used for service to the public in the Academic Bistro restaurant.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CULA 120 Minimum Grade: D or CULA 115 Minimum Grade: D
Repeat Status: Not repeatable for credit

CULA 216 - A la Carte
This is a sophomore level course in dining operations designed around a weekly restaurant operation, which is marketed and delivered to the Drexel Community and general public.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: HRM 215 Minimum Grade: D
Repeat Status: Not repeatable for credit

CULA 220 - Patisserie I
Covers the basic methods and techniques used in preparing basic desserts including cakes, pies, puddings, mousses, pastries, and tarts, with an emphasis on the variety of crusts, decorations, icings, and shortenings.
Credits: 2.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: CULA 125 Minimum Grade: D
Repeat Status: Not repeatable for credit

CULA 225 - Patisserie II
Builds on the accumulated knowledge and skills gained in CULA 220. Advances those skills by utilization of different ingredients and products such as pastries, petit fours, and flaming desserts. Emphasizes form, formula development, and presentation of classical pastries.
Credits: 2.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):

Freshman
Pre-Requisites: CULA 220 Minimum Grade: D
Repeat Status: Not repeatable for credit

CULA 226 - Patisserie III
This advanced pastry course is the third in a series of related topics. Culinary students will have the opportunity to work with techniques in cake decorating, sugar and chocolate work, and candy making. Attention to detail in pastry arts will be emphasized in this course.
Credits: 2.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CULA 225 Minimum Grade: D
Repeat Status: Not repeatable for credit

CULA 235 - Professional Dining Room Management
Students will manage front-of-the house operations in a professional dining room setting with fine dining service to the public. Table side preparations and cookery will be strongly emphasized with weekly executions.
Credits: 2.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Pre-Requisites: HRM 215 Minimum Grade: D
Repeat Status: Not repeatable for credit

CULA 240 - Fundamentals of Chinese Cuisine
Students will explore traditional regional preparations with Chinese ingredients, such as beef, fowl, lamb, vegetables and various fish and seafood.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: CULA 115 Minimum Grade: D or CULA 120 Minimum Grade: D
Repeat Status: Not repeatable for credit

CULA 290 - Culinary Arts Practicum I
Students will gain work experience in culinary production while under faculty supervision. Students obtain industry jobs, work a minimum of 60 hours, log their experiences, and write a final analysis. The networking opportunities often lead to rewarding co-op, part time, or full time employment opportunities. Students take CULA 290 or CULA 291.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Culinary Arts
Culinary Science
Pre-Requisites: CULA 120 Minimum Grade: D
Repeat Status: Not repeatable for credit

CULA 291 - Culinary Arts Practicum II
Students will gain work experience in culinary production while under faculty supervision. Students obtain industry jobs, work a minimum of 120 hours, log their experiences, and write a final analysis. The networking opportunities often lead to rewarding co-op, part time, or full time employment opportunities. Students take either CULA 290 or CULA 291.
Credits: 6.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Culinary Arts
Culinary Science
Pre-Requisites: CULA 120 Minimum Grade: D
Repeat Status: Not repeatable for credit

CULA 300 - Fund of Vegetarian Cuisine
Exposes students to the preparation of foods and menus without the use of meat or animal products. Emphasizes preparation techniques and speed, terminology, and plate presentation commonly used in vegetarian cooking.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: CULA 120 Minimum Grade: D or CULA 115 Minimum Grade: D
Repeat Status: Not repeatable for credit

CULA 305 - Fund of Italian Cuisine
Students will be presented with the philosophy of traditional Italian cooking as it is articulated in the culture of Italy. There will be a strong emphasis on regional ingredients and recipes. Topics include: basic menu language, terminology, preparation of various antipasti, pasta, and risotto.
Credits: 3.00
College: School of Tech & Prof Studies

Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: CULA 120 Minimum Grade: D or CULA 115 Minimum Grade: D
Repeat Status: Not repeatable for credit

CULA 306 - Advanced Italian Cuisine
A continuation of CULA 305. Utilizing regional Italian products, students will produce classical and traditional recipes with opportunity to further develop personal style and creativity. Proper seasoning, handling of product, and family style and plated presentations will be emphasized.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: CULA 305 Minimum Grade: D
Repeat Status: Not repeatable for credit

CULA 310 - Fund of French Cuisine
Students are introduced to French cuisine and the production of classical French dishes using contemporary techniques and ingredients. Topics include regional French influences on food, terminology and attention to detail.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: CULA 120 Minimum Grade: D or CULA 115 Minimum Grade: D
Repeat Status: Not repeatable for credit

CULA 311 - Advanced French Technique
A continuation of CULA 310. In this advanced course students will study French cuisine, vocabulary and culture as it pertains to the reading, writing and preparation of recipes, menus and ingredients. Emphasis is on professional judgment and creativity.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: CULA 310 Minimum Grade: D
Repeat Status: Not repeatable for credit

CULA 315 - Fund of American Cuisine
Students will study traditional influences on the cooking of regional American dishes and analyze those influences through recipe preparations. The history of American foods and their preparation will be presented.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: CULA 120 Minimum Grade: D or CULA 115 Minimum Grade: D
Repeat Status: Not repeatable for credit

CULA 316 - Butchery Lab
In this culinary lab course students will execute the fabrication of meat, fish and poultry products, skills necessary in any professional kitchen operation. Students will perform yield tests and calculate portion cost of fabricated items.
Credits: 2.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CULA 115 Minimum Grade: D or CULA 120 Minimum Grade: D
Repeat Status: Not repeatable for credit

CULA 320 - Advanced Culinary Studio
Under the direction of culinary industry leaders and program faculty students will prepare and produce finished plates using a variety of previously learned skills. Finished products will reflect the style of a chosen culinary industry leader executed with the judgment and professionalism of the student.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following Major(s):
May not have the following Classification(s):
Pre-Requisites: CULA 115 Minimum Grade: D or CULA 120 Minimum Grade: D
Repeat Status: Not repeatable for credit

CULA 325 - Garde Manger Lab
Introduces techniques used in the fabrication, selection and preparation of cold buffet production. Items include cold appetizers, canapes, garnishes, hors d'oeuvres, salads, and sandwiches. Additional focus on decoration, form, and presentation of cold food items.

Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: CULA 120 Minimum Grade: D or CULA 115 Minimum Grade: D
Repeat Status: Not repeatable for credit

CULA 330 - Charcuterie
Students learn about the chemistry and techniques of curing, brining, and smoking. Items covered include classic and modern, forcemeats, pates, galantines, terrines, and sausages (fresh and dry).
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: CULA 115 Minimum Grade: D or CULA 120 Minimum Grade: D
Repeat Status: Not repeatable for credit

CULA 335 - Fund of Indian Cuisine
This course introduces students to the diverse cooking and cultures of India. Explores India's unique cooking methods and the varied use of herbs, spices, and condiments.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: CULA 120 Minimum Grade: D or CULA 115 Minimum Grade: D
Repeat Status: Not repeatable for credit

CULA 399 - Ind Study in Culinary Arts
Provides independent study in Culinary Arts.
Credits: 12.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Culinary Arts
Repeat Status: Course can be repeated 98 time(s) for 998.00 credit(s)

CULA 400 - Directed Studies with a Master Chef
Structured program that allows students the opportunity to practice the skills and competencies learned in coursework with an acknowledged culinarian in a qualified foodservice operation. Students are monitored by their direct supervisor, by Culinary Arts faculty, and by evaluation of written reports, workbooks, journals, and portfolios prepared during the course.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following Major(s):
May not have the following Classification(s):
Pre-Requisites: CULA 115 Minimum Grade: D or CULA 120 Minimum Grade: D
Repeat Status: Not repeatable for credit

CULA 405 - Culture and Gastronomy I
The first in a sequence of two courses devoted to the study of food and its relationship to society. Focuses on food sources and discoveries and their effects on early population growth and expansion, commerce, and trade from the Neolithic era to the 16th century.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following Major(s):
May not have the following Classification(s):
Pre-Requisites:
Repeat Status: Not repeatable for credit

CULA 410 - Culture and Gastronomy II
The second in a sequence of two courses devoted to the study of food and its relationship to society. Focuses on food sources and discoveries and their effects on early population growth and expansion, commerce, and trade from the 16th century to the present.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following Major(s):
May not have the following Classification(s):
Pre-Requisites: CULA 405 Minimum Grade: D
Repeat Status: Not repeatable for credit

CULA 412 - Food Writing for Culinary Professionals
A practical introduction to food journalism. Explores through regular writing and reading assignments the broad range of topics typically encountered in a newspaper or magazine environment, from ingredient features and trend stories, to profiles, first person essays,

restaurant criticism, "live" deadline assignments, and long-form magazine projects.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Repeat Status: Not repeatable for credit

CULA 415 - Food Styling and Show Competition
This course in the styling and photography of good provides students with an understanding of how natural and plated food presentations are showcased for publication. Subject lighting and color contrast are studied through trial shoots and kitchen experimentation.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following Major(s):
May not have the following Classification(s):
Pre-Requisites: CULA 115 Minimum Grade: D or CULA 120 Minimum Grade: D
Repeat Status: Not repeatable for credit

CULA 420 - Senior Design Project
Students will undertake individual creative research which will enable them to prepare for the Culinary Arts Program annual show. Emphasis will be on the incorporation of skills, technologies and techniques learned from prior coursework and experience
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following Major(s):
Must have the following Classification(s):
Senior
Pre-Requisites: CULA 310 Minimum Grade: D and CULA 315 Minimum Grade: D
Repeat Status: Not repeatable for credit

CULA 425 - The Kitchen Garden
This course familiarizes students with the preparation and planting of a culinary garden using organic gardening techniques. Students also study the relationships between the kitchen garden, the rise of regional food cultures, and the evolution of plant-based foods in the definition of regional and ethnic identities and cuisines. The harvested spring produce is used in menu preparations in the student operated restaurant, The Academic Bistro.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not be enrolled in one of the following Major(s):
May not have the following Classification(s):
Repeat Status: Not repeatable for credit

CULA 426 - The Kitchen Garden: Summer
This course familiarizes students with the dynamics of the contemporary kitchen garden as a food source, the evolution of plant-based foods as a culinary medium and the interconnection between food production, cookery, and social responsibility. The harvested summer produce is used in summer term Culinary Arts classes.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

CULA 427 - The Kitchen Garden: Fall
This course familiarizes students with complex relationships between food sources, the ethics of harvest and food distribution, and the pursuit of flavor from a culinary arts standpoint. Alternative foods, organic foods, and diets connected to seasonality will be discussed as well as energy requirements and globalization of the food supply. The harvested fall produce is used in menu preparations in the student operated restaurant, The Academic Bistro.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

CULA 465 - Special Topics
Provides study in culinary arts on a special topic or on an experimental basis. May be repeated for credit.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Culinary Arts
Repeat Status: Course can be repeated 98 time(s) for 998.00 credit(s)

Customer Operations Courses

CUST 380 - Spec Top Customer Oper
Covers specific topics related to customer operations. Variable
Credits: .50 to 12.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

CUST 401 - Cust Serv Pract I
First of a three-course series. Combines classroom theory with practical application at the student's worksite, completing the learning experience. Requires students to demonstrate the ability to apply classroom learning to situations benefiting a corporation. Includes proposals, reports on work in progress, contributions to team efforts and methods of measurement identified by the faculty or mentor.
Credits: 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 98 time(s) for 998.00 credit(s)

CUST 402 - Cust Serv Pract II
Second of a three-course series. Combines classroom theory with practical application at the student's worksite, completing the learning experience. Requires students to demonstrate the ability to apply classroom learning to situations benefitting a corporation. Includes proposals , reports on work in progress, contributions to team effort and methods of measurement identified by the faculty or mentor.
Credits: 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 98 time(s) for 998.00 credit(s)

CUST 403 - Cust Serv Pract III
Third of a three-course series. Combines classroom theory with practical application at the student's worksite, completing the learning experience. Requires students to demonstrate the ability to apply classroom learning to situations benefitting a corporation. Includes proposals, reports on work in progress, contributions to team efforts and methods of measurement identified by the faculty, or mentor.
Credits: 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 98 time(s) for 998.00 credit(s)

Electrical Engineering Technology Courses

EET 102 - Introduction to Applied Engineering Technology
The main objective of this course is to introduce the basic concepts and the fundamentals of Applied Engineering Technology (AET). Students are introduced to the three tracks (electrical, mechanical & manufacturing) in AET and work on the selected topics designed to enhance the problem solving techniques.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Pre-Requisites:
Repeat Status: Not repeatable for credit

EET 201 - Circuit Analysis I
Introduction to the key electrical terms, basic laws and theorems of electric circuits by concentrating on Direct Current (DC) circuit analysis, power, and energy.
Credits: 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: PHYS 153 Minimum Grade: D and MATH 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

EET 202 - Circuit Analysis II
Introduction to time domain (transient) analysis of R, L, C elements and energy storage in L and C circuits. The response of source-free RL, RC, and RLC circuits are developed followed by response to constant voltage and current sources.
Credits: 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: EET 201 Minimum Grade: D and MATH 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

EET 203 - Non-Destructive Evaluation of Materials
The course presents principles of Ultrasound Nondestructive Evaluation of Materials combining hands-on laboratory experience with lectures. The students learn the physical principles of measurements of sound

velocity in different materials, attenuation coefficients, directivity pattern of transducers and location and dimensions of heterogeneities in materials, such as flaws, and cavities.
Credits: 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must be enrolled in one of the following Major(s):
Applied Engineering Technology
Pre-Requisites: PHYS 152 Minimum Grade: D and PHYS 154 Minimum Grade: D
Repeat Status: Not repeatable for credit

EET 204 - Introduction to Nanotechnology
The course provides an introduction to scientific notation, size relationships between nanometers and other metric measures, self assembly, molecular recognition, the history of nanotechnology, and the role and influence of nanotechnology in other technologies.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: CHEM 111 Minimum Grade: D and CHEM 113 Minimum Grade: D
Repeat Status: Not repeatable for credit

