University of Wisconsin - Stout
Department of Industrial Management
College of Technology, Engineering, and Management

Syllabus for INMGT-350/550, FACILITIES PLANNING
Spring 2008 3 Credits

INSTRUCTOR:
Thomas A. Lacksonen, Ph.D., P.E.
Room 267 Technology Wing
Office hours: MTTh 9-12 by appointment
Office phone: 232-1144
Home phone: 232-8579 (emergencies only)
E-mail: lacksonent@uwstout.edu

MEETING TIMES:
Section 001 1:25-2:50 TTh JHSW 151

COURSE DESCRIPTION:
Study of facilities location, structure, and planning for efficient layout and material handling systems.

COURSE OBJECTIVES:
1. Understand the principles and philosophies of lean manufacturing and how they apply to facilities design.
2. Learn the significant issues to design a facility to meet global requirements.
3. Learn about the requirements for design and operation of storage and warehouse units.
4. Analyze capacity, space, and flow requirements for machine, workplace, storage, and warehousing facilities to meet the needs of products and production goals.
5. Be able to design preliminary layouts for facilities and manufacturing cells as block diagram layouts.
6. Analyze layout decisions in terms of both quantitative (material flow) and qualitative factors.
7. Be able to design an appropriate facility and material handling system(s) for a selected product(s), including the selection of appropriate equipment.
8. Be able to design a detailed manufacturing cell layout using CAD.
9. Be able to design and evaluate facilities for flexibility and robustness to cope with future changes in design, new products introduction, volume variations, and changing technology.
10. Be able to follow the facility design process on an case problem, given messy and incomplete data and user requirements.

PREREQUISITE: INMGT-200 Production/Operations Management

TEXTBOOK:
Tompkins, J. A., et al. (2004) *Facilities Planning*, (3rd ed.), New York NY: Wiley.
You are STRONGLY ENCOURAGED to purchase this textbook as a reference book.

ATTENDANCE: Attendance will be taken on all in-class presentation days. Regular and on-time attendance is expected on all other days. To be best prepared for class, textbook chapters should be read before the class lecture. Students will be responsible for all lectures and other materials covered, regardless if an absence was excused or not.

GRADING: The final grade will be based on the total points earned during the semester.

Midterm tests (2)	30%
Final – comprehensive	30%
Homework/ graduate presentations	20%
Final case project	20%
Total	100%

Approximate scale: 90-100 A; 80-90 B; 70-80 C; 60-70 D; <60 F. Some + or - grades may be given at the instructor's discretion.

The homework involves textbook exercises. The final case project is a case study which will require both analysis and design. Many assignments will be design problems. The work will be graded on both the process followed and the quality of the design. There is not necessarily one "right" solution to design problems; however some solutions fail to follow the process or meet design requirements, and some solutions are better than others.

On-time completion of each exercise is required. There is a 25% penalty per day for each homework not handed in on time. On time means the first minute of the class session on which the homework is due.

Cheating on examinations, submitting work of other students as your own, or any form of plagiarism will result in penalties as spelled out in the Student Handbook.

COURSE OUTLINE: This outline is only a general guideline. Topics may be deleted or added as time and students' needs dictate.

Date:	Chapters	Topics
Jan. 24	1	- Introduction
Jan. 31	8.5-7	- Strategic Facilities Planning, Lean Manufacturing
Feb. 7	2.1-4	- Product, Process, Schedule Design; Global Manufacturing
Feb. 14	3	- Flow, Space Relationships
Feb. 21	3	- Activity Relationships
Feb. 28	4	- Personnel Requirements
March 7	5	- Material Handling
March 9		MIDTERM TEST 1 (Chapters 1-4)
March 21	5	- Material Handling
March 28	5	- Material Handling
April 4	6.1-4	- Systematic Layout Planning
April 11	to p.320	- Systematic Layout Planning
April 18	6.8-11	- Layout
April 20		MIDTERM TEST 2 (Chapters 5-6)
April 25	11, 12	- Preparing, Presenting the Facilities Plan
May 2	7	- Warehouse Operations
May 9		- Graduate presentations, review
May 15		FINAL 2:00-3:50PM (comprehensive)