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#### **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: Goodwin Coll of Prof Studies Department: Evening and Professional Studi

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

## 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, problemsolving, time management and strategies for management necessary to support learning in a college environment.

Credits: 3.00

College: Goodwin Coll of Prof Studies
Department: Evening and Professional Studi

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

## **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.

Credits: 3.00

College: Goodwin Coll of Prof Studies
Department: Evening and Professional Studi

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

## CAT 301 - Project Management

Project Management. This course offers instruction on design, appraisal, planning, and implementation of a project. It provides indepth discussion and analysis of approaches to managing projects in both the public and private sectors.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Evening and Professional Studi

Restrictions:

Must have the following Classification(s):

Senior

Pre-Requisites: (STAT 201 Minimum Grade: D or STAT 211 Minimum Grade: D or STAT 261 Minimum Grade: D ) and (POM 300 Minimum

Grade: D or OPM 300 Minimum Grade: D)

## 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: Goodwin Coll of Prof Studies Department: Evening and Professional Studi

Restrictions

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

## **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: Goodwin Coll of Prof Studies
Department: Evening and Professional Studi

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

Pre-Requisites: CAT 302 Minimum Grade: D

## 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: Goodwin Coll of Prof Studies
Department: Evening and Professional Studi

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

Pre-Requisites: STAT 211 Minimum Grade: D

## CAT 380 - Advanced Special Topics in CAT

Advanced Special Topics in CAT. Covers upper-level special topics of interest and relevance to Communication and Applied Technology majors.

Credits: 1.00 to 4.00

College: Goodwin Coll of 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

#### 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: Goodwin Coll of Prof Studies
Department: Evening and Professional Studi

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

## 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: Goodwin Coll of Prof Studies Department: Evening and Professional Studi

Restrictions:

Must have the following Classification(s):

Senior

Pre-Requisites: STAT 211 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

#### 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: Goodwin Coll of Prof Studies Department: Evening and Professional Studi

Restrictions:

Must have the following Classification(s):

Senior

Pre-Requisites: CAT 491 Minimum Grade: D

## **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: Goodwin Coll of Prof Studies Department: Evening and Professional Studi

Restrictions:

Must be enrolled in one of the following Program Level(s):

**Undergraduate Quarter** 

## 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

#### 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: Goodwin Coll of Prof Studies
Department: Evening and Professional Studi

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

#### **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: Goodwin Coll of Prof Studies
Department: Evening and Professional Studi

Restrictions:

Must be enrolled in one of the following Program Level(s):

**Undergraduate Quarter** 

#### 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: Goodwin Coll of Prof Studies
Department: Evening and Professional Studi

**Restrictions:** 

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

#### CT 220 - Database I

Students are given real-world database problems and design a database and create a working prototype in ACCESS. The course focuses on how to design databases for given problems. Topics include database design techniques using data representation approaches, techniques of translating the entity-relationship diagram into a relational schema.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Evening and Professional Studi

Restrictions:

Must be enrolled in one of the following Program Level(s):

**Undergraduate Quarter** 

## 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: Goodwin Coll of Prof Studies Department: Evening and Professional Studi

Restrictions:

Must be enrolled in one of the following Program Level(s):

**Undergraduate Quarter** 

## 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.

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Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Evening and Professional Studi

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

## CT 230 - Web Development I

This course focuses on understanding internet interactive systems from a user-centered perspective. Students learn about how people perceive, process, remember, utilize, share and communicate about information in a web environment. Students become familiar with web advertising techniques.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Evening and Professional Studi

Restrictions

Must be enrolled in one of the following Program Level(s):

**Undergraduate Quarter** 

## CT 240 - Web Development II

Students learn about the Internet and other useful Internet technologies such as WWW, FTP, Newsgroups, E-mail, Embedded objects and browser Plug-ins, Security Issues. Students also acquire the skills needed to develop, design and produce Web Pages using HTML, Cascading Style Sheets, JavaScript and Dreamweaver software.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Evening and Professional Studi

Restrictions

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

Pre-Requisites: CT 230 Minimum Grade: C

## 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: Goodwin Coll of Prof Studies Department: Evening and Professional Studi

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

# 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

## 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 indepth, open-source network intrusion detection system.

Credits: 3.00

College: Goodwin Coll of 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

# 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

#### 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,

Cryptography, Protecting Web Servers, Security for Web Browsers, Database Security, Protecting DNS, Security Policies and Procedures.

Credits: 3.00

College: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

## 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: Goodwin Coll of Prof Studies
Department: Evening and Professional Studi

Restrictions:

Must be enrolled in one of the following Program Level(s):

**Undergraduate Quarter** 

## 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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:

С

## **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: Goodwin Coll of 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

# 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: Goodwin Coll of Prof Studies Department: Evening and Professional Studi

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

#### CT 375 - Database II

Introduction to the use of SQL in an Oracle Database System. Areas covered: Data Definition Language; Data Manipulation Language; queries; use of aggregation function; ordering output and various join techniques with sub-query and correlated queries; formulate complex queries with Oracle SQL and SQL\*Plus; updating tables with sub-query results; and test queries.

