

# EDDT - 1010 - Intro to Engineering & Design

## 2022-2023 Course Proposal - REVISE

### Read Before You Begin

**IMPORT** course data by completing fields to the right.

**FILL IN** all fields required marked with an \*.

**ATTACH** supporting documentation and complete the **Acknowledgement** section.

**LAUNCH** proposal by clicking Validate and Launch at the top. Once the proposal has been launched, approve the proposal to move the proposal forward in the workflow.

This course proposal form is to **REVISE** a course, if you need to **SUSPEND**, **DISCONTINUE**, or create a **NEW** course please use the course proposal form designed for that purpose.

*IF you are proposing a new course prefix or course number use the **NEW** course proposal form and contact the Curriculum Coordinator to discuss availability.*

### Course Curriculum Outline

**Rationale for Proposed Changes\***

Updating to include electronics, manufacturing and machining intro competencies. Updating course Title, description and SLO's.

EDDT-1010 is converting to a Competency-Based Education (CBE) format to provide students with flexible scheduling and self-paced learning. Program curriculum has been redesigned to better meet industry and transfer needs.

**Impact Response:\***

Impact Report for EDDT 1010 Source: 2021-2022 SLCC General Catalog Prerequisite: EDDT 1200 - Technical Drafting II Recommended Prerequisite: EDDT 1040 - Introduction to AutoCAD Programs Cabinetmaking and Furniture Construction: CC (CTE) Engineering Design Manufacturing Technology: AAS (CTE) Engineering Drafting and Manufacturing Technology: CC (CTE) Geospatial Technology: CC (CTE) Machining CNC/CAM Technology: CC (CTE) Manufacturing Engineering Technology: AS Mechanical Engineering Technology: AS Non-Destructive Testing - Eddy Current: CC (CTE) Non-Destructive Testing - Radiography: CC (CTE) Non-Destructive Testing - Ultrasonics: CC (CTE) Surveying: AAS (CTE) Sustainable Building Construction: CC (CTE)

**Division\***

Natural Sciences & Engineering

Prefix\*

EDDT

Number\* 1010

Course Title\* Intro to Engineering & Design

Long Course Title Introduction to Engineering and Design

Course Description\* An introduction to Electronics, Manufacturing, Product Design, Machining, CAD and the design process. Students will learn to read blueprints and use design tools to create and demonstrate Orthographic Projection, Section views, Dimensioning, Sketching, Assembly drawings, Tolerancing and Fasteners.

Prerequisite(s):\* None

Recommended Prerequisite(s):\* None

Corequisite(s):\* None

Recommended Corequisite(s):\* None

Other Registration Restrictions\* None

Semesters Taught:\*  Fall  
 Spring  
 Summer

SLCC Equivalent Course(s):\* None

Can this Course be Repeated for Additional Credit?\*  Yes  
 No

If Yes, What's the Repeat Limit?

Is there an Equivalent (or Potentially Equivalent) Course at other USHE Institution(s)?\*  Yes  
 No

If Yes, Explain: DET1010 (Weber State University)

General Education Designation

Is this Course Designed for General Education?\*

Yes

No

If yes, select General Education Designation:

- Composition (EN)       Quantitative Literacy (QL)       American Institutions (AI)
- Lifelong Wellness (LW)       Communication (CM)       International Global (IG)
- Fine Arts (FA)       Fine Arts Diversity (FA,DV)       Humanities (HU)
- Humanities Diversity (HU)       Life Sciences (LS)
- Life Sciences Diversity (LS,DV)       Physical Sciences (PS)
- Physical Sciences Diversity (PS,DV)       Social Sciences (SS)
- Social Sciences Diversity (SS,DV)       Human Relations (HR)
- Quantitative Studies (QS)

**Course Hours**

Does this Course use Credit Hours or Clock Hours?\*

Credit Hours

Clock Hours

Fill out the appropriate section according to your response above:

**Credit Hour Course**

Credit Hours: 3

Contact Lab: 3

Contact Lecture: 2

Contact Other:

