

# Instructions

This Course Change form will enable you to propose several types of changes to existing courses. You may propose changes regarding:

- Department offering the course
- Course prefix
- Course number
- Course title (you may propose changes both to the full course title and/or to the abbreviated title)
- Course description
- Global Learning designation
- Gordon Rule designation
- Grading method (changing from a graded option to a pass/fail option, or vice versa)
- Credit Hours
- Course prerequisites and corequisites (adding or removing)

The Course Review Subcommittee, a standing committee of the University Curriculum Committee, will review these proposed changes and recommend approval of these changes to the FIU Faculty Senate. The members that comprise these governing bodies may not understand the nuances of your department or academic discipline. Therefore, you will be required to provide a justification for the changes you are proposing. The Course Review Subcommittee requests that justifications be specific and written for an audience that is unfamiliar with your department and program. You will also be required to attach a syllabus showing your proposed changes. Requires criteria for the syllabus are provided at the end of this form.

## Bulletin

Bulletin number

-

## Proposed Changes

Using the drop-down list, select each type of change you are proposing. (You may propose more than one type of change using this Course Change form.)

Course Title

## Justification for Course Change

Please provide a justification for the changes you are proposing.

This course is revamped to address the growing importance of computational tools and AI in civil engineering practice. The title change is proposed to highlight the addition of AI-related content, align with current academic and industry expectations, and enhance graduates' competitiveness in the job market.

The integration of AI is embedded throughout the course, where students are introduced to AI/ML fundamentals and apply them through MATLAB Deep Learning Toolbox. Homework assignments and projects require students to use AI techniques alongside conventional modeling, ensuring that AI is not treated as a stand-alone module but as an integral component of civil engineering computation.

The case study of the week explicitly focuses on AI/ML tools, requiring students to identify, present, and critically evaluate AI applications in civil engineering. In addition, two projects place AI at the center of student learning by demonstrating how these methods are applied to real-world problems.

The course AI policy emphasizes responsible use of AI, requiring students to document and attribute AI contributions to their work, thereby reinforcing ethical practice. This holistic integration ensures students not only gain technical expertise but also understand the broader implications of AI in engineering practice.

## Course Information

### College

CENGR - College of Engineering  
& Comp

### Department(s)

Civil & Environmental  
Engineering/CENGR

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If proposing a change in the department offering the course: Remove the populated department by selecting the "X" next to its name. Then, begin typing the name of the new department; a list of possible departments should autopopulate. Select the new department from this list.

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### Career

Undergraduate

**Course Prefix**

CGN

If proposing a change in course prefix: Begin typing the new course prefix; a list of possible prefixes should autopopulate in the drop-down list. Select the new course prefix from this list.

**Course Number**

4011

If proposing a change in course number: Begin by deleting the autopopulated course number. Then, type the new course number you would like to propose.

**Abbreviated Course Title**

Civil AI Comp. Tech

**Long Course Title**

AI-enabled Computational Techniques in Civil Engineering

**Long Description (Catalog Description)**

Programming and computational techniques applied in civil engineering, including visualization for computer-aided analysis and design, and the application of artificial intelligence and machine learning. Prerequisite: CGN 2420 and CES 3100.

Should this be designated a Global Learning course?

No

Should this be designated a Gordon Rule Writing course?

No

Does this proposed change impact the assessment process of a program or certificate?

No

## Effective Term

**New courses become effective in Fall of the next academic year. If this course requires a different effective date, for example Spring of the next academic year, please provide a justification in the box.**

The course approval process takes several months and concludes when the Florida Department of Education's State Course Numbering System assigns a final course number, typically two semesters from the time the proposal is submitted.

Effective Term Justification (if not Fall of next year)

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## Course Grading

Grading Basis

GRD - Graded

## Course Syllabus

## Course Attributes

Course Attributes

-

## University Core Curriculum Learning Outcomes

Student Learning Outcomes for Core Curriculum Courses

-

## Credit Hours

### Units

Min Units:

3

Max Units:

3

Value:

-

Operator:

-

### Contact Hours - Registrar View

Contact Hours Min:

-

Contact Hours Max:

-

Contact Hours Value:

0

Contact Hours Operator:

-

### Academic Progress Units - Registrar View

Academic Progress Units

Min:

3

Academic Progress Units

Max:

-

Academic Progress Units

Value:

3

Academic Progress Units

Operator:

-

### Financial Aid Units - Registrar View

Financial Aid Units Min:

3

Financial Aid Units Max:

-

Financial Aid Units

Value:

3

Financial Aid Units

Operator:

-

Course Count - not visible:

1

Repeat for Credit - Registrar View:

No

Number Of Repeats - Registrar View:

1

Total Units Allowed - Registrar view only:

3

## Prerequisite(s) and Corequisite(s)

**Requirement Group**

005714 - Prerequisites:CGN2420 and CES3100

**Instructions\***

To denote prerequisite(s) or corequisite(s), use the "Embed Course Link" (book icon) in the toolbar above each box. Click the icon. Then, search using the prefix and number of the course you wish to add. Then click "Embed Link".

If there are no prerequisite(s) or corequisite(s), please type "N/A" in each text box.

**Proposed Prerequisite Change**

If proposing a change to Prerequisites for this course, please enter the change here. If not, please enter "N/A"

**Proposed Corequisite Change**

If proposing a change to Corequisites for this course, please enter the change here. If not, please enter "N/A"

## Read-Only Catalog Fields- Registrars view only

**Catalog Course Attributes**

-

**Catalog Requirement Designation**

-

## Dependencies

## Instructional Methods (this card is hidden and should NOT be displayed)