

# CSE 5889 (Proposed): Intermediate Studies in Multidisciplinary Computing

## Course Description

Intermediate-level topics in multidisciplinary computing techniques

**Prior Course Number:** 788

**Transcript Abbreviation:** Interm: Multidispl

**Grading Plan:** Letter Grade

**Course Deliveries:** Classroom

**Course Levels:** Undergrad, Graduate

**Student Ranks:** Senior, Masters, Doctoral

**Course Offerings:** Autumn, Spring

**Flex Scheduled Course:** Never

**Course Frequency:** Every Year

**Course Length:** 14 Week

**Credits:** 2.0

**Repeatable:** Yes

**Maximum Repeatable Credits:** 8.0

**Total Completions Allowed:** 4

**Allow Multiple Enrollments in Term:** Yes

**Time Distribution:** 2.0 hr Lec

**Expected out-of-class hours per week:** 4.0

**Graded Component:** Lecture

**Credit by Examination:** No

**Admission Condition:** No

**Off Campus:** Never

**Campus Locations:** Columbus

**Prerequisites and Co-requisites:**

**Exclusions:**

**Cross-Listings:**

**The course is required for this unit's degrees, majors, and/or minors:** No

**The course is a GEC:** No

**The course is an elective (for this or other units) or is a service course for other units:** Yes

**Subject/CIP Code:** 14.0901

**Subsidy Level:** Doctoral Course

## Programs

Abbreviation	Description
BS CSE	BS Computer Science and Engineering
MS CSE	MS Computer Science and Engineering
PhD CSE	PhD Computer Science and Engineering

## General Information

Details vary from term to term; check with department for specifics about current offerings.

## Course Topics

Topic	Lec	Rec	Lab	Cli	IS	Sem	FE	Wor
Current topics in multidisciplinary computing techniques	25.0							

### ABET-EAC Criterion 3 Outcomes

Course Contribution	College Outcome
a	An ability to apply knowledge of mathematics, science, and engineering.
b	An ability to design and conduct experiments, as well as to analyze and interpret data.
c	An ability to design a system, component, or process to meet desired needs.
d	An ability to function on multi-disciplinary teams.
e	An ability to identify, formulate, and solve engineering problems.
f	An understanding of professional and ethical responsibility.
g	An ability to communicate effectively.
h	The broad education necessary to understand the impact of engineering solutions in a global and societal context.
i	A recognition of the need for, and an ability to engage in life-long learning.
j	A knowledge of contemporary issues.
k	An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

### BS CSE Program Outcomes

Course Contribution	Program Outcome
a	an ability to apply knowledge of computing, mathematics including discrete mathematics as well as probability and statistics, science, and engineering;
b	an ability to design and conduct experiments, as well as to analyze and interpret data;
c	an ability to design, implement, and evaluate a software or a software/hardware system, component, or process to meet desired needs within realistic constraints such as memory, runtime efficiency, as well as appropriate constraints related to economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability considerations;
d	an ability to function on multi-disciplinary teams;
e	an ability to identify, formulate, and solve engineering problems;
f	an understanding of professional, ethical, legal, security and social issues and responsibilities;
g	an ability to communicate effectively with a range of audiences;
h	an ability to analyze the local and global impact of computing on individuals, organizations, and society;
i	a recognition of the need for, and an ability to engage in life-long learning and continuing professional development;
j	a knowledge of contemporary issues;
k	an ability to use the techniques, skills, and modern engineering tools necessary for practice as a CSE professional;
l	an ability to analyze a problem, and identify and define the computing requirements appropriate to its solution;
m	an ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices;
n	an ability to apply design and development principles in the construction of software systems of varying complexity.

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