

Bergen Community College
Division of Math, Science and Technology
Computer Science, Engineering & Information Technologies

Course Syllabus
MFG-221 Pro/CREO® Design IV

Semester and year:
Course Number:
Meeting Times and Locations:

Instructor:
Office Location:
Phone:
Office Hours:
Email Address:

COURSE DESCRIPTION:

MFG-221 Pro/CREO® Design IV includes advanced techniques for the design and analysis using CREO MECHANICA & SURFACE. Emphasis will be placed on the technology as well utilizing advanced techniques in relation to both lab exercises as well as practical design. Lecture, lab and a comprehensive project will be used to teach how to use specific features of the software in relation to product design.

2 lecture, 2 lab, 3 credits

Prerequisites: MFG-220 Pro/CREO® Design III

STUDENT LEARNING OBJECTIVES:

As a result of meeting the requirements in this course, students will be able to:

Student performance on these objectives will be measured by:

1. Recognize the background and techniques to perform an FEA analysis on a design.	Graded modeling assignments and exams.
2. Utilize advanced modeling procedures to build complex geometry.	Graded modeling assignments.
3. Demonstrate understanding of Pro/Creo's manufacturing capabilities.	Graded modeling assignments.
4. Demonstrate overall ability to tie all areas of PTC's Pro/Creo software together to create a fully parametric design.	Graded Final Project.

TEXTBOOK: CREO/Parametric 5.0 Advanced Tutorial

Roger Toogood – Schroff Development Corporation, Shawnee-Mission
Kansas (www.schroff.com) ISBN #978-1-63057-208-2

** Subsequent material will be in the form of hand-outs

EVALUATION: A. MODELING EXERCISES	50%	B.
MIDTERM EXAM	10%	
C. FINAL PROJECT	20%	
D. CLASS PARTICIPATION	20%	
	Total: 100%	

ATTENDANCE POLICY:

BCC Attendance Policy: “All students are expected to attend punctually every scheduled meeting of each course in which they are registered. Attendance and lateness policies and sanctions are to be determined by the instructor for each section of each course. These will be established in writing on the individual course outline. Attendance will be kept by the instructor for administrative and counseling purposes.”

MFG 221 Pro/CREO® Design IV

Meeting Date	Topic	Chapter	1	Intro to Pro/Surface - Datum Points & Curves
	Handout 2			Pro/Surface - Simple Surfaces
	Handout 3			Pro/Surface
	– Boundary Blends	Handout 4		Pro/Surface – Importing data
	Handout 5			
				Intro to Pro/Mechanica 1 & 2
	6			Intro to Pro/Mechanica Structure Static Analysis 3
	7			Intro to Pro/Mechanica Structure 4 Sensitivity Studies/Optimization
	8			Pro/Mold Design
	Handout 9			Midterm Examination
	10			Pro/NC Manufacturing
	Handout 11			Pro/NC
				Manufacturing/Open Lab
				Handout
	12			Plastic Advisor / Photorender/ Handout Rapid prototyping
	13			Open Lab

14 _____ Open Lab

15 _____ Submit Project/ Presentations

Civility/Classroom Conduct

As a college of choice, Bergen Community College provides a comfort level that enables students of all abilities to mature as learners and engaged citizens. Therefore, it is important that this class provide a stimulating, rigorous, and inclusive learning environment. To that end, students must demonstrate respect to others and to ideas and opinions expressed in the class. Use of cell phones and laptops is prohibited, unless special permission is granted. Anyone not following these standard procedures may be asked to remove him/herself from the class.

Services for Students with Disabilities:

A wide variety of services are available for students with documented disabilities through the Office of Special Services (OSS) [Room S – 131, (201) 612-5270]. OSS is dedicated to serving students with physical, visual, learning, hearing, and emotional disabilities. If a student has been classified in high school or had a 504 plan, it is highly recommended that the student contact OSS during the college application process. A more detailed explanation can be found on the College web site, www.bergen.edu. Personal information is kept confidential. Examples of the types of accommodations and services include: Extended test taking time Organizational strategies.