

**Approved in 52nd BoA Meeting(02.11.2023)**

<b>Proposal for New Course</b>	
<b>Course Number</b>	: MB523
<b>Course Name</b>	: Introduction to AI and Automation
<b>Credits</b>	: 2-0-0-2 (L-T-P-C)
<b>Prerequisites</b>	: None
<b>Intended for</b>	: MBA
<b>Distribution</b>	: Compulsory
<b>Semester</b>	: Even

<b>Preamble</b>

<b>Objective</b>
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<b>Course Modules with Quantitative lecture hours</b>		
<b>Module 1</b>	<b>Introduction to AI and Automation</b>	<b>(4)</b>
Digitization and digitalization; Automation: traditional automation and intelligent automation; Identifying tasks and their characteristics suitable for automation, Automation payoffs; Defining AI, Types of AI: artificial narrow intelligence (ANI), artificial general intelligence (AGI) and artificial super intelligence (ASI), AI and machine learning, AI classification as per business capabilities- Process Automation, Cognitive Insights and Cognitive Engagement.		
<b>Module 2</b>	<b>Traditional Automation- No human Intervention</b>	<b>(4)</b>
Scopes and techniques of automation, Business processes, Process Standardization, Reengineering and deconstruction, Identification of repetition, replication and redundancy elements in business		

<p>process, Robotic Process Automation (RPA)- Scope, Benefits, Types and components of RPA, RPA Platforms, RPA vs. BPM, understanding RPA through use cases.</p>		
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<b>Module 3</b>	<b>AI for Automation</b>	<b>(6)</b>
<p>Automating decisions, human and machine capabilities for automation, Right Human-Automation Combination; Automating through Adaptive Business Processes, AI for automating repetitive tasks, AI for collaborative Automation (Human and Machine Collaboration).</p>		
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<b>Module 4</b>	<b>AI and Humans- Optimal Collaboration</b>	<b>(4)</b>
<p>Collaborative Automation through activities by humans and machines to complement each other's roles, human-in-the-loop systems, Humans for machine capability extension and amplification - Human trainers, explainers and sustainers for AI system development. AI augmenting human capabilities, Types of augmentation- Amplification, Interaction and Embodiment.</p>		
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<b>Module 5</b>	<b>Reimagining Business Processes</b>	<b>(6)</b>
<p>Proper mindset to reimagining processes, Experimentation, Leadership challenges for creating a blended culture of both humans and machines, and Building end-to-end data supply chains.</p>		
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<b>Module 6</b>	<b>New Skill Requirements for AI Based Automation</b>	<b>(4)</b>
<p>Skills required in the collaborative human and machine environment: Intelligent Interrogation, Bot Based Empowerment, Reciprocating Apprenticeship, Holistic Melding, Rehumanising Time, Responsible Normalizing, Judgement Integration, Relentless Reimagination.</p>		
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<b>Reference Book:</b>	
1	Paul R. Daugherty and H. James Wilson, Human+ Machine: Reimagining Work in the Age of AI, Harvard Business Review Press, Boston, 2018.
2	Tom Taulli, Artificial Intelligence Basics: A Non-technical Introduction, Apress, 2019.
3	Thomas H. Davenport, The AI Advantage: How to Put the Artificial Intelligence Revolution to Work, The MIT Press, 2018

4	by Ravin Jesuthasan and John W. Boudreau, Reinventing jobs:a 4-step approach for applying automation to work, Harvard Business Review Press, Boston, 2018.
5	Melanie Mitchell, Artificial Intelligence: A Guide for Thinking Humans, Pelican Books, Penguin Random House, 2019.
6	Tomas Chamorro-Premuzic, I, Human: AI, Automation, and the Quest to Reclaim What Makes Us Unique, Harvard Business Review Press, Boston, 2023.
7	Ian Barkin, Jochen Wirtz, and Pascal Bornet, Intelligent Automation: Learn how to harness Artificial Intelligence to boost business & make our world more human, Independently Published, 2020.
8	Ian Barkin, Jochen Wirtz, and Pascal Bornet, Intelligent Automation: Learn how to harness Artificial Intelligence to boost business & make our world more human, Independently Published, 2020.
9	Byron Reese, The Fourth Age: Smart Robots, Conscious Computers, and the Future of Humanity, Atria International, 2018.
10	Deepak Karwal, The Automated Enterprise: Digital Reinvention through Intelligent Automation, Publisher: Deepak Karwal, 2020.
11	Matt Calkins, Neil Ward-Dutton, George Westerman et al., Hyperautomation, BookBaby, 2020.
12	Bhasker Ghosh, Gayathri Pallail and Rajendra Prasad, The Automation Advantage: Embrace the Future of Productivity and Improve Speed, Quality, and Customer Experience Through AI, McGraw-Hill Education, 2022.