



Annual Course Report

Program on which this course is given:	Diploma of Applications of Automatic Control of Mech. Power Systems
Department offering the program:	Mechanical Power Engineering Department - ACC control Lab
Department offering the course:	Mechanical Power Engineering Department - ACC control Lab
Academic Level:	Mandatory Course- Last Term of the Diploma of Graduate Studies
Date	1 st Term 2014/2015
Semester (based on final exam timing)	<input type="checkbox"/> Fall <input type="checkbox"/> Spring <input checked="" type="checkbox"/> summer

A - Basic Information

Title:	The diploma Design Project						Code:	MEP 599
2. Units/Credit hrs per week:	Lectures	3 Credit hours per week	Tutorial	--	Practical	--	Total	3
3. Names of lecturers contributing to the delivery of the course:	Associate Professor Dr. Mohsen S. Soliman & Assistance Professor Dr. Amro Abdel-Raouf							
4. Course coordinator:	Associate Professor Dr. Mohsen S. Soliman	External evaluator:	NA at this time					

B- Statistical Information (for 2014/2015)

See the Next Tables for all Grades and statistics for the last term and the one before it

جامعة القاهرة كلية الهندسة - قسم هندسة القوى الميكانيكية

نتيجة الفصل الدراسي الأول للعام الأكاديمي 2014/2015

دبلوم تطبيقات التحكم الأوتوماتيكي في نظم القوى - طلاب تم تسجيلهم حسب الملائحة القديمة

رقم الطالب	مق 560 أجهزة القياس والاختبارات والتحكم في نظم القوى الميكانيكية	مق 561 التحكم الأتوماتيكي - النظرية والتطبيق في نظم القوى الميكانيكية	مق 562 استخدام الدوائر الهيدروليكية في نظم التحكم الأتوماتيكي	مق 599 المشروع	مق 567 تطبيقات متقدمة لتكنولوجيا PLC في نظم التحكم الأتوماتيكي	مق 571 تطبيقات المعامل الافتراضية في التحكم في أنظمة تكييف الهواء المركزية	عدد الفصول الدراسية المكتسبة	إجمالي الساعات الكلية	مجموع النقاط	المعدل التراكمي	التقدير	الحالة
1				+B	+B		3	30	92.7	3.1	B	خريج
2				-A	+B		3	30	82.2	2.7	-B	خريج
3				+B	-A		3	30	107	3.6	+B	خريج
4				+B	A		3	30	104	3.5	+B	خريج
5				A	+B		3	30	101	3.4	+B	خريج
6				A	-A		3	30	99.3	3.3	+B	خريج
7				A	-A		3	30	96.3	3.2	B	خريج
8	+B	-A	+B	-B	-A	+C	2	30	92.7	3.1	B	خريج
9	-A	A	-A	-A	-A	-B	2	30	109	3.6	+B	خريج
10	A	A	A		A	+B	2	21	81	3.9	-A	مستمر

C- Professional Information

1. Course Teaching:

• Topics actually taught: They depended and were different based on the subject of the different projects	no. of hrs	Lecture	tutorial/practical	lecturer
The project had neither formal regular lectures nor term-worksheets, nor report assignments. Some lectures or other in-term activities were done depending on project subjects.	42 hrs	3 hrs/week for 14 weeks before Term exams	---	Associate Prof. Dr. Mohsen S. Soliman & Dr. Amro Abdel-Raouf
• Topics taught as a percentage of the content specified:	<input checked="" type="checkbox"/> >90% <input type="checkbox"/> 70-90% <input type="checkbox"/> <70%			
• Reasons in detail for not teaching any topic:	Reducing the number of weeks/ Semester for many social and political reasons. Many mandatory vacations as per requirements of the university management. The term is only 12 weeks.			
• If any topics were taught which are not specified, give reasons in detail:	Non			



2. Teaching and Learning Methods: They depended and were different based on the subject of the projects

Non-regular Lectures (√)	Practical/ Training (√)	Seminar/ Workshops (√)	Class Activity (√)	Case Study (√)	Project ()	Laboratory ()	E-learning (√)	Assignments /Homework ()	Other: Submitting Final report
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If teaching and learning methods were used other than those specified, list and give reasons: Non

3. Student Assessment:

All various in-term project progress works and the project written technical report to be submitted before the oral presentation.	50%
-Final-term written formal exam	--
- Final-term project oral presentation	50%
-Class Test	--
-Total	100%

• Members of Examination Committee: Associate Professor Dr. Mohsen S. Soliman & Assistance Professor Dr. Amro Abdel-Raouf

• Role of external evaluator: Review program ILOs

4. Facilities and Teaching Materials: Totally adequate Adequate to some extent Inadequate

List any inadequacies:

Classes are not totally suits the Multi-Media Facilities

Classroom has no white screen for the data show and it needs more ventilation fans.

