

<b>Programme Name/s</b>	<b>: Architecture Assistantship/ Automobile Engineering./ Artificial Intelligence/  Agricultural Engineering/  Artificial Intelligence and Machine Learning/ Automation and Robotics/ Architecture/  Cloud Computing and Big Data/  Civil Engineering/ Chemical Engineering/ Computer Technology/ Computer  Engineering/  Civil &amp; Rural Engineering/ Construction Technology/ Computer Science &amp;  Engineering/ Fashion &amp; Clothing Technology/  Digital Electronics/ Data Sciences/ Electrical Engineering/ Electronics &amp; Tele-  communication Engg./  Electrical and Electronics Engineering/ Electrical Power System/ Electronics &amp;  Communication Engg./ Electronics Engineering/  Food Technology/ Computer Hardware &amp; Maintenance/ Instrumentation &amp; Control/  Industrial Electronics/  Information Technology/ Computer Science &amp; Information Technology/  Instrumentation/ Interior Design &amp; Decoration/  Interior Design/ Civil &amp; Environmental Engineering/ Mechanical Engineering/  Mechatronics/  Medical Laboratory Technology/ Medical Electronics/ Production Engineering/  Printing Technology/  Polymer Technology/ Surface Coating Technology/ Computer Science/ Textile  Technology/  Electronics &amp; Computer Engg.</b>
<b>Programme Code</b>	<b>: AA/ AE/ AI/ AL/ AN/ AO/ AT/ BD/ CE/ CH/ CM/ CO/ CR/ CS/ CW/ DC/ DE/ DS/  EE/ EJ/ EK/ EP/ ET/ EX/ FC/ HA/ IC/ IE/ IF/ IH/ IS/ IX/ IZ/ LE/ ME/ MK/  ML/ MU/ PG/ PN/ PO/ SC/ SE/ TC/ TE</b>
<b>Semester</b>	<b>: Fifth / Sixth</b>
<b>Course Title</b>	<b>: MANAGEMENT</b>
<b>Course Code</b>	<b>: 315301</b>

**I. RATIONALE**

Effective management is the cornerstone of success for both organizations and individuals. It empowers diploma engineers/ professionals to accomplish their tasks with finesse and efficiency through strategic planning and thoughtful execution, projects can optimize finances, enhance safety measures, facilitate sound decision-making, foster team collaboration and cultivate a harmonious work environment. The diploma engineers require leadership and management skills with technical knowledge of the core field to carry out various tasks smoothly. This course aims to instill fundamental management techniques, empowering diploma engineers/ professionals to enhance their effectiveness in the workplace.

**II. INDUSTRY / EMPLOYER EXPECTED OUTCOME**

The aim of this course is to help the students to attain the following industry identified outcome through various teaching learning experiences: Apply the relevant managerial skills for achieving optimal results at workplace.

**III. COURSE LEVEL LEARNING OUTCOMES (COS)**

Students will be able to achieve & demonstrate the following COs on completion of course based learning

- CO1 - Use relevant management skills to handle work situation
- CO2 - Apply appropriate techniques of product, operations and project management
- CO3 - Use comprehensive tools of recent management practices

**MANAGEMENT****Course Code : 315301**

- CO4 - Plan suitable marketing strategy for a product / service
- CO5 - Utilize supply chain and human resource management techniques for effective management

**IV. TEACHING-LEARNING & ASSESSMENT SCHEME**

Course Code	Course Title	Abbr	Course Category/s	Learning Scheme					Credits	Assessment Scheme												Total Marks
				Actual Contact Hrs./Week			SLH	NLH		Paper Duration	Theory				Based on LL & TL				Based on SL			
															Practical							
				CL	TL	LL					FA-TH		SA-TH		Total		FA-PR		SA-PR		SLA	
							Max	Min		Max	Min	Max	Min	Max	Min	Max	Min	Max	Min			
315301	MANAGEMENT	MAN	AEC	3	-	-	1	4	2	1.5	30	70*#	100	40	-	-	-	-	25	10	125	

