

Subject Code	Subject Name	Period per Week		Credit
25852	INDUSTRIAL MANAGEMENT	T	P	C
		2	0	2

Rationale	<p>As mid-level manager, engineering diploma graduates are responsible for proper and most efficient interaction of 6 M'S: man, machine, material, money, method (SOP or process) and market with a focus that will depend on their position in the organization (production, planning, quality, maintenance, design, etc.).</p> <p>They first need to understand the type of management and organization they work in.</p> <p>As they work directly or indirectly with manufacturing, therefore they need to have knowledge, skills and attitudes on production, planning, productivity improvement, new systems such as lean manufacturing and understand how production integrates in the overall supply chain management.</p> <p>They deal with people either as a supervisor, assistant manager or by leading transversal projects, they should know their role concerning human resources management and development. In their daily work, they must use a suitable leadership style, assign and monitor work, solve problems, support motivation to change of their teams when they implement new methods and systems.</p>
Learning Outcome (Theoretical)	<p>After undergoing the subject, students will be able to:</p> <ul style="list-style-type: none"> <input type="checkbox"/> State the roles and responsibilities of a mid-level manager within the organization <input type="checkbox"/> Differentiate various management systems and organizations <input type="checkbox"/> Describe the manufacturing process ensuring productivity, quality, cost and safety <input type="checkbox"/> State the types of production planning <input type="checkbox"/> Explain productivity improvement factors while controlling cost <input type="checkbox"/> Describe new trends of production management systems <input type="checkbox"/> Identify mid-level manager roles in the human resources management and development <input type="checkbox"/> Select the suitable leadership style depending on the situations and people <input type="checkbox"/> Identify the steps of work assignment based on goals to achieve while supporting changes <input type="checkbox"/> Describe the steps of problem solving and decision making

DETAIL DESCRIPTION (THEORY:

Unit	Topics with Contents	Class (1 Period)	Final Marks
1.	FUNDAMENTALS OF ORGANIZATION 1.1 Explain the purpose of an organization. 1.2 Define management organization. 1.3 Describe various types and features of organization structures. 1.4 Explain authority, responsibility, duties and delegation of authority. 1.5 Define span of supervision.	2	4
2.	FUNDAMENTALS OF MANAGEMENT 2.1 Explain the functions of management. 2.2 Relate administration, organization and management. 2.3 Describe different types of management and in which context they apply. 2.4 Define the specificities of industrial management.	2	4
3.	PRODUCTION MANAGEMENT 3.1 Define production management . 3.2 State functions of production management. 3.3 Describe “5p”. 3.4 Mention applications of “5p”. 3.5 Define cost control-methods. 3.6 Define inventory & inventory control. 3.7 Describe the fundamentals of maintenance management. 3.8 Explain the importance of quality system. 3.9 Explain the components of quality system	5	8
4	PRODUCTIVITY IMPROVEMENT 4.1 Define Productivity. 4.2 List factors affecting industrial productivity. 4.3 Describe productivity improvement techniques. 4.4 Describe the lean manufacturing approach. 4.5 Explain the concept of Just in Time.	3	6
5	PLANNING 5.1 Discuss importance of planning. 5.2 Explain the steps in planning. 5.3 Explain the factors affecting on planning. 5.4 State different types of production planning and control. 5.5 Describe the way to manage personal time.	4	7
6	SUPPLY CHAIN MANAGEMENT	3	4

