

# THE INSTITUTE FOR DATA CENTER PROFESSIONALS



PROFESSIONAL EDUCATION AND DEVELOPMENT

# IDCP Course Catalog









# **TABLE OF CONTENTS**

About the IDCP			
Program Staff			
Certificate Programs Overview.			
Enterprise Systems Course Descriptions			
System Programming Tracks	'-9		
Application Programming Tracks9-	11		
z/VM Education			
Running Linux Systems in a z/VM Virtualized Environment	11		
Emerging Technologies Course Descriptions			
Cybersecurity Certificate	12		
Business Analytics Certificate	13		
Data Center Technologies Course Descriptions			
Associate Certificate in Data Center Facilities Management	14		
Professional Certificate in Data Center Facilities Management	14		
Certified Data Center Professional Certificate	15		
General Information	16		

"I have been told twice this week by vendors that it's rare that they work with Data Center Managers who have the knowledge that we have."



#### About the IDCP

The Marist College Institute for Data Center Professionals (IDCP) was founded in 2004 with support and funding from the National Science Foundation. In partnership with professional, industry and governmental organizations, the IDCP has been providing individuals and corporate teams with skills-based education and credentialing supporting the data center and enterprise computing environments of the future.

Professionals working in the data center and enterprise computing realm are critical resources for the nation's economic stability and national security, yet there is a significant skills shortage as experienced professionals are retiring from the workforce and traditional educational programs are not yet addressing this challenge.

The Institute for Data Center Professionals offers a variety of online certificate programs for the working professional. All courses offered through the IDCP utilize the Marist College Premier iLearn course management system delivering multimedia content. In addition, the Knowledge Center at Marist College provides students with a hands-on virtual laboratory environment.



#### **PROGRAM STAFF**

.....

# **Dean, School of Computer Science and Mathematics**

Dr. Roger L. Norton

roger.norton@marist.edu

# **Assistant Dean, School of Computer Science and Mathematics**

Susan Scanlon

susan.scanlon@marist.edu

# **Director of Large Systems Education**

Marilyn Zeppetelli

marilyn.zeppetelli@marist.edu

#### **Administrative Staff**

Roberta Diggins, Administrator, Enterprise Systems Education roberta.diggins@marist.edu

# **Program Information Help Desk**

idcphelp@marist.edu

learnzos@marist.edu

Marist College Technical Support Help Desk: helpdesk@marist.edu



#### **CERTIFICATE PROGRAMS OVERVIEW**

**Enterprise Systems Education** 

#### **SYSTEM PROGRAMMING TRACKS**

z/OS Associate Certificate

NCRT 110 or CMPT 315 Introduction to z/OS and Major Subsystems

NCRT 120 or CMPT 316 z/OS Networking

NCRT 130 or CMPT317 z/OS Security

z/OS Professional Certificate

NCRT 210 or CMPT 451 z/OS Advanced Topics

NCRT 220 or CMPT 452 z/OS Reliability, Availability, Serviceability and Problem Determination (RAS and PD)

NCRT 230 or CMPT 453 z/OS Emerging Technologies

z/OS Expert Certificate

NCRT 320 or CMPT 454 z/OS Installation
NCRT 330 or CMPT 455 DB2 Fundamentals

NCRT 340 or CMPT 456 z/OS Performance Fundamentals

#### **APPLICATION PROGRAMMING TRACKS**

#### **COBOL** Certificate

NCRT 110 or CMPT 315 Introduction to z/OS and Major Subsystems

NCRT 420 Basic COBOL Programming

NCRT 430 Advanced COBOL Programming

**IMS Certificate** 

NCRT 110 or CMPT315 Introduction to z/OS and Major Subsystems

NCRT 520 IMS Fundamentals

NCRT 530 IMS Application Programming

**Assembler Certificate** 

NCRT 110 or CMPT 315 Introduction to z/OS and Major Subsystems

NCRT 620 Basic Assembler Language Programming

NCRT 630 Advanced Assembler Language Programming

**DB2 Certificate** 

NCRT 110 or CMPT 315 Introduction to z/OS and Major Subsystems

NCRT 820 DB2 Fundamentals

NCRT 830 DB2 Application Programming

#### **CERTIFICATE PROGRAMS OVERVIEW**

# **Enterprise Systems Education**

#### z/VM Education

NCRT 901 Running Linux Systems in a z/VM Virtualized Environment

# **Emerging Technologies**

#### **Cybersecurity Certificate Program**

CMPT 416	Introduction to Cybersecurity
CMPT 417	Hacking and Penetration Testing
CMPT 418	Mobile Security