**Total IKS Hrs for Sem. : 1 Hrs**

Abbreviations: CL- ClassRoom Learning , TL- Tutorial Learning, LL-Laboratory Learning, SLH-Self Learning Hours, NLH-Notional Learning Hours, FA - Formative Assessment, SA -Summative assessment, IKS - Indian Knowledge System, SLA - Self Learning Assessment

Legends: @ Internal Assessment, # External Assessment, \*# On Line Examination , @\$ Internal Online Examination

Note :

1. FA-TH represents average of two class tests of 30 marks each conducted during the semester.
2. If candidate is not securing minimum passing marks in FA-PR of any course then the candidate shall be declared as "Detained" in that semester.
3. If candidate is not securing minimum passing marks in SLA of any course then the candidate shall be declared as fail and will have to repeat and resubmit SLA work.
4. Notional Learning hours for the semester are (CL+LL+TL+SL)hrs.\* 15 Weeks
5. 1 credit is equivalent to 30 Notional hrs.
6. \* Self learning hours shall not be reflected in the Time Table.
7. \* Self learning includes micro project / assignment / other activities.

**V. THEORY LEARNING OUTCOMES AND ALIGNED COURSE CONTENT**

Sr.No	Theory Learning Outcomes (TLO's) aligned to CO's.	Learning content mapped with Theory Learning Outcomes (TLO's) and CO's.	Suggested Learning Pedagogies.
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**MANAGEMENT****Course Code : 315301**

<b>Sr.No</b>	<b>Theory Learning Outcomes (TLO's) aligned to CO's.</b>	<b>Learning content mapped with Theory Learning Outcomes (TLO's) and CO's.</b>	<b>Suggested Learning Pedagogies.</b>
1	<p>TLO 1.1 Justify the importance of management thoughts in Indian knowledge system.</p> <p>TLO 1.2 Describe the importance of management in day to day life.</p> <p>TLO 1.3 Explain Henry Fayol's principles of management.</p> <p>TLO 1.4 Describe the role of each level of management in its management hierarchy.</p> <p>TLO 1.5 Practice the self management skills for a given situation</p> <p>TLO 1.6 Apply the required managerial skills for a given situation</p>	<p><b>Unit - I Introduction to Management</b></p> <p>1.1 Evolution of management thoughts from ancient/medieval to modern times in India (IKS)</p> <p>1.2 Management: meaning, importance, characteristics, functions &amp; challenges.</p> <p>1.3 Introduction to scientific management- Taylor's &amp; Fayol's principles of management</p> <p>1.4 Levels &amp; functions of management at supervisory level.</p> <p>1.5 Self management skills: Self awareness, self discipline, self motivation, goal setting, time management, decision making, stress management, work life balance and multitasking</p> <p>1.6 Overview of Managerial Skills: negotiation skills, team management, conflict resolution, feedback, leadership</p>	<p>Presentations</p> <p>Case Study</p> <p>Interactive session</p> <p>Quiz competition</p> <p>Mixed Picture Puzzle</p>
2	<p>TLO 2.1 Identify the appropriate creativity technique for new product development</p> <p>TLO 2.2 Describe the new product development process for a product / service</p> <p>TLO 2.3 Comprehend the importance of various strategic steps Product Management</p> <p>TLO 2.4 Elaborate Agile product management</p> <p>TLO 2.5 Explain the significance of the Project Management</p> <p>TLO 2.6 Describe the various tools of project management</p>	<p><b>Unit - II Product, Operations and Project Management</b></p> <p>2.1 Creativity and innovation management: creativity techniques - brainstorming, checklist, reverse brainstorming, morphological analysis, six thinking hats.</p> <p>2.2 New product development, change management</p> <p>2.3 Product Management -meaning, strategic steps for sustainable design of a product</p> <p>2.4 Agile product management- concept, benefits, principles and manifesto</p> <p>2.5 Project Management: importance, areas within project management, 4Ps and phases</p> <p>2.6 Tools of Project Management: PERT and CPM, GANTT &amp; Chart Overview of Estimate and Budget</p>	<p>Presentations</p> <p>Case Study</p> <p>Video</p> <p>Demonstrations</p> <p>Presentations</p> <p>Role Play</p>

