

COLLEGE OF ARTS AND SCIENCES

IT 480-Material Handling and Plant Layout

DEPARTMENT: Agricultural and Industrial Sciences
COURSE NUMBER AND TITLE: IT 480-Material Handling and Plant Layout
SEMESTER: Spring 2008
CREDIT HOURS: 3
LECTURE LOCATION / TIME: Farrington Building 2, Room 220, TU-TH: 8:00-9:20am

INSTRUCTOR: Dr. Dominick E. Fazarro

OFFICE: Farrington, Room 216c
Box 2088
Office phone & voicemail: 936.294.1228
Email: def003@shsu.edu

OFFICE HOURS: TU-1:30pm-2:30pm;TH 2:00pm-3:00pm

TEXTBOOK: Manufacturing Facilities Design and Material Handling
3rd Ed. Fred E. Myers & Matthew P. Stephens 2005

SUPPLIES: 1"-2" three ring notebook and a flash drive (512 MB, to 2G)

COURSE OBJECTIVES/COMPETENICES:

This course is a designed to provide the student knowledge and experience in designing an efficient manufacturing facility layout with techniques and procedures. Upon completion of this course, the student should be able to:

- ✓ Define product, process and schedule design requirements of facilities planning
- ✓ Identify activity relationships and space requirements for the manufacture of specific products
- ✓ Evaluate personnel needs for specific goods production
- ✓ Develop alternatives, concepts and techniques related to material handling
- ✓ Produce a complete plant layout for the manufacture of a specific product
- ✓ Become familiar with concepts of computer-aided layout designs
- ✓ Develop alternatives/functions for receiving and shipping, storage, manufacturing, office and facilities
- ✓ Develop quantitative approaches relating to deterministic and probabilistic models
- ✓ Evaluate and select facilities plan from exterior sources
- ✓ Prepare and present the facilities plan to upper-level management

COURSE FORMAT:

This course will be a combination of lecture, demonstrations, student inquiry, and in-class creative problem solving. The students will be expected to participate in question and answer sessions and in oral reports. Assignments, exam, and plant layout project will be required.

COURSE OUTLINE:

1. Introduction to manufacturing facilities design and material handling
2. Where to find information for facilities design?
3. Time Study
4. Process Design
5. Flow analysis techniques
6. Activity relationship analysis
7. Ergonomics/workstation design space requirements
8. Auxiliary services requirements space
9. Employee space
10. Material Handling
11. Material Handling Equipment
12. Office Layout Techniques and space requirements
13. Area allocation
14. Facilities design/layout
15. Application of computer simulation and modeling
16. Selling the layout

ATTENDANCE POLICY:

1. Every student is expected to be present and **on time** for every class. You are tardy whether you come in late or leave early. Roll will take at the beginning of each class; if you are not in your seat (three tardies will be counted as one absent). **Accumulate four absents (6) hours and your grade will drop by a letter, nine (9) hours and it drops by two (2) letters.** Attendance will be taken based upon Quick Quiz and turned in work for the day. In case you are absent, whether excused or unexcused, you are still responsible for the material covered.

NOTE: I take roll based upon rather or not practical assignments for that night have been completed and turned, at least one of them. Class will end when you are done with the assignments and have turned them, or at 9:20 am whichever comes first.

Material and instructions will be disseminated one time only. If you are absent or late, the responsibility for obtaining handouts and information is incumbent on you. These will also be posted on Blackboard the day they are assigned. You would be wise to establish relationships with fellow students for assuring that you remain well informed and that you are adequately prepared for exams.

2. Each student should be prepared for class/lab by having carefully read and studied all assigned textbook readings and/or handouts. **Work will NOT be accepted for credit beyond one week of the due date.** Absences do not exempt you from the responsibility of turning material in on time and they do not extend the due date of the assignment schedule.

3. There will not be repeat exams, quizzes, or makeup assignments except for extenuating circumstances (Documented illness, family crisis, etc.) or by mutual agreement prior to the absences between the instructor and the student.

ASSIGNMENTS:

See the attached sheet listing tentative assignments and due dates (also located on Blackboard). All grades are posted on BB, it is YOUR responsibility to keep track of your points.

GRADING:

1. **Exams - 2** (1 midterm, 1 Project ACAD/w presentation) major exams will be given during the semester. Tests will consist of written questions over each software application will consist of multiple choice, true false, completion and matching.

NOTE: You will submit a paper print out for grading, an electronic copy in the BlackBoard “drop box” to insure academic honesty so that I can do random checks. Additional lab time is available per the open lab schedule posted.