# **Business Analytics Certificate Program - Graduate Level**

MSIS 53/	Data Management
MSIS 545	Introduction to Data Analysis and Computational Statistics
MSIS 637	Decison Support Systems
MSIS 591	Data Mining and Predictive Analytics

# Data Center Technologies Program Overview

#### **Associate Certificate in Data Center Facilities Management**

	_
CMPT 130	Information Technology and Systems Concepts
CMPT 482	Introduction to Facilities Management
<b>CMPT 487</b>	Advanced Facilities Management

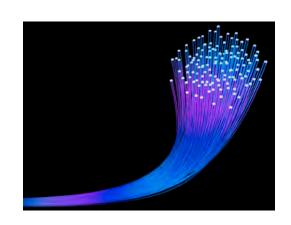
#### **Professional Certificate in Data Center Facilities Management**

CMPT 306	Data Communication and Networks
CMPT 309	Project Management
CMPT 483	Cloud Infrastructure and Services

#### **Certified Data Center Professional Certificate**

ORG 101	Managing Organizations
ORG 203	Practical Applications of Accounting

"The zNetworking course was an eye opener for me. I had some basic knowledge but this course made everything so much clearer."





#### **COURSE DESCRIPTIONS**

**Enterprise Systems** 

#### **System Programming Track**

Associate Certificate

NCRT 110 (non-credit) or CMPT 315 (4 credits)

#### Introduction to z/OS and Major Subsystems

This course introduces operating system and data processing concepts in the context of large system (or Enterprise) computing using a combination of active learning exercises and passive learning presentations. The course content covers modern hardware, operating system, and middleware functions and features. This includes hardware concepts such as virtualization, logical partitioning, multi-processing, and high performance I/O. The operating system concepts covered include workload management (batch and transactional), dispatching, job control language, security, networking and other operating system functions. A brief introduction to z/OS UNIX is included as well. The course concludes with an overview of key middleware (transaction and database managers as well as messaging software) and their contribution to an overall hardware / software configuration needed to process enterprise workloads.

\_\_\_\_\_

NCRT 120 (non-credit) or CMPT 316 (credit)

#### z/OS Networking

This course examines network theory and architectures (TCP/IP and SNA/APPN), the business problems to be solved and actual implementations, as well as security, administration, and operations. A PC with Windows is required to complete assignments where you learn and investigate general computer networking, and 2 hands-on labs where you will work on your own virtual z/OS system: examining, modifying, and repairing its network. The labs and lectures are an introduction to the tasks of a z Systems network administrator and will enable you to discuss data center issues with network managers as an informed and active participant.

Prerequisite: NCRT 110 or CMPT 315

\_\_\_\_\_\_

NCRT 130 (non-credit) or CMPT 317 (credit)

#### z/OS Security

The course is based on the IBM Redbook entitled "Introduction to the New Mainframe: Security." The class is structured to develop the student's understanding of information security from a business implementation perspective. The basic concepts of security are explained, as well as how these concepts have been implemented on the z Systems hardware and the z/OS operating system and its components.

Prerequisite: Introduction to z/OS and Major Subsystems

Follows NCRT 120 or CMPT 316

# **System Programming Track**

**Professional Certificate** 

NCRT 210 (non-credit) or CMPT 451 (credit)

#### z/OS Advanced Topics

This course is designed to go into some detail on key technical areas of interest to personnel working with z Systems and z/OS. Several topics are extensions to basic materials covered in the Introduction to z/OS and Major Subsystems class



while others cover new material. Topics covered include business continuity and disaster recovery, business intelligence and data warehousing, a look inside the coupling facility, z/OS installation overview, z/OS performance basics, global resource serialization and z Systems virtualization (including memory management). Other topics such as system commands, system integrity and Server Time Protocol reinforce and expand on concepts discussed in earlier classes.