EET 205 - Digital Electronics with Laboratory
The objective of this course is to introduce AET students to fundamentals of digital electronics starting with the binary number system and proceeding to logic gates, Boolean algebra, combinational logic circuits, and the basic arithmetic units used in digital computers such as adders, counters and shift registers.
Credits: 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: EET 201 Minimum Grade: D
Repeat Status: Not repeatable for credit

EET 206 - Analog Electronics I
Students are introduced to linear circuit analysis of passive and active semiconductor components, modeling of non-linear circuit elements, light and heat-dependent semiconductor devices, biasing of three-terminal devices, and semiconductor small-signal models.
Credits: 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: EET 201 Minimum Grade: D and EET 202 Minimum Grade: D
Repeat Status: Not repeatable for credit

EET 307 - Basic Power Systems I
Fundamentals of single-phase and three-phase power systems; introduction to symmetrical components and sequence impedances; power transfer modeling; the per-unit system; power transmission line impedance and admittances.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Junior
Senior
Pre-Requisites: EET 104 Minimum Grade: D
Repeat Status: Not repeatable for credit

EET 311 - Modeling of Engineering Systems
Course introduces students to development and application of ordinary differential equations to systems analysis with emphasis on electrical systems. Particular attention is paid to the derivation of differential equations from given practical circuits used in industrial applications.
Credits: 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MATH 122 Minimum Grade: D and EET 201 Minimum Grade: D
Repeat Status: Not repeatable for credit

EET 313 - Signals and Systems I
Course introduces students to applications of the systems analysis to the design of useful circuits and devices used in industrial applications. Covers time and frequency domain circuit analysis (transfer function, convolution) to determine response of the system to the arbitrary input.
Credits: 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: EET 311 Minimum Grade: D
Repeat Status: Not repeatable for credit

EET 317 - Analog Electronics II
Students are introduced to four-layer diodes, power amplifiers, differential amplifiers, linear and non-linear operational amplifiers,

feedbacks, oscillators, and active filters. Class discussions include practical circuits, troubleshooting, and case studies.
Credits: 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: EET 206 Minimum Grade: D
Repeat Status: Not repeatable for credit

EET 319 - PLC Fundamentals
Introduces the fundamentals of programmable logic controllers, and PLC application in control industry. The course includes both lecture and laboratory for implementing the learning principles to practical projects. The emphasis is to cover the basics of the ladder logic, PLC functions, programming and PLC hardware implementation.
Credits: 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: EET 205 Minimum Grade: D
Repeat Status: Not repeatable for credit

EET 322 - Electrical Energy Conversion
The course covers the fundamentals and the principles of electrical machines and transformers, with an emphasis on their application and installation. The course covers transformer, dc, ac and special machines. Novel energy conversion techniques such as Fuel Cell and Batteries are also discussed.
Credits: 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: EET 202 Minimum Grade: D
Repeat Status: Not repeatable for credit

EET 323 - Electrical Systems Design
This course covers the basics of industrial systems, including safety, grounding, protection, lighting, distribution, commonly found in residential, commercial and industrial environment. The course formulates the application of standards and codes such as NEC, NEMA and IEEE.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: EET 202 Minimum Grade: D
Repeat Status: Not repeatable for credit

EET 324 - Power Electronics
The course covers the basics of the industrial and power electronics over a spectrum of applications and provides an introduction to the emerging technologies in these fields. The course is accompanied by laboratory using hardware and software simulation tools.
Credits: 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: EET 202 Minimum Grade: D
Repeat Status: Not repeatable for credit

EET 325 - Microprocessors
Introduces student to fundamental of microprocessing using application-oriented approach. Included fundamental principles and system requirements supplemented with specific implementation examples and practical circuits with detailed design considerations.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: EET 205 Minimum Grade: D
Repeat Status: Not repeatable for credit

EET 401 - Applied Micro-controllers
The course is an introduction to microcontroller hardware and software with an emphasis on embedded control applications. Topics covered include microcontroller architectures, programming, analog and digital input/output, timing, debugging and PC-based software development tools.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: EET 205 Minimum Grade: D
Repeat Status: Not repeatable for credit

EET 402 - Control Engineering
The course covers fundamental of control theory and their applications, including, linear systems and feedback, linear system operation and stability, standard methods applicable to the linear systems and basic for designs and applications.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter

Pre-Requisites: EET 311 Minimum Grade: D and EET 313 Minimum Grade: D
Repeat Status: Not repeatable for credit

EET 404 - Signals and Systems II
Introduces the analysis of electric circuits under steady sinusoidal conditions, applications of Laplace transformation and complex frequency analysis, and Fourier analysis for representing an arbitrary time function as a sum of sinusoidal functions.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: EET 313 Minimum Grade: D and EET 311 Minimum Grade: D
Repeat Status: Not repeatable for credit

EET 406 - Communication Systems
This course introduces AET student to fundamentals of Communication Systems using an integrated approach to analog and digital communications. Design and applications of contemporary communication systems are emphasized via the reduction theory to practice.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: EET 311 Minimum Grade: D and EET 313 Minimum Grade: D
Repeat Status: Not repeatable for credit

EET 407 - Power Systems Fundamentals
The course covers the basic principles of the power systems, electric grid, methods to analyze electric grid systems and basic power system protection and stability.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: EET 202 Minimum Grade: D and EET 322 Minimum Grade: D
Repeat Status: Not repeatable for credit

EET 409 - Optical System Design
This course introduces AET student to fundamentals of Optics and Optical Systems using an application-oriented approach. Special attention is given to fundamentals principles of Optical Systems and their requirements supplemented with specific applications-based examples.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: PHYS 154 Minimum Grade: D
Repeat Status: Not repeatable for credit

Emergency Management Courses

EMER 210 - Hazard Mitigation
This course examines risks associated with natural and man-made hazards and explores how to reduce threats to life and property.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

EMER 215 - Public Management in Times of Crisis
This course covers comprehensive disaster plans and training for the public manager. The course will include planning for natural disasters and accidents, and planning for events related to terrorism.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

EMER 220 - Emergency Incident Risk Management
This course will focus on risk management skills used by first responders to emergency incidents. Particular attention will be paid to the emergency operations systems of the Philadelphia police and fire departments in conjunction with the Managing Director's Office of Emergency Management.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

EMER 225 - Infrastructure Disaster Recovery
This course will focus on the recovery of a business after a disaster occurs. This course will take the view of the private business enterprise

and ways to maintain "business as usual". The course will provide information about the process of business recovery planning.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

EMER 235 - Public Information Strategies
This course presents ways organizations handle and disseminate information to the public. Specifically, the course will analyze the role of the public information officer, the procedures for providing information to internal and external audiences, dealing with media outlets, and the importance of crisis communication plans.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

EMER 245 - Search and Rescue
This course will focus on the fundamentals of Search and Rescue (SAR) skills and training. Students will be taught the proper use of equipment and how to assist people in distress by using SAR systems to provide responses to lost, injured, or overdue people who may be in harm's way in varied environments.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

Hotel & Restaurant Management Courses

HRM 110 - Introduction to the Hospitality Industry
Presents the opportunities available in the hospitality industry, concentrating on restaurants, hotels, and institutional food services and comparing their business formats and services to the public. Explores careers in hospitality and the need for such enterprises in modern society.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Culinary Arts
Hospitality Management
Hotel and Restaurant Mgmt
Pre-Requisites:
Repeat Status: Not repeatable for credit

HRM 120 - Principles of Food-Service Management
Covers techniques of contemporary food and beverage management and their application in the professional food-service environment. Emphasizes budget preparation, food and labor cost controls, menu planning and pricing, and quantitative management. Requires simulated restaurant project.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: HRM 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

HRM 130 - Tourism I
The course reviews the basic concepts and techniques in the field of tourism and tourism management. It is an introduction to the tourism industry, cost and benefits of tourism, effects on the host communities, impacts on travelers and host communities, and promotion of tourism.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following Major(s):
Repeat Status: Not repeatable for credit

HRM 135 - Tourism II
This is the second part of introduction to tourism & travel at the freshman level. The course reviews the basic concepts in the economy of tourism, ecological constraints to tourism development, research and marketing techniques, main macroeconomic magnitudes of tourism, main outgoing and incoming destinations and the future of tourism and travel. Some or all pre-requisites may be taken as either a pre-requisite or co-requisite. Please see the department for more information.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following Major(s):
Pre-Requisites: HRM 130 Minimum Grade: D (May be taken concurrently)
Repeat Status: Not repeatable for credit

HRM 150 - Customer Service
This foundation course presents students with the types of services that create an ongoing bond between a company and its customers.

Also, through some proven techniques, analyze relations between service delivery, pricing, branding and image creation.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

HRM 160 - Laws of the Hospitality Ind
Examines legal subjects relative to the foodservice and lodging industries including government regulations and foodservice operators, foodservice contracts, liability, patron civil rights, franchising, and bankruptcy and reorganization. Includes analysis of case studies and relevant court decisions.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: HRM 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

HRM 200 - Software for Hospitality Industry
This is an introductory course to the various software applications used by managers in the Hospitality and Tourism industries.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Culinary Arts
Hospitality Management
Hotel and Restaurant Mgmt
Pre-Requisites:
Repeat Status: Not repeatable for credit

HRM 215 - Commercial Food Production
Applies culinary principles to the production of fine good in quantity. Emphasizes menu planning and management of production, food design, quality, and service. Requires service to the public. Weekly production reports are required.
Credits: 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: CULA 115 Minimum Grade: D or CULA 120 Minimum Grade: D
Repeat Status: Not repeatable for credit

HRM 220 - Purchasing for the Hospitality Industry
Covers principles and techniques of quantity-foods purchasing and hospitality furnishings. Emphasizes channels of distribution, determination of specifications, mechanics of buying, and the purchasing function in food-service facilities.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: HRM 110 Minimum Grade: D or HRM 120 Minimum Grade: D
Repeat Status: Not repeatable for credit

HRM 225 - Equipment Design and Layout
Covers principles of selection, operation, and maintenance of food-service equipment. Emphasizes requirements for various hospitality facilities and the supporting design, construction, and renovation of such.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: HRM 120 Minimum Grade: D
Repeat Status: Not repeatable for credit

HRM 250 - Contract Fdsvc Management
Introduces students to the dynamics of a commercial foodservice operation.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: HRM 120 Minimum Grade: D
Repeat Status: Not repeatable for credit

HRM 310 - Hospitality Accounting Systems
Studies accounting systems for hotels, restaurants, and institutions, including analysis of business transaction flow and the preparation and

interpretation of financial statements. Includes consideration of the Uniform System of Accounts for Restaurants, computer-assisted processing, reports generation, and data analysis.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: HRM 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

HRM 315 - Continental/Ethnic/Reg Cuisine
Must be completed prior to six-month food service co-op. Surveys the state of the art in international fine food, focusing on its roots in various ethnic traditions. Includes food preparation and tasting as an integral part of the course.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: CULA 115 Minimum Grade: D or CULA 120 Minimum Grade: D
Repeat Status: Not repeatable for credit

HRM 320 - Hospitality Management Information Systems
Studies computer applications in the hospitality industry, including inventory control, restaurant systems, bar and beverage systems, and telephone and security-management systems. Emphasizes guest tracking, electronic cash registers, and point-of-sale devices.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Junior
Sophomore
Pre-Requisites: HRM 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

HRM 325 - Hotel Room Division Management
Studies front-office management and control, including pricing and associated structures, occupancy rates and patterns, audits and income, reservations, and special functions. Emphasizes service and sales as well as guest needs.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: HRM 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

HRM 326 - Hotel Rooms Division Management II
Studies front-office management and control, including pricing and associated structures, occupancy rates and patterns, audits and income, and special functions.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Hospitality Management
Hotel and Restaurant Mgmt
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites: HRM 325 Minimum Grade: D
Repeat Status: Not repeatable for credit

HRM 330 - Hotel & Restaurant Marketing
Covers techniques and principles of marketing services in the hospitality industry, with emphasis on the marketing plan, advertising and promotion, sales, and public relations.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: HRM 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

HRM 335 - Beverage Management
Provides a comprehensive study of wines, spirits, and beers and the role they play in the success of the hospitality industry. Covers topics including history, marketing and sales, channels of distribution, manufacturing processes, mixology, and service and control systems, with concentration in American and European wines and international beers. Gears application to computerized and accounting system. tips certification.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):

Continuing Education
May not be enrolled in one of the following Major(s):
May not have the following Classification(s):
Pre-Requisites: HRM 120 Minimum Grade: D
Repeat Status: Not repeatable for credit

HRM 340 - Catering Management
Examines techniques of catering management and their application in the professional food-service environment, with emphasis on menu planning, controls, and budget preparation.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following Major(s):
Must have the following Classification(s):
Junior
Senior
Pre-Requisites: HRM 120 Minimum Grade: D
Repeat Status: Not repeatable for credit

HRM 345 - Convention Management
Provides an in-depth study of convention, corporate, and group segments of the hospitality industry.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: HRM 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

HRM 347 - Sport Tourism
Students will investigate international sport tourism organizations and their services, and analyze issues including: Sport tourism facility and event financing, sport tourism impacts, and globalization and sport tourism.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: HRM 130 Minimum Grade: D
Repeat Status: Not repeatable for credit

HRM 350 - Cost Controls in Hospitality
Course deals with theory and technique basic to managing costs and maximizing profits in relevant area within restaurant, hotel, and tourism segments of hospitality.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: HRM 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

HRM 355 - Resort Management
This course studies the unique aspects of managing a full service destination resort in contrast to a traditional hotel operation. Students will study varied aspects of resort management including guest profiles, resort operations, report marketing and program development among other topics.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: HRM 325 Minimum Grade: D
Repeat Status: Not repeatable for credit

