Informatics, BS
Bachelor of Science, 2013-2014 Catalog Year

**Notes:** ** See CIDSE Advising Center or CIDSE Website (http://cidse.engineering.asu.edu/degreerequirementsbsinform/) for approved lab science sequence courses, electives or focus area courses.
*Designates critical requirements for Informatics admits in the 2013-2014 academic year. Minimum ‘C’ grade required in all CPI and CSE required courses.
Term 1

MAT 210: Brief Calculus- Differential and integral calculus of elementary functions with applications. Not open to students with credit in MAT 260 or 270 or 290

Or MAT 265: Calculus for Engineers-1-Limits and continuity, differential calculus of functions of one variable, introduction to integration. Not open to students with credit in MAT 270.

CPI 101: Introduction to Informatics- Concepts, tools, techniques, and applications of informatics. Includes overview of programming, data management, visualization, modeling, and social implications.


ENG 101: First-Year Composition

Term 2


CSE 205: Object-Oriented Programming & Data Structures- Problem solving by programming with an object-oriented programming language. Introduces data structures. Overview of computer science topics.

ENG 102: First-Year Composition

General Elective: *Elective cannot include CSE, MAT, PHY, BIO, CHM

Term 3

MAT 243: Discrete Mathematical Structures- Logic, sets, functions, elementary number theory and combinatorics, recursive algorithms, and mathematical reasoning, including induction. Emphasizes connections to computer science.

IEE 305: Information Systems Engineering- Overview of computer and information systems applications. Topics include client/server; distributed computing; networks; process modeling; e-commerce; enterprise applications; Internet.

Basic Lab Science: (SG or SQ)-see major map link for options

Informatics Elective/ Focus Area

Term 4

CPI 200: Math foundations of Informatics- Practical introduction to the mathematics necessary for studies in informatics. Topics include discrete math, analytic geometry, calculus, and linear algebra.

Informatics Elective/ Focus Area

Basic Lab Science: (SQ)-see major map link for options

HU/SB: Humanities, Fine Arts & Design or Social & Behavioral Sciences

Term 5

CPI 360: Decision Making & Problem Solving- Practical use of database systems, computer graphics, and modeling to inform decision making.

CPI 310: Web Information Mgt System- Relational database design, entity-relationship modeling, relational algebra, SQL, database access through Web, Web data management, introduction to XML, fundamentals of Web application development, Web server architectures, lecture, in-class lab activities.


Or STP 231: Statistics for Biosciences- Concepts and methods of statistics; display and summary of data, interval estimation, hypothesis testing, correlation, regression. Applications to biological sciences.

Or GCU 495: Quant. Methods Geog & Plan- Statistical techniques applied to the analysis of spatial distributions and relationships. Introduces models and theory in geography. fee

Or IEE 380: Probability and Statistics for Engineering Problem Solving- Applications-oriented course with computer-based experience using statistical software for formulating and solving engineering problems

Informatics Elective/ Focus Area

Term 6

CPI 350: Evaluation of Informatics Systems- Methods for evaluation of informatics systems, including design of computational and human experiments, ethnography, and analytic techniques.


Informatics Elective/ Focus Area

Term 7

CPI 485: Team-based design of an informatics system; working with clients; development of requirements, use cases, class/object diagrams, and plans for quality assurance and other evaluations; technical communication; teamwork.

Upper Division Informatics Elective/ Focus Area

Term 8

CPI 486: Implementation of the informatics system designed during CPI 485; work processes; keeping designs consistent with implementations; conducting QA and other evaluations; technical communication; teamwork.

Upper Division Informatics Elective/ Focus Area

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