**ESSEX COUNTY COLLEGE**

**Course Outline**

**Student Learning Outcomes (SLO) Assessment Summary Sheet**

**Course Prefix & Number**: ENR 103 **Course Title**: Engineering Graphics & Introduction to CAD

**Credit Hours**: 2.0 **Contact Hours**: 3.0 **Name of Person Completing this Form**: Dr. H. Assadipour

**Type of Course:** (Check **all** that apply.)

Developmental Not required for any program (not a major or additional requirement)/Other

AA program major requirement AS program major requirement AAS program major requirement

(Engineering program) (EET, MET, CET & Arch Tech programs)

AA program additional requirement AS program additional requirement AAS program additional requirement

General Education affirmed course – if so, indicate the foundation category/ies the course is **affirmed** by GECC as addressing:

Written and Oral Communication Humanistic Perspective

Quantitative Knowledge and Skills Historical Perspective

Scientific Knowledge and Reasoning Global and Cultural Awareness of Diversity

Technological Competency/Information Literacy Ethics

Society and Human Behavior

**Student Learning Outcomes (SLOs)**:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Detailed Goal (SLO)** | **Assessment Method** | **Introduction (I) or**  **Mastery (M)**  **of SLO** |
| **Course Goals** | Explain and apply the basics of blueprint reading, preparation and detailing of technical drawings, drawing scale, title block, revision block, additional notes, etc. |  | N/A |
| Utilize free-hand sketching and basic drafting instruments in geometric construction. | Evaluation of sampled regular class-work, homework, weekly projects, and portfolio. |
| Employ shape description and drawing preparation techniques of multi-view orthographic projection and 3D visualization using isometric, oblique, and perspective views created via instrumental drafting techniques. | Evaluation of sampled regular class-work, homework, weekly projects, and portfolio and blueprinted questions on Test #1. |
| Apply shape description and drawing preparation techniques through the creation of parametric 3D solid models using Inventor software in order to prepare detailed drawings which contain all necessary dimensions and annotations, including geometric dimensioning & tolerancing (GD&T). |  |
| Use additional shape description tools of sectioning, auxiliary, detail, break, and broken-out views to complete shape description in order to create the assembly of many components of the design object and generate exploded assembly and bill of materials. |  |
| **Program Goals\***  (if course is a major requirement) | N/A | N/A | N/A |
| **Gen Ed Goals\***  (if course is a Gen Ed course) | N/A | N/A | N/A |

**\*** addressed by **THIS** specific course