HRM 360 - Hospitality Ind Public Relations
This course provides students with an understanding of the process and effective use of public relations as applied to the hospitality industry with a focus on restaurants. A variety of marketing communication media including advertising, sales promotions, and development of a press kit and press releases will be examined. During the course students will develop a public relations campaign for a specific restaurant.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: HRM 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

HRM 365 - Heritage Tourism
Using the historic city of Philadelphia and its main background, this course reviews the significance and role of culture and heritage related tourist attractions. Students deal with the main issues in current research on heritage tourism while having hands-on exposure to the managements and marketing of some of Philadelphia's landmarks.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter

Pre-Requisites: HRM 130 Minimum Grade: D
Repeat Status: Not repeatable for credit

HRM 370 - Gaming & Casino Management I
Examines theories pertinent to casino games including the organizational management, staffing, regulations, internal control, and reporting requirements of gaming operations.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: HRM 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

HRM 371 - Gaming & Casino Management II
This course studies advanced casino management topics such as game statistics, casino marketing and profitability. Students will study the probability and mathematics of casino games and review in depth casino marketing concepts and techniques that are unique to gaming. Race and sports book operations will also be studied.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: HRM 370 Minimum Grade: D
Repeat Status: Not repeatable for credit

HRM 375 - Security and Loss Prevention
This course studies the unique aspects of managing security in the hospitality industry. Students will study various aspects of security and loss prevention including security equipment, guest concerns, departmental responsibilities, protection of fund, emergency management, risk management and insurance. This course will include a site visit and guest lectures.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: HRM 370 Minimum Grade: D
Repeat Status: Not repeatable for credit

HRM 385 - Tourism Guest Lecture Series
This course provides contact with prominent industry professionals who visit class weekly to convey their experiences and facilitate discussions.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites:
Repeat Status: Not repeatable for credit

HRM 395 - Economics of Tourism
This course introduces participants to economic and government policy issues that impact the tourism industry. The course provides a strategic framework for understanding the macroeconomic and policy environment that is shaped by multilateral institutions, government and the tourism industry.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following Major(s):
May not have the following Classification(s):
Pre-Requisites:
Repeat Status: Not repeatable for credit

HRM 399 - Independent Study in HRM
Provides individualized study of a specialized area of hotel and restaurant management. May be repeated for credit.
Credits: 12.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Culinary Arts
Hospitality Management
Hotel and Restaurant Mgmt
May not have the following Classification(s):
Freshman
Pre-Junior
Sophomore
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

HRM 405 - Current Issues in Travel & Tourism
Covers current issues in the management of travel and tourism services. Environmental trends, planning and development, policy formation, social and economic impact and marketing of travel and tourism are included.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: HRM 135 Minimum Grade: D and HRM 365 Minimum Grade: D
Repeat Status: Not repeatable for credit

HRM 415 - Fine Dining & Services
HRM senior capstone hospitality class. Requires students to design, produce, and market a weekly dinner to the public. With the participation of guest chefs from some of the area's finest hotels and restaurants, students produce food comparable to that served in the finest restaurants in the city.
Credits: 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following Major(s):
May not have the following Classification(s):
Pre-Requisites: HRM 215 Minimum Grade: D
Repeat Status: Not repeatable for credit

HRM 420 - Hospitality Design
Provides a historical, spatial, and aesthetic study of the great hotels and restaurants of the late 19th and the 20th century. Emphasizes the architectural quality of the spaces and the functions they imply in services to the users, management, and client. Field trip.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: HRM 325 Minimum Grade: D
Repeat Status: Not repeatable for credit

HRM 425 - Hospitality Indstry Admin
This course provides an in-depth study of various managerial strategies in hospitality. The course will examine the application of the tools of strategic management in hospitality settings and introduce models, methods, and techniques which can be used to identify strategic issues and generate future-oriented action plans to inform tactics that are designed to implement change.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Culinary Arts
Hospitality Management
Hotel and Restaurant Mgmt
Must have the following Classification(s):
Junior
Senior
Pre-Requisites: HRM 355 Minimum Grade: D
Repeat Status: Not repeatable for credit

HRM 435 - Wine and Spirits
Provides a detailed study of the classification, production, identification, and service of alcoholic beverages, with a major emphasis on wines. Uses a systematic approach to tasting and evaluation.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following Major(s):
Must have the following Classification(s):
Senior
Repeat Status: Not repeatable for credit

HRM 450 - Hospitality Leadership Seminar
This course integrates material covered in multiple disciplines related to the hospitality industry. Examines the development of innovative management in all segments of the industry. Identification and development of a personal leadership philosophy and style.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Culinary Arts
Hospitality Management
Hotel and Restaurant Mgmt
Must have the following Classification(s):
Senior
Repeat Status: Not repeatable for credit

HRM 455 - Hospitality Human Resources Management
Analyzes the role of the human resources division in the hospitality industry. Examines the process of recruitment, selection, and performance appraisals of the hospitality workforce.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Culinary Arts
Hospitality Management
Hotel and Restaurant Mgmt
Must have the following Classification(s):
Junior
Senior
Repeat Status: Not repeatable for credit

HRM 465 - Spec Top Hotl/Restrnt Mgt
Provides study in hotel and restaurant management on a special topic or on an experimental basis. May be repeated for credit. This is a writing intensive course.
Credits: 12.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

HRM 470 - Gaming Legislation, Policy & Law
This course provides an overview of federal and state laws governing legalized gaming in the United States with emphasis on gaming in Pennsylvania. The powers of the state regulatory agencies will be examined with discussion concerning the underlying reasons used in regulating to ensure the integrity of the gaming industry.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: HRM 370 Minimum Grade: D
Repeat Status: Not repeatable for credit

HRM 472 - Gaming Information Systems
This course studies computer information systems that are unique to the Gaming Industry. Students will study each system from a business perspective learning function and process. They will perform case studies, view produce demonstration and observe new technology trends that impact casino operations.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: HRM 371 Minimum Grade: D
Repeat Status: Not repeatable for credit

HRM 475 - Current Issues in Gaming
Current issues in the management of casino and gaming operations. Environmental trends, planning and development, policy formulation, social and economic impact and marketing of casinos and gaming operations are potential topics for discussion.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: HRM 371 Minimum Grade: D
Repeat Status: Not repeatable for credit

Industrial Engineering Courses

INDE 240 - Technology Economics
Techniques for project decisions: benefit cost, present worth and annual worth analysis, rate of return, minimum attractive rate of return, capital budgeting, risk analysis, and depreciation.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

INDE 300 - Quality Management
This is a course about managing quality. It will introduce quality concepts necessary for an organization to remain competitive in today's economy. Discussion will focus on the tools and techniques necessary to manage quality processes within an organization.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must have the following Classification(s):
Junior
Senior
Pre-Requisites: MATH 122 Minimum Grade: D
Repeat Status: Not repeatable for credit

INDE 301 - Health Systems Introduction
Emphasis on the application of industrial engineering methodologies to analyze and solve health systems challenges. Critical evaluation of the utility of key industrial engineering concepts and tools for assessing and modeling health care problems and challenges in health care delivery.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must have the following Classification(s):
Junior
Pre-Junior
Senior
Repeat Status: Not repeatable for credit

INDE 340 - Introduction to Decision Analysis
Overview of modeling techniques and methods used in decision analysis, including multiattribute utility models, decision trees, and Bayesian models. Psychological components of decision making are

discussed. Elicitation techniques for model building are emphasized. Practical applications through real world model building are described and conducted.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must have the following Classification(s):
Junior
Pre-Junior
Senior
Pre-Requisites: STAT 262 Minimum Grade: D and MATH 122 Minimum Grade: D
Repeat Status: Not repeatable for credit

INDE 350 - Industrial Engineering Simulation
Covers techniques and application of computer simulation of existing or proposed real world systems and processes. Models of such systems or processes are often complex, precluding traditional analytical techniques. Students will build simulation models and do simulations with commercial simulation software, analyze and interpret the results, and to plan simulation studies.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Graduate Quarter
Must have the following Classification(s):
Junior
Senior
Pre-Requisites: STAT 261 Minimum Grade: D
Repeat Status: Not repeatable for credit

INDE 351 - Intelligent Manufacturing Systems
Design and simulation of intelligent manufacturing systems with special emphasis on sensor-integrated robotic assembly tasks. Fundamentals of artificial intelligence, application of robotics, sensors, vision, network integration, and flexible assembly work cells. Industry based case studies and working examples.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

INDE 361 - Quality Control
Covers theory and methods for design and analysis of quality control systems, including solutions to problems of product specifications, process control, acceptance inspection, and other means of quality assurance. Fall. Alternate years.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: STAT 261 Minimum Grade: D
Repeat Status: Not repeatable for credit

INDE 362 - Operations Research for Engineering I
Introduces systems sciences, including linear programming and other linear optimization methods, simplex method, primal-dual solution methods, the transportation method, pert-cpm and other network techniques, and dynamic programming. Requires development and presentation of simulation term-project proposals. Winter.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Co-Requisites: MATH 261
Pre-Requisites: MATH 261 Minimum Grade: D
Repeat Status: Not repeatable for credit

INDE 363 - Operations Research for Engineering II
Covers single and multi-episode probabilistic inventory models, queuing theory, single and multichannel systems, production scheduling and other assignment methods, Markov processes, Poisson processes and other stochastic systems, and replacement theory. Includes selected case studies. Applications: queuing, reliability, inventory, and finance. Requires development and presentation of term-project simulation models.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: INDE 362 Minimum Grade: D
Repeat Status: Not repeatable for credit

INDE 364 - Special Tops Indust Engr
Provides special courses offered based on student or faculty interests. All terms. Variable
Credits: .50 to 12.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi

Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

INDE 365 - Systems Analysis Methods I
Provides an introduction to the concepts and techniques used in analysis of complex systems. Covers the origins and structure of modern systems and the step-wise development of complex systems and the organizations of system development projects. Systems Development Lifecycle (SDLC) from concept development, engineering development, post-development.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must have the following Classification(s):
Junior
Senior
Repeat Status: Not repeatable for credit

INDE 366 - Systems Analysis Methods II
OO (Object Oriented) Methodology and UML (Universal Modeling Language) modeling, within the SDLC (System Development Life Cycle) framework, are covered in this class. There are two components to OO systems Analysis and Design; The ORM (Object- Relationship Model) is a way to describe or represent objects, classes of objects, relationships between objects and classes, and memberships of the real world. The OBM (Object-Behavior Model) is a means of describing the behavior of objects.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Freshman
Pre-Requisites: INDE 365 Minimum Grade: D
Repeat Status: Not repeatable for credit

INDE 367 - Data Processing
Covers the information ?based skills necessary for Industrial Engineers. It is a project based course. Particular attention is paid to real world database problems. This course explains data acquisition and database systems. The course focuses on designing databases for given problems. Students will use different database techniques. Introduction to SQL.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

INDE 370 - Industrial Project Management
Provides an overview of the roles, responsibilities, and management methods of technology in project management. Emphasizes scheduling of various projects, monitoring, control and learning from projects. Three interrelated objectives of budget, schedule, and specifications are also introduced. The course assumes no prior knowledge in management techniques and is intended to teach students how to develop approaches and styles of management for service and manufacturing industry projects.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

INDE 375 - Quality Improvement by Experimental Design
Methods for Design and analyzing industrial experiments. Blocking; randomization; multiple regression; factorial and fractional experiments; response surface methodology; Taguchi's robust design; split plot experimentation.
Credits: 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Freshman
Pre-Requisites: STAT 261 Minimum Grade: D or STAT 201 Minimum Grade: D
Repeat Status: Not repeatable for credit

INDE 399 - Ind Study in Industrial Engr
Credits: .50 to 12.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 98 time(s) for 998.00 credit(s)

INDE 400 - Designs of Program Evaluation Systems
Focus on evaluation broadly conceived to include evaluation of programs as well as within business organizations. The context of the

class is evaluation in the health care sector, particularly long term care. Emphasis placed on the development of valid and practical models, and the identification and measurement of short-term and long-term intervention outcomes. Covers principles of research design, evaluation, and measurement issues.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must have the following Classification(s):
Junior
Senior
Pre-Requisites: STAT 261 Minimum Grade: D or STAT 201 Minimum Grade: D or STAT 211 Minimum Grade: D
Repeat Status: Not repeatable for credit

INDE 461 - Methds Engr & Measurement
Covers fundamentals for developing methods improvements and measurement of these improvements through time study and standard data. Includes analysis and design of man-and-machine work systems and application to typical problems in work measurements. Fall. Alternate years.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: POM 311 Minimum Grade: D
Repeat Status: Not repeatable for credit

INDE 462 - Industrial Plant Design
Covers design of a product-oriented facility, including process design, materials handling, work area design, storage and warehousing, and service-area planning. Includes complete final plant layout and presentation of term project. Winter. Alternate years.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: INDE 461 Minimum Grade: D
Repeat Status: Not repeatable for credit

INDE 463 - Production Management
Covers production planning and control systems, including materials, equipment, and manpower requirements; manufacturing planning and control, including production scheduling, inventory, and quality control; analytical methods for inventory control; and production planning and methods. Spring. Alternate years.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: INDE 462 Minimum Grade: D
Repeat Status: Not repeatable for credit

INDE 467 - Decision Processes
Covers advanced methods of analyzing decision-making under uncertainty, including expected value concepts and criteria, decision tree analysis, preference theory concepts, probabilistic risk assessment, risk analysis using simulation techniques, and decisions to purchase imperfect information. Uses case studies relating to facility siting, resource exploration and development, and new technology deployment and market penetration. Fall. Alternate years.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MATH 261 Minimum Grade: D
Repeat Status: Not repeatable for credit

INDE 468 - Analysis of Experimental Data
Covers use of linear and non-linear models to identify cause and estimate effect. Includes randomization and blocking with paired comparisons, significance testing and confidence intervals, factorial designs, least squares regression analysis, response surface methods, analysis of variance, and Box-Jenkins and other time series forecasting methods. Fall.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MATH 261 Minimum Grade: D
Repeat Status: Not repeatable for credit

INDE 469 - Org Planning & Control
Analyzes human, capital, and physical resource planning, allocation, and control, including human factors and man-machine interface, technological innovation, concepts of behavioral science, and structure and dynamics of industrial organizations. Uses a case study approach to situational analysis. Spring. Alternate years.

Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: POM E311 Minimum Grade: D and POM 461 Minimum Grade: D
Repeat Status: Not repeatable for credit

INDE 470 - Engineering Quality Methods
Methods for controlling and improving industrial processes. Control charts; process capability; multifactor experiments; screening experiments; robust designs. Understanding of the continuous quality improvement tied to a real life project improvement.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

INDE 490 - Senior Project Design
Design methodology and engineering principles applied to open-ended design problems with inherent breadth and innovation. This course integrates the knowledge acquired in the various courses of the undergraduate curriculum to an open-ended design effort and applies the knowledge gained to the solution of contemporary engineering problem. Requires written and oral final reports, including oral presentations by each design team at a formal design conference open to the public and conducted in the style of a professional conference. Some or all pre-requisites may be taken as either a pre-requisite or co-requisite. Please see the department for more information.
Credits: 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must have the following Classification(s):
Senior
Pre-Requisites: INDE 470 Minimum Grade: D (May be taken concurrently)
Repeat Status: Not repeatable for credit

Manufacturing Engineering Technology Courses

MET 100 - Graphical Communication
Introduces engineering graphics and fundamentals of computer aided design using the interactive software package AutoCAD on a personal computer.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

MET 101 - Manufacturing Materials
Covers tests used to characterize properties of ceramic, polymeric, and metallic materials and how material properties influence their use and manufacturing. Includes laboratory work on ASTM and industrial testing procedures.
Credits: 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CHEM 111 Minimum Grade: D and CHEM 113 Minimum Grade: D
Repeat Status: Not repeatable for credit

MET 102 - Industrial Electronics
Covers the theory and application of electronics in industry. Includes electron theory, circuit analysis, electromagnetism, motors, and generators.
Credits: 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Junior
Sophomore
Pre-Requisites: EET 101 Minimum Grade: D and PHYS 184 Minimum Grade: D
Repeat Status: Not repeatable for credit

MET 201 - Introduction to Mfg Processes
Introduces manufacturing and its managed activities: research and development, production, marketing, industrial relations, and finance. Includes laboratory work in organization, staffing, and operating a model manufacturing enterprise.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Junior

Sophomore
Pre-Requisites: MATH 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

MET 202 - Computer-Aided Drafting
Introduces computer design using an interactive software package on a microcomputer.
Credits: 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Junior
Sophomore
Pre-Requisites:
Repeat Status: Not repeatable for credit

MET 204 - Applied Quality Control
Covers variables, procedures, and processes of total quality control within the manufacturing industries. Includes instrumentation for material evaluation, attribute inspection and sampling, supervising for organizational quality improvements, and statistical control. Emphasizes directed laboratory experiences.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Junior
Senior
Pre-Requisites: STAT 261 Minimum Grade: D
Repeat Status: Not repeatable for credit

MET 205 - Robotics and Mechatronics
Provides a comprehensive technical introduction to robotics and automation in manufacturing. Topics include flow line production, material handling, group technology, and flexible and mechatronics-integrated manufacturing.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Junior
Senior
Pre-Requisites: PHYS 152 Minimum Grade: D and MATH 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

MET 209 - Fluid Power
Covers the fundamentals of hydraulic systems with an emphasis on applications of Bernoulli's equation. Topics include component types and designs, hydraulic circuit analysis, and design of hydraulic systems.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MHT 205 Minimum Grade: D
Repeat Status: Not repeatable for credit

MET 213 - Applied Mechanics
Covers elements of statics and strength of materials with specific applications to manufacturing problems. Topics include the design of bolted connections, simple structures, centroids, moments of inertia and beam design.
Credits: 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: PHYS 153 Minimum Grade: D and MET 101 Minimum Grade: D and MATH 122 Minimum Grade: D
Repeat Status: Not repeatable for credit

MET 301 - Advanced Design Graphics
Covers the theory and practice of industry's parts and assembly drawings with a specialization in tolerance and geometric dimensioning. Discusses industrial procedures and standards.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MET 100 Minimum Grade: D
Repeat Status: Not repeatable for credit

MET 306 - Zone Technologies
Covers scheduling concepts and knowledge and use of specialized software used in the shipbuilding industry. Also covers the creation of an integrated plan for the installation of appropriate subassemblies, units, and equipment in a zone of a ship.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Senior

Pre-Requisites: MET 207 Minimum Grade: D
Repeat Status: Not repeatable for credit

MET 307 - HazMat for Manufacturing
Covers the characteristics of hazardous substances and wastes, medical surveillance for plant personnel, toxicology, respirators and protective clothing, environmental direct reading indicators, decontamination procedures, and safe working practices.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Senior
Pre-Requisites: BIO 161 Minimum Grade: D and CHEM 162 Minimum Grade: D and CHEM 164 Minimum Grade: D
Repeat Status:

MET 308 - Maritime Manufacturing
Provides an overview of the key engineering standards, laws, and regulations governing the construction of commercial vessels in the United States and methods of complying with these requirements. Focuses on the ship manufacturing process and the installation and testing of ship systems.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Senior
Repeat Status: Not repeatable for credit

MET 310 - Advanced Robotics and Mechatronics
Covers applied topics related to the integration of computer, robotics, and internet-based automation technologies in modern manufacturing.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MET 205 Minimum Grade: D
Repeat Status: Not repeatable for credit

MET 313 - Machine Tool Processing
Covers material separation with lathes, shapers, milling and grinding machines, band sawing and electro-discharge machining. Discusses tool design, precision measurement and safety with emphasis towards manufacturing applications.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MET 101 Minimum Grade: D and MET 201 Minimum Grade: D
Repeat Status: Not repeatable for credit

MET 316 - Computer Numerical Control
Discusses theory and application of computer numerical control machines in the manufacturing environment. The laboratory focuses on the programming and operation of CNC machine tools.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Graduate Quarter
Pre-Requisites: MATH 110 Minimum Grade: D and MET 100 Minimum Grade: D
Repeat Status: Not repeatable for credit

MET 380 - Special Topic in Manufacturing
Covers selected topics that meet student interest and faculty capabilities. May be taken more than once if topics vary. Students may enroll in more than one section in a term when different topics are covered in each section.
Credits: 1.00 to 5.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Senior
Repeat Status: Course can be repeated 98 time(s) for 998.90 credit(s)

MET 402 - Manufacturing Design with CAD
Covers design of tools and fixtures for manufacturing, including general-purpose work holders, modular and dedicated fixtures, jigs, fixturing principles, degree of freedom, locating and clamping components, wire frame and solid modeling, and 3d to 2D conversion. Students design models of fixtures.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MET 100 Minimum Grade: D and MET 313 Minimum Grade: D
Repeat Status: Not repeatable for credit

MET 403 - Three Dimensional Modeling

Covers three-dimensional design with emphasis on manufacturing and industrial standards. Includes computer-aided-manufacturing using solid, surface, and wire-frame models.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MET 100 Minimum Grade: D and MET 313 Minimum Grade: D
Repeat Status: Not repeatable for credit

MET 404 - Digital Instrumentation
Covers digital technology and its application in manufacturing. Covers variables, procedures, and processes of total quality control.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: EET 201 Minimum Grade: D
Repeat Status: Not repeatable for credit

MET 407 - Manufacturing Processes
Covers a systematic understanding of the operations, applications, and planning of manufacturing processes. Discusses quantitative evaluations of processing parameters influencing product quality.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MET 101 Minimum Grade: D and MATH 122 Minimum Grade: D
Repeat Status: Not repeatable for credit

MET 408 - MFG Information Management
Covers information management in manufacturing. Topics include cost estimation and control, manufacturing resources planning (MRP), just-in-time (JIT), production and inventory controls, management information systems (MIS), supply chain management (SCM), and other advanced information management technology.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MET 205 Minimum Grade: D and MATH 122 Minimum Grade: D
Repeat Status: Not repeatable for credit

MET 409 - Green Manufacturing
Covers life cycle analysis, pollution prevention, recycling, and lean manufacturing, including characteristics of hazardous substances and wastes, medical surveillance for plant personnel, toxicology, respirators and protective, environmental direct reading indicators, decontamination procedures and safe working practices for MFG.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Graduate Quarter
Pre-Requisites: MET 131 Minimum Grade: D
Repeat Status: Not repeatable for credit

MET 411 - Adv Computer Numerical Control
This course covers applied topics related to the integration of computer, CNC machines, and internet-based automation technologies in modern manufacturing.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MET 316 Minimum Grade: D
Repeat Status: Not repeatable for credit

MET 421 - Senior Design Project I
This course constitutes the first course of a three-quarter course sequence. It aims to train the students in identifying projects of relevance to the society, in planning and scheduling a solution, and in entrepreneurial activities that may result from the project. The course is also intended to cover an industrial project starting from the proposal writing and conceptual design to final steps. This course is focused on proposal writing.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must have the following Classification(s):
Senior
Repeat Status: Not repeatable for credit

MET 422 - Senior Design Project II
This course constitutes the second course of a three-quarter course sequence and continues MET 421. It aims to train the students in maintaining the progress of a project on schedule, including resolving any team conflicts. It also trains them how to prepare oral, and submit written progress reports. The students supply summary reports to his/her advisor. This course is focused on following standard design steps from the conceptual to final design.
Credits: 3.00

College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MET 421 Minimum Grade: D
Repeat Status: Not repeatable for credit

MET 423 - Senior Design Project III
This course constitutes the final course of a three-quarter course sequence and continues MET 422. It aims to train the students to conduct a project form the conceptual to the preliminary and the final design, how to conduct program review, and how to present and document the findings, design, and conclusions, in both oral and written formats. This course is focusing on following standard design from the conceptual to final step and preparation of written final report preparation of written final report and presentation to the public.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MET 422 Minimum Grade: D
Repeat Status: Not repeatable for credit

Mechanical Engineering & Mechanics Courses

MEM 201 - Foundations of Computer Aided Design
Covers application of modern, computer-aided graphics techniques and the use of state-of-the-art, computer-aided design/drafting package(s). Includes topics such as principles of computer-aided design/drafting and interactions with computer-aided manufacturing, rapid prototyping, and other modern manufacturing processes; engineering graphics and graphics languages in computer-aided design and/or drafting; creation of a drawing environment; database and file management, editing, modification, displaying, dimensioning, plotting and printing; special editing techniques; 3-D modeling, solid modeling, shading, and rendering; and file transfer. Students must have Sophomore class standing.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites:
Repeat Status: Not repeatable for credit

MEM 202 - Engineering Mechanics-Statics
Covers intermediate static mechanics, an extension of the fundamental concepts and methods of static mechanics introduced in the freshman courses TDEC 111, TDEC 113, and TDEC 115. Includes topics such as problem formulation and solution methods; two-and three-dimensional vector representation of forces, moments and couples; static equilibrium of particles, rigid bodies, and engineering structures; analysis of external and internal forces in structures via methods of free body diagrams; and properties of cross-sectional areas.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PHYS 185 Minimum Grade: D or PHYS 111 Minimum Grade: D or PHYS 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 220 - Basic Fluid Mechanics
Covers general physical properties of a fluid; kinetics of fluid motion; material derivative, vorticity, strain, and dynamics of fluids; and derivation of conservation laws in control volume form with applications.
Credits: 4.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: TDEC 114 Minimum Grade: D or MATH 189 Minimum Grade: D or MATH 200 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 230 - Mechanics of Materials I
Covers definitions of stress and strain, uniaxial loading, torsion, bending moments and shear forces in beams, bending stresses and shear stress in beams, and stress transformation.
Credits: 4.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MEM 202 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 238 - Dynamics
Covers kinematics and kinetics in two and three-dimensional space, force and acceleration, linear and angular momentum, and energy methods.
Credits: 4.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education

May not have the following Classification(s):
Freshman
Pre-Requisites: (MATH 189 Minimum Grade: D or MATH 200 Minimum Grade: D) and (PHYS 111 Minimum Grade: D or PHYS 185 Minimum Grade: D or PHYS 101 Minimum Grade: D)
Repeat Status: Not repeatable for credit

MEM 255 - Introduction to Controls
Introduces the concepts of modeling of mechanical, electrical, electromechanical, thermal, and hydraulic systems; linearization; state-space model; time-domain analysis; transfer functions; frequency-domain analysis; analysis of systems involving automatic control of position, speed, power, flow, pressure, temperature, and other physical quantities; basic concept of feedback; basic concept of stability; computer-aided analysis.
Credits: 4.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MEM 238 Minimum Grade: D and (MATH 201 Minimum Grade: D or MATH 261 Minimum Grade: D or ENGR 231 Minimum Grade: D) and (MATH 210 Minimum Grade: D or MATH 262 Minimum Grade: D or ENGR 232 Minimum Grade: D)
Repeat Status: Not repeatable for credit