Total Contact Hours: 5

**Clock Hour Course**

Clock Hours:

Billable Hours:

Total Contact Hours:

**Course Learning Outcomes**

**SLCC College-Wide & General Education Student Learning Outcomes.**

*Complete the applicable fields below with the course-level student learning outcomes and indicate how they align to the SLCC College-Wide outcome in the text area.*

*Course-level learning outcomes may fit in several College-wide outcomes; select the best area(s) based upon the primary purpose of the course learning outcome. If the course does not include one or more of the College-wide outcomes, please leave text area blank.*

See [SLCC Assessment webpage](#) for additional details about College-Wide Student Learning Outcomes.

Provide detailed statement for each learning outcome, including brief, general descriptions of how the outcome will be assessed.

**1. Acquire  
Substantive  
Knowledge**

The student will demonstrate the basics of Orthographic Projection including: standard views and view placement, alphabet of lines, rules for creation, and create drawings by sketches and CAD.

The student will demonstrate the basics Dimensioning including: types of dimensions, placement of dimensions, basic dimensioning rules, and how to apply dimensions to a drawing.

The student will demonstrate the basics of Sketching including: reading and interpreting an object depicted in a sketch, create two-dimensional sketches, demonstrate how to sketch different features, and understand sketching techniques.

The student will demonstrate the basics of Section Views including: meaning of sections and cutting-plane lines and creating full section views.

The student will demonstrate the basics of Design and Working Drawings including: analyze different types of designs, describe the basics of solid modeling and rapid prototyping, how to document and revise a drawing, and interpret a Bill of Materials.

The student will demonstrate the basics of Tolerancing including: Fit-Form-and function, apply class-of-fits to a drawing, read and create limit dimensions, Geometric dimensioning and Tolerancing and tolerance build-up.

The student will demonstrate the basics of Fasteners including: parts of a screw thread, screw thread forms, types of thread representation, typical thread specifications, and recognize different screw thread types.

The student will demonstrate the basics of Geometric Construction including: draw four different types of triangles and five types of parallelograms, identify and draw a regular triangle, square, hexagon, and octagon, divide a space into equal parts, an angle in half, divide a line into equal parts, draw lines and arcs tangent to each other, and discern the meaning of tangent points.

The student will be introduced to the basics of CAD, Electronics, Manufacturing, Machining, and Product Design and how they all relate to each other. The student will also be introduced to the EDMT faculty and the program content of each of these areas.

The student will analyze various career pathways detailing working conditions, education, salaries, responsibilities, opportunities, and progression pathways.

Students will practice applying the stages of the design process collaboratively by giving and receiving feedback to complete a 3-D printed mini-capstone project.

Students will create a portfolio that reflects the best of their work throughout the course.

Students will be able to analyze blueprints and define the important aspects of the blueprints.

**2. Communicate Effectively**

The student will demonstrate the basics of Orthographic Projection including: standard views and view placement, alphabet of lines, rules for creation, and create drawings by sketches and CAD.

The student will demonstrate the basics of Section Views including: meaning of sections and cutting-plane lines and creating full section views.

The student will demonstrate the basics of Design and Working Drawings including: analyze different types of designs, describe the basics of solid modeling and rapid prototyping, how to document and revise a drawing, and interpret a Bill of Materials.

The student will demonstrate the basics of Sketching including: reading and interpreting an object depicted in a sketch, create two-dimensional sketches, demonstrate how to sketch different features, and understand sketching techniques.

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**3. Develop Quantitative Literacies**

The student will demonstrate the basics of Tolerancing including: Fit-Form-and function, apply class-of-fits to a drawing, read and create limit dimensions, Geometric dimensioning and Tolerancing and tolerance build-up.

The student will demonstrate the basics of Geometric Construction including: draw four different types of triangles and five types of parallelograms, identify and draw a regular triangle, square, hexagon, and octagon, divide a space into equal parts, an angle in half, divide a line into equal parts, draw lines and arcs tangent to each other, and discern the meaning of tangent points.

**4. Think Critically & Creatively**

The student will demonstrate the basics of Section Views including: meaning of sections and cutting-plane lines and creating full section views.

