

# Computer and Information Systems (CIS) EFA

The demand for Computer and Information System Analysts is projected to grow as computer technology continues to revolutionize our society. Employment in this area is expected to increase by 21% between 2014 and 2024. Industrial Engineers have a natural role to play in this field by using quantitative system analysis, manufacturing system knowledge, and human factors skills to help design and refine computer systems that are becoming ever more complex. The field offers substantial opportunities for technical skill development, travel, and interaction with a diverse range of professionals. This focus area completes all the requirements for a minor in computer science.

The following courses are required:

Semester	Course #	EFA Course	Session	SH	Pre-/Co-requisites
4 (Spring)	ENGR:2730	Computers in Engineering	F,S	3	ENGR:1300
4 (Spring)	MATH:3800	Elementary Numerical Analysis	F,S	3	(MATH:2550 or MATH:2700) and (MATH:1560 or MATH:1860)
5 (Fall)	ECE:3330	Introduction to Software Design	F	3	ENGR:2730
7 (Fall)	CS:2210	Discrete Structures	All	3	
8 (Spring)	CS:2230	Computer Science II: Data Structures	All	4	CS:1210 or ENGR:2730
8 (Spring)		Technical Elective (choose from Table below)		3	
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The following courses are technical electives:

Course #	Technical Electives	Session	SH	Pre-/Co-Requisites
CS:3330	Algorithms	All	3	CS:2210, CS:2230 and (MATH:1550 or MATH:1850)
CS:3820	Programming Language Concepts	F,S	3	CS:2210, CS:2230 and (CS:2630 or CS:2820 or ECE:3330 or ECE:3350)
CS:2630	Computer Organization	F,S	3	CS:2210 and CS:2230
CS:4400	Database Systems	F,S	3	CS:2210 and CS:2230 and CS:3330
CS:5800	Fundamentals of Software Engineering	F,S	3	ECE:3330 or CS:2820

Students wishing to substitute another CS technical elective numbered 3200 to 5890 should submit a petition for course substitution.

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