MEM 304 - Intro to Biomechanical Eng
An overview of the application of mechanical engineering to biological systems. Covers basic anatomy and physiology; tissue, joint, cell, and protein mechanics; joint kinematics; biofluid mechanics; biothermodynamics; biotransport; biomimetic controls; and biomanufacturing.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: MATH 200 Minimum Grade: D and PHYS 101 Minimum Grade: D and CHEM 102 Minimum Grade: D and BIO 141 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 310 - Thermodynamic Analysis I
Reviews first and second laws of thermodynamics as applied to closed systems, control volumes, and thermodynamic cycles; covers thermodynamic relations and properties of real fluids, mixtures, and solutions; introduces phase and chemical equilibrium, power and refrigeration cycles, and combustion.
Credits: 4.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENGR 210 Minimum Grade: D or MEM 210 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 311 - Thermal & Fluid Sci Lab
Introduces modern laboratory techniques, including statistical analysis of experimental data; thermodynamic properties and equations of state; and dynamic and static temperature measurements with potentiometers, bridge circuits, and oscilloscopes. Fall.
Credits: 2.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MEM 220 Minimum Grade: D and MEM 310 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 320 - Fluid Dynamics I
Covers equation of motion for compressible flow; static, total, and stagnation concepts; one-dimensional isentropic, normal shock, including Fanno and Rayleigh flows and choked flow; two-dimensional supersonic flow, including Prandtl-Meyer flow and oblique shocks; analysis and design of compressible flow devices, including supersonic nozzles, diffusers, wind tunnels, inlets, and combustors.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MEM 220 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 330 - Mechanics of Materials II
Reviews mechanics of materials, beam theory, combined loading, stress transformation, shear center, asymmetrical bending, deflection of beams, statically indeterminate beams, energy methods, inelastic bending, and beam column instability.
Credits: 4.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman

Pre-Requisites: MEM 230 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 331 - Experimental Mechanics I
Covers static testing methods, including strain gages, extensometers, photoelasticity, and model analysis; practical applications of experimental stress analysis; and verification of standard materials tests, including tensile, shear, and buckling. Winter. Some or all pre-requisites may be taken as either a pre-requisite or co-requisite. Please see the department for more information.
Credits: 2.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MEM 230 Minimum Grade: D and MEM 238 Minimum Grade: D (May be taken concurrently)
Repeat Status: Not repeatable for credit

MEM 345 - Heat Transfer
Covers fundamentals of conduction, convection, and radiation; steady and unsteady heat conduction; fundamentals of boundary layer flows; introduction to forced and free convection for external and internal flows; blackbody radiation; and radiation and surface radiation properties.
Credits: 4.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENGR 210 Minimum Grade: D and (MEM 220 Minimum Grade: D or CIVE 320 Minimum Grade: D) and (MATH 210 Minimum Grade: D or MATH 262 Minimum Grade: D or ENGR 232 Minimum Grade: D)
Repeat Status: Not repeatable for credit

MEM 351 - Dynamic Systems Laboratory I
Includes experiments involving modeling and simulation of linear and non-linear dynamic systems, including feedback controls. Spring.
Credits: 2.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MEM 255 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 355 - Perf Enhancemt Dyn Systems
This course introduces measures of performance of dynamical systems, means of computing/evaluation-of such measures, and how to design controllers to improve performance.
Credits: 4.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: MEM 255 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 361 - Engineering Reliability
Reviews probability concepts and modeling of random phenomena, including parameter estimation, empirical determination of distribution models, catastrophic failure models, material strength and fatigue life distribution, and reliability improvement.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Junior
Senior
Pre-Requisites: MATH 290 Minimum Grade: D or MATH 201 Minimum Grade: D or MATH 261 Minimum Grade: D or ENGR 231 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 373 - Space Systems Engineering I
Introduction to space engineering through presentation of two topics that serve as the foundation of space systems analysis and design: rocket propulsion and orbital mechanics.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: MEM 220 Minimum Grade: D and MEM 238 Minimum Grade: D and MEM 310 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 374 - Space Systems Engineering II
Introduction to design principles and theory of satellite systems engineering, including design theories and parameters involved in satellite development, as well as real life conditions such as applications, product assurance, assembly, and testing.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics

Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: MEM 373 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 380 - Special Topics Mech Engr
Selected topics that meet student interests and faculty capabilities. May be taken more than one time when the topics vary. Students may enroll in more than one section of this course in any one term when different topics are covered in each section. This is a writing intensive course.
Credits: 12.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Pre-Requisites:
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

MEM 395 - Hess UG Scholars Research
A change for undergraduates to experience independent research as part of the MEM Hess Honors Program. Weekly group meetings to discuss the details of the research endeavor are coupled with independent student in a research laboratory. May be repeated five times for credit.
Credits: .50 to 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MEM 310 Minimum Grade: D
Repeat Status: Course can be repeated 5 time(s) for 18.00 credit(s)

MEM 399 - Independ Study Mech Engr
Provides independent study or research on a topic approved by the department.
Credits: .50 to 12.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

MEM 400 - Internal Combustion Engines
Covers engine types and trends, thermodynamics of engines and engine processes, ideal and actual engine processes and cycles, combustion and emissions, fuel chemistry and properties, detonation and knock, and engine testing and performance.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MEM 310 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 402 - Power Plant Design
Covers heat cycle arrangement, equipment selection, analysis of cost demands, and diversity factors. Includes economic studies of plant and cycle arrangements.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MEM 310 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 403 - Gas Turbines & Jet Propulsion
Covers fundamentals of thermodynamics and aerothermodynamics, and application to propulsion engines; thermodynamic cycles and performance analysis of gas turbines and air-breathing propulsion systems, turbojet, turboprop, ducted fan, ramjet, and ducted rocket; theory and design of ramjets, liquid and solid rockets, air-augmented rockets, and hybrid rockets; aerodynamics of flames, including the thermodynamics and kinetics of combustion reactions; supersonic combustion technology and zero-g propulsion problems; and propulsion systems comparison and evaluation for space missions.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MEM 220 Minimum Grade: D and MEM 310 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 405 - Principles of Combustion I
Covers thermochemistry, the relationship between heats of formation and bond energies, heat capacity and heats of reaction, chemical equilibrium, calculation of flame temperature, and composition of burned gas.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics

Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MEM 410 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 406 - Principles of Combustion II
Covers laminar flame propagation in premixed gases, detonation and deflagration, burning of liquid and solid fuels, and diffusion flames.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MEM 405 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 410 - Thermodynamic Analysis II
Covers thermodynamic analysis of ideal and real mixtures and gas phase reacting systems. Introduces equilibrium analysis.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MEM 310 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 413 - HVAC Loads
Human comfort and associated models; state-of-the-art methods of calculating building peak heating and cooling loads; analysis of different psychrometric processes; different types of secondary systems: description, operating principles, modeling, simulation and sizing of secondary systems.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MEM 345 Minimum Grade: D and (MEM 310 Minimum Grade: D or AE 220 Minimum Grade: D)
Repeat Status: Not repeatable for credit

MEM 414 - HVAC Equipment
Standard and real, single-stage multistage refrigeration cycles; vapor compression components (compressor, expansion devices, condensers, and evaporators); heat pumps; absorption systems; boilers; heat exchangers; cooling coils, cooling towers; part-load energy performance; annual energy; annual energy estimation methods (degree-day, bin method, modified degree-day).
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MEM 345 Minimum Grade: D and (MEM 310 Minimum Grade: D or AE 220 Minimum Grade: D)
Repeat Status: Not repeatable for credit

MEM 415 - Fuel Cell Engines
Introduces fundamental aspects and operating principles of fuel cell systems, including: basic electrochemical principles, thermodynamics required for understanding the operation, components including functions and materials, electrochemical performance characteristics, analysis of system losses and efficiency, various fuel cell types, current state of technology, application areas/implementation, and current technical challenges.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: (MEM 220 Minimum Grade: D or CHE 302 Minimum Grade: D or CHE 311 Minimum Grade: D or CIVE 320 Minimum Grade: D) and MEM 310 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 417 - Introduction to Microfabrication
This course focuses on the fundamentals of microfabrication technologies. The materials, principles, and applications of silicon-based microfabrication technologies such as photolithography, wet/dry etching, deposition techniques, surface micromachining, and polymer micromachining are covered. This course also includes two lab sessions through which students have hands-on experiences in microfabrication.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must be enrolled in one of the following College(s)/School(s):
Arts and Sciences
College of Engineering
Must have the following Classification(s):
Junior
Senior
Repeat Status: Not repeatable for credit

MEM 419 - Microfluidics and Lab-on-a-Chip
This course focuses on design, manufacturing, and application of lab-on-a-chip systems as well as understanding microfluidic phenomena. The lecture covers novel microfluidic phenomena, microsensors, microactuators, and case studies. This course also includes two lab sessions through which student have hands-on experiences in lab-on-a-chip technology
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must be enrolled in one of the following College(s)/School(s):
Arts and Sciences
College of Engineering
Must have the following Classification(s):
Junior
Senior
Pre-Requisites: MEM 417 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 420 - Aerodynamics
Covers steady and unsteady flow, flow around a body, wing theory, thin airfoil theory, fundamental equation of finite-wing theory, and aerodynamic characteristics of wings. Introduces potential theory and boundary layer phenomena.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MEM 220 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 423 - Mechanics of Vibration
Covers free and forced vibrations of one-, two-, and multiple-degree-of-freedom systems; continuous systems; and transient and random vibration problems. Includes use of digital computer for homework and special class problems.
Credits: 4.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MEM 238 Minimum Grade: D and (TDEC 222 Minimum Grade: D or ENGR 232 Minimum Grade: D or MATH 210 Minimum Grade: D or MATH 262 Minimum Grade: D)
Repeat Status: Not repeatable for credit

MEM 424 - Biomechanics
Introduces modeling of dynamics of biomechanical systems.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MEM 202 Minimum Grade: D and MEM 238 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 425 - Aircraft Design & Perform
Introduces aerodynamics and airfoils; steady flight; power required and power available curves; range and endurance; takeoff, glide, and landing; stick force and control-free stability; moment coefficients and derivatives; and designing to specification. Students must have Junior class standing.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Junior
Senior
Repeat Status: Not repeatable for credit

MEM 426 - Aerospace Structures
Covers properties of wing and fuselage sections, torsion of thin-walled and skin-stringer multiple-cell sections, non-symmetrical bending of wing and fuselage sections, shear in thin-walled and skin-stringer sections, and buckling. Introduces matrix methods.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MEM 230 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 427 - Finite Element Methods
Introduces the fundamental theory and formulations of finite element method and its application in structural mechanics and thermal/fluid science. Topics include formulation of 1-D and 2-D elements, isoparametric elements, static and dynamic analysis of trusses, beams, and frames, 2-D plane problems, and heat transfer problems.

Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MEM 230 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 428 - Introduction to Composites I
Introduces anisotropic elasticity, lamina stiffness and compliance, plane stress and strain, test methods, and failure criteria.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MEM 330 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 429 - Introduction to Composites II
Covers laminated plate theory, stiffness and compliance of laminated plates, effect of laminated configuration on elastic performance, and strength production.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MEM 428 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 430 - Advanced Stress Analysis
Examines three-dimensional representation of stress and strain, coordinate transformation, stress strain relationships for anisotropic and isotropic materials, equilibrium equations, boundary value problems, governing equations in plane strain and plane stress problems, Airy's stress function, two-dimensional problems in polar coordinates, and selected applications to stress analysis problems in mechanical engineering.
Credits: 4.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MEM 330 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 431 - Machine Design I
Covers static strength and fatigue theories of failure, fasteners, welded joints, springs, roller bearings, and lubricated spur gears.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Junior
Pre-Junior
Sophomore
Pre-Requisites: MEM 202 Minimum Grade: D and MEM 230 Minimum Grade: D and MEM 238 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 435 - Intro Comp Aid Desgn/Mfg
Covers fundamental use of CAD/CAM systems for geometry definition, finite element applications, and introductory computer graphics concepts.
Credits: 4.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Junior
Senior
Pre-Requisites: MEM 201 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 436 - Intro To Comp-Aided Mfg
Examination of the basic elements that are used to integrate the design and manufacturing processes. Robotics computerized-numerical controlled machine, and CAD/CAM systems. Manufacturability considerations when integrating unit process elements.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MEM 201 Minimum Grade: D and MEM 435 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 437 - Manufacturng Process I

Examines the basic elements used to integrate the design and manufacturing processes; robotics, computerized-numerical-controlled machines, and CAD/CAM systems; and manufacturability considerations when integrating unit process elements.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MEM 220 Minimum Grade: D and MEM 230 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 438 - Manufacturing Process II
Covers plastics and reinforced plastics processes, theory of polymer and plastic process, simple models of polymer flows, and manufacturability of plastics.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MEM 437 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 440 - Thermal Systems Analysis
This course covers fundamentals of thermal systems; the role of design in engineering practice; economic analysis of thermal systems; advanced concepts and analysis of heat exchangers and distillation equipment; modeling of thermal systems; simulation of thermal systems; fundamentals of optimization and design of optimized thermal systems.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MEM 345 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 444 - Biofluid Mechanics
This course introduces flow-related anatomy and pathophysiology, and biomedical flow devices and their design challenges. Analysis methods to solve biological fluid mechanics design problems are introduced and several interdisciplinary team projects are assigned to apply fluid mechanics to practical biological or medical problems.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MEM 220 Minimum Grade: D or BMES 451 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 446 - Fundamentals of Plasmas I
Introduces the fundamentals of plasma science and modern industrial plasma applications in electronics, fuel conversion, environmental control, chemistry, biology, and medicine. Topics include quasi-equilibrium and non-equilibrium thermodynamics, statistics, fluid dynamics and kinetics of plasma and other modern high temperature and high energy systems and processes.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: PHYS 201 Minimum Grade: D or TDEC 201 Minimum Grade: D or PHYS 112 Minimum Grade: D or PHYS 187 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 447 - Fundamentals of Plasmas II
Continues the development of the engineering fundamentals of plasma discharges applied in modern industrial plasma applications in electronics, fuel conversion, environmental control, chemistry, biology, and medicine. Topics include quasi-equilibrium and non-equilibrium thermodynamics, statistics, fluid dynamics of major thermal and non-thermal plasma discharges, operating at low, moderate and atmospheric pressures.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: MEM 446 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 448 - Applications of Thermal Plasmas
Introduces applications of modern thermal plasma processes focused on synthesis of new materials, material treatment, fuel conversion, environmental control, chemistry, biology, and medicine. Topics Include thermodynamics and fluid dynamics of high temperature plasma processes, engineering organization of specific modern thermal plasma technologies.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):

