Course Code	UDS21D05T	Course Name	TECHNOLOGY LEADERSHIP AND INNOVATION MANAGEMENT	Course Category	D	Discipline Specific Elective	L	T	P	C
							4	0	0	4

Pre-requisite Courses	Nil	Co-requisite Courses	Nil	Progressive Courses	Nil
Course Offering Department	Computer Applications		Data Book / Codes/Standards	Nil	

Course Learning Rationale (CLR):	The purpose of learning this course is to,	Learning

		Level of Thinking (Bloom)	Expected Proficiency (%)	Expected Attainment (%)
CLR-1 :	Teach the participants how to lead transformational growth by developing an understanding of exponential and digital technologies and innovations			
CLR-2 :	Learn how to apply prevalent best practices within business organizations, sectors, and industries			
CLR-3 :	Make the participants understand, embrace, and deploy the appropriate innovations at scale for business organizations to not only survive but thrive.			
CLR-4 :	Learn to create new opportunities and shape the future of their organizations and industries by harnessing transformational technologies.			
CLR-5 :	Understand how business leaders are provided with responsibility to drive tech innovation and strategy across their organization			
CLR-6 :	Understand how companies get up-to-speed on the latest technologies and business applications to offer superior solutions to clients			

Course Learning Outcomes (CLO):	At the end of this course, learners will be able to:	Level of Thinking (Bloom)	Expected Proficiency (%)	Expected Attainment (%)	Program Learning Outcomes (PLO) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
					Fundamental Knowledge	Application of Concepts	Link with Related Disciplines	Procedural Knowledge	Skills in Specialization	Ability to Utilize Knowledge	Skills in Modeling	Analyze, Interpret Data	Investigative Skills	Problem Solving Skills	Communication Skills	Analytical Skills	ICT Skills	Professional Behavior	Life Long Learning
CLO-1 :	Walk away with cocepts of how digital transformation offers a technology-based solution to a business problem that you face in your organization	2	85	80	H	H	H	H	H	H	H	H	H	H	H	H	L	H	H
CLO-2 :	Have excellent Knowledge of Frameworks that help with the practical application of AI-related modeling and possibilities of implementing AI-driven solutions in your business	3	85	80	H	H	H	H	H	H	H	H	H	H	H	H	L	H	H
CLO-3 :	Have excellent Techniques that advance their leadership acumen with a focus on topics that will help you gain maximum traction on your tech initiatives	3	85	80	H	H	H	H	H	H	H	H	H	H	H	H	L	H	H
CLO-4 :	Understand the various applications of AI in business and the opportunities being created by advances in AI	3	85	80	H	H	H	H	H	H	H	H	H	H	H	H	L	H	H
CLO-5 :	Understand applications of digital strategies successfully adopted by global brands, and contemplate which strategies might prove most effective in your organization	3	85	80	H	H	H	H	H	H	H	H	H	H	H	H	L	H	H
CLO-6 :	Inculacate the impact of digital transformation on business models and study the disruptive products that transforms industry verticals	3	85	80	H	H	H	H	H	H	H	H	H	H	H	H	L	H	H

Note: All our curriculum, study materials, assignments, quizzes, lab works, and learning resources are personalized and dynamically generated using machine learning models based on the learner's learning ability. Users can review our learning curriculum only through our intelligent learning management platform (iLMSP), and our learning resources and lab infrastructures are available only in the digital form on our cloud infrastructures.

Duration (hour)		12	12	12	12	12
S-1	SLO-1	**Unit 1: Management - General vs. Business**	Issues in Technology Innovation Management	Performance Measurement, Performance Management, and Improvements	Steps of technology implementation ✓ Plan ✓ Design ✓ Implement ✓ Support	**Unit 9: Technology Assessment: Technology Choice, Technology Assessment Process**
	SLO-2	Management Overview	Research Methods in Technology Innovation Management	Need of Technology Forecasting	Automation overview	Technology Assessment overview, Importance of technology assessment
S-2	SLO-1	Principles of Management	Customer Value Creation in Technology Firms	Technology Lifecycle	Automation and business cases	Business Benefits and challenges of technology assessment
	SLO-2	Financial Management	Management of Software Engineering Projects	Technological Roadmaps and Forecasting	Business case for automation	Various elements in technology assessment, Steps to conduct technology assessment
S-3	SLO-1	Business Environment	Integrated Product Development	**Unit 5: Technology Adoption and Diffusion**	**Unit 7: Technological Change and Impact of Technological Change**	Evaluating and Choosing Technologies, Evaluating Criteria
	SLO-2	Human Resource Management	Designing Innovation Communities	Technology Adoption and Diffusion Overview	Technology change Overview	**Unit 10: Technology and Innovation Business Case Development**
S-4	SLO-1	Marketing Research	**Unit 3: Program, Project, People, and Product Management**	Technology Adoption Lifecycle	Process of Technology Changes	Business cases overview
	SLO-2	Communication skills	Program Management overview, Foundations of Program Management	Stages of Technology Adoption Lifecycle	Importance of Technology Changes	Data and assumptions
S-5	SLO-1	Leadership skills	Program Management Life Cycle and Methodologies, Program Management Skills	How a Business leverages from Technology Adoption Lifecycle	Characteristics of Technology Changes	Business cases – organizational context, Business case opportunity identification
	SLO-2	Business laws	Projects, Programs, and Portfolios, Role and Responsibilities of a Program Manager	Why Companies need to focus on Technology Adoption Lifecycle	Example of Technology Changes	Business case considerations, Effective Decision-making structures, Business case opportunities
S-6	SLO-1	Customer Relations Management	Leading a Program, Leading a Program vs Leading a project	How Technology Adoption works	Impacts of Technology Changes	Building a business case for introducing new technologies
	SLO-2	Computer Applications	Project Management overview, Foundations of Project Management	Business Benefits of Improving Adoption rates	Emerging Technologies	**Unit 11: Evaluating Industry Trend, Market Demand, and Business Needs**
S-7	SLO-1	Operations Management	Project Management Life Cycle and Methodologies,Project	Technology Adoption Challenges	Impact on the workforce	Market Research and competitive analysis

