# ITWS/CSCI Dual Curriculum 

## Concentration in Web Technologies

Fall 2017

| Semester I <br> ITWS-1100 Introduction to Information <br> Technology and Web Science <br> CSCI-1100 Computer Science I <br> MATH-1010 Calculus I <br> BIOL-1010 Intro. to Biology <br> BIOL-1015 Introduction to Biology Lab | Semester II <br> CSCI-1200 Data Structures <br> MATH-1020 Calculus II <br> ITWS-1220 IT and Society (HASS SS) PHYS-1100 Physics I |
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| Semester III <br> ITWS-2110 Web Systems Development CSCI-2200 Foundation of Computer Science CSCI-2500 Computer Organization Communication Design Elective (Conc.) | Semester IV <br> ITWS-2210 Intro to Human Computer Interaction (HASS H) <br> ITWS-4500 Web Science Systems Development CSCI-2300 Introduction to Algorithms CSCI-2600 Principles of Software (Conc.) |
| Semester V (Summer) <br> Assessment Elective (Conc.) <br> Math Option II <br> HASS Elective <br> Science Option | Semester VI (Fall or Spring) <br> ITWS-4310 Managing IT Resources CSCI-4380 Database Systems (CSCI option/capstone) HASS 2000+ Level Elective Math Option I |
| Semester VII <br> ITWS-4100 Information Technology and <br> Web Science Capstone <br> CSCI-4430 Programming Languages <br> (Conc.) <br> CSCI-4440 Software Design and Documentation <br> (Conc.) (CSCI option/capstone) <br> HASS 2000+ Level Elective | Semester VIII <br> CSCI-4210 Operating Systems (Conc.) <br> CSCI-4220 Network Programming <br> (Conc.) (CSCI option/capstone) <br> CSCI-4150 Intro. to Artif. Intell. (Conc.) (CSCI option/capstone) <br> HASS 4000 Level Elective |

## Communication Design Elective (one of):

COMM-2610 Introduction to Visual Communication
COMM-4460 Visual Design: Theory and Application
COMM-4520 Information Architecture
COMM-4650 Marketing Communication Design
COMM-4660 Visual Literacy

## Assessment Elective (one of):

COMM-4420 Foundations of HCI Usability
COMM-4180 Studio Design in HCI (only when COMM-4420 is not offered)
ISYE-4760 Mathematical Statistics

## Science Option:

A four-credit course chosen from the following: astronomy, biology, chemistry, earth and environmental science, and physics. The Pass/No Credit option cannot be used for this course. The course ERTH 1030 cannot be used to satisfy this requirement.

## Mathematics Options:

Two additional courses in mathematics. Mathematics Option I must be one of the following courses: MATH 2010, MATH 4030, MATH 4040, MATH 4100, or MATP 4600. Mathematics Option II must be any course in MATH/MATP at the 2000 level or above (excluding MATH 2800). Independent study courses cannot be used to satisfy this option. The Pass/No Credit option cannot be used for these courses. Note that although some courses are cross-listed as both MATH and CSCI, if a course is used to fulfill the Mathematics Option requirement, it cannot also be used as a CS Option/Capstone course.

## Computer Science (CS) Options and Computer Science Capstone:

For students doing a dual ITWS/CSCI the following courses fulfill these requirements:
CSCI-4150 Intro. to AI
CSCI-4380 Database Systems
CSCI-4220 Network Programming
CSCI-4440 Software Design and Documentation

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