Continuing Education
Pre-Requisites: PHYS 201 Minimum Grade: D or TDEC 201 Minimum Grade: D or PHYS 112 Minimum Grade: D or PHYS 187 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 449 - Applications of Non-Thermal Plasmas
Application of modern non-thermal plasma processes focused on synthesis of new materials, material treatment, fuel conversion, environmental control, chemistry, biology, and medicine. Topics Include non-equilibrium thermodynamics and fluid dynamics of cold temperature plasma processes, engineering organization of specific modern non-thermal plasma technologies.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: PHYS 201 Minimum Grade: D or TDEC 201 Minimum Grade: D or PHYS 112 Minimum Grade: D or PHYS 187 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 453 - Aircrft Flight Dynam & Ctrl I
Covers general equations of motion for aircraft; linearization based on small disturbance theory and modal analysis to identify longitudinal open-loop characteristics; review of classical control theory; state space analysis; and autopilot design, including classical, pole placement, and optimal.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MEM 355 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 454 - Aircrft Flight Dynam& Ctrl II
Covers observers; lateral dynamics; Dutch roll, roll convergence, and spiral modes; autopilot design and evaluations; and inertial cross-coupling computer simulation and analysis.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MEM 453 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 455 - Introduction to Robotics
Introduces basic concepts in robot operation and structure, including actuators, sensors, mechanical components, robot control and robot programming.
Credits: 4.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MEM 238 Minimum Grade: D and MEM 255 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 456 - Robotics II
Covers homogeneous kinematics of robots; velocities and accelerations; and static forces in manipulators, including iterative Newton-Euler formulation of manipulator dynamics.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MEM 455 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 457 - Robotics III
Covers robotic-based automated manufacturing, including robot work cell configurations, applications of robots in manufacturing, material transfer, assembly, and inspection.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following College(s)/School(s):
College of Engineering
Must have the following Classification(s):
Senior
Pre-Requisites: MEM 456 Minimum Grade: D
Repeat Status:

MEM 458 - Micro-Based Control Sys I
Provides hands-on experience in real-time control and manipulation of hardware dynamic systems, including microcomputer, architecture, software, and device drivers. Emphasizes real-time interfacing of data acquisition and control systems.
Credits: 3.00
College: College of Engineering

Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MEM 355 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 459 - Micro-Based Cntrol Sys II
Continues MEM 458. Provides real-time control and manipulation of hardware dynamic systems. Emphasizes real-time interfacing of data acquisition and control systems.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MEM 458 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 462 - Intro To Engr Mgmt
Introduces the general theory of management, including the processes of planning, organizing, assembling resources, supervising, and controlling. This is a writing intensive course.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Junior
Senior
Repeat Status: Not repeatable for credit

MEM 475 - Medical Robotics I
Use of robots in surgery, safety considerations, understanding robot kinematics, analysis of surgeon performance using a robotic devices, inverse kinematics, velocity analysis, acceleration analysis, various types of surgeries case study.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MEM 238 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 476 - Medical Robotics II
Force and movement for robot arms, robot dynamics, computer vision, vision based control, combining haptics, vision and robot dynamics in a cohesive framework for the development of a medical robotic system.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MEM 475 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 477 - Haptics for Medical Robotics
Introduction to haptics, physiology of touch, actuators, sensors, non-portable force feedback, portable voice feedback, tactile feedback interfaces, haptic sensing and control.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MEM 238 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 478 - Computer-Aided Tissue Engr
Introduction to the engineering aspects of tissue reengineering and integrated CAD/CAE/CAM technology applied to tissue engineering with hands-on experience combing CAD, medical image processing, 3-D reconstruction software, and solid freeform fabrication of tissue scaffolding.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must have the following Classification(s):
Senior
Repeat Status: Not repeatable for credit

MEM 491 - Senior Design Project I
Introduces the design process, including information retrieval, problem definition, proposal writing, patents, and design notebooks. Includes presentations on problem areas by experts from industry, government, and education.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Senior

Pre-Requisites: MEM 230 Minimum Grade: D and MEM 238 Minimum Grade: D and MEM 355 Minimum Grade: D and MEM 345 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 492 - Senior Design Project II
Continues MEM 491. Requires written and oral progress reports.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Senior
Pre-Requisites: MEM 491 Minimum Grade: D
Repeat Status: Not repeatable for credit

MEM 493 - Senior Design Project III
Continues MEM 492. Requires written and oral final reports, including oral presentations by each design team at a formal Design Conference open to the public and conducted in the style of a professional conference.
Credits: 3.00
College: College of Engineering
Department: Mechanical Engr & Mechanics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Senior
Pre-Requisites: MEM 492 Minimum Grade: D
Repeat Status: Not repeatable for credit

Mechanical Engineering Technology Courses

MHT 201 - Kinematics
Study of four-bar linkages, sliders, and other devices using orthogonal of vectors, instantaneous centers, equivalent linkages, and effective cranks. Graphic solutions are emphasized, including an introduction to computer software.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites: PHYS 152 Minimum Grade: D
Repeat Status: Not repeatable for credit

MHT 205 - Thermodynamics I
Students are introduced to the general theory of heat and matter; laws of thermodynamics; energy-transformation principles and availability of energy; and properties and processes for substances and ideal gases.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: PHYS 154 Minimum Grade: D and MATH 122 Minimum Grade: D
Repeat Status: Not repeatable for credit

MHT 206 - Thermodynamics II
First and second law analysis of power cycle components. Analysis of gas power cycles, including Otto & Diesel engines and Brayton cycle turbines. Analysis of traditional power plant cycles, including Rankine, Refrigeration and heat pump.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: MHT 205 Minimum Grade: D
Repeat Status: Not repeatable for credit

MHT 214 - Technology Lab I
Conduct experiments to determine the physical properties of incompressible fluids and to measure the flow rates of velocities utilizing pilot tubes, office plates, Venturi and Weirs flow meter, U-tube differential manometers and piezometers. Some or all pre-requisites may be taken as either a pre-requisite or co-requisite. Please see the department for more information.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Junior
Senior
Pre-Requisites: MHT 301 Minimum Grade: D (May be taken concurrently)
Repeat Status: Not repeatable for credit

MHT 220 - Applied Statics
Explores forces, moments, couples, statistics of particles, and rigid bodies in two and three dimensions. Examines external and internal distributed forces, first moments and centroids, and structures such as trusses, frames and machines.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:

Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: PHYS 282 Minimum Grade: D and MATH 122 Minimum Grade: D
Repeat Status: Not repeatable for credit

MHT 222 - Applied Dynamics I
Topics include friction, second moments, and virtual work; kinematics of particles-rectilinear and curvilinear motions of dynamic particles-force, mass and acceleration, work and energy.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MHT 220 Minimum Grade: D or MET 103 Minimum Grade: D
Repeat Status: Not repeatable for credit

MHT 224 - Applied Dynamics II
Impulse and momentum of particles; kinematics and dynamics of rigid bodies-force-mass and acceleration; dynamics of rigid bodies - work and energy. Impulse and momentum; introduction to mechanical vibration.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MHT 222 Minimum Grade: D
Repeat Status: Not repeatable for credit

MHT 226 - Measurement Lab
A detailed laboratory report will be required of each student consisting of 15-20 pages of analysis, calculation and discussion of results based on the experiments conducted.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: PHYS 154 Minimum Grade: D
Repeat Status: Not repeatable for credit

MHT 295 - Environmental Control Plasma Laboratory
The course presents engineering principles of non-thermal plasma application to air cleaning from Volatile Organic Compounds by combining hands-on laboratory experience with lectures. The students learn the engineering and physical principles of non-equilibrium plasma systems using the unique pulsed corona system of the Drexel Plasma Institute Environmental Laboratory.
Credits: 2.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: CHEM 111 Minimum Grade: D and CHEM 113 Minimum Grade: D
Repeat Status: Not repeatable for credit

MHT 301 - Fluid Mechanics I
Examine hydrostatics; principles governing fluids at rest; pressure measurement; hydrostatic forces on submerged areas and objects; simple dams. Discuss fluid flow in pipes under pressure; fluid energy; power and friction loss; Bernoulli's theorem. Flow measurement.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MHT 220 Minimum Grade: D or MET 103 Minimum Grade: D
Repeat Status: Not repeatable for credit

MHT 310 - Appl Strength of Materials I
Topics include axially loaded members, stress and strain, allowable stresses, factor of safety, temperature effects, indeterminate members, torsional stresses and deformation. Students also examine shear moment beams; and flexural and transverse shearing stresses in beams.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MHT 222 Minimum Grade: D
Repeat Status: Not repeatable for credit

MHT 312 - Appl Strength of Materials II
A study of determinate and indeterminate bean deflections and reactions by superposition, integration and moment area methods. Topics include combined stresses; principal stresses; Mohr's circle; and theories of failure.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MHT 310 Minimum Grade: D
Repeat Status: Not repeatable for credit

MHT 314 - Thermo and Heat Transfer Lab
Explores basic thermodynamic relations. Conduct experiments of the flow of compressible fluids and steam and the energy conversion of a fuel into a working substance and the related heat transfer mechanisms.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MHT 205 Minimum Grade: D
Repeat Status: Not repeatable for credit

MHT 316 - Fluid Mechanics Lab
Conduct experiments to determine the physical properties of incompressible fluids and to measure the flow rate of velocities as the fluid flows through open channels, partially filled conduits, conduits under pressure, pipe networks, and turbines and pumps.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MHT 301 Minimum Grade: D
Repeat Status: Not repeatable for credit

MHT 401 - Mechanical Design I
An introduction to mechanical design, the design process, design factors, creativity, optimization, human factors, and value engineering. Topics include simple design, properties and selection of materials; stress concentrations; strength under combined stresses; theories of failure; impact; and fluctuating and repeated loads.
Credits: 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MET 101 Minimum Grade: D and MET 103 Minimum Grade: D
Repeat Status: Not repeatable for credit

MHT 402 - Mechanical Design II
Topics include deformation and design of belt drives, chair drives, detachable fasteners and bearings, lubrication, and journal bearings. Covers stresses and power transmission of spur, bevel, and worm gear, shaft design, and clutches and brakes.
Credits: 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MHT 401 Minimum Grade: D
Repeat Status: Not repeatable for credit

MHT 403 - Fluid Mechanics II
Consider pipe networks and reservoir systems, flow in open channels and uniform flow energy, friction loss, minor losses, velocity distribution, alternate stages of flow, critical flow, non-uniform flow, accelerated, retarded flow and hydraulic jump.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MHT 301 Minimum Grade: D
Repeat Status: Not repeatable for credit

MHT 404 - Advanced Materials
Lectures on inorganic materials, i.e., polymers, glasses, ceramics, concrete, wood, and materials having important electrical and magnetic properties; also a summary of the most up-to-date applications for the fabrication and uses of both metals and nonmetals.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must have the following Classification(s):
Senior
Pre-Requisites: MET 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

MHT 405 - HVAC
Heating, Ventilation, and Air Conditioning (HVAC) focuses on air conditioning principles, including psychometrics and heat pumps. Examines calculation of heating and cooling loads in accordance with ASHRAE practices, principles of gas compression, analysis of vapor compression; refrigeration systems, low temperature refrigeration cycles, and absorption refrigeration systems.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must have the following Classification(s):
Senior
Pre-Requisites: MHT 206 Minimum Grade: D
Repeat Status: Not repeatable for credit

Professional Studies Courses

PRST 180 - Special Topics in PRST

Covers special topics related to Professional Studies. Allows the college to offer new, specialized lower-level topics of interest and relevance to the major.
Credits: 1.00 to 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 11 time(s) for 12.00 credit(s)

PRST 211 - Computer Applications for Professionals
Through lecture-demonstrations, hands-on labs, independent study assignments, and case study analysis, students are challenged to use critical-thinking, data analysis and problem-solving techniques to develop cost-efficient and effective solutions to realistic professional problems using computer-based business application software. Students should possess a basic level of computer proficiency before taking this course.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PRST 212 - Creative Studies in the World Wide Web
This course prepares professionals with an understanding of the process of developing creative, functional Web sites. Concentrating on the creative flow of the design process, the course uses Adobe Dreamweaver as the medium for development. Students should possess a basic level of computer proficiency before taking this course.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PRST 303 - Interpersonal Skills for Virtual Teams
This course will introduce students to the dynamics of virtual teamwork and will allow students to experience first-hand the opportunities and challenges associated with operating in a virtual environment.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PRST 330 - Career & Professional Development
This course explores the literature of careers including preparation, organizational entry, orientation, nontraditional careers, and early, mid, and later career issues. The course provides students with opportunities for assessment of interests and capabilities, initiation and implementation of a personal development plan (PDP), and feedback on personal and career development.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following College(s)/School(s):
School of Tech & Prof Studies
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PRST 380 - Advanced Special Topics in PRST
Covers special topics of interest in Professional Studies. This course may be repeated for credit.
Credits: 1.00 to 4.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 11 time(s) for 12.00 credit(s)

PRST 399 - Independent Study in Professional Studies
Provides individual study or research in Professional Studies under faculty supervision. This course may be repeated for credit.
Credits: .50 to 6.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Professional Studies
Repeat Status: Course can be repeated 11 time(s) for 6.00 credit(s)

PRST 440 - Policy Analysis
The course analyzes the entire process of policy agenda-setting, initiation, decision-making, implementation, evaluation and assessment. Students will be equipped with tools to analyze and understand the entire process of policy formation in any public or private enterprise. The skills developed in this course can be used in many professional fields.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following College(s)/School(s):

School of Tech & Prof Studies
May not have the following Classification(s):
Freshman
Sophomore
Repeat Status: Not repeatable for credit

PRST 450 - Creative Leadership for Professionals
This course presents leadership as a collaborative focus for transforming change. Topics include the leadership crisis, differences between leadership and management, how leaders create and change culture, and ways in which leaders build creative, enduring organizations. In addition, the course is designed to help students develop their own leadership potential.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following College(s)/School(s):
School of Tech & Prof Studies
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites:
Repeat Status: Not repeatable for credit