Unit	Topics with Contents	Class (1 Period)	Final Marks
	6.1 Define supply chain management. 6.2 Explain the components of supply chain management. 6.3 Explain production integration into supply chain management.		
7.	HUMAN RESOURCES MANAGEMENT AND DEVELOPMENT (HRM-HRD) 7.1 Describe the main functions in human resources management (HRM). 7.2 Describe the main functions in human resources development (HRD). 7.3 Explain the role of manager in the recruitment process. 7.4 Explain the role of manager in the training process. 7.5 Explain the role of manager in the performance management system. 7.6 Mention the components of compensation and benefits system.	3	6
8.	LEADING A TEAM 8.1 Define leadership. 8.2 Identify personality traits impacting leadership style. 8.3 Discuss the types of leadership. 8.4 Define motivation and motivational cycle. 8.5 State the importance of motivation. 8.6 List motivation drivers based on Maslow, Herzberg adapted to various generations 8.7 State concepts of Theory-X, Theory-Y and Theory-Z	3	6
9.	WORK ASSIGNMENT 9.1 List different types of leadership styles. 9.2 Describe the leadership style adapted to the work assignment and delegation. 9.3 State SMART goal. 9.4 Set SMART goals to support work assignment. 9.5 Identify ways to reduce resistance to change during work assignment.	4	8
10.	PROBLEM SOLVING AND DECISION MAKING 10.1 Mention the steps of problem solving. 10.2 Explain tools used to analyze and solve problem addressing the 5M components. 10.3 Define decision making. 10.4 Discuss different types of decision-making process. 10.5 Describe the steps in decision making.	3	7
	Total	32	60

Necessary Resources (Tools, equipment and Machinery):

SI	Item Name	Quantity (piece/s)
01	Case studies, examples, exercises related documents	One for each student
02	Project templates	One for each student

Recommended Books:

SI	Book Name	Writer Name	Publisher Name & Edition
01.	Principles of Management	Dr. Md. Mainul Islam and Dr. Abdul Awal Dhan,	Bangladesh Open University.
02.	Personnel Management and Industrial Relation.	Mohammad Mohiuddin	NIDS Publication Co, Dhaka.
03.	Production Operations Management: The Handbook	Ronald P Bizzle Jr	Independently published (January 31, 2023)
04.	How To Implement Lean Manufacturing, Second Edition 2nd Edition	Lonnie Wilson	McGraw Hill; 2nd edition (March 22, 2015)
05.	The Toyota Way, Second Edition: 14 Management Principles from the World's Greatest Manufacturer Hardcover	Jeffrey K Liker	McGraw Hill; 2nd edition (December 1, 2020)
06.	Faster, Better, Cheaper in the History of Manufacturing 1st Edition	Christopher Roper	Productivity Press; 1st edition (August 5, 2016)
07.	Supply Chain Management, Inventory Control, Human Resource Management, and Customer Service (Louis Bevoc Series of Educational and Informational Books)	Louis Bevoc	CreateSpace Independent Publishing Platform (September 4, 2016)
08.	Bulletproof Problem Solving: The One Skill That Changes Everything	Charles Conn	Wiley; 1st edition (March 6, 2019)
09.	The Miniature Guide to Critical Thinking Concepts and Tools	Richard Paul and Linda Elder	The Foundation for Critical Thinking: Eighth edition (September 20, 2019)
10.	Leadership and the One Minute Manager: Increasing Effectiveness Through Situational Leadership	Ken Blanchard, Patricia Zigarmi, Drea Zigarmi	William Morrow; Updated edition (October 15, 2013)
11.	Effective Delegation of Authority: A (Really) Short Book for New Managers	Hassan Osman	Independently published (May 7, 2019)
12.	The Human Element: Overcoming the Resistance That Awaits	Loran Nordgren, David Schonthal	Wiley; 1st edition (September 28, 2021)
13.	The 7 Habits of Highly Effective People	Stephen R. Covey	Free Press (1989)
14.	ব্যবস্থাপনা	মোহাম্মদ খালেবুজ্জামান	দি যমুনা পাবলিশার্স
16.	কলেজে আরও ভালো কীভাবে করা যায়	সম্পাদকমন্ডলী	নায়েম, ঢাকা

17.	শিল্প প্রতিষ্ঠান উৎকর্ষ অর্জন	সম্পাদকমন্ডলী	নায়েম, ঢাকা
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Website References:

SI	Web Link	Remarks
01.	www.coachinforleaders	Podcast on leadership skills
02.	https://essentialcomm.com/	Podcast on coaching
03.	https://www.manager-tools.com/	Podcast on management
04.	https://www.shrm.org/	Website of the most important HR association in USA
05.	https://www.makingchips.com/	Podcast on manufacturing