Fall 2002
Updated: August 23, 2002

EGN 4410 Engineering Design 1 ED1

Course Work Sheets

College of Engineering (COE)

Florida Atlantic University

Instructors

Dr. Ming Huang (Mechanical Engineering)

Dr. Daniel Raviv (Electrical Engineering)

Dr. Bassem Al-Halabi (Computer Science and Engineering)

ED1 Course Syllabus

EGN 4410 - Engineering Design 1

Course Description

Students will be introduced to and apply design methodologies, creativity, and problem solving techniques to develop capstone design projects in a multi-disciplinary team setting. They will conduct research, feasibility study, and conceptual design to generate and present proposals to be worked on in Design II course.

Credits: 2

Pre-requisite:

Students must be in their senior year with departmental approval.

Instructor(s)/Coordinators:

?? Dr. Ming Huang, ME, EG223, 297-3984, huangm@fau.edu
?? Dr. Daniel Raviv, EE, SE472, 297-2773, ravivd@fau.edu
?? Dr. Bassem Alhalabi, CSE, SE362, 297-3182, balhalabi@fau.edu

Text book:

Dym and Little, "Engineering Design", John Wiley, 1999

Reference books:

?? H.S. Fogler and S.E. LeBlanc, *Strategies for Creative Problem Solving*, Prentice Hall, 1995.
?? Edward Lumsdaine and Monika Lumsdaine, *Creative Problem Solving*, McGraw Hill, 1995.
?? D. Pressman, "Patent It Yourself", 9th Edition, NOLO Press, 2002.
?? Anne Eisenberg , "A Beginner's Guide to Technical Communication", McGraw Hill, 1998.

Topics:

1. Design process and its applications

2. Creativity, and problem solving and their applications

3. Team building and its practice.

4. Communication skills and practices (proposal and report writing, oral presentation)

5. Project planning, management and economics/marketability and their applications

6. Ethics, safety, hazard, and environment related issues.

Grading Policy

Important: The difficulty level of the project is a mutual agreement between the student and the advisors and once agreed on, it would not affect the grade.
Your final grade is based on several partial scours as explained in the Grading Sheet.

ED1 Class Schedule (Fall 2002) Updated 8/23/02

This is a tentative schedule. Subject to change.
Legend: A= Dr. Alhalabi, H= Dr. Huang, R= Dr. Raviv, Cr= to Coordinators, Ad= to Advisors, e= by email

WEEK / DATE		INST./ ROOM		ACTIONS IN CLASS	SUBMISSION
1	T 08/20	---	--	--	-
	R 08/22	A,H,R	GCS102	Welcome to ED	-
	F 08/23	A,H,R	GCS102	ME Tour	-
2	T 08/27	A,H,R	GCS102	Mini project task and team assignments/ Topic	-
	R 08/29	A,H,R	GCS102	Topic	- Homework if applicable
	F 08/30	A,H,R	SE309	CSE Tour	-
3	T 09/03	A,H,R	GCS102	Ideas and Brainstorming	-
	R 09/05	A,H,R	GCS102	Ideas and Brainstorming / Topic	- Homework if applicable
	F 09/06	A,H,R	SE309	EE Tour	-
4	T 09/10	A,H,R	GCS102	Capstone project: Sharing ideas /topic	- Capstone ideas
	R 09/12	A,H,R	GCS102	Capstone project: Choosing ideas /topic	- Homework if applicable
	F 09/13	A,H,R	GCS102	Activities	-
5	T 09/17	A,H,R	GCS102	Topic	-
	R 09/19	A,H,R	GCS102	Topic	- Homework if applicable
	F 09/20	A,H,R	GCS102	Project teams formed/ activities	-
6	T 09/24	A,H,R	E Lobby	Mini Project demos (lobby of building 36)	-
	R 09/26	A,H,R	E Lobby	Mini Project demos	- Homework if applicable
	F 09/27	A,H,R	E Lobby	Mini Project demos	- Peer Evaluation [Cr]
7	T 10/01	A,H,R	GCS102	Project teams formed, advisors selected / Topic	-Log sheet signed [Cr/Ad]
	R 10/03	A,H,R	GCS102	Project re-definition: teams + advisors / Topic	signed every week
	F 10/04	A,H,R	GCS102	Activities	afterwards !!!
8	T 10/08	A,H,R	GCS102	Project definition, research and specifications	Grading Sheets [Cr]
	R 10/10	A,H,R	GCS102	Project potential solutions/Sol. Selection/ Topic	-
	F 10/11	A,H,R	GCS102	Project tasks assignment	Pre-proposal [e,Ad+Cr]
9	T 10/15	A,H,R	GCS102	Projects approval /Topic	-
	R 10/17	A,H,R	GCS102	Topic	-
	F 10/18	A,H,R	GCS102	Activities	-
10	T 10/22	A,H,R	GCS102	Topic	-
	R 10/24	A,H,R	GCS102	Topic	-
	F 10/25	A,H,R	GCS102	Activities	-Proposal Draft [e,Ad]
11	T 10/29	A,H,R	GCS102	Topic, etc.	-
	R 10/31	A,H,R	GCS102	Topic, etc.	-
	F 11/01	A,H,R	GCS102	Activities	-
12	T 11/05	A,H,R	GCS102	Presentation (20 min), final changes	Log Sheets [Cr]
	R 11/07	A,H,R	GCS102	Presentation (20 min), final changes	-
	F 11/08	A,H,R	GCS102	Team meetings	-
13	T 11/12	A,H,R	GCS102	Presentation (20 min), final changes	Peer Evaluation [Cr]
	R 11/14	A,H,R	GCS102	Presentation (20 min), final changes	-
	F 11/15	A,H,R	GCS102	Team meetings	-
14	T 11/19	A,H,R	GCS103	Join ED2 for project presentations	Final Proposal [e,Ad+Cr]
	R 11/21	A,H,R	GCS103	Join ED2 for project presentations	-
	F 11/22	A,H,R	GCS103	Join ED2 for project presentations	-
15	T 11/26	A,H,R	GCS103	Join ED2 for project presentations	-
	R 11/28		--	THANKSGIVING Recess	-
	F 11/29		--	THANKSGIVING RECESS	-
16	T 12/03	A,H,R	GCS103	Join ED2 for project presentations	-
	R 12/05		--	Reading Day	-
	F 12/07		--	--	-

