



Jordan University of Science and Technology
Faculty of Engineering
Chemical Engineering Department

CHE552 Process Control Lab - JNQF Level: 7

First Semester 2023-2024

Course Catalog

1 Credit Hours. Temperature control, level control, pressure control, flow control, and process module.

Text Book

Title	Control Laboratory Manual
Author(s)	Rowaida Zoumot
Edition	2nd Edition
Short Name	Reference_1
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
Reference_2	Process Modeling, Simulation and Control for Chemical Engineers	1. Luyben, W.L	2nd Edition	
Reference_3	Process Dynamics and Control	Seborg, Edgar, and Mellichamp	1st Edition	

Instructor

Name	Mrs. Rowaida Zoumot
Office Location	CH1 L2
Office Hours	Sun : 13:30 - 14:30 Mon : 11:30 - 14:30 Tue : 10:30 - 12:30 Thu : 12:30 - 14:30
Email	zmot@just.edu.jo

Class Schedule & Room
Section 1: Lecture Time: Mon : 08:30 - 11:30 Room: LAB Section 2: Lecture Time: Sun : 14:30 - 17:30 Room: LAB

Prerequisites		
Line Number	Course Name	Prerequisite Type
225510	CHE551 Process Dynamics And Control	Prerequisite / Study

Tentative List of Topics Covered		
Weeks	Topic	References
Weeks 1, 2	Introduction to Control Lab	From Reference_1 , From Reference_2
Weeks 3, 4	Electrical Console (PCT-10)	From Reference_1
Week 5	Temperature Control (PCT-13 + PCT-10) / Level Control (PCT-11+ PCT-10)	From Reference_1
Weeks 6, 7	Temperature Control (LAB VIEW)	From Reference_1
Weeks 8, 9	Pressure Control (PCT-3) (LAB VIEW)	From Reference_1
Weeks 10, 11	Process Module (PCT-9) (LAB VIEW) & Level Control (PCT-11) (LAB VIEW)	From Reference_1

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Introduce the student to the basic elements of the control system and enhance the understanding of the fundamentals of control system [20SO1] [5L7K1]	20%	
Familiarize the student with the process control operations and introduce a variety of modern and classical experimental techniques . [20SO6] [5L7S2]	20%	
Demonstrate the different modes of the control system and provide some practice in making engineering judgments, estimates and assessing the reliability of measurements, skills which are very important for any successful engineer [20SO2] [5L7S3]	20%	
Improve written and communication skills through the lab reports. These will also provide students with experience in organizing, analyzing and interpreting engineering data [20SO5] [1L7C1]	20%	
Expose students to a group learning environment by requiring to work in groups, much like the real world [20SO3] [10L7C3]	20%	

Relationship to Program Student Outcomes (Out of 100%)						
SO1	SO2	SO3	SO4	SO5	SO6	SO7
20	20	20		20	20	

Relationship to NQF Outcomes (Out of 100%)				
L7K1	L7S2	L7S3	L7C1	L7C3
20	20	20	20	20

Evaluation	
Assessment Tool	Weight
REPORTS	30%
LAB WORK	15%
MID EXAM	15%
FINAL EXAM	40%

Policy	
Policy	<p>1- Grouping The class will be divided into 3 groups where each group will perform one experiment/week. In the first week of the semester the members of each group will be assigned by the instructor.</p> <p>Attendance</p> <p>2- Attendance will be checked at the beginning of each class. University regulations will be strictly followed for students exceeding the maximum number of absences.</p> <p>Lab. Reports</p> <p>3- Laboratory reports will be due one week after the scheduled experiment. This DEADLINE WILL BE STRICTLY ENFORCED. Reports should be submitted to the instructor during the scheduled lab session. 20% WILL BE DEDUCTED FOR EACH DAY THE LAB REPORT IS LATE.</p> <p>4- Quizzes Quizzes will be part of this course. No make-up quizzes will be conducted except in the case of a documented emergency</p> <p>5- Student Conduct:</p> <p>It is the responsibility of each student to adhere to the principles of academic integrity. Academic integrity means that a student is honest with him/herself, fellow students, instructors, and the University in matters concerning his or her educational endeavors. Cheating will not be tolerated in this course. University regulations will be pursued and enforced on any cheating student.</p>

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