Prerequisite: Completion of the z/OS Associate Certificate

NCRT 220 (non-credit) or CMPT 452 (credit)

#### z/OS Reliability, Availability, Serviceability and Problem Determination (RAS and PD)

This course provides an overview of Reliability, Availability, and Serviceability (RAS) principles and their importance to the z Systems hardware and z/OS operating system. The course introduces the major characteristics of the different aspects of RAS, distinguishing serviceability and problem determination. It also covers the broad area of Reliability and Availability functions and the value that they bring to the z Systems installation, as well as the management processes required by an installation to ensure that the highest levels of Availability can be attained. The reliability and availability topics covered include: an introduction to RAS concepts, general approaches for enabling a highly available environment, z Systems hardware and software availability features including parallel sysplex, and z/OS reliability including program recovery environments. z/OS Serviceability topics include: storage dumps, logging, and tracing, z./OS messages, operational problem determination (including Runtime Diagnostics, Predictive Failure Analysis and zAware) and an introduction to using IPCS to analyze two classes of storage dumps.

Follows NCRT 210 or CMPT 451

NCRT 230 (non-credit) or CMPT 453 (credit)

#### z/OS Emerging Technologies

This course provides an overview of technologies that are expected to have significant impact on large scale computing environments over the next several years. In some cases the technologies discussed are relatively new and in other cases they have been around in one form or another for some time. In either case, this course looks at these technologies from the perspective of the z Systems hardware and software and the value and uniqueness of these technologies when used on z Systems. The topics covered include service- oriented architecture, Web 2.0, WebSphere process server, WebSphere message broker, XML on z Systems, JAVA on z Systems, Content Manager, Information Integration, z/OS simplification, Rational Developer for z Systems, z/OS Healthchecker, z/OS System REXX, GDPS Active/Active, and zLinux on z Systems.

Follows NCRT 220 or CMPT 452

# **System Programming Track**

**Expert Certificate** 

NCRT 320 (non-credit) or CMPT 454 (credit)

#### z/OS Installation

This course provides instruction on the use of SMP/E to perform z/OS installation and related activities. Practical exercises are used to build z/OS installation skills. The topics covered in this course include z/OS installation overview, SMP/E basic topics, SMP/E advanced topics, planning for z/OS, z/OS software offerings, ordering z/OS software, cloning, upgrading a z/OS product, z/OS migration, configuration and customization, z/OS deployment, ServerPac and best practices for maintenance.

Prerequisite: Completion of the z/OS Professional Certificate



NCRT 330 (non-credit) or CMPT 455 (credit)

#### **DB2 Fundamentals**

The DB2 Fundamentals class provides an introduction to the DB2 relational database system as implemented on z/OS. It introduces the major DB2 concepts, structures, functions and features and includes an introduction to DB2, DB2 concepts, system overview, system structures, database services, DB2 environment, attachment facilities, workload management, distributed data facility, SQL overview, DB2 interface, SQL journeys, database and application implementation, concurrency control, security, logging and recovery, startup and restart, commands, utilities and tools, system performance and fundamental query optimization.

#### Follows NCRT 320 or CMPT 454

.....

NCRT 340 (non-credit) or CMPT 456 (credit)

#### z/OS Performance Fundamentals

The z/OS Performance Fundamentals class provides a practical approach to understanding z/OS performance concepts and techniques. The class includes an introduction to the discipline of z/OS performance fundamentals, formula fundamentals, resources that need to be performance- managed, managed workloads that will be using the managed resources, the discipline of computer performance measurement and monitoring, common methodologies used to conduct a performance analysis and review, processor performance fundamentals, processor storage (memory) and paging subsystem performance fundamentals, workload manager performance fundamentals, sysplex and parallel sysplex performance fundamentals and workload performance fundamentals.

Follows NCRT 330 or CMPT 455

# **Application Programming Track**

**COBOL Application Programming Certificate** 

NCRT 420 (non-credit)

#### **Basic COBOL Programming**

The basic COBOL application programming class provides the student an opportunity to exercise a number of programming techniques using the COBOL programming language. COBOL has been used to develop commercial applications and is still in wide use today in many large organizations. The class covers the use of structured programming techniques to design, code and test COBOL programs. This class will teach MOVEs, IF...ELSE, PERFORMs, I/O, math operations and array processing techniques. Weekly programming projects will be assigned to give students ample opportunity to learn the COBOL programming language.

