Modern Information Technology Program: An In-Depth Introduction

An eleven-week program providing instruction in coding and a hands-on overview of key topics in modern computing and business applications.

Modern computing has paved the way for technological advancements that span every facet of our lives. It would be impossible to find any industry or individual that has been unaffected by dramatic trends emerging in technology.

Have you grown tired of sitting in meetings nodding your head while people talk about the “cloud”, “big-data”, “search engine optimization” and other buzzword-topics? Do fears of a poorly secured network at your home or office cause you unease? Are you trusting your company’s web presence to “experts” with very limited understanding about the hosting service that you are employing and the services that you are paying for? Do you see ads for Go Daddy and wonder what in the world they are trying to sell you? Have you wondered why people keep talking about “big data” and why nearly every industry from professional sports to healthcare to the military is spending billions of dollars to employ skilled workers in that area?

If any of these apply to you, we think that you will find DePaul University’s Modern Information Technology Program an accessible yet challenging introduction to some of the most exciting and still-evolving computing specialties.

Whether your goals arise out of a desire for personal enrichment, or you simply wish to engage more effectively with IT staff, this program will get you there.

This program is geared towards executives, managers, business owners, and anyone looking for a deeper understanding of modern computing. Individuals who complete the curriculum will leave with coding skills and an understanding of cutting-edge trends in IT.

Classroom lectures, reading materials, and demonstrations will be complemented by faculty-guided hands-on exercises.

YOU WILL LEARN ABOUT:

- Web page design
- Coding
- Securing a home or business network
- Computer Hacking
- “The Cloud”
- Search Engine Optimization

- Physical Computing
- Predictive Analytics
- Big Data
- Social Media
- Recommender Systems
- Emerging Trends
**Modern Information Technology: An In-Depth Introduction**

The Modern Information Technology program offers a comprehensive introduction to the most important topics and trends in modern-day computing. It will enable students to develop a hands-on, practical understanding of the technologies shaping every aspect of our personal and professional lives.

The program assumes only basic personal computing skills and internet experience. While delving into technical topics, our faculty will keep in-depth theory and technical jargon to a minimum. Students should expect to be challenged while being educated in several of the key issues that confront specialists in areas such as computer programming, artificial intelligence, and data analytics to name a few. Throughout the course, participants will acquire basic coding skills. In fact, by the end of the program, all participants will have successfully created a web site that incorporates programming in the “languages” of the World Wide Web including HTML, CSS, and JavaScript.

All topics covered by this course will include some form of workshop / lab time. Lectures and related workshops will be conducted by faculty from DePaul University’s College of Computing and Digital Media.

**CURRICULUM**

Below is a brief overview of some of the topics that we will be covering in this course.

<table>
<thead>
<tr>
<th>CODING AND WEB SITE CREATION</th>
<th>Build web pages by programming in HTML, CSS, and JavaScript; Databases and server-side web computing.</th>
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<tbody>
<tr>
<td>TOPICS IN COMPUTER SECURITY</td>
<td>Wireless network security; Eavesdropping or “sniffing” data over network connections; Virtual Private Networks; Hacking, Identity theft.</td>
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<tr>
<td>BIG DATA AND THE CLOUD</td>
<td>“Mining” big data; Applications to areas such as marketing, health-care, and national security.</td>
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<tr>
<td>PHYSICAL COMPUTING</td>
<td>The “internet of things”; 3D printing, to Nest thermostats, to self-driving cars. How physical computing is affecting the future of our personal and professional lives.</td>
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<tr>
<td>MARKETING AND SEARCH ENGINE OPTIMIZATION</td>
<td>Strategies for prominence in search engine results; Search Engine Optimization; Whether or not one can really “game” the search engine system.</td>
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<tr>
<td>SOCIAL MEDIA</td>
<td>Facebook, Instagram, Wikis; Separating fact from hype. Leveraging social media to generate publicity, influence perceptions, and shape image.</td>
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<tr>
<td>PREDICTIVE ANALYTICS / RECOMMENDER SYSTEMS</td>
<td>Leveraging big data to target marketing, anticipate need, generate business opportunities, and more. Applications employed by Amazon, Netflix, Centers for Disease Control, and more.</td>
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GENERAL INFORMATION

ADMISSION

Prerequisite Skills/Knowledge: This program assumes only the ability to use a personal computer and access the internet. A substantial commitment of time is required for this intensive course of study. Final admission will be determined by the admissions committee on the basis of an applicant’s overall qualifications including work history and educational background.