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<b>Sr.No</b>	<b>Theory Learning Outcomes (TLO's) aligned to CO's.</b>	<b>Learning content mapped with Theory Learning Outcomes (TLO's) and CO's.</b>	<b>Suggested Learning Pedagogies.</b>
3	<p>TLO 3.1 Understand the importance of quality management tools</p> <p>TLO 3.2 Explain the importance of various techniques for optimization and waste minimization</p> <p>TLO 3.3 State the importance of ISO quality standards</p> <p>TLO 3.4 Describe ERP</p> <p>TLO 3.5 State the importance of ISO</p> <p>TLO 3.6 Recognize the importance of customer satisfaction as a competitive advantage</p>	<p><b>Unit - III Management Practices</b></p> <p>3.1 Quality circle, kaizen, Six Sigma, TQM</p> <p>3.2 5S, Kanban card system, TPM, Lean Manufacturing: Meaning, Steps and Importance</p> <p>3.3 Quality Standards and ISO: Meaning, ISO 9001:2016, ISO 14000, OSHA 2020</p> <p>3.4 The overview of ERP along with example</p> <p>3.5 Service quality and customer/client satisfaction, servicescape</p>	<p>Presentation</p> <p>Case study</p> <p>Interactive session</p> <p>Quiz</p> <p>Video</p> <p>Demonstration</p> <p>Lecture Using Chalk-Board</p>
4	<p>TLO 4.1 Explain the importance of marketing techniques</p> <p>TLO 4.2 Explain the importance of needs, wants and desires in marketing</p> <p>TLO 4.3 Interpret the traditional and digital marketing techniques</p> <p>TLO 4.4 Plan different aspects of an event management</p>	<p><b>Unit - IV Marketing Management</b></p> <p>4.1 Marketing management: meaning, significance, Seven P's of Marketing</p> <p>4.2 Needs, wants and demands in marketing. Customer relationship management</p> <p>4.3 Types of marketing: traditional and digital marketing</p> <p>4.4 Event management: types, different aspects of event management, crisis management</p>	<p>Case Study</p> <p>Interactive session based video</p> <p>Role Play</p> <p>Flipped Classroom</p> <p>Presentations</p>
5	<p>TLO 5.1 State the importance of supply chain and logistics management</p> <p>TLO 5.2 Explain the components of supply chain and logistics Management</p> <p>TLO 5.3 Describe the role of information technology in supply chain &amp; logistics management</p> <p>TLO 5.4 State the significance of Human Resource Management</p> <p>TLO 5.5 Analyze the various methods of recruitment, selection and training for an organization</p> <p>TLO 5.6 List the qualities of a successful supervisor</p>	<p><b>Unit - V Supply Chain &amp; Human Resource Management</b></p> <p>5.1 The overview of Supply Chain and logistics Management</p> <p>5.2 Components of Supply Chain and logistics Management</p> <p>5.3 Role of information technology in supply chain &amp; logistics management</p> <p>5.4 Overview of Human Resource Management-Meaning,significance,scope and principles</p> <p>5.5 Recruitment, selection and training of human resources. Chalk Circle</p> <p>5.6 Qualities of a successful supervisor /team leader and types of leadership</p>	<p>Presentations</p> <p>Video</p> <p>Demonstrations</p> <p>Case Study</p> <p>Collaborative learning</p> <p>Video</p> <p>Demonstrations</p> <p>Chalk-Board</p>

**VI. LABORATORY LEARNING OUTCOME AND ALIGNED PRACTICAL / TUTORIAL EXPERIENCES : NOT APPLICABLE.****VII. SUGGESTED MICRO PROJECT / ASSIGNMENT/ ACTIVITIES FOR SPECIFIC LEARNING / SKILLS DEVELOPMENT (SELF LEARNING)****Assignment / Article**