Prerequisite: NCRT 110 or CMPT 315

NCRT 430 (non-credit)

#### **Advanced COBOL Programming**

This course begins with a review of single dimensional array processing techniques before beginning multidimensional array processing techniques. File processing techniques including sorts, merges, and transaction processing will be covered. Structured Programming techniques and modularization including both internal and external subroutines will be taught and used in all programming projects. Database processing will be taught using both VSAM, including IDCAMS, and DB2. DB2 will be taught using both interactive processing with SQL Processor Using File input (SPUFI) and batch processing using embedded SQL. This course uses weekly programming projects to enable the student to practice what is being taught. These programming projects will be entered, compiled and executed on the Marist College z/OS mainframe computer using TSO.

**Follows NCRT 420** 



# **Application Programming Track**

IMS Application Programming Certificate

NCRT 520 (non-credit)

#### **IMS Fundamentals**

This course is designed to present an introduction to the basic facilities of IMS, how these facilities work together and how application programs interact with them. The course presents the IMS Database System, the IMS Transaction Manager, and their use in today's modern enterprise systems. An introduction to IMS Parallel Sysplex and high availability will be provided.

Prerequisite: NCRT 110 or CMPT 315

.....

NCRT 530 (non-credit)

#### **IMS Application Programming**

This course is designed to present the skills needed to write application programs that interface with the IMS Transaction Manager, and use DL/I to process IMS databases. Topics include DL/I Environment, Call Processing, Retrieval Calls, and Update Calls, programming techniques, advanced segment search arguments, system service calls, message processing programming, message format services and IMS Transaction Manager additional facilities.

Follows NCRT 520

### **Application Programming Track**

Assembler Language Application Programming Certificate

NCRT 620 (non-credit)

#### **Basic Assembler Language Programming**

The class includes weekly video lectures and programming assignments that help students develop fundamental assembler skills. Individual attention is given to each student. Topics include number systems, machine components, instruction formats, addressing techniques, character manipulation, looping, conditional logic, packed decimal and binary arithmetic, multiple CSECTs, parameter passing, linkage conventions, debugging by hand and with the interactive debugger zXDC, dump reading, and DSECTs.

Prerequisite: NCRT 110 or CMPT 315

.....

NCRT 630 (non-credit)

#### **Advanced Assembler Language Programming**

Weekly programming exercises will introduce a number of advanced z/OS assembler language programming techniques. In particular, this class will provide an opportunity to develop z/OS assembler code that uses tables, lists and linked lists, z/OS units of work such as TCB's and multitasking, z/OS assembler techniques and services to provide high levels of availability, z/OS assembler instructions and techniques for serialization, z-architecture instructions, z/OS multitasking using non-privileged system services, programs with multiple CSECTs, and re-entrant code. The exercises used in the class will allow the student to continue to develop good practices for designing, coding and testing well-structured and well-documented z/OS assembler code.

Follows NCRT 620



# **Application Programming Track**

**DB2 Application Programming Certificate** 

NCRT 820 (non-credit)

#### **DB2 Fundamentals**

The DB2 Fundamentals class provides an introduction to the DB2 relational database system as implemented on z/OS. It introduces the major DB2 concepts, structures, functions and features and includes an introduction to DB2, concepts, system overview, structures, database services, DB2 environment, attachment facilities, workload management, distributed data facility, SQL overview, DB2 interface, SQL journeys, database implementation, application implementation, concurrency control, DB2 security, logging and recovery, startup and restart, DB2 commands, utilities and tools, system performance and fundamental query optimization.

Prerequisite: NCRT 110 or CMPT 315

NCRT 830 (non-credit)

### **DB2 Application Programming**

This course presents the fundamental concepts and programming techniques required to access DB2 for z/OS data through application programs. Students will learn to code programs with embedded SQL and to use a variety of attachment facilities to run those programs against DB2 for z/OS databases. The course includes many hands-on programming exercises which give students the opportunity to develop programming skills, learn good programming techniques and implement programming best practices while accessing DB2 data. Students taking this course should have a basic understanding of relational databases (preferably DB2 for z/OS) and a basic knowledge of SQL.

