DISCIPLINARY DIFFERENCES OF UNDERGRADUATE COMPUTING PROGRAMS AT IUPUI

INDIANA UNIVERSITY - SCHOOL OF INFORMATICS AND COMPUTING

Informatics

The undergraduate program in Informatics, combining principles from information systems, computer science, psychology, and sociology, prepares students to tackle current-day problems in business, healthcare, science, law, art, and entertainment. In the core set of classes, students study information management, application development human-computer interaction, and the legal and social aspects of information and technology. Students also complete a concentration, which involves the application of informatics to a field of study of their choice. Popular choices include business, human-computer interaction, media arts, biological and health-related sciences, and legal informatics.

Media Arts and Science

In the Media Arts and Science program, students study and practice the use of digital media to communicate, educate, engage, or entertain. The program explores the fundamentals of communication and digital storytelling. Many courses in the program are project-based, allowing students to become fluent in the use of contemporary tools for producing Web sites, games, 3D motion graphics, and videos. Students also learn to develop software applications for the desktop, the Web, and mobile devices. The program is flexible, allowing to students to choose the path that best matches their career goals. The program also fosters the skills and qualities prized by employers in the 21st century workplace – skills for communication, teamwork, and productivity.

PURDUE UNIVERSITY - SCHOOL OF ENGINEERING & TECHNOLOGY

Computer Engineering

Computer Engineering is the integration of the fields of electrical engineering and computer science to develop computer-based systems. Students get training in electrical engineering, software design, and hardware-software integration. Computer engineering students study many hardware and software aspects of computing. Computer engineers are usually involved in writing software and firmware for embedded microcontrollers, designing VLSI chips, designing analog sensors, and designing mixed signal circuit boards. Computer engineers can work on computer controlled mechanical devices, such as robots, which involved the control and communication of motors and sensors. Computer engineering students are allowed to choose areas of in-depth study in different percentage mixture of hardware and software in their junior and senior year.

Computer and Information Technology (CIT)

CIT students learn to identify, design, implement, and manage applied software and hardware solutions to business problems using current and emerging technology. The CIT program creates IT professionals who can employ and manage technology to best meet the information management needs of an organization. Students receive instruction in both front-end and back-end technologies. The CIT program is centered on hands-on experience and real-world problem-solving with experiential learning incorporated throughout the curriculum. After a thorough grounding in fundamentals, CIT students select one or more of 4 concentration areas: networking systems, information security, Web and application development, and data management. CIT - we make IT work.

Computer Graphics Technology (CGT)

CGT prepares students to become the finest practitioners, managers, and leaders in the field of applied computer graphics technology and digital communication. Graduates are creative and technological problem solvers. Graduates gain proficiency in two-dimensional, three-dimensional, interactive, and time-based principles of computer graphics as they relate to practical applications demanded by business and industry in Indiana, the nation, and the world. An innovative leader in its field, CGT provides practical experience through learning, discovery, and engagement on a domestic and international basis.

PURDUE UNIVERSITY - SCHOOL OF SCIENCE

Computer and Information Science (CSCI)

CSCI at IUPUI teaches the foundations of computing and information processing along with the necessary scientific and practical skills to prepare students for the demands of the current and future computing-driven society. Graduates are able to devise, analyze, improve upon, and experiment with algorithms, system design principles, and software solutions for a wide variety of problems and to apply these skills to specific real-world application areas such as biology, medicine, engineering, environmental systems, business and industry, cyber security, and forensics. Undergraduate research is encouraged so that students may contribute to, as well as benefit from, the frontiers of computing.