CSE 4998H (Approved): Undergraduate Research in Computer Science and Engineering

Course Description
Opportunity for undergraduate student to conduct research in Computer Science and Engineering.

Transcript Abbreviation: HonUG Research CSE
Grading Plan: Satisfactory/Unsatisfactory
Course Deliveries: Classroom
Course Levels: Undergrad
Student Ranks: Junior, Senior
Course Offerings: Autumn, Spring, May, Summer, May + Summer
Flex Scheduled Course: Always
Course Frequency: Every Year
Course Length: 14 Week
Credits: 1.0 - 10.0
Repeatable: Yes
Maximum Repeatable Credits: 10.0
Total Completions Allowed: 10
Allow Multiple Enrollments in Term: No
Graded Component: Independent Study
Credit by Examination: No
Admission Condition: No
Off Campus: Sometimes
Campus Locations: Columbus
Prerequisites and Co-requisites: Honors status; Permission of Instructor
Exclusions:

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: Baccalaureate Course

Programs

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BS CSE</td>
<td>BS Computer Science and Engineering</td>
</tr>
</tbody>
</table>

Course Topics

<table>
<thead>
<tr>
<th>Topic</th>
<th>Lec</th>
<th>Rec</th>
<th>Lab</th>
<th>Cli</th>
<th>IS</th>
<th>Sem</th>
<th>FE</th>
<th>Wor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunity for undergraduate student to conduct research in Computer Science and Engineering.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.

Prepared by: Brittany Jones