Follows NCRT 820

#### z/VM Education

NCRT 901 (non-credit)

#### Running Linux Systems in a z/VM Virtualized Environment

In this course, you will be introduced to the concept of virtualization, z/VM administration, directory maintenance, storage administration, and system administrative tasks required to administer a healthy z/VM production system running Linux system guests.

"I have absolutely no regrets having taken this class. This class exceeded my expectations and prepared me for the courses to follow."



#### **COURSE DESCRIPTIONS**

# **Emerging Technologies**

#### **Cybersecurity**

The Cybersecurity certificate is suitable for entry-level positions in the computer science or information technology fields, senior system mangers or system administrators, or technical professionals looking to broaden their skill set or transition into security from adjacent fields such as criminal justice, business and finance, or healthcare. Course material fulfill curriculum requirements from the US government and the Association of Computing Machinery (ACM), including required topics for training security professionals under the Information Assurance Courseware Evaluation Program established by the US National Security Agency (NSA). The courses also cover all key areas of the CISSP Common body of Knowledge. Although the certificate assumes no prior experience in cybersecurity, recommended prerequisites include familiarity with introductory programming principles and data networking; there are no specific computer language prerequisites for this certificate.

# Cybersecurity Certificate Program

#### Introduction to Cybersecurity (CMPT 416N) - 4 credits

This course provides an introduction and overview of key concepts in cybersecurity for cloud and enterprise data centers. We provide a framework for understanding cybersecurity concepts based on the NIST cybersecurity lifecycle. Students will be introduced to core concepts including physical data center security, authentication, access control, identity management, secure software development principles and practice, cryptography, cloud security, compliance, and governance. Students will be introduced to a variety of common security attacks, including code injection, man-in-the-middle, phishing, buffer overflows, and adjacency attacks. Using a self-contained lab environment, isolated from the campus network and the Internet, students will be able to practice common hacks and defense strategies, and learn how to scan websites and cloud environments for security vulnerabilities. Practical examples of real world security breaches will be used as case studies to illustrate key concepts. (prerequisites: knowledge of computer programming principles and networking)

#### Hacking and Penetration Testing (CMPT 417N) - 3 credits

This course provides an examination of the landscape, key terms, and concepts that a security practitioner needs to understand in order to protect their data centers. Students will be introduced to best practices before, during, and after a cyberattack has taken place. The course provides a technical overview of hacking, including how attackers conduct surveillance to identify security weaknesses, foot-printing a targeted site, and the methodology hackers follow in exploiting known vulnerabilities. Students will gain experience designing a penetration test plan, implementing intrusion detection systems, and performing incident response with basic digital forensics. Ethical hacking and penetration testing tools will be described, with the aid of a secure, online virtual cloud lab environment where students can safely practice their skills. (prerequisite: CMPT 416N)

#### Mobile Security (CMPT 418N) - 4 credits

This course deals with security concerns in the rapidly evolving world of mobile and wireless devices, which are becoming the primary means of computing and communication for both the workplace and home. The course introduces funda mentals of wireless communication, including the evolution of wireless networking and its impact on the corporate data center. Students will explore the wireless network infrastructure, along with wireless LAN (WLAN) security threats and auditing tools. Students will gain experience with WLAN implementation, management, and countermeasures, finger-printing mobile devices, and the unique challenges of implementing WLAN security policies. Hands-on experience will be provided using the Android mobile platform, along with virtual cloud security labs where students can safely experiment with different WLAN tools, risk assessments, standards, and security models. (prerequisite: CMPT 416N)



# **Business Analytics Certificate**

#### **Graduate Level**

The Marist Business Analytics certificate does not require a computer science or technology background and may be of strong interest to those students working in advertising and marketing, health care administration, business strategy, research, or finance. Individuals working in these employment sectors who wish to stay competitive in their field should do so by deepening their knowledge of Business Analytics. Students must have a bachelor's degree to enter this graduate level program.

**MSIS 537** 

#### **Data Management**

Data Management covers fundamentals of relational database design, with special focus on data modeling and the use of SQL for relational data query and manipulation. Students need to be proficient at modeling business data, manipulating data through standardized query languages such as SQL, and accessing data from standardized database interface protocols.