PRST 491 - Professional Portfolio I
The professional portfolio is a two-course capstone project that provides Professional Studies majors with an opportunity to demonstrate achievement in their major and to engage in self-reflection. Components include reflective essays and carefully chosen samples of academic and relevant professional work completed during the college experience. This is a writing intensive course.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Professional Studies
May not have the following Classification(s):
Freshman
Junior
Pre-Junior
Sophomore
Pre-Requisites: COM 270 Minimum Grade: D and CAT 301 Minimum Grade: D and CRTV 301 Minimum Grade: D and CRTV 302 Minimum Grade: D and CRTV 303 Minimum Grade: D and PRST 440 Minimum Grade: D and PRST 450 Minimum Grade: D
Repeat Status: Not repeatable for credit

PRST 492 - Professional Portfolio II
Requires completion of the professional portfolio begun on PRST 491. Components of Professional Portfolio II include creative expression, future directions, and reflect on the major and the experience of creating a portfolio. This is a writing intensive course.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Professional Studies
May not have the following Classification(s):
Freshman
Junior
Pre-Junior
Sophomore
Pre-Requisites: COM 230 Minimum Grade: C and CAT 360 Minimum Grade: C and PRST 491 Minimum Grade: C
Repeat Status: Not repeatable for credit

Property Management Courses

PRMT 110 - Intro to Property Management
An introduction to the multidisciplinary world of property management. This course provides an overview of facilities, construction, marketing, leadership, human resource management, finance, law, sociology, and how to interact with a variety of key stakeholders, such as property owners, investors, tenants, and the government.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PRMT 210 - Rental Prop & Fair Housing Law
Rental Property Law including lease essentials, tenancies, implied warranty of habitability, security deposits, tort liability, leasehold improvements, default, eviction, landlord's and tenant's rights, duties and remedies. The course covers the basics of Fair Housing law, the Americans with Disabilities Act, and anti-discrimination law. Current issues and cases are featured.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites:
Repeat Status: Not repeatable for credit

PRMT 215 - Building Systems for PRMT I
The first of a two-course sequence addressing building systems. Covers heating, ventilating, and air-conditioning principles and practices as they relate to property management.
Credits: 3.00
College: School of Tech & Prof Studies

Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PRMT 216 - Building Systems for PRMT II
The second of a two-course sequence addressing building systems. Covers plumbing, electrical, fire safety, telecommunications, acoustical and roofing system principles and practices as they relate to property management.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: PRMT 215 Minimum Grade: D
Repeat Status: Not repeatable for credit

PRMT 225 - Technical Drawings for Property Managers
This course covers reading and interpreting a variety of technical drawings and plans that relate to property management.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PRMT 310 - Property Financing & Valuation
This course provides the financial tools to calculate and analyze the cash flows, tax implications and risks of various projects. Decision-making models, lease valuation, and sensitivity analysis are employed in real situations. Alternative financing choices, cost of funds, tax incentive options, capitalization rates, and current market conditions are considered.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Pre-Requisites: FIN 301 Minimum Grade: D
Repeat Status: Not repeatable for credit

PRMT 315 - Property Risk Management
This course focuses on strategies managers and owners employ to maximize protection of property and tenants and minimize exposure to liability and costs. The course includes emergency management, security, and insurance protection. Agency duties are explored including fair housing and environmental issues. The essentials of various insurance policies are presented.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PRMT 320 - Sustainable Property Mgt
An introduction to the study of sustainable housing where energy issues and environmental resource efficiencies are considered in the planning, development, design, renovation, environmental protection, waste minimization, and overall management of a property. The impact of Green Property design on property management especially facility management is featured.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites:
Repeat Status: Not repeatable for credit

PRMT 325 - Human Res Strategies - Prop Mgmt
This course focuses on specialized strategies to successfully manage employees and subcontractors involved in property management companies and projects. A variety of areas are covered: recruiting top talent, retention, diversity policies, employee coaching, negotiations, conflict resolution, training and development, outsourcing, and housing law.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites:
Repeat Status: Not repeatable for credit

PRMT 330 - Property Management Technology
The focus of this course is the role that technology plays in the management and marketing of property. Important issues discussed include the latest software innovations, auto-pay systems, tenant website systems, software integration, communications strategy, security systems, television and data systems, and incorporating technology into a property's marketing plan.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: PRMT 110 Minimum Grade: D

Repeat Status: Not repeatable for credit

PRMT 333 - Social Responsibility for Property Managers
The course explores application of ethics and social responsibility concepts, and challenges property managers are likely to face.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PRMT 335 - Mktg & Leasing Residential Prop
This course covers the marketing of residential rental properties to acquire new tenants and retain existing ones. Market analysis is used as a foundation to create a marketing plan. Buyer motivation, customer service, and tenant retention strategies are discussed. Students demonstrate successful sales techniques by participating in a sales presentation.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following Major(s):
Pre-Requisites:
Repeat Status: Not repeatable for credit

PRMT 340 - Managing & Marketing Retail Prop
An introduction to managing and marketing retail property using shopping centers as the basis for discussion. Issues include leasing, tenant mix, tenant relations, advertising, and daily and long-term concerns. Mixed-use developments are featured and students review best practice examples and analyze and visit area shopping centers.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following Major(s):
Pre-Requisites: PRMT 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

PRMT 341 - Managing and Marketing Office Buildings
This course covers skills required for successful office building management. Topics include managing, marketing, leasing, and maintaining single office buildings and portfolios of properties. Views management of the office building as a real estate investment.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: PRMT 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

PRMT 342 - Managing and Marketing Industrial Properties
This course covers skills required for successful industrial property management. Topics include managing, marketing, leasing, and maintaining single industrial properties and portfolios of industrial properties.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: PRMT 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

PRMT 345 - Managing & Marketing Housing for an Aging Pop
This course covers the management and marketing of housing for later life starting with a market analysis. Students discover challenges to be overcome and opportunities available in this unique segment of the housing market. The course covers successful management and marketing strategies involving active adult communities and senior living facilities.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following Major(s):
Pre-Requisites: PRMT 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

PRMT 350 - Affordable Housing Management
An introduction to the challenges of managing affordable housing. Managing affordable housing requires the interaction of important players: legislators, government policymakers, citizen advocacy groups, and citizens/tenants. This course features presentations from industry leaders, visits to affordable developments, and completion of an analysis paper covering the development, marketing and management process.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: PRMT 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

PRMT 355 - Student Housing Management
This course focuses on the effective management of student housing. Successful student housing managers need to have specialized education in a variety of areas including federal laws, emergency management requirements, security and communications planning, marketing to the student population, town-gown relations and awareness of current cases and issues.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: PRMT 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

PRMT 356 - Military Housing Management
This course focuses on the effective management of military housing. The successful management of military housing requires specialized study in a variety of areas including federal laws, emergency management requirements, security and communications planning, military regulations, Department of Defense initiatives and regulations, and awareness of current cases and issues.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: PRMT 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

PRMT 360 - Managing & Mkt Commercial Pro
An introduction to managing and marketing commercial property using office buildings, warehouses, medical buildings, factories and industrial properties as the basis for discussion and analysis. Issues include maintenance, marketing, location analysis, lease provisions, risk management, leasehold improvements, and government and tax incentive programs. Students discuss best practice examples and analyze and visit properties to meet industry leaders.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: PRMT 110 Minimum Grade: D and FIN 301 Minimum Grade: D
Repeat Status: Not repeatable for credit

PRMT 363 - Commercial Property Financial Reports
Covers the administration, preparation, and interpretation of operating and capital budgets, profit and loss statements, balance sheets, arrears reports, vacancy reports, and collection reports. Topics include tenant charges for operating costs, calculating a lease commission, and understanding components of net operating income and cash flow.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: FIN 301 Minimum Grade: D and PRMT 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

PRMT 365 - Commercial Property Appraisal
This course focuses on the fundamental concepts of real estate appraisal with an emphasis on the process of valuing commercial property. The course covers the foundations of property valuation, data collection and analysis, and alternative approaches to estimating the value of commercial properties.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites:
Repeat Status: Not repeatable for credit

PRMT 380 - Special Topics in PRMT
Covers special topics of interest in Property Management. This course may be repeated for credit.
Credits: .05 to 12.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Repeat Status: Course can be repeated for 12.00 credit(s)

PRMT 399 - Independent Study in Property Mgt
Provides individual study or research in Property Management under faculty supervision. This course may be repeated for credit.
Credits: 1.00 to 6.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Major(s):
Property Management
Repeat Status: Course can be repeated for 12.00 credit(s)

PRMT 491 - Senior Project in Property Mgt
In this capstone course students participate in discussions and conduct research of key issues facing property managers. A major part of the class is a community analysis project using guidelines provided by the National Apartment Association and a professional property manager as a mentor through the process.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Property Management
Pre-Requisites: CAT 301 Minimum Grade: D or CAT 302 Minimum Grade: D or DSMR 231 Minimum Grade: D or MKTG 301 Minimum Grade: D or ORGB 300 Minimum Grade: D or PRMT 310 Minimum Grade: D or PRMT 315 Minimum Grade: D or PRMT 320 Minimum Grade: D or PRMT 325 Minimum Grade: D or PRMT 330 Minimum Grade: D or REAL 330 Minimum Grade: D
Repeat Status: Not repeatable for credit

Real Estate Courses

REAL 310 - Introduction to Real Estate
This course provides the foundation for understanding the Real Estate business with a survey of development, land use, planning, property rights, leases, deeds, contracts, mortgages, time value of money and insurance.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites: ACCT 115 Minimum Grade: D
Repeat Status: Not repeatable for credit

REAL 320 - Real Estate Law Princ & Pract
This course will explore the unique legal requirements of the real estate business including property rights, involuntary transfers, easements, private restrictions, public restrictions, zoning and land development laws.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites: REAL 310 Minimum Grade: D
Repeat Status: Not repeatable for credit

REAL 330 - Facilities & Property Mngt
This course will explore the role of a property manager in maintaining a real estate asset, earning a return on operations and tenant retention and satisfaction through property management.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites: REAL 310 Minimum Grade: D
Repeat Status: Not repeatable for credit

REAL 470 - RE Invest & Mkt & Feas Anal
This course will introduce and explore the market analysis and feasibility methods in framing and supporting investment decision making for real estate projects.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites: CMGT 468 Minimum Grade: D
Repeat Status: Not repeatable for credit

REAL 471 - Adv Real Estate Invest & Anal
This course will explore the market analysis and feasibility methods in framing and supporting investment decision making for real estate projects. Detailed market analysis strategies will be employed and case studies will be analyzed to deepen the student's knowledge and judgment for investment decision making.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites: CMGT 468 Minimum Grade: D
Repeat Status: Not repeatable for credit

REAL 472 - Adv Mkt Research & Analysis
This course will explore the market research methods used to understand and dissect geographical and demographical real estate markets. Detailed market research strategies will be employed and case studies will be analyzed to deepen the student's knowledge of market research techniques and resources.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman

Sophomore
Pre-Requisites: CMGT 468 Minimum Grade: D
Repeat Status: Not repeatable for credit

REAL 473 - Sales & Mktg of Real Estate
This course will explore the strategies for successful marketing of real property bases on market research and development strategies.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites: CMGT 468 Minimum Grade: D
Repeat Status: Not repeatable for credit

REAL 474 - Real Estate Econ in Urban Mkts
This course will offer a unique and detailed perspective on urban real estate development and the special sub-markets in which they exist. Attention will be given to the characteristics of the particular economic factors relevant in urban real estate markets.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites: CMGT 468 Minimum Grade: D
Repeat Status: Not repeatable for credit

REAL 475 - Real Estate Finance
This course will focus on the options and implications of different financing methods with the unique trade-offs associated with each considered.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites: CMGT 468 Minimum Grade: D
Repeat Status: Not repeatable for credit

REAL 476 - Real Estate Valuation & Anal
This course will introduce the concepts of real estate valuation, appraisals, and the relationship of these to financing and cash requirements.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites: CMGT 468 Minimum Grade: D
Repeat Status: Not repeatable for credit

Retail Leadership Courses

RETL 315 - Power of Retail Brands
This course provides an in-depth analysis of theoretical and applied branding techniques. Retail marketing, merchandising, and in-store brand representatives will be analyzed to recognize the detailing necessary to create a successful retail brand. Students will read branding studies to comprehend why the phenomena of branding has encompassed our consumer society.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

RETL 325 - Applied In-Store Visual Strategies
Provides students with an understanding of how retailers use visual display to gain retail market share. Students will examine various types of visual display and how this impacts the retail environment.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

RETL 400 - Retail Leadership Capstone
This course will provide students practical experience leading all aspects of a retail establishment. Topics covered include customer service, human resources, planogram/floorset, visual merchandising/display, sales and completing the sale, merchandising the store, quality of merchandise/product, leadership responsibilities, and future goals.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):

Continuing Education
Repeat Status: Not repeatable for credit

Sport Management Courses

SMT 101 - Principles of Coaching
This course will include setting performance goals in coaching, the various roles of the coach, ethical conduct in coaching, the psychology of coaching, coach-athlete compatibility, coaching burnout, personality of the coach, and coaching youth sports. An emphasis is places on conducting practices and competitions to enhance the social-emotional growth of athletes.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Repeat Status: Not repeatable for credit

SMT 102 - Principles of Coaching II
This course will examine the administrative side of coaching by approaching the profession from a business manager's standpoint. The NCAA¿s Champs Life Skills model will be incorporated into the course. Students will develop their own personal philosophies and strategies crucial for fostering development of student athletes outside of sport.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: SMT 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

SMT 110 - The Business of Sport
This course will introduce students to the billion-dollar industry and identify the vast, creative, and substantial role business plays in professional, collegiate and amateur sports. Sports business applications are explored in the following areas: sponsorship. Promotions, marketing, fundraising, finance, media, ticketing, public relations, labor, facilities, e-sports and sport careers.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