- Make a one page note based on a book of management you read.
- Write a short article on inventory management exploring online learning resources.
- Prepare a report on ISO standards applicable to your field. a. IATF 16949-2016 / SLA-TS 16949-2016, - Automotive Industry b. ISO 22000 — Food safety management c. ISO 50001 — Energy management d. ISO/IEC 27001 - Cyber Security e. ISO/DIS 4931-1 - Buildings and civil engineering works
- Prepare a 4 quadrant matrix of time management for managing the tasks.
- Prepare a report on any one software used for Supply Chain and Logistics Management.
- Prepare a GANTT Chart for project management related to your field.

**Note Taking**

- Watch a Tedx Talk Video on managerial skills and take notes in the form of keywords.

**Case Study**

- Prepare a case study and discuss the same on following topics a. Self Management Skills b. Six Thinking Hats c. Kaizen d. Quality Circle e. Safety Measures in different organizations related to your field
- Study the recruitment and selection process of any organization related to your field.
- Prepare a case study on management lessons based on life of Chhatrapati Shivaji Maharaj
- Conduct outbound training on managerial skills. Make a video and upload on social media.

**Quizes**

- Participate in online quizzes related to areas of management .

**Assignment**

- Workshops to be conducted for students on following topics a. creativity techniques b. time management c. stress management d. negotiation and conflict e. goal setting f. meditation new product development

**Note :**

- Above is just a suggestive list of microprojects and assignments; faculty must prepare their own bank of microprojects, assignments, and activities in a similar way.
- The faculty must allocate judicious mix of tasks, considering the weaknesses and / strengths of the student in acquiring the desired skills.
- If a microproject is assigned, it is expected to be completed as a group activity.
- SLA marks shall be awarded as per the continuous assessment record.
- For courses with no SLA component the list of suggestive microprojects / assignments/ activities are optional, faculty may encourage students to perform these tasks for enhanced learning experiences.
- If the course does not have associated SLA component, above suggestive listings is applicable to Tutorials and may be considered for FA-PR evaluations.

**VIII. LABORATORY EQUIPMENT / INSTRUMENTS / TOOLS / SOFTWARE REQUIRED : NOT APPLICABLE****IX. SUGGESTED WEIGHTAGE TO LEARNING EFFORTS & ASSESSMENT PURPOSE (Specification Table)**

Sr.No	Unit	Unit Title	Aligned COs	Learning Hours	R-Level	U-Level	A-Level	Total Marks
1	I	Introduction to Management	CO1	13	8	6	4	18
2	II	Product, Operations and Project Management	CO2	8	2	4	6	12
3	III	Management Practices	CO3	8	4	4	6	14
4	IV	Marketing Management	CO4	8	2	4	6	12
5	V	Supply Chain & Human Resource Management	CO5	8	4	4	6	14
<b>Grand Total</b>				<b>45</b>	<b>20</b>	<b>22</b>	<b>28</b>	<b>70</b>

**X. ASSESSMENT METHODOLOGIES/TOOLS****Formative assessment (Assessment for Learning)**

- MCQ Based Class Test, Self Learning Activities / Assignment

**Summative Assessment (Assessment of Learning)**

- Summative Assessment (Assessment of Learning) MCQ based

**XI. SUGGESTED COS - POS MATRIX FORM**

Course Outcomes (COs)	Programme Outcomes (POs)							Programme Specific Outcomes* (PSOs)		
	PO-1 Basic and Discipline Specific Knowledge	PO-2 Problem Analysis	PO-3 Design/ Development of Solutions	PO-4 Engineering Tools	PO-5 Engineering Practices for Society, Sustainability and Environment	PO-6 Project Management	PO-7 Life Long Learning	PSO-1	PSO-2	PSO-3
CO1	1	1	1	-	-	2	3			
CO2	1	3	3	-	1	3	3			
CO3	1	3	1	-	1	1	3			
CO4	1	2	2	-	1	2	3			
CO5	1	1	2	-	1	2	3			

