General Information/Requirements

24 total credit hours -- 12 credits from the lower-division courses and 12 credits from the upper-division courses listed below. *All courses for the minor must be taken graded.* The CIT minor consists of the following requirements:

Lower Division:  
CIS 110, CIS 111, CIT 281 OR CIS 111, CIS 115, CIT 281

Upper Division:  
CIT 381, CIT 382, CIT 383

All courses must be taken graded. Lower-division courses must be completed with a grade of B- or better. Upper-division courses must be completed with a grade of C- or better, and are offered only one term per year. Before enrolling in CIT 281, you must declare the CIT minor with the Undergraduate Coordinator in the CIS main office.

Lower-Division Courses

- **CIS 110 - Fluency with Information Technology.** Introduction to information technology (IT), the study of computer-based information systems. Basics of the Internet and World Wide Web. Students create websites using XHTML and CSS.

- **CIS 111 - Introduction to Web Programming.** Project-based approach to learning computer programming by building interactive web pages using JavaScript and XHTML. Programming concepts including structured and object-oriented program design. CIS 110 recommended preparation.

- **CIT 281 – Web Applications Development I.** Web 2.0 as a business platform: Infrastructure in the cloud, Office 2.0 (Google Docs), web and database integration with AJAX, XML, PHP, and MySQL. Requires computer-laboratory work in addition to regularly scheduled hours. *Prereq: CIS 110 and 111 OR CIS 111 and CIS 115.*

Upper-Division Courses

- **CIT 381 - (Fall) Database Systems.** Introduction to database systems, emphasis on database design and access. Database concepts, data modeling, normalization, data warehousing, query languages, formulation of complex queries. *Prereq: CIT 281.*

- **CIT 382 - (Winter) Web Applications Development II.** Organization of information on the web and applications of Internet technology. Emphasis on planning, implementation, and issues that apply to building and maintaining business Intranets. *Prereq: CIT 381.*