

## Technology Related Ethics

### 40160 Digital Technology, Society, and Ethics

This course will explore ethical and moral dilemmas that arise as powerful and pervasive new technologies increasingly shape how individuals understand themselves, and play important roles in weaving together new kinds of social groups. We will examine how new technological capacities have helped shape new kinds of economic organization and production (information economy), new forms of community (dispersed, virtual), and led people to new understandings of individuality and of themselves (e.g., online communities as constitutive of new self-definitions and understandings). We will work through case studies to investigate how particular new communication technologies have changed how society is organized, and changed how individuals interact with one another. We will explore ethical questions in the context of these case studies, and will ask ourselves how people can and should treat and engage one another in a rapidly transforming technical and social landscape. We will grapple with understanding information technologies as both shaping and reflecting the communities and societies in which they exist; and we will consider whether the question of how one should/can engage another person may be decided by, or embedded in the technical structure of new social media and other technical systems. We will explore how our interactions with the physical world are increasingly mediated by technologies (from games to Google glass), and think about how the 'natural' and the 'artificial' are merging together, possibly transforming what it means to be human, or to be a nation. In short, we will explore how communication systems shape societies: how social, economic, political, and cultural life is transformed as new technologies enable new modes of mediated social interaction. In a rapidly transforming world, this course will lead students to understand themselves as, and be, active, ethical contributors, capable of shaping communities of various kinds: business, social, cultural, and other.

## Technology and Society

### 40210 The Internet and Society

This course will spend the semester studying the impact the World Wide Web has had on several key areas of our society, including communications, commerce, marketing, productivity, education, collaboration, and our sense of community. Through a combination of discussion, group presentation, guest lectures, and out of class research, students will be exposed to some of the profound effects this medium has had on our culture. In spite of the bursting of the dot com bubble, the Web has left all of the above mentioned areas substantially changed, many for the long term. The positive and negative forces brought on by this technology must be recognized, studied, and dealt with if we are to truly embrace the momentous opportunities brought about by the World Wide Web.

### 40620 Digital Analysis and Forensic Psychology of Cybercrime

The use and interaction with digital devices is a part of daily life. This course will introduce students to the principles of forensic psychology as they apply to cybercrime offenses along with the field of computer forensics techniques and methodologies. Topics to be covered include the motivations of hackers, online child offenders, cyber stalkers, and identity thieves along with electronic discovery, Windows forensic analysis procedures, and Macintosh forensic analysis procedures.

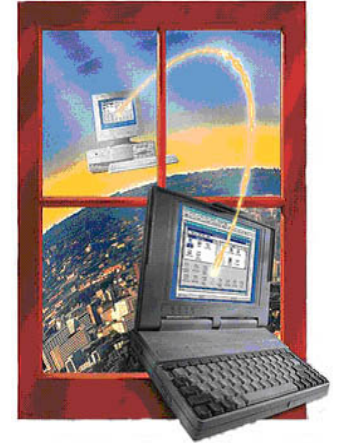
### 40720 Cybercrime and the Law

Almost all crimes, or even human interactions, contain a digital component. The fact that "old" laws don't always fit "new" problems is no more apparent than in the area of cybercrimes. This course will include discussion of topics including: the methodology of typical cyber investigations, the application of the Fourth Amendment to digital evidence, and different types of cyber-specific laws enforced today. The course will also focus on the responses of both courts and legislators to the ever-evolving issues presented by computer crimes.