2. Assignments-will be given out each week. The assignments vary from internet book and mini-research projects.
3. Final/ Group Project
The group project will consist of a full detailed drawings of floor plans. The project will encompass material learning for the course. The instructor is providing real life simulation on working as a group to meet a specified deadline to make a profit. Progress reports will be turn in every two weeks.

In order to get full credit for the progress reports, first the content must be meaningful, and second everyone must provide signatures of the group members. If the progress report does not meet the instructor’s requirements, the group will receive half of the total points. I STRONGLY SUGGEST that the group make copies of the progress reports and put them into a binder, because at the end of the semester the instructor can make mistakes in documenting grades in Blackboard or the system goes down. You wan to have a backup to protect yourself as well as the group.

GRADING PLAN:

Each lab assignment should be completed during the scheduled lab period. Lab assignments are due at the beginning of the next regular class period. Late work will be penalized 10 points for each day it’s late. Work more than one week late will receive a zero.

Each student is expected to individually complete all drawing exercises for each of the units in this course. Penalties will be assessed for work, which is turned in late. Each student will

also complete unit tests plus a comprehensive final exam. The final grade for the course will be based upon points earned (tentative) as follows:

Assignments(30pts)	(20%)	=	360 Points Possible
Mid term	(30%)	=	200 Points Possible
Progress reports(20pts)	(10%)	=	140 Points Possible
Work Points (40pts)	(10%)	=	400 Points Possible
Final Project	(40%)	=	300 Points Possible
Total		=	1400 Points Possible

Please refer to the assignments point accumulation sheet for a break down.

A	= 1400-1260
B	= 1259-1007
C	= 1006-704
D	= 703-421
F	= BELOW 421

ACADEMIC HONESTY:

The University expects all students to engage in all academic pursuits in a manner that is above reproach. Students are expected to maintain complete honesty and integrity in the academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action.

If students are found to be cheating or guilty of plagiarism (including copying a drawing): First time offense will result in the test or assignment being counted as a zero and (this applies to the person who copied and the person who willingly allowed or supplied the data to be copied). This is why an electronic version of your work must also be submitted in the BB "drop box" so that I may do random checks. If the student repeats the violation, the course grade will be assigned as 'F'.

CLASSROOM RULES AND CONDUCT:

The lab assistant and instructor will enforce laboratory safety rules for any safety violations. Each safety violation will cause the current lab assignment grade to be dropped by one (1) grade letter for each occurrence. Students who are especially disruptive may be reported to the Dean of Students for disciplinary action in accordance with university policy.

THE FOLLOWING ARE THE SAFETY RULES:

- Cellular telephones and pagers must be turned off before class begins. If your cell phone rings during class or lab time it will be confiscated for 24 hours.
- **Eating, drinking and tobacco products are not allowed in the computer labs at any time.**
- No equipment may be removed from the laboratory.
- Talking at inappropriate times, sleeping, horseplay, pranks or other acts of mischief is prohibited.

STUDENT ABSENCES ON RELIGIOUS HOLY DAYS POLICY:

Section 51.911(b) of the Texas Education Code requires that an institution of higher education excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. A student whose absence is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence. University policy 861001 provides the procedures to be followed by the student and instructor. A student desiring to absent himself/herself from a scheduled class in order to observe (a) religious holy day(s) shall present to each instructor involved a written statement concerning the religious holy day(s). This request must be made in the first fifteen days of the semester or the first seven days of a summer session in which the absence(s) will occur. The instructor will complete a form notifying the student of a reasonable timeframe in which the missed assignments and/or examinations are to be completed.

DISABLED STUDENT POLICY:

It is the policy of Sam Houston State University that no otherwise qualified disabled individual shall, solely by reason of his/her handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any academic or Student Life program or activity. Disabled students may request help with academically related problems stemming from individual disabilities from their instructors, school/department chair, or by contacting the Chair of the Committee for Continuing Assistance for Disabled Students and Director of the Counseling Center, Lee Drain Annex, or by calling (936) 294-1720.

SHSU adheres to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations for students with disabilities. If you have a disability that may affect adversely your work in this class, then I encourage you to register with the SHSU Counseling Center and to talk with me about how I can best help you. All disclosures of disabilities will be kept strictly confidential. **NOTE: no accommodation can be made until you register with the Counseling Center**

“The above schedule, policies, and assignments in this course are subject to change in the event of extenuating circumstances or by mutual agreement between the instructor and the students.”