Legends :- High:03, Medium:02,Low:01, No Mapping: -

\*PSOs are to be formulated at institute level

**XII. SUGGESTED LEARNING MATERIALS / BOOKS**

**MANAGEMENT****Course Code : 315301**

Sr.No	Author	Title	Publisher with ISBN Number
1	A. K. Gupta	Engineering Management	S. Chand, ISBN: 81-219-2812-5, 2007, 2nd Edition
2	O. P. Khanna	Industrial Engineering & management	Dhanpat Rai Publication, ISBN: 978-8189928353, 2018
3	Harold Koontz and Heinz Weinrich	Essentials of Management	Tata McGraw Hill Education ISBN: 9789353168148, 2020, 12th edition
4	E. H. McGrath	Basic Managerial Skills for All	PHI ISBN: 978-8120343146, 2011, 9th Edition
5	Andrew DuBrin	Management Concepts and Cases	Cengage Learning, ISBN: 978-8131510537, 2009, 9th edition
6	K. Dennis Chambers	How Toyota Changed the World	Jaico Books ISBN: 978-81-8495-052-6, 2009
7	Jason D. O'Grady	How Apple changed the World	Jaico Publishing House ISBN: 978-81-8495-052-0, 2009
8	Subhash Sharma	Indian Management	New Age International Private Limited ; ISBN-978-9389802412, 2020, 1st edition
9	Chitale, Dubey	Organizational Behaviour Text and Cases	PHI LEARNING PVT. LTD., ISBN: 978-9389347067, 2019, 2nd Edition

**XIII . LEARNING WEBSITES & PORTALS**

Sr.No	Link / Portal	Description
1	<a href="https://www.debonogroup.com/services/core-programs/six-thinking-hats/">https://www.debonogroup.com/services/core-programs/six-thinking-hats/</a>	Six Thinking Hats
2	<a href="https://hbr.org/1981/09/managing-human-resources">https://hbr.org/1981/09/managing-human-resources</a>	HR Management
3	<a href="https://theproductmanager.com/topics/agile-product-management/">https://theproductmanager.com/topics/agile-product-management/</a>	Agile Product Management
4	<a href="https://www.cdlogistics.ca/freight-news/the-5-components-of-supply-chain-management">https://www.cdlogistics.ca/freight-news/the-5-components-of-supply-chain-management</a>	Supply Chain Management
5	<a href="https://www.infosectrain.com/blog/understanding-the-concepts-of-gantt-chart-and-critical-path-methodology-cpm">https://www.infosectrain.com/blog/understanding-the-concepts-of-gantt-chart-and-critical-path-methodology-cpm</a>	PERT, CPM, GANTT Chart
6	<a href="https://www.simplilearn.com/best-management-tools-article">https://www.simplilearn.com/best-management-tools-article</a>	Management Tools
7	<a href="https://www.psychometrica.in/free-online-psychometric-tests.html">https://www.psychometrica.in/free-online-psychometric-tests.html</a>	Psychometric Tests
8	<a href="https://www.investopedia.com/terms/e/erp.asp">https://www.investopedia.com/terms/e/erp.asp</a>	ERP
9	<a href="https://asq.org/quality-resources/quality-management-system">https://asq.org/quality-resources/quality-management-system</a>	QMS
10	<a href="https://testlify.com/test-library/creative-thinking/">https://testlify.com/test-library/creative-thinking/</a>	Psychometric Tests
11	<a href="https://www.mindtools.com/">https://www.mindtools.com/</a>	Management Skills
12	<a href="https://www.investopedia.com/terms/d/digital-marketing.asp">https://www.investopedia.com/terms/d/digital-marketing.asp</a>	Digital Marketing

**Note :**

- Teachers are requested to check the creative common license status/financial implications of the suggested online educational resources before use by the students