Informatics, Certificate

ESCPICERT

Description

The certificate program in informatics teaches students to use computer technology to gather, synthesize, store, visualize and interpret information. These skills are critical to a broad range of disciplines. This program provides students with an understanding of the capabilities and technologies of informatics as it applies to domain-specific problems in their field of study.

Students completing this program are able to understand and use methods for the basic computational principles behind the operation of:

- communication, networking and interaction
- decision-making and problem-solving
- modeling, inference and visualization
- representing, creating and running routine activities
- storing, indexing and retrieving information

Graduates should be in high demand within the software industry and in government, education, science, medicine and other fields that make use of computer technology. Those with the applied and user-oriented focus of the certificate are attractive to such employers.

At a Glance

- **College/School:** Ira A. Fulton Schools of Engineering
- **Location:** Tempe campus

2019 - 2020 Major Map
Major Map (Archives)

Program Requirements
This certificate requires 21 credit hours of coursework. Students will take 15 credit hours of required courses and will select six credit hours of elective coursework. The certificate requires at least 12 credit hours of upper-division coursework.

**Required Courses -- 15 credit hours**

- CPI 101: Introduction to Informatics (CS) (3)
- CPI 200: Mathematical Foundations of Informatics (MA) (3)
- CPI 220: Applied Data Structures and Algorithms (3)
- CPI 350: Evaluation of Informatics Systems (3)
- IEE 380: Probability and Statistics for Engineering Problem Solving (CS) or STP 420: Introductory Applied Statistics (CS) (3)

**Elective Courses -- 6 credit hours**

- AME 394: Philosophies of Technology (3)
- AME 394: Programming the Internet of Things (3)
- ART 345: Visualization and Prototyping (3)
- ART 346: 3-D Computer Imaging and Animation (CS) (3)
- ART 435: Foundry Research Methods (3)
- BIO 355: Introduction to Computational Molecular Biology (CS) (3)
- BMI 102: Introduction to Public Health Informatics (3)
- BMI 201: Introduction to Clinical Informatics (3)
- CIS 300: Web Design and Development (3)
- CIS 308: Advanced Excel in Business (3)
- CIS 365: Business Database Systems Development (3)
- CPI 310: Web-Based Information Management Systems (3)
- CPI 360: Decision Making and Problem Solving (3)
- CPI 394: Special Topics (3)
- CPI 460: Intelligent Interactive Instructional Systems (3)
- CPI 494: Special Topics (3)
- CSE 220: Programming for Computer Engineering (3)
- CSE 240: Introduction to Programming Languages (3)
- CSE 259: Logic in Computer Science (3)
- ENG 374: Technical Editing (3)
- GIT 135: Graphic Communications (3)
- GIT 215: Introduction to Web Authoring (3)
- GIT 230: Digital Illustration in Publishing (3)
- GIT 335: Computer Systems Technology (3)
- HSE 101: Introduction to Human Systems Engineering (SB) (3)
- MAT 267: Calculus for Engineers III (MA) (3)
- MAT 275: Modern Differential Equations (MA) (3)
- MAT 300: Mathematical Structures (L) (3)
MAT 421: Applied Computational Methods (CS) (3)
SER 216: Software Enterprise: Personal Process and Quality (3)
SER 334: Operating Systems and Networks (3)
SOC 334: Technology and Society (L or SB) (3)
STS 304: Science, Technology, and Society (SB) (3)
STS 306: Social Effects of Science and Technology (SB) (3)
TEL 313: Technology in an Educational Setting (3)
TWC 414: Visualizing Data and Information (3)
TWC 444: User Experience (3)

Depending on a student's undergraduate program of study, prerequisite courses may be needed in order to complete the requirements of this certificate.

Enrollment Requirements

The undergraduate certificate in informatics is available to all students who are in good standing at ASU and may be used by interdisciplinary studies BA students as part of their degree program. Students need to submit an undergraduate certificate form to the School of Computing, Informatics and Decision Systems Engineering Academic Advising Center located in Centerpoint, room 105. This form is available on the registrar's website. Interdisciplinary studies students need to contact their advisor to add the informatics concentration to their degree program.

A student pursuing an undergraduate certificate must be enrolled as a degree-seeking student at ASU. Undergraduate certificates are not awarded prior to the award of an undergraduate degree. A student already holding an undergraduate degree may pursue an undergraduate certificate as a nondegree-seeking graduate student.

Global Opportunities

PLuS Alliance
Global Experience
Global Degree

Career Opportunities

Contact Information