.....

**MSIS 545** 

#### **Introduction to Data Analysis and Computational Statistics**

Intro to Data Analysis and Computational Statistics covers key statistical methods used to analyze data in support of business decisions and provides a practical introduction to modern techniques for computational data analysis using open source tools such as the R system.

**MSIS 637** 

#### **Decision Support Systems**

Decision Support Systems focuses on model driven and data driven decision making tools that help managers address structured and semi-structured decision making tasks; management science topics include mathematical programming, decision theory, risk analysis and stochastic simulation; data-driven tools such as online analytical processing, business performance monitoring and probabilistic expert systems are considered.

.....

**MSIS 591** 

#### **Data Mining and Predictive Analytics**

Data Mining and Predictive Analytics provides in-depth coverage of data mining, the discipline concerned with extracting /discovering hidden patterns in the data. Data processing (including data reduction), data mining applications in real world situations are extensively addressed throughout the course.

"The IDCP program helped me in my pursuit to become a better educated, more effective Data Center Manager. Earning the CDCP certification is a real mark of achievement and definitely assisted me throughout my career."



#### **COURSE DESCRIPTIONS**

# **Data Center Technologies**

#### **Data Center Technologies**

The Data Center Facilities Management Associate and Professional Certificate programs provide competency in critical infrastructure design, management, and problem-solving acumen. While learning relevant, job-related skills, participants earn undergraduate credits that can be applied toward a fully online bachelor's degree at Marist College. The program provides participants with essential knowledge and skills in facilities management, infrastructure, power, cooling, data communication, project management and cloud computing.

# Associate Certificate in Data Center Facilities Management

CMPT 130 (3 Credits)

#### **Information Technology and Systems Concepts**

This course establishes a foundation for the understanding of information systems in organizations. Applications and technologies are studied in relation to organizational objectives. The student studies different types of systems such as MIS, DSS, EIS and basic applications to a data center environment. The student studies an overview of technology including hardware, software, Internet, World Wide Web, e-Commerce, database and objects.

.....

CMPT 482 (3 Credits)

#### **Introduction to Facilities Management**

This course introduces the student to all facets of data center facilities management including deployment, support, major site infrastructures (power, cooling, etc.), downtime windows, security, maintenance procedures and relationships (IT systems, processes, management). The majority of the course, however, concentrates on the physical aspects of data centers.

Pre- or Co-requisite: CMPT 130

.....

CMPT 487 (3 credits)

#### **Advanced Facilities Management**

This course provides a technical overview of critical infrastructure, including energy conservation equipment, generation and transmission equipment, electrical safety, facilities engineering, systems maintenance, energy security, UPS systems, power transfer switch systems, standby generators, and data center energy efficiency.

**Prerequisite: CMPT 482** 

Professional Certificate in Data Center Facilities Management

Prerequisite: Successful completion of the Associate Certificate in Facilities Management plus:

CMPT 309 (3 credits)

#### **Project Management**

The Project Management class is designed to meet the needs of students and professionals who want to build or strengthen their skills in building high performance virtual teams, integrating project elements and achieving satisfactory deliverables. It combines the expertise of a seasoned project manager with the structured project management knowledge



framework. The result is a focused and results oriented curriculum that provides systematic instructions on project management knowledge areas, processes, tools, best practices and lessons learned. The content of this course is consistent with the Project Management Body of Knowledge (PMBOKÒ) defined by the Project Management Institution (PMI). The instructor is an Executive Project Manager with the PMPÒ certification by PMIÒ.

.....

CMPT 306 (4 credits)

#### **Data Communication and Networks**

This course examines the concepts and mechanisms of wired and wireless data-audio-, and video-transport systems. Network architecture, terminology, control, standards (OSI and TCP/IP models), and general topologies will be discussed. Current equipment and physical interconnections will be explored for a range of network services to support activities such as application development, distributed processing, operating information centers, and providing distance learning. Topics covered include an analysis of the problems and limitations imposed by the physical channel, wireless networks, comparative switching techniques, routing, congestion control, and higher-level protocols needed to complete the enduser to end-user connection.

