

### 47567 03 Special Studies

Instructor permission required. NOTE: College guidelines apply as well.

### 47567 04 Special Studies

The purpose of this course is to provide students with experience in various aspects of video game development including level design, implementation, testing and deployment. The development environment will be the Half-Life 2 video game modding engine and its associated software tools. Additional third-party (and often free) utilities may also be necessary. Students will work on their own or in teams on agreed upon areas of interest. NOTE: College guidelines apply as well.

## Technology Related Ethics

### 40150 Current Trends in Computer Applications

The Current Trends course allows the students to think about and discuss issues openly that pertain to computer ethics, business ethics, and some social ethical issues. We start out by having an understanding of the distinction between the terms Moral and Ethical. The class works through the generally accepted theories for resolving moral and ethical conflicts. These are egoism, natural law, utilitarianism, and respect for persons. We also discuss the reasons businesses exist and what they think their responsibility toward society is now and how it might change in the future. The students also debate several business ethical issues. In the area of Information Technology, there is discussion about what the student sees as right or wrong, ethical or not ethical in the many issues of discussion that are presented. Restriction: Seniors Only.

## Technology and Society

### 40260 Information Security

This course provides students with a working knowledge of information security topics through a focus on best practices, applications and implementation strategies. Students will learn the fundamental principles of information security and explore contemporary topics in the field, including access control methodologies, business continuity/disaster recovery planning, firewalls, network security, operating system security, intrusion detection, cryptography and incident handling.



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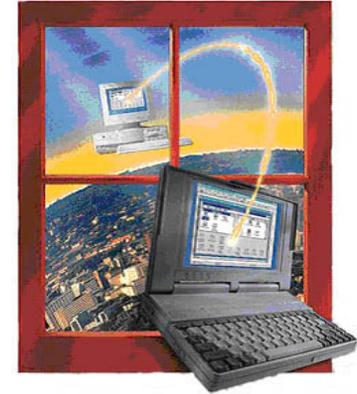
<http://www.nd.edu/~capp/careemight.html>

CAPP 20505	Intro to Computer Systems	Berzai	8:30-9:20	MW/F
CAPP 30400	Research Methods in Computers	Villano	9:30-10:45	TR
CAPP 30510	Management Information Systems	Berzai	9:35-10:25	MW/F
CAPP 30550	JavaScript	Casault	9:30-10:45	TR
CAPP 40150	Current Trends in Computer Applications	Berzai	10:40-11:30	MW/F
CAPP 40260	Information Security	Chapple	11:00-2:15	TR
CAPP 40540	CAD for the Stage	Cole/Clayton	11:45-12:35	MW
CAPP 40545	Computers in Psychology Research & Educ.	Crowell	3:30-4:45	TR
CAPP 40550	Digital 3D Modeling	Melchiorri	8:30-10:25	MW/F
CAPP 40551	Motion Design 1: Introduction to Motion Media	Sherman	3:00-6:00	MW
CAPP 40559	Information Design: Data Driven Design	Murnieks	3:00-6:00	MW
CAPP 40561	Web Design 1: Intro. to Web-Based Interactivity	Murnieks	11:45-2:45	MW
CAPP 40610	Fundamentals of Business Thinking	Sucec	2:00-5:00	T
CAPP 45565-01	Internship	Berzai	TBA	TBA
CAPP 45565-02	CAPP/TBS Community Service	Crowell	TBA	TBA
CAPP 47567-01	Special Studies 01	Berzai	TBA	TBA
CAPP 47567-03	Special Studies 03	Sucec	TBA	TBA
CAPP 47567-04	Special Studies 04	Villano	TBA	TBA

FALL 2012

## COMPUTER APPLICATIONS & TECHNOLOGY, BUSINESS, & SOCIETY

Your windows in the College to the worlds of Technology & Business



Fall 2012

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CAPP IS OPEN TO STUDENTS  
IN ALL COLLEGES

## CAPP SUPPLEMENTARY MAJOR REQUIREMENTS

### CAPP REQUIRED COURSES:\*

Programming Languages	6 hrs
Technology Applications	12 hrs
Technology Related Ethics	3 hrs
Technology & Society	3 hrs
Total Needed:	24 hrs

## TBS COMPLEMENTARY SKILLS PROGRAM REQUIREMENTS

### TBS REQUIRED COURSES:\*

Programming Languages	3 hrs
Technology Applications	3 hrs
Technology Related Ethics	3 hrs
Business Knowledge	3 hrs
Technology & Society	3 hrs
Total Needed:	15 hrs

## Programming Language

### 30550 JavaScript

JavaScript is a popular scripting language used to add dynamic elements that breathe life into boring static Web pages. JavaScript is designed to work in standard Web browsers and is tightly integrated with HTML. You would be hard pressed to find any popular commercial Web sites that don't use JavaScript to create an interactive user experience. Join this class and learn how to apply JavaScript in to your own Web projects.