Credits: 3.00

College: Goodwin Coll of Prof Studies
Department: Evening and Professional Studi

Restrictions:

Must be enrolled in one of the following Program Level(s):

**Undergraduate Quarter** 

Pre-Requisites: CT 220 Minimum Grade: C

## 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: Goodwin Coll of 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

#### 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: Goodwin Coll of Prof Studies
Department: Evening and Professional Studi

Restrictions:

Must be enrolled in one of the following Program Level(s):

**Undergraduate Quarter** 

#### CT 385 - Web Development III

Students acquire skills to develop, design and produce Web pages. Software such as Dreamweaver MX, Flash MX, and Fireworks MX are used. Students acquire skills to develop, design and produce an ecommerce web site.

Credits: 3.00

College: Goodwin Coll of Prof Studies
Department: Evening and Professional Studi

Restrictions:

Must be enrolled in one of the following Program Level(s):

**Undergraduate Quarter** 

Pre-Requisites: CT 240 Minimum Grade: C

## 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: Goodwin Coll of Prof Studies
Department: Evening and Professional Studi

Restrictions:

Must be enrolled in one of the following Program Level(s):

**Undergraduate Quarter** 

## 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: Goodwin Coll of Prof Studies
Department: Evening and Professional Studi

Restrictions:

Must be enrolled in one of the following Program Level(s):

**Undergraduate Quarter** 

## 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: Goodwin Coll of 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

#### CT 392 - Web Development IV

This course teaches students to create dynamic Web applications, configure their web site, create database connection, add dynamic content to the page, add server behaviors to the page, how to add security features such as passwords and personalizing pages. May be repeated once for credit.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Evening and Professional Studi

Restrictions:

Must be enrolled in one of the following Program Level(s):

**Undergraduate Quarter** 

Pre-Requisites: CT 385 Minimum Grade: C

# 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: Goodwin Coll of Prof Studies
Department: Evening and Professional Studi

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

#### 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: Goodwin Coll of Prof Studies
Department: Evening and Professional Studi

Restrictions:

Must be enrolled in one of the following Program Level(s):

**Undergraduate Quarter** 

#### 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

#### 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: Goodwin Coll of Prof Studies Department: Evening and Professional Studi

Restrictions:

Must be enrolled in one of the following Program Level(s):

**Undergraduate Quarter** 

## 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: Goodwin Coll of Prof Studies Department: Evening and Professional Studi

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

## 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.

Windows and Linux. Credits: 3.00

College: Goodwin Coll of 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

#### 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: Goodwin Coll of Prof Studies
Department: Evening and Professional Studi

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

#### CT 425 - Database III

Create, execute, and maintain procedures, functions, packages, and triggers. Manage dependencies. Manipulate large objects. Conditionally control code flow (loops, control structures, and explicit cursors). Describe Oracle-supplied packages. Handle runtime errors. Manage program constructs. Describe the features and syntax of PL/SQL.

Credits: 3.00
College: Goodwin Coll of Prof Studies
Department: Evening and Professional Studi

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

Pre-Requisites: CT 375 Minimum Grade: C

## 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: Goodwin Coll of 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

## CT 430 - Database IV

This course focuses on skills that are essential for using Oracle9i. Emphasis is places on the flow of information through the repository, and default behavior of Oracle9i Designer tool set. Topics include

transforming the analysis model into design level definitions, refining the data and application designs, simple Oracle Forms and Web PL.SQL applications.

Credits: 3.00

College: Goodwin Coll of Prof Studies
Department: Evening and Professional Studi

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

Pre-Requisites: CT 425 Minimum Grade: C

## 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: Goodwin Coll of 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

## CT 432 - IT Security Systems Audits

This course presents the theory, methodology, procedures and handson 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

## CT 496 - Senior Project II

This course is a continuation of Senior Project I. In this course, studentteams are required to implement theirs project specifications and requirements developed in the previous course.

Credits: 3.00

College: Goodwin Coll of 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

## **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: Goodwin Coll of 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

## 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: Goodwin Coll of 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):

## 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: Goodwin Coll of 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

# 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

## **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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

# 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

# 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: Goodwin Coll of 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: CMGT 161 Minimum Grade: D and MATH 102 Minimum

Grade: D and PHYS 182 Minimum Grade: D

## 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

# CMGT 462 - Construction Management II

Covers construction supervision, function, contract documents, insurance and bonds, organization, planning and scheduling administration, purchasing, accounting, safety, labor relations, inspection, and reporting. Spring.

