

**The Hong Kong University of Science and Technology**

**UG Course Syllabus**

**Spring 2025**

Design of Logistics and Manufacturing Systems

IEDA4200

3 Credits

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**Office Hours:** Mondays 3-4pm

**Course Description**

This course is designed to provide some fundamental concepts, theories and procedures for the study of facility location, process and material flow analysis, physical layouts, computerized layout planning, warehouse operations, and material handling.

**Intended Learning Outcomes (ILOs)**

By the end of **this course**, students should be able to:

- Explain the basic principles of facility planning from a supply chain view point
- Construct facility location models
- Design product, process, and production schedules
- Conduct flow and activity relationship analysis
- Determine space requirement and plant layout
- Identify and apply different algorithms used in computer-aided layout design
- Describe a range of methods, equipment and technologies for material handling
- Explain the basic warehouse operations and describe key warehouse layout design principles

**Assessment and Grading**

This course will be assessed using criterion-referencing and grades will not be assigned using a curve. Detailed rubrics for each assignment are provided below, outlining the criteria used for evaluation.

**Assessments:**

<b>Assessment Task</b>	<b>Contribution to Overall Course grade (%)</b>
Homework assignments + Lab	15%
Project	15%
Participation	5%
Mid-Term	25%
Final examination	40%

\*Please check the updated due dates of homework assignment submissions on canvas

## Course Outline

	Topic
1	Introduction to Facilities Planning
2	Facility Location Models
3	Machine Layout Algorithms
4	Flow & Activity Relationships
5	Layout Design Algorithms
6	Warehouse Layout Models
7	Product, Process and Schedule Design

## Course AI Policy

All students are encouraged to use Generative AI wisely in class activities and discussions with proper acknowledgement.

## Communication and Feedback

Students who have further questions about the feedback including marks should consult the instructor/TAs within one week after the feedback is received.

## Resubmission Policy

To ensure fairness for students who submit assignments on time, a penalty for late submission is listed as follows:

- Late submission within 12 hours, 25% penalty will be applied.
- Late submission between 12 to 24 hours, 50% penalty will be applied.
- Late submission for more than 24 hours will not be accepted.

## Reference Books

Tompkins, J.A., White, J.A., Bozer, Y.A., Tanchoco, M.A. (2010). Facilities Planning (4th Ed). Hoboken, NJ: John Wiley and Sons, Inc.

## Academic Integrity

Students are expected to adhere to the university's academic integrity policy. Students are expected to uphold HKUST's Academic Honor Code and to maintain the highest standards of academic integrity. The University has zero tolerance of academic misconduct. Please refer to [Academic Integrity | HKUST – Academic Registry](#) for the University's definition of plagiarism and ways to avoid cheating and plagiarism.