



Philadelphia University

Faculty of Engineering – Mechatronics Engineering Department
Second Semester 2017/2018

Course Details:

Title: Computer Aided Design/Computer Aided Manufacturing (640524)
CAD/CAM

Prerequisite: Mechanical Design (640432) + Engineering Workshop 2 (620172)

Credit Hours: 3 credit hours (16 weeks per semester, approximately 45 contact hours)

Textbook: “Introduction to Computer Numeric Control CNC” By James Valentino, Pearson publisher, 5th edition 2012.

References:

- CAD/CAM Computer Aided Design and Manufacturing. By Groover, Prentice Hall, 3rd edition, 2008.
- Computer Aided Manufacturing. By Hsu-Pin Wang, second edition, 1998.

Description: The course provides the students with the knowledge and understanding of the concepts, techniques, and applications of Computer Integrated Manufacture (CIM).

Website: <http://www.philadelphia.edu.jo/academics/inaimi>

Instructor: Dr. Ibrahim Al-Naimi

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Office: Engineering building, room 6408, ext: 2370

Office hours: Sunday, Tuesday, and Thursday: 10:10-11:00 and 12:10-1:00

Course Outlines:

Week	Topic
(1, 2)	Introduction to Production Systems
(3 - 5)	Computer Aided Design (CAD)
(6, 7)	Computer Aided Manufacturing (CAM)
(8 - 15)	Computer Numerical Control (CNC)

Course Learning Outcomes with reference to ABET Student Outcomes:

Upon successful completion of this course, student should:

1.	Understand the concepts of CIM, CAD, and CAM	[a, c]
2.	Understand the basic features and characteristics of CNC machines	[a, e]
3.	Develop CNC part programs using different machine tools	[a, b, c, e, k]

Assessment Guidance:

Evaluation of the student performance during the semester (total final mark) will be conducted according to the following activities:

Sub-Exams: The students will be subjected to two scheduled written exams, first exam and second exam during the semester. Each exam will cover materials given in lectures in the previous 3-4 weeks.

Quizzes: Four quizzes of (10-15) minutes will be conducted during the semester. The materials of the quizzes are set by the lecturer.

Final Exam: The students will undergo a scheduled final exam at the end of the semester covering the whole materials taught in the course.

Grading policy:

First Exam	20%
Second Exam	20%
Quizzes	20%
Final Exam	40%
Total:	100%

Attendance Regulation:

The semester has in total 45 credit hours. Total absence hours from classes and tutorials must not exceed 15% of the total credit hours. Exceeding this limit without a medical or emergency excuse approved by the deanship will prohibit the student from sitting the final exam and a zero mark will be recorded for the course. If the excuse is approved by the deanship the student will be considered withdrawn from the course.

February, 2018