COURSE #	NAME	INSTRUCTOR	TIME	DAYS	REQUIRE FILLED
CAPP 23507	La Telenovela	Barry	9:30-10:45	TR	Application
CAPP 30350	Visual Basic	Irniger	5:05-6:20	MW	Language
CAPP 30370	Web Development	Runyon	3:30-4:45	TR	Language
CAPP 30390	Prgrmmg for Video Games Dev	Villano	9:30-10:45	MW	Language
CAPP 30391	Script Based Programming 1	Flynn	2:00-3:15	TR	Language
CAPP 30521	E-Business Strategies	Coughlin	11:00-12:15	MW	Application
CAPP 30523	Applied Multimedia Technology	Clark/Turner	2:00-3:15	MW	Application
CAPP 40160	Digital, Technology, Society & Ethics	Jurkowitz	2:00-2:50	MWF	Computer Ethics
CAPP 40210	The Internet & Society	Rose	11:00-12:15	TR	Technology & Society
CAPP 40544	Computer in Psychology	Crowell	TBA	TBA	Application
CAPP 40546	Practicum in Robotics	Crowell/Villano	2:00-3:15	TR	Application
CAPP 40551	Visual Comm. Desn 6: Motion Design	Murnieks	2:00-4:45	MW	Application
CAPP 40553	Music Through Technology	Dye/Merten/Sanchez	11:00-12:15	MW	Application
CAPP 40561	Visual Comm. Design 3: Web Design	Murnieks	11:00-1:45	MW	Application
CAPP 40620	Digital and Forensic Psych	Kajzer	12:30-1:45	MW	Tech. & Soc., App.
CAPP 40720	Cybercrime and the Law	Tamashasky	11:00-12:15	MW	Tech & Soc, Comp. Eth.
CAPP 45565	Internship 01	Crowell	TBA	TBA	TBD
CAPP 45566	CAPP/TBS Comm. Serv. Intern. 02	Crowell	TBA	TBA	TBD
CAPP 45565	CAPP/TBS Comm. Serv. Intern. 02	Crowell	TBA	TBA	TBD
CAPP 47567	Special Studies 01	Crowell	TBA	TBA	TBD

## COMPUTER APPLICATIONS & TECHNOLOGY, BUSINESS, & SOCIETY

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Technology & Business*



## Spring 2015

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**CAPP IS OPEN TO STUDENTS IN ALL  
COLLEGES**

## Programming Language

### 30350 Visual Basic Programming

The course will investigate object-oriented data processing concepts using Microsoft's Visual Basic Programming Language. Technology and technique will be combined to explore the object-oriented paradigm. Object-oriented will be compared to traditional procedural paradigms wherever appropriate.

### 30370 Introduction to Web Development

The goal of this course is to provide working experience with the full range of front-end technology needed to produce a modern website. The course will cover Planning, Discovery, Information Architecture, Wireframing, Semantic HTML Markup, CSS Layout and javascript. Emphasis will be placed on building sites that can be viewed on any device using Progressive Enhancement and Responsive Web Design/Development. Some time will be spent covering CMS options and server-side languages but will not be a focus of the course.

### 30390 Programming for video game development

The purpose of this course is to provide students with experience in various aspects of programming for video game development. No prior programming experience is necessary and students will proceed at their own pace. In addition to several programming projects that utilize gaming APIs or frameworks, students will also be exposed to level design (map creation), 3D construction techniques, custom textures, sound design, and lighting effects. 3D game development will utilize the Hammer Editor, part of the Half-Life 2 video game modding Software Development Kit (Source SDK) and its associated tools. Additional third-party (and often free) utilities will also be necessary. Students will work on their own or in teams on a final project agreed upon with the instructor. Students will need to provide their own Windows compatible computer or laptop or a Mac running windows under BootCamp.

### 30391 Script Based Programming 1

Description: Introduction to programming. Programming structures suitable for basic and intermediate computation. Elements of computer organization and networking. Development of programming skills including data manipulation, multimedia programming, and networking. Standards for exchange and presentation of data. Comprehensive programming experience using Python.

## Technology Applications

### 20507 La Telenovela: History, Culture, Product

The aim of this course is to explore the genre of the telenovela. Students will sharpen oral and written language skills through exposure to authentic telenovelas from Spain and Latin America, and through the creation and production of their own telenovela. They will be able to learn the idiosyncrasies of Hispanic culture as well as popular expressions. Writing and oral production will be stressed as the students write, direct, act, tape and edit a telenovela. During this process students will learn basic videography and on-line video and audio editing techniques.

