

Chemeketa Community College
4000 Lancaster Drive NE
PO Box 14007
Salem, Oregon 97309

Course Outline

Course Identification	<u> EGR248 </u>	Credits	<u> 3 </u>	Date	<u> 03/04 </u>
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Course Title: Graphics and 3-D Modeling

Total Instructional Hours, for Course, per Term:

<u> 11 </u>	Lecture Hours	=	<u> 1 </u>	Credit(s)
<u> 66 </u>	Laboratory Hours	=	<u> 2 </u>	Credit(s)

Prerequisite Course(s):

DRF130 AutoCAD 1 or consent of instructor

Required Text(s):

Shih, *Parametric Modeling with Autodesk Inventor R7*, Mission, Kansas SDC

Course Description:

Covers graphic communication, multi-view and pictorial representation, conceptual design, spatial analysis, and engineering design representation through use of advanced level computer tools.

Performance Based Learner Outcomes:

Upon successful completion of the course, students should be able to:

1. Use AutoCAD Inventor in drafting applications.
2. Generate parametric 3-D models of machine parts.
3. Produce single and multi-view drawings from 3-D solid models.
4. Compute tolerances.
5. Generate pictorial views from 3-D models.
6. Analyze fit for assembled machine parts.

Course Content Outline:

- I. Extruded models
- II. Projection of 2-D views from a 3-D model
- III. Auxiliary views
- IV. Revolved models
- V. Tolerance computation
- VI. Linking a 3-D model to a spreadsheet
- VII. Assembly
- VIII. Interference checking
- IX. Exploded views
- X. NURBS surfaces