The student will be introduced to the basics of CAD, Electronics, Manufacturing, Machining, and Product Design and how they all relate to each other. The student will also be introduced to the EDMT faculty and the program content of each of these areas.

Students will practice applying the stages of the design process collaboratively by giving and receiving feedback to complete a 3-D printed mini-capstone project.

Students will be able to analyze blueprints and define the important aspects of the blueprints.

**5. Develop Civic  
Literacy & Become a  
Community Engaged  
Learner**

The student will analyze various career pathways detailing working conditions, education, salaries, responsibilities, opportunities, and progression pathways.

Students will practice applying the stages of the design process collaboratively by giving and receiving feedback to complete a 3-D printed mini-capstone project.

Students will create a portfolio that reflects the best of their work throughout the course.

**6. Work in a  
Professional &  
Constructive Manner**

The student will demonstrate the basics of Design and Working Drawings including: analyze different types of designs, describe the basics of solid modeling and rapid prototyping, how to document and revise a drawing, and interpret a Bill of Materials.

The student will analyze various career pathways detailing working conditions, education, salaries, responsibilities, opportunities, and progression pathways.

Students will practice applying the stages of the design process collaboratively by giving and receiving feedback to complete a 3-D printed mini-capstone project.

Students will create a portfolio that reflects the best of their work throughout the course.

Students will be able to analyze blueprints and define the important aspects of the blueprints.

## 7. Develop Computer & Information Literacy

The student will demonstrate the basics of Orthographic Projection including: standard views and view placement, alphabet of lines, rules for creation, and create drawings by sketches and CAD.

The student will demonstrate the basics Dimensioning including: types of dimensions, placement of dimensions, basic dimensioning rules, and how to apply dimensions to a drawing.

The student will demonstrate the basics of Sketching including: reading and interpreting an object depicted in a sketch, create two-dimensional sketches, demonstrate how to sketch different features, and understand sketching techniques.

The student will demonstrate the basics of Section Views including: meaning of sections and cutting-plane lines and creating full section views.

The student will demonstrate the basics of Design and Working Drawings including: analyze different types of designs, describe the basics of solid modeling and rapid prototyping, how to document and revise a drawing, and interpret a Bill of Materials.

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## 8. Develop Lifelong Wellness

### Acknowledgements and Attachments

Please attach any required files by navigating to the right side menu and clicking “Files”. Record when this has been completed in the checkbox, below.

**REMINDER:** Revisions made to the *Course Learning Outcomes* will require an updated syllabus be completed and attached to this proposal.

