ENTC 380 - Computer-Aided Manufacturing – Fall 2009

OBJECTIVES: 1. To provide the student with the ability to analyze and evaluate production systems, automation technologies, material handling and tracking technologies, and manufacturing systems. Prerequisites: ENTC 181 and MATH 151.
2. To provide the student with the ability to recognize, describe and employ computer software and equipment needed to create a computer model and manufacture a product.

INSTRUCTOR: Louis McDaniels; 512-496-8768 (Mobile – NO TEXT MESSAGES) or 979-458-4509 (Campus office); Email: mcdaniels@entc.tamu.edu, Office: THOM 118F.

LAB INSTRUCTOR: Adam Farmer, Email: Adam@entc.tamu.edu, Office: THOM 119.

MEETING TIME: Lecture: MW from 10:20 – 11:10 a.m. in THOM 112D.

OFFICE HOURS: W 2:30-3:30 p.m. or by appointment.

TEXT: Groover, M.P., *Automation, Production Systems, and Computer-Integrated Manufacturing*, Prentice Hall, 2008, 3rd Edition

ATTENDANCE: Attendance is per University Regulations and is strongly recommended. Beginning with week 3, each unexcused absence more than three reduces your final course grade by one percentage point up to a maximum of five percentage points. **See below for excused absence rules**.

EXCUSED ABSENCES:

a. See Student Rule 7 (http://student-rules.tamu.edu/rule07). In the event of illness, confirmation of visit to a health care professional affirming date and time of visit must be presented according to Section 7.1.6.2.b.

b. ***Make-up of labs and scheduled exams will not be allowed except for an excused absence.*** Due dates will be set by Mr. McDaniels or the lab TA as appropriate. If a quiz is missed due to an excused absence, the student will be awarded the class average quiz grade for that quiz.

GRADING:

Exams (3x) (1)	60%
Optional Final Exam) (1)	
Laboratory (1)	20%
Attendance and Participation	5%
Quizzes	10%
Homework (2)	5%

90% ≤ A
80% ≤ B < 90%
70% ≤ C < 80%
60% ≤ D < 70%
F < 60%

NOTES:

1. The three regular exams are required. *The optional final exam may not replace a regular exam missed because of an unexcused absence*. Makeup and late work in lecture and lab will not be accepted except for excused absences per TAMU regulations. Due dates will be set by Mr. McDaniels or the lab TA as appropriate.
2. Homework will be regularly assigned. Answers will be posted at http://etidweb.tamu.edu/ftp/ENTC380/
3. All changes in attendance to lab sections must be approved in writing by the lab TA.

Plagiarism and Intellectual Property: The handouts used in this course are copyrighted. "Handouts" means all materials generated for this class, which include but are not limited to syllabi, quizzes, exams, lab problems, in-class materials, review sheets, and additional problem sets. Because these materials are copyrighted, you do not have the right to copy the handouts, unless you are expressly granted permission by the copyright holder.

As commonly defined plagiarism consists of passing off as one's own the ideas, words, writings, etc., which belong to another. In accordance with this definition, you are committing plagiarism if you copy the work of another person and turn it in as your own, even if you should have the permission of that person. Plagiarism is one of the worst academic sins, for the plagiarist destroys the trust among colleagues without which research cannot be safely communicated.

If you have any questions regarding plagiarism, please consult the latest issue of the *Texas A&M University Student Rules*, under the section "Scholastic Dishonesty."

ENTC 380 - Computer-Aided Manufacturing – Fall 2009

American with Disabilities (ADA) Policy Statement: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Services for Students with Disabilities in Cain Hall, Rm. B118, or call 845-1637. For additional information visit http://disability.tamu.edu.

Academic Integrity: "*An Aggie does not lie, cheat or steal or tolerate those who do.*" The Aggie Code of Honor is an effort to unify the aims of all Texas A&M men and women toward a high code of ethics and personal dignity. For most, living under this code will be no problem, as it asks nothing of a person that is beyond reason. It only calls for honesty and integrity, characteristics that Aggies have always exemplified. The Aggie Code of Honor functions as a symbol to all Aggies, promoting understanding and loyalty to truth and confidence in each other.

See http://student-rules.tamu.edu/rule20 and http://www.tamu.edu/aggiehonor/ for more information about Student Rules and the Aggie Honor System.

Lecture Schedule

Week	Monday	Wednesday	Chapter[1]
1 – 08/31	Introduction	Manufacturing Operations	1 & 2
2 – 09/07	Manufacturing Operations	Manufacturing Models	2 & 3
3 – 09/14	Manufacturing Models	TPM – Reliability, Availability and Equipment Effectiveness	3 & Notes
4 – 09/21	**Quiz**; Numerical Control Code Overview	Review	7
5 – 09/28	**Exam 1**	Introduction to Material Handling	9
6 – 10/05	Material Transport Systems	Material Transport Systems	10
7 – 10/12	Material Transport Systems	Storage Systems	10 & 11
8 – 10/19	Automatic Data Capture	**Quiz**	12
9 – 10/26	Review	Introduction to Manufacturing Systems	13
10 – 11/02	**Exam 2**	Single Station Manufacturing Cells	14
11 – 11/09	Single Station Manufacturing Cells	Manual Assembly Lines	14 & 15
12 – 11/16	Automated Assembly Systems	Cellular Manufacturing	17 & 18
13 – 11/23	Flexible Manufacturing Systems **Take Home Quiz Due**	No class	19
14 – 11/30	Review	**Exam 3**	
15 – 12/07	Grades available for review	Reading Day	
	Tuesday		
12/15	**Optional Final Exam: 8 – 10 a.m.**		

[1] Partial notes on most lecture topics are available at http://etidweb.tamu.edu/ftp/ENTC380/. These notes contain material that may not be mentioned in lecture and should be reviewed in preparation for exams and quizzes.