### 30521 E-Business Strategies

E-business employs the use of the Internet and the Web to transact business, creating electronic markets where prices are transparent, markets are global, and trading is highly efficient. E-business has a direct impact on a firm's relationship with suppliers, customers, competitors, and partners as well as the method it uses to advertise, sell, and use products. In this course, students will analyze the business models and strategies of online companies, explore failed e-business ventures, understand the strategic, financial, marketing, and organizational challenges facing e-business firms, and consider the societal impact of e-business development.

### 30523. Applied Multimedia Technology

The goal of this course is to explore ways multimedia can be used to communicate information and solve problems. Students use a variety of tools, including Adobe Flash, to complete projects in the areas of animation, audio, image editing, and scripting. They also evaluate existing media for content, aesthetics, functionality, and usability. Students will often begin to learn material before class by completing tutorials. Follow-up activities in class then apply the concepts without step-by-step instruction. The course also equips students with strategies for enhancing their skills after the semester ends.

### 40545 Computers in Psychology Research and Education

This course and its counterpart in Psychology (PSY 388) are 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 instructional system on management and coaching including graphics, video and audio files.
2. Creating a visual basic application to administer and collect survey data.
3. Exploring and comparing the capabilities of online teaching tools.
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, which will take as much or more time as other regular three credit courses.

### 40546 Practicum in Robotics

This course will allow students to work with the Nao humanoid robot platform. Students will learn about how to control the sensory and motor capabilities of the robot to produce specific sequences of robot behaviors and/or to allow the robot to respond to particular inputs from the external environment. Students will work with the instructors to identify the specific behaviors and response sequences to be created. Permission is required.

### 40551 Visual Communication Design 6: Motion Design

Exploration of narrative, visual and aural principles to best convey a time-based message through a series of project assignments. Effective use of motion graphics through sketching, storyboarding, kinetic type, animation, narration and soundtracks. Media delivery may include digital signage, web, broadcast and other public venues such as a planetarium. Survey of the technological aspects to motion media including principles of digital animation, video output devices, and planning for application in a space.

### 40553 Music Through Technology

Music through Technology is a lecture/lab course open primarily to CAPP majors and musicians, with consideration of other interested students. Lecture topics include the historical evolution of technology in music, surveying the influence that technology had on the music world, from a creative standpoint to the accessibility and distribution of music to the masses. Other examples of technology's influence in music may include the development of multi-track recording on popular music, synthesizer and midi technology, technology's applications for musical composition, and the adaptation of CD and mp3 formats to musical performers. The historical influence of technology is an illuminating foundation to current developments in the creative processes of music. Lab topics cover an introduction to current music technology including digital audio recording and editing, midi technology (sound and notation), and the digital management and distribution of music. Students will experience all of these technologies on an introductory level, but focus their interests on a technology-based final project to develop and display their acquired skills.

### 40561 Visual Communication Design 3: Web Design (or 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 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.

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### 45565 01 Internship

This internship is for UNPAID work with various for-profit civic, public and or private organizations using acquired computer applications knowledge and skills. Credit is given only if work is unpaid and is done in the Information Systems area of an organization. Typically this internship is completed in the summer.

### 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 usually involving a non-profit, religious, or campus groups in our local community. Credit is given only if work is unpaid and significantly involves the use of Information technology skills. This internship might be done locally during the academic year.

### 47567 01 Special Studies

This course involves an independent study development or other project that requires completion of a significant body of work combining technology in some way with an academically acceptable content knowledge area or discipline, such as a student's primary major. Enrollment in this course requires approval of a written proposal outlining the specific details of the proposed project. For guidelines on the required proposal and approval process see the CAPP website. CAPP/TBS students only.

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