ED1 Coordinator and Advisor Grading Sheet

Each student must fill the top part of this grading sheet once the project is determined and advisors are secured. Each student must turn in this form by the end of week 8 to any of the course coordinators. This form shall remain with the course coordinators for final grade reporting. Advisors shall email to the coordinators the scores for proposal draft-2, finial proposal, and presentation for each group.

Semester: (circle one)   Fall   Spring   Summer,   Year 20_____

Project Title: _____   Team # [   ]

Student Name: _____ SS#: _____ Signature: _____

Team Members/Dept: 1)_____/____2)_____/____3)_____/___

Advisor: _____ Initials: _____

Co-Advisor(s): _____ Initials: _____

Coordinators: 1)_____2)_____3)_____

Project Grading Table: Advisor fills first two lines, and coordinator fills last line.

Grade Portion Category	Score	Advisor Score	Co-advisor Score (opt)	Coordinator Score	Average Scores
Mini Project: Overall performance?	team 0-15				
Proposal Draft-2: Dose it have substantial material?	team 0-10				
Proposal Final: Overall clarity and style?	team 0-15				
Proposal Presentation: Overall clarity and style?	team 0-15				
Homework Assignment: Individual student assignment.	student 0-10				
Class Activities: Attendance, participation, …	student 0-10				
Instructor Evaluation: General student behavior/conduct.	student 0-10				
Peer Team Evaluation: Student performance in the team?	student 0-5				
ED1 Log Sheet: Progress consistently maintained?	student 0-10				

Final Grade By the Course/Project Coordinator	Initials	Letter Grade: A, A-, B+,….	Sum

Florida Atlantic University
College of Engineering
Engineering Design 1 & 2

ED1 Student Log Sheet

Each students should individually maintain this log sheet and must periodically (every one week) annotate his/her progress summary and have it initialed and dated by their advisors (coordinators when advisors are not available). Advisors must check the logbooks to match the progress summary on this form. Towards the end of the semester, students must turn it in to the course coordinators. Report problems if any.

Semester: (circle one)   Fall   Spring   Summer,   Year 20____

Student Name: _____   Team #_____

Project Progress Log Summary: Students annotate and advisors Initial.		Advisor Check
I have Done:	I will do:	Hours _____ Log Bk _____ Date _____ Initials _____
I have Done:	I will do:	Hours _____ Log Bk _____ Date _____ Initials _____
I have Done:	I will do:	Hours _____ Log Bk _____ Date _____ Initials _____
I have Done:	I will do:	Hours _____ Log Bk _____ Date _____ Initials _____
I have Done:	I will do:	Hours _____ Log Bk _____ Date _____ Initials _____
I have Done:	I will do:	Hours _____ Log Bk _____ Date _____ Initials _____

Labs Usage Limitation

To use any lab facilities and equipment, you must be enrolled in Engineering Design I or II Courses. Or, you may have a special permission from COE.

Rules & Regulations

1. **Use your student's ID card to admit ONLY yourself and KEEP the doors always CLOSED.**

2. **No smoking / drinking / eating is allowed in the labs. Keep the entire lab CLEAN.**

3. **Lab Equipment, Hardware, Software, and Documents MAY NOT be checked out.**

4. **Do not INSTALL / COPY / DELETE / MODIFY any software in the labs.**

5. **Once you are assigned a station in any lab, stick with it till the end of the project.**

6. **You may keep personal components related to your project in the lab till it is completed.**

7. **Be conservative on consumable items and reuse working items.**

Security

You may be video taped for your security and against lab vandalism

Problem Reporting

Any hardware/software failure, discovery of any lost or damaged item, or any abuse in any form in any lab must be reported to the COE tech support or to the coordinators.

Penalties

Any violation and/or abuse in any form of any Lab regulations and/or facilities may result in disciplinary actions and loss of lab access privileges.