			Management Skills, Role of a Project Manager			
	SLO-2	Organizational Behavior	Organizational structure and culture, People Management overview, Foundations of People Management	Diffusion of Innovation	Implications for public policy	Use market research to find customers
S-8	SLO-1	Economics	People Management Life Cycle and Methodologies, People Management Skills, Getting Work Done Through Others	Companies and Technological Diffusion	**Unit 8: Corporate Learning, Research, and Innovation**	Find a Market advantage, Five Force analysis
	SLO-2	Business Fundamentals	Assessment and Evaluation, Building Peer Networks, Essentials of communication	Pattern of Technological Diffusion	Organizational learning	Rivalry among competitors in an industry
S-9	SLO-1	Retail Management	Managing Self, Product Management overview, Foundations of Product Management	Product Diffusion	Obstacles to organizational learning	Threat of potential new entrants, Threat of Substitutes for an Industry's Offerings
	SLO-2	Understanding Industry and Markets	Product Management Life Cycle and Methodologies, Product Management Skills, Managing Innovative Product Teams	Characteristics of Technology Diffusion	Building a learning organization	Power of Suppliers to an Industry, Power of an Industry's Buyers
S-10	SLO-1	Digital Marketing	Roles and Responsibilities of the Product Manager, Marketing Challenges and Guiding Principles, Customer Development and Crossing the Chasm	**Unit 6: Implementation of New Technology, Automation, and Business Case Development**	Implementing an Effective Corporate Learning Strategy	Limitations of Five Forces Analysis, Market Demand Analysis ✓ Market identification ✓ Business cycle ✓ Product niche ✓ Evaluate competition
	SLO-2	Leadership and Ethics	**Unit 4: Technology Acquisition and Forecasting**	Implementing New Technologies overview	Corporate research overview	**Unit 12: Evaluating Industry Trend, Market Demand, and Business Needs**
S-11	SLO-1	Strategic Management	Acquisition Laws, Regulations, and Policies	Marketing Perspective	Importance of Corporate research	Technology Leader overview, Technology steward overview, Aspects of Technology Leadership
	SLO-2	**Unit 2: Technology and Innovation Management**	Business Planning, Need and Establishing the Acquisition Team	Framework for implementation	Business Benefits of Corporate research	Assessment and forecasting ✓ Technology assessment ✓ Technology forecastin
S-12	SLO-1	Principles of Technology Innovation Management	Planning for IT Acquisitions	Multiple internal markets	Why is corporate innovation needed	Technology management and transfer, Technology assessment techniques, Adopting Project management methodologies from different industries

	SLO-2	Technology Entrepreneurship	Acquisition Strategy, Plan, and Implementation	Promotion vs hype	Getting started with corporate innovation	Build in time to experiment and fail, Taking the management out of project management

Learning Resources	1. https://deepsphereai.litmos.com/ 2. V. K. Narayanan, Gina Colarelli O'Connor, (2010), "Encyclopedia of Technology and Innovation", John Wiley & Sons Ltd Scott Shane, (2008), "The Handbook of Technology and Innovation Management", John Wiley & Sons Ltd	3. Robert S. Friedman, Desiree M. Roberts, Jonathan D. Linton, (2008), "Principle Concepts of Technology and Innovation Management: Critical Research models", Information science reference 4. Marc J. de Vries, (2021), "Innovation Research in Technology and Engineering Management – A Philosophical Approach", Routledge Mark Dodgson, David Gann, Ammon Salter, (2008), "The Management of Technological Innovation – Strategy and Practice", Oxford University Press

Learning Assessment

	Bloom's Level of Thinking	Continuous Learning Assessment (50% weightage)								Final Examination (50% weightage)	
		CLA – 1 (10%)		CLA – 2 (10%)		CLA – 3 (20%)		CLA – 4 (10%) #			
		Theory	Practice	Theory	Practice	Theory	Practice	Theory	Practice	Theory	Practice
Level 1	Remember	40%	-	40%	-	40%	-	40%	-	40%	-
	Understand										
Level 2	Apply	40%	-	40%	-	40%	-	40%	-	40%	-
	Analyze										
Level 3	Evaluate	20%	-	20%	-	20%	-	20%	-	20%	-
	Create										
	Total	100 %		100 %		100 %		100 %		100 %	

CLA – 4 can be from any combination of these: Assignments, Seminars, Tech Talks, Mini-Projects, Case-Studies, Self-Study, MOOCs, Certifications, Conf. Paper etc.,

Course Designers

Experts from Industry	Experts from Higher Technical Institutions	Internal Experts
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