Credits: 3.00

College: Goodwin Coll of 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 461 Minimum Grade: D

## 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: Goodwin Coll of 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

## **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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

# CMGT 468 - Real Estate

Overview of the development process including site selection, residential densities, market analysis and cash flow analysis.

Credits: 3.00

College: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

## **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: Goodwin Coll of 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

## 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: Goodwin Coll of Prof Studies Department: Evening and Professional Studi

Restrictions:

May not have the following Classification(s):

Freshman Pre-Junior Sophomore

Pre-Requisites: CRTV 301 Minimum Grade: D

## 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: Goodwin Coll of 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: CRTV 302 Minimum Grade: D

## **Culinary Arts Courses**

#### CULA 200 - Professional Skills Lab I

This course is a prerequisite for all Culinary Arts laboratory classes and provides a foundation in culinary skills. Provides a thorough knowledge of the techniques and learning experiences in the preparation of basic food items, including grains, starches, legumes, and pasta.

Credits: 1.50

College: Goodwin Coll of Prof Studies Department: Hospitality Management

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** 

May not have the following Classification(s):

Freshman

Co-Requisites: CULA 230, HRM 215

# CULA 205 - Prof Skills Lab II

Builds on the accumulated knowledge and skills gained in CULA 200. Advances those skills by utilization of different ingredients and products such as meat, poultry, and seafood in the production of complete menus.

Credits: 1.50

College: Goodwin Coll of Prof Studies Department: Hospitality Management

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** 

May not have the following Classification(s):

Freshman

Co-Requisites: CULA 230

## CULA 210 - Professional Skills Lab III

Builds on the accumulated knowledge and skills gained in CULA 220. Focuses on buttercream, gum paste, fondant, and cake assembly.

Credits: 1.50

College: Goodwin Coll of Prof Studies Department: Hospitality Management

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: CULA 230

#### **CULA 215 - Foundations of Professional Baking**

Offers study and practice of the fundamentals of baking science. Course content includes equipment identification and utilization, formula and recipe conversions, weights and measures, and terminology.

Concentration on bread modeling and display will be extensively used.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

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** 

May not have the following Classification(s):

Freshman

Co-Requisites: CULA 230

#### 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: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions:

Must be enrolled in one of the following Program Level(s):

**Undergraduate Quarter** 

Pre-Requisites: CULA 230 Minimum Grade: D

# 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: Goodwin Coll of Prof Studies Department: Hospitality Management

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 215 Minimum Grade: D

#### 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: Goodwin Coll of Prof Studies
Department: Hospitality Management

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

## **CULA 230 - Major Techniques and Tradition**

Instructs students in the preparation of various menu items from selected regions of the world. Emphasizes nutritional analysis, cost control, and utilization of resources. Explores banquet, American, and Russian styles of service.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

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** 

May not have the following Classification(s):

Freshman

Pre-Requisites: HRM 120 Minimum Grade: D

## CULA 231 - Major Techniques/Traditions II

A continuation of CULA 230. Students further develop their culinary skills and apply these skills to plate design and production; with strong emphasis on speed, organization and creativity.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions:

Must be enrolled in one of the following Program Level(s):

**Undergraduate Quarter** 

Pre-Requisites: CULA 230 Minimum Grade: D or HRM 115 Minimum

Grade: D

## **CULA 235 - Professional Dining Room Management**

Designed for students managing the front-of-the-house of a restaurant open to the public. Emphasizes the proper greeting and seating of guests, taking and writing orders, and the serving of food and beverages. Includes tableside cooking and presentation.

Credits: 1.50

College: Goodwin Coll of Prof Studies
Department: Hospitality Management

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: CULA 230

#### **CULA 240 - Chinese Cuisine Fundamentals**

Survey of principles involved in cooking, researching, receiving, identifying, fabricating and storing Chinese ingredients. Additional focus on traditional regional dishes using beef, veal, fowl, lamb, vegetables and various fish.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

Pre-Requisites: CULA 230 Minimum Grade: D and CULA 215 Minimum

Grade: D

#### **CULA 300 - Vegetarian Cuisine**

Exposes students to the preparation of foods reflecting influences from meatless menus. Emphasizes preparation techniques and speed, terminology, and plate presentation commonly used in vegetarian cooking.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

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 230 Minimum Grade: D and NFS 101 Minimum

Grade: D

#### **CULA 305 - The Italian Tradition**

Instructs students on the production of menus reflecting influence from Italy. Exposes students to the preparation of classical dishes in a traditional way. Topics include Italian menu terminology, tableside cooking, and compound sauces. Emphasizes braising, grilling, and poaching techniques.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

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 215 Minimum Grade: D and CULA 230 Minimum