5. Exams/ILOs Matrix

• ILOs/Evaluation Source Matrix

ILOs	Source of Evaluation									
	Assignments	Quizzes	Experiments	Lab Exam	Midterm Exam	Projects term	Papers/Repor 4o	Final Exam	Others 1	Others 2
❖ Knowledge and Understanding ❖ Intellectual Skills ❖ Professional and Practical Skills ❖ General and Transferable Skills										
a) Knowledge and Understanding: Having successfully completed this course, the post-graduate student should have knowledge and understanding of (depending on the project subject): a1- Various types of automatic control systems in mechanical power & energy transfer processes. a2- Basics, various definitions & terminologies associated with automatic control systems. a3- Requirements of on-line interactive virtual lab programs to study and analyze control systems. a4- Essential components of control loops/circuits in many applications of mechanical power systems. a5- Conservation eqns.& transfer functions of different types of automatic control systems/processes. a6- Basics & requirements of performing a short-term project in different automatic control fields. a7- How to integrate various subjects, knowledge, understanding, & skills into specific project task. a8- How to integrate human resources & available materials into team project due at a specific time.	-	-	-	-	-	-	√	√	√	√



<p>b) Intellectual Skills: Having successfully completed this course, the student should have the ability to do:</p> <p>b1- Searching for scientific information and adopting automatic control self-E-learning capabilities.</p> <p>b2- Analyze and compare the component effects, performance, and efficiency of different types of automatic control systems.</p> <p>b3- Apply concepts of software simulation, diagnostics & operation of various practical control systems.</p> <p>b4- Compare between various types of processes, components, & complete control systems/circuits.</p> <p>b5- Apply scientific, engineering analysis, and appropriate modelling equation/process, & to select best-efficient components to design, analyze, and solve automatic control problems.</p> <p>b6- Select and apply appropriate technical and optimum method in doing engineering design and analysis of automatic control problems.</p>	-	-	-	-	-	-	√	√	√	√
<p>c) Professional and Practical Skills: Having successfully completed this course, the student should have the ability to do:</p> <p>c1- Identify several types of automatic control problems which are essential for design and operation of mechanical power systems and energy transfer processes.</p> <p>c2- Perform professional design and modelling for different automatic control systems.</p> <p>c3- Suggest possible alternative solutions for various types of components and parts.</p> <p>c4- Diagnose efficiency and performance of different types of control circuits/systems.</p> <p>c5- Analyze different types of processes on real psychometric diagram and plotting schematics.</p>	-	-	-	-	-	-	√	√	√	√
<p>d) General and Transferable Skills: Having successfully completed this course, the student should have the ability to do:</p> <p>d1- Perform engineering assembly of many processes & components into one applicable control system.</p> <p>d2- Transfer knowledge, Work in group, & Communicate in written & oral forms, in English.</p> <p>d3- Use IT & evolutionary technological tools & PC applications (Excel, Mat lab, Virtual labs, .etc).</p> <p>d4- Prepare & write reports, Manipulate & sort data, Think logically, and continuous self-E-learning.</p> <p>d5- Identify practical problems, compare between different technologies for HVAC systems.</p> <p>d6- Organise & manage time & resources effectively; for short-term and longer-term commitments</p>	-	-	-	-	-	-	√	√	√	√



- Midterm Exam: No Midterm Exam for this course but an oral presentation & a project technical report.

Question	ILOs									
	1	2	3	4	5	6	7	8	9	10
1. (problem 1)										
2. (problem 2)										

- Final Exam: No Final Exam for this course but an oral presentation & a project technical report. Different parts of the ILOs are evaluated adequately through-out various part of the design project.

Question	ILOs									
	1	2	3	4	5	6	7	8	9	10
1. (problem 1)										
2. (problem 2)										
3. (problem 3)										
4. (problem 4)										
5. (problem 5)										

6. Administrative Constraints: Reducing the number of the weeks per semester

- List any difficulties encountered:

- Reducing the number of weeks/ Semester for many social and political reasons

- Many mandatory vacations as per requirements of the university management. The term is only 12 weeks.

7. Comments from external evaluator(s):	Response of Course Team
Not available in writing for instructors to respond to	None
8. Comments from Students:	Response of Course Team
Done but not available in writing for instructors to respond to	None
9. Course Enhancement:	
Progress on actions identified in the previous year's action plan:	
Action	State whether or not completed and give reasons for any non-completion
Upgrading Teaching facilities Supply visual aids for the classrooms Maintenance of classrooms	Not completed due to administrative problems
10. Action Plan for Academic Year 2014 – 2015	

Actions Required	Completion Date	Person Responsible
Upgrading Teaching facilities Supply visual aids Maintenance of classrooms Incorporate more practical materials & measurement experimental labs in the course Make a Mat lab programs to illustrate the basic ideas of each topic with graphs	End of 2015	Administration and Members of The Examination Committee
Course Coordinator:	Associate Professor Dr. Mohsen S. Soliman	
Signature:		