ANNEXURE I

MODULE-WISE COURSE CONTENT AND OUTCOME				
SL. NO	**MODULE NAME**	**MODULE CONTENT**	**MODULE LEARNING OUTCOME**	**DURATION (HRS)**
1	Foundations of Generative AI	- Overview of generative AI models: Neural Networks, Transformers, GANs. - Introduction to key tools like GPT, DALL-E.- Real-world applications of generative AI in various industries.	- Understand how generative AI models work. - Explain the basics of neural networks, transformers, and GANs. - Identify key tools for generative tasks.	4
2	Text Generation	- Natural Language Processing (NLP) fundamentals. - Using models like GPT for text generation. - Applications: content creation, chatbots, summarization.	- Generate coherent and contextually accurate text. - Implement language models for industry-specific tasks. - Evaluate and refine text outputs.	4
3	Image Generation and Synthesis	- Basics of image generation using GANs and VAEs.- Tools: DALL-E, Stable Diffusion.- Applications: design, marketing, and creative arts.	- Generate high-quality and innovative images.- Apply image generation techniques to solve design and creative challenges.- Assess image fidelity and realism.	4
4	Audio and Video Generation	- Techniques for audio synthesis using models like WaveNet. - Video generation using GANs and Transformer-based models. - Applications in media and entertainment.	- Create realistic audio and video outputs. - Use generative techniques for multimedia content creation. - Enhance storytelling with AI-generated media.	4

5	Ethical Considerations in Generative AI	- Addressing misinformation and bias in generative AI.- Copyright, plagiarism, and intellectual property concerns.- Guidelines for responsible use of AI.	- Evaluate ethical implications of generative AI.- Identify and mitigate bias in AI outputs.- Ensure compliance with copyright and ethical standards.	4
6	Applications of Generative AI	- Case studies: Generative AI in design, marketing, healthcare, and entertainment.- Customized workflows using generative models.- Challenges in industry adoption.	- Apply generative AI techniques to various domains.- Solve domain-specific problems innovatively.- Recognize challenges in implementation and deployment.	5
7	Augmenting Creativity with AI	- Exploring the intersection of AI and human creativity.- Tools for collaborative creativity: AI-assisted design and ideation.- Real-world examples of AI-augmented innovation.	- Use AI to enhance human creativity.- Collaborate with generative AI tools for innovative problem-solving.- Demonstrate creative solutions using generative models.	5
8	Building and Fine-Tuning Generative Models	- Training and fine-tuning generative models.- Understanding hyperparameter tuning and optimization.- Deployment strategies for generative AI solutions.	- Train and fine-tune models for specific applications.- Optimize models for better performance and scalability.- Deploy generative AI solutions effectively.	5
9	Simulation and Testing	- Simulating generative AI outputs for quality assessment. - Tools and metrics for evaluating generative outputs.- Iterative improvement of models.	- Simulate generative outputs for validation. - Use metrics to assess quality, coherence, and originality.- Refine models based on feedback and testing.	5
10	Capstone Project	- Solve a real-world problem using generative AI.- Apply the full pipeline: Data preparation, model building, evaluation, and deployment.- Present professional insights and solutions.	- Demonstrate end-to-end application of generative AI.- Solve complex problems innovatively.- Deliver actionable and professional project results.	5

ANNEXURE II

OVERALL COURSE LEARNING OUTCOME ASSESSMENT CRITERIA AND USECASES			
Learning Outcome	**Assessment Criteria**	**Performance Criteria**	**Use Cases**
Gain foundational knowledge of Generative AI models.	Understanding neural networks, transformers, GANs, and other frameworks.	- Explain the principles of generative AI. - Identify the architectures and workflows of key models. - Discuss their applications.	- Automated text summarization for businesses. - AI-driven design prototypes for fashion and architecture.
Develop skills to generate text, images, audio, or video.	Practical use of GPT, DALL-E, WaveNet, and other tools.	- Generate high-quality, domain-specific outputs. - Solve creative challenges with generative tools. - Refine outputs for specific use cases.	- AI-based video content creation. - Personalized product descriptions for eCommerce.
Evaluate ethical and copyright implications.	Awareness of misinformation, plagiarism, and intellectual property concerns.	- Identify biases in datasets. - Ensure responsible AI usage. - Adhere to copyright and ethical norms.	- AI-driven moderation of social media content. - Prevention of deepfake misuse in media.
Augment creativity and solve complex problems.	Collaborative use of AI tools for innovative solutions.	- Use generative models to enhance human creativity. - Address complex challenges through innovative AI applications.	- AI-enhanced storytelling for media. - Innovation in educational content creation.

LIST OF FINAL PROJECTS (20 PROJECTS THAT COMPREHENSIVELY COVER ALL THE LEARNING OUTCOME)	
SL.NO	**FINAL PROJECT**
1	AI-Powered Content Creation for Marketing.
2	Realistic Image Synthesis for eCommerce.
3	AI-Generated Music Composition.
4	AI-Assisted Video Dubbing and Subtitling.
5	Ethical Chatbot Design for Healthcare.
6	Generative AI for Story Writing and Plot Generation.
7	Personalized Product Recommendations.
8	Creating Synthetic Training Data for Computer Vision Tasks.
9	Speech Synthesis for Accessibility.
10	Predictive Text Generation for Custom Applications.
11	Automated Animation for Media Production.
12	Style Transfer for Digital Art.
13	Virtual Fashion Try-On Systems.
14	AI for 3D Modeling and Rendering.
15	Text-to-Image Generation for Advertisement Design.
16	Healthcare Diagnostics using GANs.

17	Creating Personalized Learning Material for Education.
18	AI for Fake News Detection using Generative Models.
19	Enhancing Cybersecurity with Generative Models.
20	Real-Time Image Editing and Enhancement.

ANNEXURE III

COURSE ASSESSMENT RUBRICS (TOTAL MARKS: 70)				
ASSESSMENT CRITERIA	**DESCRIBE THE CRITERIA OF THE BELOW CATEGORY PERFORMANCE**			**TOTAL MARKS**
	FAIR	**GOOD**	**EXCELLENT**	
MCQ/ Programming/ Project Submission Round	Above 40	Above 55	Above 65	70

Category	**Assessment Criteria**	**Performance Levels**	**Weightage (Marks)**
Practical Skills Proficiency	Demonstrates ability to generate and refine outputs effectively.	Fair, Good, Excellent	20
Technical Knowledge Application	Applies learned concepts to generate creative solutions.	Fair, Good, Excellent	10

Category	Assessment Criteria	Performance Levels	Weightage (Marks)
Project Execution	Completes assigned projects with innovative approaches and relevance.	Fair, Good, Excellent	30
Communication and Reporting	Presents project outcomes professionally using clear documentation.	Fair, Good, Excellent	10