Outcome Assessment Timeline

Academic Programs

Computer Aided Design

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| **APR /SLO 4-Year Cycle** | **2022-2026** |
| **Course ID** | **Course-Level Student Learning Outcome (CSLO)** | **Measure/Collect Data** | **Discuss & Plan** |
| **CAD 220** | Students will create a correctly sized and dimensioned technical drawing using CAD software. (CAD 220; ISLO 5) | Spring 2025 | Fall 2025 |
| Students will examine a drawing of a 3D object and create a multiview drawing of the object. (CAD 220; ISLO 2) | Spring 2024 | Fall 2025 |
| **CAD 222** | Produce a multiple view drawing of a dimensioned part and assembly using mechanical design software. (CAD 222; ISLO 5) | Spring 2024 | Fall 2025 |
| Student will design a 3-dimensional solid model of a machine part from a dimensioned drawing using sketches, parameters, and constraints. (CAD 222; ISLO 5) | Spring 2024 | Fall 2025 |
| Student will apply appropriate drawing techniques in the building of a 3-dimensional (3D) CAD model based on analysis of provided orthographic information. (CAD 222; ISLO 5) | Spring 2024 | Fall 2025 |
| Student will develop a 3-dimensional Solidworks model by analysis of data and design parameters. (CAD 222; ISLO 5) | Spring 2024 | Fall 2025 |
| **CAD 223** | Student will analyze an existing drawing and demonstrate proficiency in the interpretation and application of general tolerances and ANSI tolerancing symbols. (CAD 223; ISLO 3) | Spring 2024 | Fall 2025 |
| Student will analyze, interpret and modify existing drawing to include all correct dimensioning, tolerancing and view requirements necessary for fabrication. (CAD 223; ISLO 5) | Spring 2024 | Fall 2025 |
| Student will demonstrate the ability to create isometric and orthographic drawings from 3-dimensional models. (CAD 223; ISLO 5) | Spring 2024 | Fall 2025 |
| **CAD 224** | Student will demonstrate proficiency in developing mechanical drawings that are completely dimensioned and toleranced that include all necessary orthographic views, details and a corresponding 3-dimensional solid model. (CAD 224; ISLO 2) | Spring 2024 | Fall 2025 |
| Student will demonstrate proficiency in manipulating a series/library of parts in the development of an assembly drawing. (CAD 224; ISLO 2) | Spring 2024 | Fall 2025 |
| Student will demonstrate proficiency in generating both 3-dimensional solid and surface models when given appropriate data. (CAD 224; ISLO 5) | Spring 2024 | Fall 2025 |
| **CAD 230** | Students will create a parametric solid model using multiview drawings and sketches. (CAD 230; ISLO 6) | Spring 2024 | Fall 2025 |
| Students will organize a selection of components into an assembly. (CAD 230; ISLO 5) | Spring 2024 | Fall 2025 |
| **CAD 231** | Students will design sheet metal parts. (CAD 231; ISLO 5) | Fall 2023 | Fall 2025 |
| Students will use surface modeling techniques to create complex free-form designs. (CAD 231; ISLO 6) | Fall 2023 | Fall 2025 |
| **CAD 273** | Student will create a hard surface 3D model and apply materials to it. (CAD 273; ISLO 2) | Fall 2023 | Fall 2025 |
| Student will produce a high resolution rendering of a scene with lights and shading. (CAD 273; ISLO 15) | Fall 2023 | Fall 2025 |
| **CAD 274** | Students will demonstrate the ability to batch render an animation project and produce a high-end animation using compositing software. (CAD 274; ISLO 15) | Fall 2023 | Fall 2025 |
| Students will demonstrate the creation of keyframes and set driven keys using Maya software. (CAD 274; ISLO 2) | Fall 2023 | Fall 2025 |
| **CAD 276** | CAD276 SLO #1 Student will construct, apply materials, animate, and present to the class a single three-dimensional model of their own. | Fall 2023 | Fall 2025 |
| CAD276 SLO #2 Student will use the External Link area in the classroom management system to access internet links that provide geometry and sound files that can be used in there class projects. | Fall 2023 | Fall 2025 |
| CAD276 SLO #3 Student will access, evaluate, and analyze written and graphic information in the construction and animation of a 3-dimensional model. | Fall 2023 | Fall 2025 |
| **CAD 277** | CAD277 SLO #1 Student will construct, apply materials, animate, and present to the class a single three-dimensional model of their own. | Fall 2023 | Fall 2025 |
| CAD277 SLO #2 Student will access, evaluate, and analyze written and graphic information in the construction and animation of a 3-dimensional model. | Fall 2023 | Fall 2025 |
|  | CAD277 SLO #3 Student will analyze, assess, and research existing professional animations for content, ideas, and effects for future and current use in student work. | Fall 2023 | Fall 2025 |
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|  |  | **Measure/Collect Data** | **Discuss & Plan** |
| **Program** | **Program-Level Student Learning Outcome (PSLO)** |  |  |
| Computer Aided Design and Drafting - Advanced CA A2576 | 1. Correctly organize and print different types of views used in mechanical design. | 2022-2026 | Fall 2025 |
| 2. Analyze drawings and modify to meet industry required standards. | 2022-2026 | Fall 2025 |
| 3. Using technical documents students will evaluate mechanical drawings for errors. | 2022-2026 | Fall 2025 |
| Computer Aided Design and Drafting - Basic CP 2569 | 1. Correctly develop and organize drawings to met industry mandated standards. | 2022-2026 | Fall 2025 |
| 2. Using CAD skills construct or modify provided drawings based on written and verbal communications. | 2022-2026 | Fall 2025 |
| Computer Aided Design and Drafting AS CTE A2571 | 1. Construct, modify and print existing drawings to meet industry standards. | 2022-2026 | Fall 2025 |
| 2. Use provided software to construct and analyze solid models. | 2022-2026 | Fall 2025 |
| 3. Use appropriate technical material to determine and correctly communicate drawing information. | 2022-2026 | Fall 2025 |
| Design Technology AS CTE A2572 | 1. Correctly modify drawings through evaluation of written instructions. | 2022-2026 | Fall 2025 |
| 2. Using technical documentation analyze drawings and modify to meet industry required industry standards. | 2022-2026 | Fall 2025 |
| Design Technology CA A2577 | 1. Correctly organize and print different types of views used in mechanical design. | 2022-2026 | Fall 2025 |
| 2. Correctly evaluate multiple mechanical drawings for correct form and fit. | 2022-2026 | Fall 2025 |
| 3. Evaluate and analyze mechanical drawings for errors. | 2022-2026 | Fall 2025 |