Grade: D

## CULA 306 - The Italian Tradition II

This course is a continuation of CULA 305, Italian Tradition. Through study, discussion and demonstration of authentic Italian products, students produce classical regional recipes.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions:

Must be enrolled in one of the following Program Level(s):

**Undergraduate Quarter** 

Pre-Requisites: CULA 230 Minimum Grade: D and CULA 305 Minimum

Grade: D

# CULA 310 - The French Tradition

Instructs students on the production of menus reflecting influence from France. Exposes students to the preparation of classical dishes in a traditional way. Topics include French menu terminology, tableside cooking, and compound sauces. Emphasizes braising, grilling, and poaching techniques.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

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 215 Minimum Grade: D and CULA 230 Minimum

Grade: D

#### CULA 311 - The French Tradition II

In this advanced course, the student studies French Cuisine, vocabulary, and culture as it pertains to the reading, writing and preparation of ingredients.

Credits: 3.00

College: Goodwin Coll of Prof Studies
Department: Hospitality Management

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

Pre-Requisites: CULA 230 Minimum Grade: D or CULA 310 Minimum

Grade: D

#### **CULA 315 - The American Tradition**

Instructs students on the production of menus that influence American daily production, with a focus on different cooking techniques. Emphasizes regional trends in American foods and their impact on menu design.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

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 215 Minimum Grade: D and CULA 230 Minimum

Grade: D

## **CULA 320 - Advanced Culinary Studio**

A synthesis of various traditions under the guidance of Culinary Arts program faculty and guest chefs. Emphasis will be on the preparation and fiscal costing of dinners prepared and served to the public in the Culinary Arts state of the art facilities.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

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** 

May not have the following Classification(s):

Freshman

Pre-Requisites: CULA 305 Minimum Grade: D or CULA 310 Minimum

Grade: D

## **CULA 325 - The Garde Manger Laboratory**

Introduces techniques used in the fabrication, selection, and preparation of cold buffet work including, cold appetizers, canapés, garnishes, hors d'oeuvres, salads, and sandwiches. Additional focus on decoration, form and presentation of cold food items.

Credits: 2.00

College: Goodwin Coll of Prof Studies

Department: Hospitality Management

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 230 Minimum Grade: D

#### 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: Goodwin Coll of Prof Studies
Department: Hospitality Management

Restrictions:

Must be enrolled in one of the following Program Level(s):

**Undergraduate Quarter** 

Pre-Requisites: CULA 230 Minimum Grade: D

#### **CULA 335 - Indian Cuisine Fundamentals**

This course introduces students to diverse cooking and cultures of India. The course explores India's unique cooking methods and the varied use of herbs, spices and condiments. The course also explores the historical influx of people arriving in the ancient subcontinent and how it has contributed to Indian Cuisine.

Credits: 3.00

College: Goodwin Coll of Prof Studies
Department: Hospitality Management

Restrictions:

Must be enrolled in one of the following Program Level(s):

**Undergraduate Quarter** 

Pre-Requisites: CULA 215 Minimum Grade: D and CULA 230 Minimum

Grade: D

# **CULA 399 - Ind Study in Culinary Arts**

Provides independent study in Culinary Arts.

Credits: 12.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

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** 

#### 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: Goodwin Coll of Prof Studies Department: Hospitality Management

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** 

May not have the following Classification(s):

Freshman

Pre-Requisites: CULA 230 Minimum Grade: D and (CULA 305 Minimum

Grade: D or CULA 310 Minimum Grade: D)

#### 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: Goodwin Coll of Prof Studies Department: Hospitality Management

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** 

May not have the following Classification(s):

Freshman

Pre-Requisites: HRM 315

## 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: Goodwin Coll of Prof Studies Department: Hospitality Management

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** 

May not have the following Classification(s):

Freshman

## **CULA 415 - Food Styling and Show Competition**

The preparation of Culinary Arts students for show competition based on American Culinary Federation (A.C.F.) guidelines. Students will compete in different geographic regions with regards to product presentation and technique. Culinary Arts Program faculty and visiting chefs will be among the panel of judges

Credits: 2.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

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** 

Must have the following Classification(s):

Junior Senior

## 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: Goodwin Coll of Prof Studies Department: Hospitality Management

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** 

Must have the following Classification(s):

Senior

#### CULA 425 - The Kitchen Garden

To familiarize students with the 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.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

Must be enrolled in one of the following Major(s):

**Culinary Arts** 

Hotel and Restaurant Mgmt

May not have the following Classification(s):

Freshman

#### **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: Goodwin Coll of Prof Studies
Department: Hospitality Management

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** 

## **Customer Operations Courses**

# **CUST 380 - Spec Top Customer Oper**

Covers specific topics related to customer operations. Variable

Credits: .50 to 12.00

College: Goodwin Coll of 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

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: Goodwin Coll of Prof Studies
Department: Evening and Professional Studi