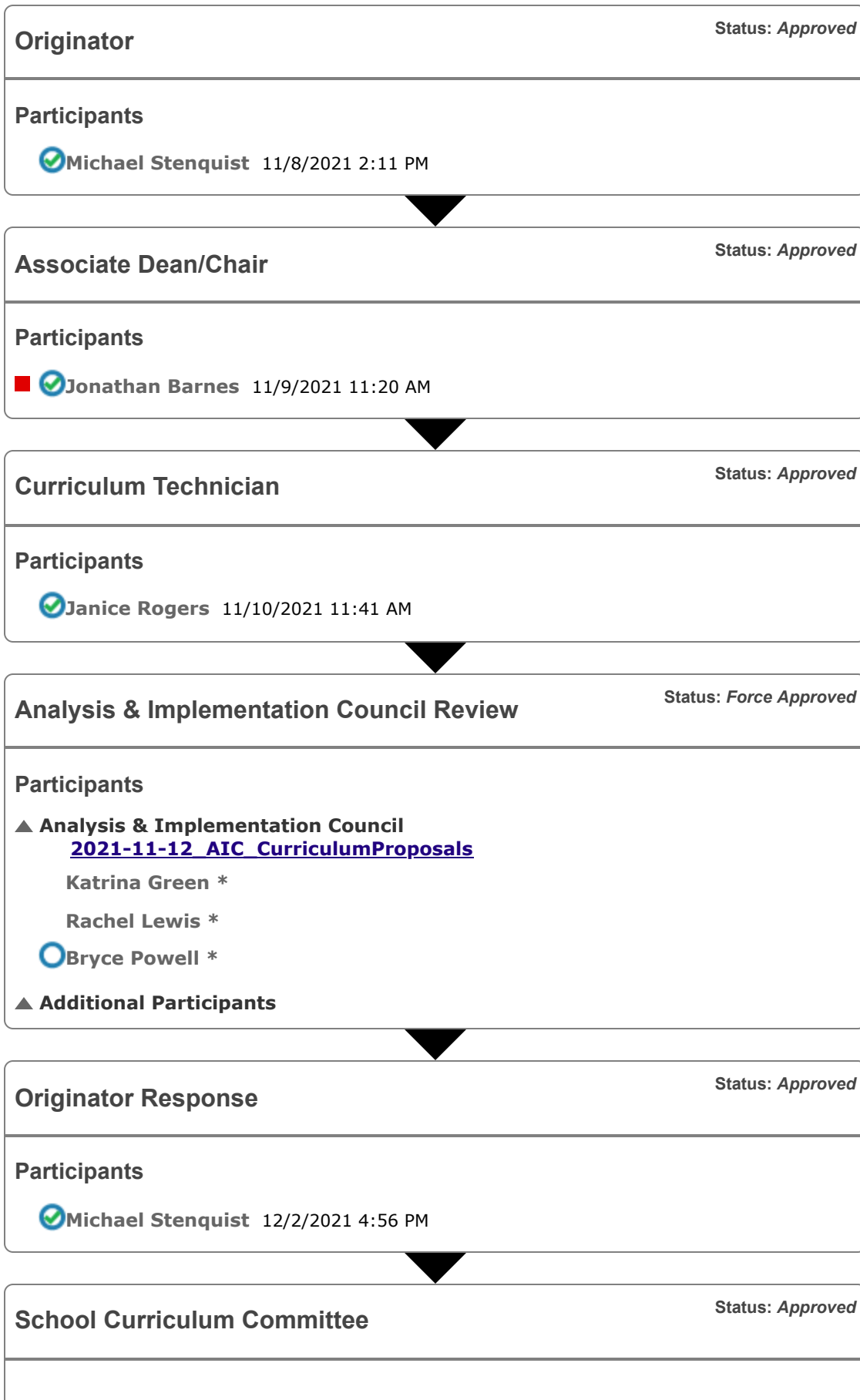
- Attached\***
- I acknowledge that all areas of this proposal are complete as required for the purpose of this proposal.
  - A representative syllabus is attached.
  - The General Education Rationale is attached if required.



**Acalog Owner**

**Acalog Course OID** 64554

# Steps for EDDT - 1010 - Intro to Engineering & Design



## Participants

▲ **School Curriculum Committee**  
[2022-01-14 SME Curriculum](#)

■  Janice Rogers \* 1/24/2022 12:11 PM

## Senate Curriculum Committee

Status: *Force Approved*

## Participants

▲ **Senate Curriculum Committee**  
[2022-02-14 SenateCurr Proposals](#)

Jenny Huynh \*

Rachel Lewis \*

Rebecca Lowell \*

Bryce Powell \*

▲ **Additional Participants**

## Faculty Senate

Status: *Force Approved*

## Participants

▲ **Faculty Senate**  
[2022-03-21 FacSenate CurriculumProposals](#)

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## Provost

Status: *Force Approved*

## Participants

Rachel Lewis

Jason Pickavance

Clifton Sanders

Rachel Lewis (System Administrator)  
3/22/2022 1:37 PM

## Published to Catalog

Status: *Force Approved*

## Participants

Rachel Lewis

■ Courtney Wood

✔ **Andrea Tipton (System Administrator)**

7/20/2022 11:25 AM

## **Attachments for EDDT - 1010 - Intro to Engineering & Design**

**CCO\_EDDT\_1010\_Syllabus\_F21.docx** (uploaded by Michael Stenquist, 11/8/2021 1:45 pm)