Bergen Community College
Division of Science and Health
Department of Science and Technology

Course Syllabus
MFG-206 Concepts of Industrial Design

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

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

COURSE DESCRIPTION:

MFG-206 Concepts of Industrial Design is an exploration of 2D and 3D techniques used by industrial designers to communicate ideas for new products and product designs. Course includes a brief history of industrial design. Exercises in ideation and conceptualization will be used to familiarize students with design development philosophy. Use of freehand drawing techniques and drafting skills will be explained to produce presentations of proposed product concepts. Model making techniques will be explored to develop 3D communication skills.
2 lecture, 2 lab, 3 credits
Prerequisites: DFT-107 Drafting I
Co-requisites: None

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. Explain the purpose of industrial design and its importance in the development of new products.	Graded Exams
2. Express ideas and concepts using standard methods for industrial designers.	Graded Exercises
3. Demonstrate the ability to create drawings and models for the purpose of presentation to other designers and clients.	Graded Projects and Exercises
4. Classify the use of industrial materials and how they affect product design criteria.	Graded Exams

COURSE CONTENT:	CHAPTER	TOPIC
Design Sketching	Pgs. 6-19	Basic Theory
	Pgs. 20-45	Investigative & Explorative Sketches
	Pgs. 46-71	Explanitory Sketches
	Pgs. 72-87	Persuasive Sketches
Ind. Design Mat. & Manuf. Guide	3.	Metals
	4.	Metal Forming
	5.	Metal Cutting
	6.	Metal Joining
	8.	Plastics
	11.	Joining Plastics
	13.	Rubbers and Elastomers
	14.	Natural Engineering Materials
	15.	Composites
Handouts		3D Modeling Project
		Critique and Design Assessment

TEXTBOOK: No Textbook Required

EVALUATION:

A. Project Assignments	30%
B. Examination.	30%
B. Final Examination.	30%
C. Class Participation	10%
TOTAL	100%

SPECIAL NOTES: **A final grade cannot be assigned for the course until all projects and examinations for the course have been completed.**

Make-up examinations will be administered in accordance with the instructor's and division's policy.

FACULTY ABSENCE PROCEDURE: Please note well.

A daily listing will appear in the glass case located in the main hall A bldg. which will indicate all classes which are cancelled. Students can consult this case before going to class. If students find a class cancelled which has not been listed, they should report this to the divisional dean's office (A325) or to the evening/Saturday office (L113).

CALENDAR:

Class Meeting	Date	Topic	Chapter

1.	_____	Basic I.D. Theory	Pgs. 6-19
2.	_____	Sketching Techniques	Pgs. 6-19
3.	_____	I.D. Philosophy & Research	Pgs. 20-45
4.	_____	**EXAM 1** Explanatory Sketches	Pgs. 46-71
5.	_____	2D Modeling Development	Handout (H/O)
6.	_____	Materials for 3D Modeling	3,8,13,14,15
7.	_____	3D Model Development - Concept	H/O
8.	_____	**EXAM 2** Tools and Techniques	4,5,6,11
9.	_____	2D Modeling Assignment - Execution	H/O
10.	_____	2D Modeling Critique	
11.	_____	Philosophy of Industrial Design	H/O
12.	_____	3D Modeling Assignment - Concept	H/O
13.	_____	Intro to 3D Solid Modeling	H/O
14.	_____	**FINAL EXAM** Persuasive Sketches	Pgs. 72-87
15	_____	3D Modeling Critique	

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