### 30400 Research methods in Computer Programming

The purpose of this lab-based course is to provide students with hands-on experience in various areas of computer programming. Essential programming topics will be demonstrated and practiced in class, including basic and advanced data types, control structures (conditionals, iteration, etc.), software timing, randomization, and text file manipulation. Examples will be provided in several computer languages that are commonly found in research settings.

## Technology Applications

### 20505 Introduction to Computer Systems

As an introduction to Information Processing, this is a literacy course which explains computer systems including hardware, software, systems analysis and other related topics. The class learns some computer programming, logic, design and documentation using the BASIC language. Students also work in teams to learn a particular phase of the IS environment, work with multimedia software and make presentations to the class.

### 30510 Management Information Systems

Students are introduced to leadership and management skills in the information processing environment. Discussions on why and how management makes decisions are an important part of the course, as are discussions of current problems of management in the business world related to computer applications.

### 40540 CAD for the Stage (FTT)

The study of the use of the computer to design scenery and lighting for the stage. The course will begin at a rudimentary level of understanding of computer-aided design and progress to 2-D and then 3-D design techniques. A basic understanding of the Macintosh computer system is necessary, and significant computer work is required outside class.

### 40545 Computers in Psychology Research and Education (PSY)

This course and its counterpart in Psychology (PSY 20671) is project-oriented. It is not an introductory course on computer applications. Students need to already have (or learn during the semester) the skills needed to complete whatever project is defined. Generally, projects are applications or systems that fit into the broad spectrum of the instructor's interests, which students can determine by consulting the Instructor's web page (<http://www.nd.edu/~ccrowell>). New projects are defined each semester. Some recent projects have involved: 1. Developing a multimedia presentation on management and coaching using PowerPoint slides and audio files. 2. Creating a visual basic application to administer surveys on disk. 3. Exploring the capabilities of WebCT/Concourse as a teaching tool. 4. Developing a web site for student advising in the Psychology Department. 5. Completing a database application in Microsoft Access for tracking and reporting manager coaching sessions. Students are expected to plan and develop a functional application.

### 40550 Digital 3-D Modeling (DESN)(FTT)

This is an introductory course to Rhinoceros. The focus of this class is to learn how to use the software to generate 3D virtual models with an emphasis on industrial design concerns as well as creating manufacturable data for rapid prototyping. The class will be devoted to learning tools, interface, modeling and rendering methods. This will be achieved by completing specific assignments and tutorials. The final assignment will be to virtually model and render a product or scene from a concurrent class or personal interest.

### 40551 Motion Design 1: Introduction to Motion Media (DESN)

*Prerequisites: Graphic Design I.*

This multimedia course will give the studio, design or CAPP major an introduction to the design of motion graphics. Students will develop short information movies, movie trailers, or movie opening sequences. The course will use Adobe After Effects software and also cover basic DVD and QuickTime movie development. Skill with various graphics software is useful, with expertise in Adobe Photoshop being very important.

### 40559 Information Design: Data Driven Design (DESN)

Visualization and sequencing of complex or abstract subject matter for the purpose of informing, educating or training the end-user. Design process includes the acquisition of information and data to become a subject matter expert on a project topic. Development of topics through the parsing of information, focusing of subject, sketching, illustration and graphical data representation. Delivery of information through an interactive, user-driven experience possibly exploring handheld devices.

### 40561 Web Design 1: Introduction to Web-Based Interactivity

Exploration of on-line interactive communications for web enabled platforms including desktop and mobile devices. Application of user-centered design principles to hierarchical and I navigational structures, interface, web typography, imagery, sound, and motion through a series of exercises and projects. Survey of technological aspects to web site design, development and production.

### 40610 Fundamentals of Business Thinking

This course is designed to provide an integrated understanding of the foundational business disciplines of accounting, finance, marketing, and management, especially for CAPP majors planning a career in business. Fundamental leadership and consulting skills will also be addressed. Case analysis, coupled with a highly interactive format, will be employed to ensure practical exposure to today's business environment. Primary areas of focus will address the critical elements for success in the corporate environment, the knowledge and preparation necessary to facilitate your interviewing process, and the business fundamentals for those with entrepreneurial aspirations.

### 45565 01 Internship

This encompasses working with various civic, public and or private organizations using acquired computer applications knowledge and skills. Credit is given only if work is done in the Information Systems area of an organization.

### 45565 02 CAPP/TBS Community Service Internship

This internship was created to allow an interested CAPP/TBS student to lend their skills and talents to a worthy cause in our local community.

### 47567 01 Special Studies

This independent study course involves a programming or development project developed by a student in conjunction with a faculty advisor. Special independent study guidelines and permissions apply to this course that is described in a document available on the CAPP website ([www.nd.edu/~capp](http://www.nd.edu/~capp)). CAPP/TBS students only. NOTE: College guidelines apply as well.