Undergraduate Degree Program
Program - CEC Internet of Things SLO (BS)

Mission Statement

FIU’s Bachelor of Science in IoT will transform a student into a technological expert who can manage, program, maintain and secure IoT devices in many critical areas such as energy, transportation, health, aviation, infrastructure and hospitality. This program will provide expertise in the following four pillars: hardware, software, wireless communications and cybersecurity & privacy.

Electrical and Computer Engineering

Outcomes

FIU graduates should be able to achieve the following:

<table>
<thead>
<tr>
<th>Content Knowledge and Skills (including Technology)</th>
<th>Direct Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Content Knowledge</strong></td>
<td><strong>Assessment Method:</strong> Students will work in teams to compile the Research Project Proposal. The Research Project Proposal will encompass many different aspects of the project starting from Problem Formation, Statement, Feasibility and Risk Analysis, Globalization and Issues and Standards, Survey of Related Projects and Patents, Theory Model Analysis of Ethical Dilemmas, Health, Safety, and Sustainability. Students will prepare a consolidated document by involving careful analysis of client and user needs by experiencing life cycle development steps of the real life project. Every member of the team will be involved in preparing the Project Proposal. A rubric will be used to assess student achievement of the following indicators out of 20 possible points (Sophisticated: 20 to &gt;16 points; Competent: 16 to &gt;8 points; Needs Work: 8 to &gt;0pts) per indicator: - Introduction - Subject Knowledge</td>
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</tbody>
</table>

Course Activity: Senior Project - Written Research Proposal
**Course Assessed:** TCN 4940
**Sampling:** At least 10 students or 10%, whichever is greater.
**Minimum Criteria for Success:** Students will score at least a 75% (15 out of 20) on the rubric, per Content Knowledge indicator.

<table>
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<th>Critical Thinking</th>
<th>Direct Measures</th>
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Dilemmas, Health, Safety, and Sustainability.

Students will prepare a consolidated document by involving careful analysis of client and user needs by experiencing life cycle development steps of the real life project.

Every member of the team will be involved in preparing the Project Proposal.

A rubric will be used to assess student achievement of the following indicators out of 20 possible points (Sophisticated: 20 to >16 points; Competent: 16 to >8 points; Needs Work: 8 to >0pts) per indicator:
- Research
- Contribution
- Supporting Material
- Conclusions

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<th>Communication (Oral or Written)</th>
<th>Direct Measures</th>
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<td>Written Communication</td>
<td>Procedure:</td>
</tr>
<tr>
<td>Graduates will be able to effectively communicate ideas in a written and graphical form through a scientific report.</td>
<td>Assessment Instrument: Rubric</td>
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<td>Assessment Method:</td>
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<th>Oral Communication</th>
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<td>Graduates will be able to effectively communicate ideas verbally</td>
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Course Activity: Senior Project - Written Research Proposal
Course Assessed: TCN 4940
Sampling: At least 10 students or 10%, whichever is greater.
Minimum Criteria for Success: Students will score at least 75% (15 out of 20), per Critical Thinking indicator.

Oral Communication
Graduates will be able to effectively communicate ideas verbally

Assessment Instrument: Rubric
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Students will prepare a consolidated document by involving careful analysis of client and user needs by experiencing life cycle development steps of the real life project.

Every member of the team will be involved in preparing the Project Proposal.

A rubric will be used to assess student achievement of the following indicators out of 20 possible points (Sophisticated: 20 to >16 points; Competent: 16 to >8 points; Needs Work: 8 to >0pts) per indicator:
- Writing
- Composition
- Citations
- Overall Report Organization

Course Activity: Senior Project - Written Research Proposal
Course Assessed: TCN 4940
Sampling: At least 10 students or 10%, whichever is greater.
Minimum Criteria for Success: Students will score at least 75% (15 out of 20 points), per Written Communication indicator.
Assessment Method: All group members will be part of preparing the video and present portion of the presentation and make sure to prepare it well by covering all portions of the project content. It's a group activity but based on presentation individual will be graded.

A rubric will be used to assess student achievement of the following indicators out of 25 possible points (Sophisticated: 25 to >18 points; Competent: 18 to >9 points; Needs Work: 9 to >0pts) per indicator:
- Content
- Comprehension
- Presentation Skills

Course Activity: Senior Project - Oral Proposal Presentation
Course Assessed: TCN 4940
Sampling: At least 10 students or 10%, whichever is greater.
Minimum Criteria for Success: Students will score at least 18 out of 25 points, per Oral Communication indicator.