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

#### 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: Goodwin Coll of Prof Studies
Department: Evening and Professional Studi

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

#### 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: Goodwin Coll of Prof Studies Department: Evening and Professional Studi

Restrictions

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

## **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: Goodwin Coll of 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):

# 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

## 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: 3.00

College: Goodwin Coll of Prof Studies
Department: Evening and Professional Studi

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

Pre-Requisites: PHYS 152 Minimum Grade: D and PHYS 153 Minimum

Grade: D

#### 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: Goodwin Coll of 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

# 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

## 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: Goodwin Coll of Prof Studies Department: Evening and Professional Studi

Restrictions:

Must be enrolled in one of the following Program Level(s):

**Undergraduate Quarter** 

Pre-Requisites: MATH 185 Minimum Grade: D

# 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

#### **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: Goodwin Coll of 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

## **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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

#### **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: Goodwin Coll of 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

## **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: Goodwin Coll of 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

## **EET 401 - Applied Micro-controllers**

The course covers general principles of micro-controller and Reduced Instruction Set Computer (RISC) into realization of industrial project, with the emphasis to formulate the learned principles to various devices.

Credits: 3.00

College: Goodwin Coll of 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

# **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: Goodwin Coll of 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

#### 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: Goodwin Coll of Prof Studies
Department: Evening and Professional Studi

Restrictions:

Must be enrolled in one of the following Program Level(s):

**Undergraduate Quarter** 

Pre-Requisites: EET 331 Minimum Grade: D and EET 313 Minimum

Grade: D

## **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: Goodwin Coll of 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

#### **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: Goodwin Coll of 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

#### 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: Goodwin Coll of Prof Studies
Department: Evening and Professional Studi

**Restrictions:** 

Must be enrolled in one of the following Program Level(s):

**Undergraduate Quarter** 

Pre-Requisites: PHYS 184 Minimum Grade: D

**Food Science Courses** 

#### FDSC 154 - Foods: Composition, Interaction and Formulation

Covers the physical and chemical characteristics of food components including sugars, starches, proteins, and fats and their changes during preparation and cooking. Also considers the interaction of components in foods such as eggs, dairy products, meats, and cereals and the formulation of baked goods. Methods of sensory evaluation are included.

Credits: 4.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

## FDSC 270 - Microbial Food Safety and Sanitation

Covers topics including types, sources and growth of microorganisms in food; food spoilage; foodborne infections and intoxications and their prevention; chemical contamination; pest control and sanitation standards in foodservice operations; and FDA and local regulations.

Credits: 4.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

## FDSC 350 - Experimental Foods: Product Development

Covers the ingredients used in the development of new food products and the process of developing new food products. Objective and subjective testing procedures are demonstrated in laboratory. Students propose and carry out a food development project.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

Pre-Requisites: FDSC 154 Minimum Grade: D or NFS 154 Minimum Grade: D or NFS 152 Minimum Grade: D or BIO 311 Minimum Grade: D

## FDSC 450 - Food Microbiology

Covers application of microbiological principles to food safety, production, nutrient quality, and spoilage.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

Pre-Requisites: FDSC 270 Minimum Grade: D or NFS 270 Minimum

Grade: D or BIO 21 Minimum Grade: D

## FDSC 451 - Food Microbiology Laboratory

Teaches laboratory techniques of food microbiology with emphasis on food production and quality assurance procedures.

Credits: 2.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

Pre-Requisites: FDSC 450 Minimum Grade: D or NFS 450 Minimum

Grade: D

FDSC 454 - Microbiology & Chemistry of Food Safety

Provides advanced study of chemicals of food safety significance, with emphasis on the effects of compounds normal to food. Includes

regulations and controls.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

Pre-Requisites: ENVR 436 Minimum Grade: D or BIO 203 Minimum

Grade: D

#### FDSC 456 - Food Preservation Processes

Covers fundamentals of food processing and preservation, including techniques and methods employed to extend the useful life of food products, and the significance of changes in the composition of foods due to the processing, enzymatic activity, microbial action and chemical change.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

Pre-Requisites: NFS 215 Minimum Grade: D or NFS 400 Minimum

Grade: D or BIO 311 Minimum Grade: D

# FDSC 458 - Nutritional Impact of Food Processing Methods

Covers the effect of processing on foods, emphasizing nutritional and chemical aspects. Includes topics such as synthetic foods, food additives, current food processing methods, nutritional policy, consumer dietary patterns, and food product trends.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

Pre-Requisites: (FDSC 154 Minimum Grade: D and NFS 215 Minimum Grade: D ) or (NFS 154 Minimum Grade: D and NFS 400 Minimum Grade: D ) or (NFS 154 Minimum Grade: D and NFS 215 Minimum