FACILITIES

All lectures will be recorded using advanced Course Online recording technology. Enrolled participants can view and review all of the lectures on any PC, Mac, Smartphone, or tablet device. Participants who are unable to attend a lecture can view it at any time afterwards throughout the duration of the course.

To promote the learning process, the Institute maintains special-purpose laboratories as well as dedicated classrooms equipped with state-of-the-art audio/visual equipment. This program will also make use of specialized labs where necessary including our Physical Computing and Security labs and workshop areas.

BENEFITS TO PARTICIPANTS

Enrollment in this program means you are a part-time DePaul student which affords you use of the computing labs, library, tutoring services, and other facilities.

As a DePaul University student, you will have access to free or significantly discounted software. For example, Microsoft’s MSDNAA program (available to CDM students) provides free or significantly discounted downloads of much of their best-known software. Many companies also offer discounts to students on hardware. For example, Apple Computers offers the ‘Apple Store for Education’ discount program.

SCHEDULE

The Institute offers one section of the program each term. Classes meet on one weekday evening (the exact day varies by academic quarter) and on Saturday mornings.

FACULTY

The faculty consists of instructors from the College of Computing and Digital Media and experts in industry. Faculty will be available throughout the program both in person and through electronic mail.
The college, through its School of Cinematic Arts, School of Computing, and its School of Design, offers a variety of programs at the undergraduate and graduate levels. Over 3,000 students are enrolled in the college’s bachelor’s programs and over 2,700 students are enrolled in the master’s and Ph.D. programs making the college’s graduate program one of the largest in the country. The college offers more than 300 courses each quarter, many in the evening, and primarily in the Loop and Lincoln Park Campuses. Most of the degree programs are also available exclusively online.

**Offerings at the undergraduate level include:**
- Animation B.A. / B.F.A.
- Computer Science B.S.
- Cyber-Physical Systems Engineering B.S.
- Cybersecurity B.S.
- Data Science B.S.
- Film and Television B.A. / B.F.A.
- Game Design B.S.
- Game Programming B.S.
- Graphic Design B.F.A.
- Information Systems B.S.
- Information Technology B.S.
- Interactive and Social Media B.S.
- Math and Computer Science B.S.
- Network Engineering and Security B.S.

**Offerings at the graduate level include:**
- Animation M.A.
- Applied Technology M.S.
- Business Information Technology M.S.
- Computational Finance M.S.
- Computer Science M.S.
- Cybersecurity M.S.
- Digital Communication and Media Arts M.A.
- E-Commerce Technology M.S.
- Experience Design M.A.
- Film and Television M.S.
- Game Programming M.S.
- Health Informatics M.S.
- Human-Computer Interaction M.S.
- Information Systems M.S.
- IT Project Management M.S.
- Network Engineering and Security M.S.
- Predictive Analytics M.S.
- Product Innovation and Computing M.S.
- Software Engineering M.S.
- J.D./M.S. in Computer Science Technology

**Master’s of Fine Arts**
- Animation
- Creative Producing
- Documentary
- Film and Television
- Game Design
- Screenwriting

**Ph.D. in Computer and Information Sciences**
- Ph.D. in Human Centered Design

**INSTITUTE FOR PROFESSIONAL DEVELOPMENT**

The Institute for Professional Development was formed by the college in 1984 to assist both individuals and businesses in keeping pace with the rapid development of computer technologies. The Institute currently offers a variety of intensive certificate programs in these areas:

- Advanced SQL
- Big Data and NoSQL
- Big Data Using Hadoop
- Big Data Using Spark
- Cloud Computing Technologies
- Data Science for Business
- Fundamentals of R
- Introduction to SQL
- iOS Developer
- IPv6
- Java™ Developer
- Modern Information Technology
- Modern .NET Web Development
- SQL Server® Business Intelligence
- SQL Server® Database Administration
- Technology and Innovation
- Web Development with JavaScript and HTML5

**APPLICATION PROCEDURE:**

Complete the enclosed application and return it with a non-refundable $40.00 application fee (check or money order made payable to DEPAUL UNIVERSITY) to:

DePaul University
Modern Information Technology Program
Institute for Professional Development
243 S. Wabash Avenue, Room 301
Chicago, IL 60604-2300