SMT 152 - Leadership in Sports & Society
This course helps the students realize and understand their impact as role models in the community and leaders for youth in American society. The students and coaches will learn about theory and identify and develop their leadership styles.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites: SMT 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

SMT 200 - Intro to Facility/Event Mgmt
Introduction to Sport Facility and Event Management. An introduction to the planning, running, maintaining and evaluating of sporting facilities and events. This course will introduce students to topics pertinent to the operation of sports facilities and to the management and organization of sports events. Financial considerations for both the private and public sector will be emphasized.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: SMT 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

SMT 201 - Sports Marketing., Promotion. and Public Relations
Students will build an integrated marketing plan for a sporting event by first describing how the four Ps of marketing are applied in sports. Students learn about the uses of the essential elements of marketing. Students will be able to identify the conventions of sport promotions and public relations.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: SMT 110 Minimum Grade: D and SMT 200 Minimum Grade: D
Repeat Status: Not repeatable for credit

SMT 203 - Sports Conditioning
Course will examine principles of sports conditioning and training. Students will gain an in-depth understanding of training principles in a non-sport specific format. Developing and administering a training plan is a key component to coaching and students will be adept at this skill after completing this course.
Credits: 3.00
College: School of Tech & Prof Studies

Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: SMT 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

SMT 205 - Sports Information
This course is an overview of sports information and media relations and its role in the field of sport management. This course will cover skill sets and roles a sports information specialist must demonstrate in order to be successful. There will be emphasis on writing, communication, planning, and organizational skills.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Sport Management
Pre-Requisites: SMT 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

SMT 210 - Prevnt/Care Athletic Injuries
This course will concentrate on the coach's role in the health and well being of the athlete. Emphasis will be placed on both preventive and well being of the athlete. Emphasis will be placed on both preventive measures to decrease an athlete's chance for injury as well as the appropriate response when injury does occur. The psychological implications of injury to an athlete will be explored and specific injuries will be discussed.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

SMT 215 - Sports Ticket Sales & Operations
Course will examine the diverse and changing environment of ticket and operation sales in the sport industry. Course will expose students to the standards, principles and practices that can be applied to multitude of areas that ticketing touches within the sports industry.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Sport Management
May not have the following Classification(s):
Freshman
Pre-Requisites: SMT 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

SMT 220 - Recreation, Wellness & Society
This course chronicles the history and trends in recreation in modern society. It identifies the major operations of the recreation industry and demonstrates its economic impact; compares and contrasts the purposes and practices of recreation, leisure, and sport. Emphasis will be placed on asking to what degree increased recreation impacts the health and wellness of a society.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Pre-Requisites: SMT 110 Minimum Grade: D and SMT 200 Minimum Grade: D
Repeat Status: Not repeatable for credit

SMT 225 - Sports Budgeting
Basic theory in finance and accounting applied to managerial control of sport organizations. Includes forms of ownership, taxation, financial analysis, capital budgeting, and economic impact studies.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Sport Management
May not have the following Classification(s):
Freshman
Pre-Requisites: ACCT 115 Minimum Grade: D
Repeat Status: Not repeatable for credit

SMT 230 - Sports and the Law
Reviews the legal and regularity aspects, elements, and relationships for all constituents participating in sports: administrators, coaches, athletes, agents, vendors, sponsors, faculty managers and owners, and spectators. Seminal court cases are discussed. Students examine the inextricable links between the law and business ethics.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Junior
Pre-Junior
Senior

Pre-Requisites: BLAW 201 Minimum Grade: D and SMT 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

SMT 235 - Sports Admin and Governance
Sports create governance structures, policies, and procedures, even at the most rudimentary level. This course examines the purpose and practice of sports governance and how it relates to sports administration from little league, to the Olympic Games, to international federations, to professional sports.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: SMT 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

SMT 240 - Olympic Games
Provides an overview of modern Olympic Games focusing on the organization, politics, economic implications and the bidding process of the Games. Topics of sponsorship, media coverage and ethical considerations will be discussed. The course will also address how the spirit of the Olympic Games has changed over time.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

SMT 245 - NCAA Compliance
This course will overview basic regulatory, legal and due process rules that govern NCAA competition. Course will cover elements of NCAA regulations, rules interpretations, enforcement decisions and sanctions. An understanding of NCAA rules compliance will be gained through legal cases and actual NCAA enforcement proceedings.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Sport Management
May not have the following Classification(s):
Freshman
Pre-Requisites: SMT 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

SMT 250 - Technology and Sport
Students will identify the major areas where technology has enhanced the performance of athletes and the participation in sports spectatorship. They will be introduced to the essential technologies used in sport management with an emphasis on communication technology. This is a Writing Intensive course.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: SMT 110 Minimum Grade: D or CT 230 Minimum Grade: D or INFO 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

SMT 254 - Women & Minority Opportunities in Sport
This course chronicles the major events and strategies used for women and minorities to have equal opportunities to participate in sports at all levels. It points out the social and legal issues surrounding the dramatic rise in women and minority participation at all levels of play.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Sport Management
May not have the following Classification(s):
Freshman
Pre-Requisites: SMT 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

SMT 255 - Legal Foundations of Title IX
This course will overview the basic legal concepts surrounding Title IX and its applications to intercollegiate athletics programs. The basic elements of Title IX and how various tests are applied by the court system will be included. Course will focus on actual legal cases, investigations and remedial plans.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Sport Management
May not have the following Classification(s):
Freshman
Pre-Requisites: SMT 110 Minimum Grade: D and SMT 230 Minimum Grade: D
Repeat Status: Not repeatable for credit

SMT 260 - Sports Agents & Labor Relations
This course examines the controversial nature of being a sports agent. Students will be exposed to legal and ethical issues that surround sports agents. Additionally, students will review the labor relations laws and collective bargaining agreements that govern professional sports through a variety of lectures, readings and assignments.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Sport Management
May not have the following Classification(s):
Freshman
Pre-Requisites: SMT 230 Minimum Grade: D and BLAW 201 Minimum Grade: D
Repeat Status:

SMT 270 - Sports Facility Planning & Management
This course is designed to provide learning experiences in managing sport facility operations, planning new sport facilities, and renovating and maintaining new facilities. An understanding of sports facilities, their design, and management will be gained through field study, speakers, and standard classroom material.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Sport Management
May not have the following Classification(s):
Freshman
Pre-Requisites: SMT 200 Minimum Grade: D
Repeat Status: Not repeatable for credit

SMT 275 - Sports Event Management
This course provides the student with exposure to comprehensive event planning, funding and managing sports events including those for professional, amateur and collegiate sports events, and commercial, recreational, and club sports.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Sport Management
May not have the following Classification(s):
Freshman
Pre-Requisites: SMT 200 Minimum Grade: D
Repeat Status: Not repeatable for credit

SMT 280 - Kinesiology
Provides an introduction and overview to the science of human movement. Identifies uses of the field of kinesiology in relation to science, medicine, human behavior, athletics, and overall fitness. Applies knowledge and concepts to the areas of physical activity, athletics, and recreation/fitness. Students will actively participate in and observe human movement in human performance labs.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites:
Repeat Status: Not repeatable for credit

SMT 300 - Quantitative Analysis and Statistics for Sports
This is an intensive course presented for the non-specialist in statistical analysis and statistical models applicable in the sports industry. The emphasis is on proper application of classical descriptive and inferential techniques to design-making using sample data. Covers statistical techniques that can be applied to further studies in the sports.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites: SMT 110 Minimum Grade: D and BUSN 101 Minimum Grade: D and (MATH 102 Minimum Grade: D or MATH 183 Minimum Grade: D)
Repeat Status: Not repeatable for credit

SMT 305 - Fundraising in Sports
Course will examine skills, strategies and techniques needed for successful revenue generation in the sport industry. Areas to be addressed include characteristics of a donor, preparing direct mail solicitation, understanding major gift fundraising, and importance of donor research. Ethical issues and trends in athletic development will also be addressed.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Sport Management
May not have the following Classification(s):
Freshman
Pre-Requisites: SMT 110 Minimum Grade: D and SMT 201 Minimum Grade: D
Repeat Status: Not repeatable for credit

SMT 307 - Corporate Sponsorship in Sports
Course will examine corporate sponsorship and its impact on the sport industry from a sales and marketing perspective. Students will gain an understanding of sponsorship inventory, pricing, negotiation, and activation of sponsorship agreements.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Sport Management
May not have the following Classification(s):
Freshman
Pre-Requisites: SMT 110 Minimum Grade: D and SMT 201 Minimum Grade: D
Repeat Status: Not repeatable for credit

SMT 309 - Capital Campaigns in Athletics
Course will examine strategies organizations use to develop and launch successful athletic capital campaigns. Areas addressed include understanding a capital campaign and setting fundraising goals. Organizational readiness, feasibility study and campaign failures will also be addressed.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Sport Management
May not have the following Classification(s):
Freshman
Pre-Requisites: SMT 110 Minimum Grade: D and SMT 201 Minimum Grade: D
Repeat Status: Not repeatable for credit

SMT 310 - Sports Contracts
Course will cover basic legal issues and strategies surrounding contract issues in sports. Students will be introduced to basic elements of contract law and see it applied by the court system in the context of the sports industry.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Sport Management
May not have the following Classification(s):
Freshman
Pre-Requisites: SMT 230 Minimum Grade: D and BLAW 201 Minimum Grade: D
Repeat Status: Not repeatable for credit

SMT 315 - Sports Publications & Graphics
Course will examine sports publications such as tickets, fund raising and marketing brochures, media guides, annual reports and website publications. Students will submit writings to the sport management online digest.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Sport Management
May not have the following Classification(s):
Freshman
Pre-Requisites: SMT 205 Minimum Grade: D
Repeat Status: Not repeatable for credit

SMT 320 - Economic Aspects of Sports Management
An introduction to the economic aspects of sport management, which will examine labor relations, supply and demand, restrictive practices, stadium funding mechanisms, and franchise values and movements. The growing importance of the media in the sports-economic nexus and the inextricable link between economics and law will be emphasized.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: ECON 201 Minimum Grade: D and SMT 110 Minimum Grade: D and SMT 230 Minimum Grade: D
Repeat Status: Not repeatable for credit

SMT 337 - Risk Management in Sports
Course will cover basic issues and strategies surrounding risk management in athletics. Students will be introduced to types of legal obligations and liability exposure inherent in sports and the tools used to minimize risk. Emphasis will be on safety review and risk assessment.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Sport Management
May not have the following Classification(s):
Freshman
Pre-Requisites: SMT 230 Minimum Grade: D and BLAW 201 Minimum Grade: D
Repeat Status: Not repeatable for credit

SMT 340 - International Aspects of Sport
Continuing with the true spirit of the Olympic Games, sports can be a rich avenue for building an international community. This course compares and contrasts how sports are perceived, organized, and played in many countries. It examines the social, political, and economic aspects of sports in other countries. Students will learn about major international sporting events. This is a writing intensive course.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Pre-Requisites: SMT 110 Minimum Grade: D and SOC 268 Minimum Grade: D
Repeat Status: Not repeatable for credit

SMT 345 - Fan Experience Management
Course will explore impact of fan experience on the sports industry. Course will examine customer service philosophies and techniques to improve overall experience of consumers. Course will also review research methods used to measure fan/ sponsor experience and determine impact on retention, entertaining spend and per capita spending.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Sport Management
May not have the following Classification(s):
Freshman
Pre-Requisites: SMT 110 Minimum Grade: D and SMT 201 Minimum Grade: D
Repeat Status: Not repeatable for credit

SMT 347 - Sport Tourism
Students will investigate international sport tourism organizations and their services, and analyze issues including: Sport tourism facility and event financing; sport tourism impacts; and globalization and sport tourism.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: SMT 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

SMT 365 - Operations Management in Sport
This course tracks the growing network of media outlets devoted to sports coverage and shows the essential conventions of sports coverage. Students discover how sports news is gathered, designed, and disseminated to many audiences and observe the dynamics between and among athletes, athletic events, businesses of sports, and the media.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: SMT 110 Minimum Grade: D and SMT 250 Minimum Grade: D and ORGB 300 Minimum Grade: D
Repeat Status: Not repeatable for credit

SMT 390 - Special Topics in Sports Mgmt
This course will cover special topics of interest to students in the Sports Studies and Management major. May be repeated for credit.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following Major(s):
May not have the following Classification(s):
Pre-Requisites:
Repeat Status: Course can be repeated 98 time(s) for 998.00 credit(s)

SMT 399 - Independent Study
Provides supervised study that allows students to explore additional sport management topics of their choosing.
Credits: .50 to 12.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Major(s):
Sport Management
Pre-Requisites: SMT 110 Minimum Grade: D
Repeat Status: Course can be repeated 3 time(s) for 12.00 credit(s)

SMT 401 - Professional Portfolio
The professional portfolio is a capstone course that provides sport management majors an opportunity to demonstrate achievement in their major and engage in self-reflection. Components include reflective essays and samples of relevant professional work completed during the college experience.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
Must be enrolled in one of the following Major(s):
Sport Management
Must have the following Classification(s):

Senior
Pre-Requisites: SMT 225 Minimum Grade: D and SMT 250 Minimum Grade: D and SMT 305 Minimum Grade: D and SMT 310 Minimum Grade: D
Repeat Status: Not repeatable for credit

SMT 475 - Sports Industry Practicum
The practicum is designed to develop greater breadth and depth of students' understanding and experience within the industry. The practical application of knowledge and skill acquired in class will help students extend their expertise by working in a sport management related organization. Suggested for non-co-op students.
Credits: 3.00
College: School of Tech & Prof Studies
Department: Evening and Professional Studi
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: SMT 110 Minimum Grade: D or SMT 101 Minimum Grade: D
Repeat Status: Course can be repeated 2 time(s) for 6.00 credit(s)