.....

CMPT 483 (4 credits)

#### **Cloud Infrastructure and Services**

This course examines the technical building blocks of Cloud Computing. This course examines the different type of service models, delivery models and characteristics that make up a typical cloud environment. The course will touch on the different cloud providers today including OpenStack and Amazon. This course will also cover the impacts that cloud has on security, networking and maintenance. The economics of the cloud and how they impact cloud services will be discussed.

**Prerequisite: CMPT 306** 

#### Certified Data Center Professional Certificate

# Prerequisite: Successful completion of the Data Center Facilities Management Associate and Professional Certificates plus

ORG 101 (3 credits)

#### **Managing Organizations**

This course provides an introduction to the management of organizations. Students will learn about organizational structures, history of management, and the tasks, roles and responsibilities of managers. Planning, organizing, directing and controlling the management process will be discussed. Critical and ethical decision making will be emphasized throughout the course.

ORG 203 (3 credits)

#### **Practical Applications of Accounting**

This course introduces students to the fundamental principles and concepts of financial accounting. There will also be exposure to the practical applications of cost and managerial accounting. Students will develop a basic understanding of business transactions, balance sheets and financial statements.

"The hands on work was challenging and I learned a lot from the labs. I feel my experiences in these classes will help me advance in my career."



#### **General Information**

#### **Certificate Programs**

Students must achieve a grade of C or above in each course within a certificate program in order to receive the IDCP certificate. The courses that comprise the IDCP certificates are 100% online, instructor-led and asynchronous allowing students across all time zones to participate and collaborate in a virtual classroom environment. Students should expect to devote a minimum of 10 to 15 hours per week as each course is comparable to a traditional undergraduate class.

#### Enrollment, Fees and Tuition

All students must complete an enrollment form when registering for a course or certificate program. Tuition is payable in full at the time of registration. Tuition varies depending on the specific course or program. Please visit <a href="http://idcp.marist.edu">http://idcp.marist.edu</a> for more details. In some cases, programs may be offered at significant introductory discounts. There are additional discounts when multiple students enroll from a company.

Payment may be made by check or credit card. Checks should be made payable to Marist College and mailed to the address indicated on the enrollment form.

There are no additional registration fees. However, some courses do require textbooks. Textbooks may run \$75 to \$150 per course. Some courses do not require any textbook purchase as the materials are provided or downloadable.

### **Course Delivery**

Students interact with the iLearn course management system asynchronously. All that is required is a high speed Internet connection and an up-to-date work station. Students do not have to be "present" at any specific time for class participation; therefore courses are accessible across all time zones and geographies.

#### Refunds

Refunds are issued according to specific policies governing non-credit or credit programs. For non-credit courses, tuition is non-refundable once the classes have started. For credit-bearing programs, refunds are provided in accordance with Marist College policies. A policy guide will be sent to all students enrolling in credit-bearing courses.

#### **Cancellation Policy**

Marist College and the Institute for Data Center Professionals reserve the right to cancel any course for which there is insufficient enrollment, restrict registration in a course, provide additional teaching assistants or change instructors if necessary. In the event of course cancellations or schedule changes, every effort will be made to notify registered students as quickly as possible.

#### Office Hours

Marist College Help Desk (for technical support)

Hours of operation during the fall and spring semesters (beginning the first day of classes):

Monday - Thursday 7:30a.m.-10:00p.m., Friday 7:30a.m.-5:00p.m.

Hours of operation during fall and spring semester breaks are:

Monday - Thursday 7:30a.m. - 7:00p.m., Friday - 7:30a.m. - 5:00p.m.

Hours of operation during the summer are:

Monday - Friday 8:00a.m. - 7:00p.m.

Institute for Data Center Professionals Administrative Offices

Monday- Friday 8:30a.m.-5:00p.m.

"I did like that there was a strong component of ongoing evaluation through quiz scores rather than an emphasis on just one or two exams."



# THE INSTITUTE FOR DATA CENTER PROFESSIONALS

# http://idcp.marist.edu



# **MARIST**

THE INSTITUTE FOR DATA CENTER PROFESSIONALS Marist College Hancock Technology Center 3399 North Road IDCP Poughkeepsie, NY 12601