Grade: D )

#### FDSC 460 - Food Chemistry

Covers physicochemical properties of food constituents, including the application of underlying scientific principles to the processing of foods and biological materials.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

Pre-Requisites: NFS 215 Minimum Grade: D or NFS 400 Minimum

Grade: D or BIO 311 Minimum Grade: D

## FDSC 461 - Food Analysis

Provides analysis of foods and biological samples, with emphasis on their chemical composition and physicochemical properties.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

Pre-Requisites: NFS 216 Minimum Grade: D or NFS 404 Minimum

Grade: D or BIO 306 Minimum Grade: D

## FDSC 480 - Special Topics in Food Science

Covers special topics of interest in food science. This course may be

repeated for credit. Credits: 1.00 to 12.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

## FDSC 490 - Seminar in Food Science

Current topics in food science will be studies with presentations by invited speakers and students. This course may be repeated for credit.

Credits: 1.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

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

## FDSC 498 - Independent Study in Food Science

Provides individual study or research in food science under faculty

supervision. This course may be repeated for credit.

Credits: 1.00 to 12.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

# **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: Goodwin Coll of Prof Studies Department: Hospitality Management

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** 

Hotel and Restaurant Mgmt

## **HRM 115 - Culinary Science**

Introduces the principles, techniques, and standards of commercial and classical food production.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

Pre-Requisites: HRM 110 Minimum Grade: D

#### 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: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions

May not be enrolled in one of the following Program Level(s):

Continuing Education

Pre-Requisites: HRM 115 Minimum Grade: D

# 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: Goodwin Coll of Prof Studies Department: Hospitality Management

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** 

Hotel and Restaurant Mgmt

#### 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.

Credits: 3.00

College: Goodwin Coll of Prof Studies

Department: Hospitality Management

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** 

Hotel and Restaurant Mgmt

Pre-Requisites: HRM 130 Minimum Grade: D

#### 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: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions:

Must be enrolled in one of the following Program Level(s):

**Undergraduate Quarter** 

Must have the following Classification(s):

Freshman

#### 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: Goodwin Coll of Prof Studies Department: Hospitality Management

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** 

Hotel and Restaurant Mgmt

## HRM 210 - Safety & Sanitation

Provides an understanding of the basic principles of hygiene, safety, and sanitation applicable to the food-service industry. Covers the responsibilities and control procedures of the hospitality industry, including implementation of controls (hazard analysis and critical control procedures), in regard to maintenance, safety, and sanitation. Provides students with materials and tools that will enable them to train employees in food safety principles and practices. Discusses applicable laws and regulations. Servsafe certification awarded after successful completion of the Servsafe examination.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

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

## **HRM 215 - Commercial Food Production**

Must be completed prior to three-month food service co-op. Applies culinary science to the production of fine food in quantity. Emphasizes

menu planning and management of production, food design, quality,

and service. Requires service to the public.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

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 115 Minimum Grade: D

#### 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: Goodwin Coll of Prof Studies Department: Hospitality Management

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

#### HRM 225 - Equipment Design and Layout

Covers principles of selection, operation, and maintenance of foodservice equipment. Emphasizes requirements for various hospitality facilities and the supporting design, construction, and renovation of such.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

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

## HRM 230 - Design Application

Applies two-dimensional design to advertising copy, menus, menu inserts, tabletop advertising, and hospitality marketing pieces.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

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 or HRM 110 Minimum

Grade: D

#### HRM 250 - Contract Fdsvc Management

Introduces students to the dynamics of a commercial foodservice

operation. Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

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

#### 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: Goodwin Coll of Prof Studies Department: Hospitality Management

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: (ACCT 115 Minimum Grade: D or ACCT 111 Minimum

Grade: D ) and HRM 110 Minimum Grade: D

## 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: Goodwin Coll of Prof Studies
Department: Hospitality Management

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 215 Minimum Grade: D or CULA 230 Minimum

Grade: D

## 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: Goodwin Coll of Prof Studies Department: Hospitality Management

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 200 Minimum Grade: D or INFO 101 Minimum Grade: D or CS 161 Minimum Grade: D ) and HRM 120 Minimum Grade:

#### **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: Goodwin Coll of Prof Studies Department: Hospitality Management

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

#### 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: Goodwin Coll of Prof Studies Department: Hospitality Management

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):

Hotel and Restaurant Mgmt

May not have the following Classification(s):

Freshman Sophomore

Pre-Requisites: HRM 325 Minimum Grade: D

## 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: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

May not have the following Classification(s):

Pre-Requisites: ACCT 115 Minimum Grade: D and HRM 120 Minimum

Grade: D

## 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: Goodwin Coll of Prof Studies Department: Hospitality Management

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** 

Hotel and Restaurant Mgmt

Must have the following Classification(s):

Senior

#### **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: Goodwin Coll of Prof Studies Department: Hospitality Management

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** 

Hotel and Restaurant Mgmt

May not have the following Classification(s):

Freshman

Pre-Requisites: HRM 120 Minimum Grade: D or ACCT 115 Minimum

Grade: D

#### **HRM 345 - Convention Management**

Provides an in-depth study of convention, corporate, and group

segments of the hospitality industry.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

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

## **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: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions:

Must be enrolled in one of the following Program Level(s):

**Undergraduate Quarter** 

Pre-Requisites: HRM 110 Minimum Grade: D

#### **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: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

Pre-Requisites: HRM 325 Minimum Grade: D

## 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: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions:

Must be enrolled in one of the following Program Level(s):

**Undergraduate Quarter** 

Pre-Requisites: HRM 130 Minimum Grade: D

## 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: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

Pre-Requisites: MATH 101 Minimum Grade: D and ACCT 115 Minimum

Grade: D

# 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: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

Pre-Requisites: HRM 370 Minimum Grade: D and MKTG 301 Minimum

Grade: D

## 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: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

Pre-Requisites: HRM 325 Minimum Grade: D

#### 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: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

Pre-Requisites: HRM 365 Minimum Grade: D

#### 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: Goodwin Coll of Prof Studies Department: Hospitality Management

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):

Hotel and Restaurant Mgmt

Must have the following Classification(s):

Junior Pre-Junior Senior

Pre-Requisites: HRM 135 Minimum Grade: D and ECON 201 Minimum

Grade: D

## 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: Goodwin Coll of Prof Studies Department: Hospitality Management

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** 

Hotel and Restaurant Mgmt

May not have the following Classification(s):

Freshman Pre-Junior Sophomore

## 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.

tourism are included. Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

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

#### HRM 410 - Laws of Hospitality Industry

Examines legal subjects relative to the food-service and lodging industries, including government regulations and the food-service operators, food-service contracts, liability, patron civil rights, franchising, and bankruptcy and reorganization. Includes analysis of actual case studies and relevant court decisions.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

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

#### 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: Goodwin Coll of Prof Studies Department: Hospitality Management

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):

Hotel and Restaurant Mgmt

Must have the following Classification(s):

Junior Senior

Pre-Requisites: HRM 215 Minimum Grade: D and HRM 315 Minimum

Grade: D

#### 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: Goodwin Coll of Prof Studies Department: Hospitality Management

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

## HRM 425 - Hospitality Indstry Admin

Covers organization and administration of food-service facilities, with emphasis on organizational charting, personnel administration, turnover management, and forecasting. Considers school-district food service, college and university food service, business and industrial accounts, and independent contract food-service and lodging corporations.

Credits: 3.00

College: Goodwin Coll of Prof Studies
Department: Hospitality Management

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** 

Hotel and Restaurant Mgmt

Must have the following Classification(s):

Junior Senior

#### HRM 430 - Hotel Sales and Marketing

This course will cover advanced techniques and principles of marketing services, particularly in the hotel segment of the hospitality industry. Emphasis is on the marketing plan, advertising, promotions and public relations.

Credits: 3.00

College: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions

May not be enrolled in one of the following Program Level(s):

Continuing Education

Pre-Requisites: HRM 330 Minimum Grade: D and MKTG 301 Minimum

Grade: D

#### 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: Goodwin Coll of Prof Studies Department: Hospitality Management

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** 

Hotel and Restaurant Mgmt

Must have the following Classification(s):

Senior

# 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: Goodwin Coll of Prof Studies Department: Hospitality Management

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** 

Hotel and Restaurant Mgmt

Must have the following Classification(s):

Junior Senior

#### 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: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

May not have the following Classification(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: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

Pre-Requisites: HRM 370 Minimum Grade: D

## **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: Goodwin Coll of Prof Studies
Department: Hospitality Management

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

Pre-Requisites: HRM 371 Minimum Grade: D

## 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: Goodwin Coll of Prof Studies Department: Hospitality Management

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

Pre-Requisites: HRM 371 Minimum Grade: D

## **Industrial Engineering Courses**

## 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

## **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: Goodwin Coll of 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

#### **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: Goodwin Coll of 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

# 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

## **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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

# 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

# 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: Goodwin Coll of 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

## INDE 399 - Ind Study in Industrial Engr

Credits: .50 to 12.00

College: Goodwin Coll of Prof Studies
Department: Evening and Professional Studi

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

#### 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

# 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

## 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.

Credits: 4.00

College: Goodwin Coll of 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

## **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: 4.00

College: Goodwin Coll of Prof Studies Department: Eve & Prof Studies (Hist)

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

Must have the following Classification(s):

Freshman

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: Goodwin Coll of 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

#### 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: Goodwin Coll of Prof Studies Department: Eve & Prof Studies (Hist)

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

## 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: Goodwin Coll of 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

## MET 202 - Computer-Aided Drafting

Introduces computer design using an interactive software package on a microcomputer.

Credits: 4.00

College: Goodwin Coll of 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

## 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: Goodwin Coll of Prof Studies Department: Eve & Prof Studies (Hist)

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

#### 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: Goodwin Coll of Prof Studies Department: Eve & Prof Studies (Hist)

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

## 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: Goodwin Coll of 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

# 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

#### 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: Goodwin Coll of Prof Studies Department: Eve & Prof Studies (Hist)

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

## 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: Goodwin Coll of Prof Studies Department: Eve & Prof Studies (Hist)

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

#### 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: Goodwin Coll of Prof Studies Department: Eve & Prof Studies (Hist)

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

Must have the following Classification(s):

Senior

#### 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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 and MET 313 Minimum Grade: D

## 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

# 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

## **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: Goodwin Coll of 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 182 Minimum Grade: D

## 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: Goodwin Coll of 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 184 Minimum Grade: D and MATH 185 Minimum

Grade: D

# 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: Goodwin Coll of 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

## 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.

Credits: 3.00

College: Goodwin Coll of 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

## 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

# 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

#### **Professional Studies Courses**

## 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: Goodwin Coll of Prof Studies
Department: Evening and Professional Studi

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

#### 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 if 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: Goodwin Coll of Prof Studies
Department: Evening and Professional Studi

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

## 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: Goodwin Coll of 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):

Goodwin Coll of Prof Studies

May not have the following Classification(s):

Freshman Pre-Junior Sophomore

## 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: Goodwin Coll of Prof Studies
Department: Evening and Professional Studi

Restrictions:

Must be enrolled in one of the following College(s)/School(s):

Goodwin Coll of Prof Studies

May not have the following Classification(s):

Freshman Pre-Junior Sophomore

## 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: Goodwin Coll of Prof Studies
Department: Evening and Professional Studi

Restrictions:

Must be enrolled in one of the following College(s)/School(s):

Goodwin Coll of Prof Studies

May not have the following Classification(s):

Freshman Pre-Junior Sophomore

Pre-Requisites: CRTV 303 Minimum Grade: D and ORGB 300 Minimum

Grade: D

#### 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: Goodwin Coll of 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 303 Minimum Grade: D and PRST 330 Minimum Grade: D and PRST 440 Minimum Grade: D and PRST 450 Minimum

Grade: D

#### 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: Goodwin Coll of 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: D and CAT 360 Minimum

Grade: D and PRST 491 Minimum Grade: D

#### **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: Goodwin Coll of 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):

## 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: Goodwin Coll of Prof Studies
Department: Evening and Professional Studi

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

## SMT 120 - Life Skills for Coaches

This course uses the life developmental intervention model to educate coaches on how to develop a comprehensive program that is designed to foster healthy development of student, athletes, and young adults. The course incorporates the NCAA's CHAMPS Life Skills model as its philosophical underpinnings.

Credits: 3.00

College: Goodwin Coll of 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 101 Minimum Grade: D

#### 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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

# 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: Goodwin Coll of Prof Studies Department: Evening and Professional Studi

Restrictions:

May not be enrolled in one of the following Program Level(s):

**Continuing Education** 

#### 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: Goodwin Coll of 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 )

# 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: Goodwin Coll of 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

#### SMT 330 - Gender Equity & Women in Sport

This course chronicles the major event and strategies used for women 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's participation in sports at all levels of play. Students will explore in a particular sport.

Credits: 3.00

College: Goodwin Coll of 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 SOC 268 Minimum

Grade: D and BLAW 201 Minimum Grade: D

## SMT 335 - Minority Issues/Oppor in Sport

This course chronicles the major events and strategies used for 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 minority participation in sports at all levels of play. Students will explore reasons, perceived or real, for under representation of a particular race in a particular sport.

Credits: 3.00

College: Goodwin Coll of 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 SOC 268 Minimum

Grade: D and BLAW 210 Minimum Grade: D

#### 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: Goodwin Coll of 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

#### 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: Goodwin Coll of 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

## 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: Goodwin Coll of 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): Pre-Requisites: SMT 110 Minimum Grade: D

#### SMT 475 - Coaching Practicum

This course provides the practicum for coaching in a selected sport and appropriate level such as intercollegiate, interscholastic or youth sports. During the practicum the student, under the guidance of a mentor, will apply the basics of coaching philosophy, sport psychology, teaching sport skills, sport physiology, sports medicine and team management. The practicum is self-arranged by the student and must be approved by a faculty advisor.

Credits: 3.00

College: Goodwin Coll of 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 152 Minimum

Grade: D