## Syllabus

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| **Module** | **Topics** | **Hours** |
| **Day 1.** **Introduction to Generative AI** | * **Introduction to AI and Generative AI** * **Applications of Generative AI** * Evolution of Generative AI * Introduction to Deep Learning * Setting up System for GenAI Hands on session * Hands-on session on Neural Network using Tensorflow | **3** |
| * Introduction to Large Language Models (LLM’S) * Introduction to Transformer Architecture * Exploring Commercial and Open Source Large Language Models   Such as Open AI,Cohere,LLAMA,Gemeni,etc   * Hands on session of text generation using Cohere,Prompt Templates | **3** |
| **Day 2**  **Hugging Face and LangChain** | * Introduction to Hugging face- Open Source AI Community for NLP * Hands-on session by exploring various LLM’s * Creating a multi lingual chatbot * Deploying multi lingual chatbot using Hugging face spacers * Sample programs and assignment | **3** |
| * Introduction to Langchain – Framework for building LLM powered Applications * Development and deployment of chatbot using Langchain and Hugging face * Collaborating with external API’s to develop GenAI Applications * **Sample programs and assignment** | **3** |
| **Day 3**  **Retrieval-Augmented Generation (RAG)** | * Introduction to RAG * Introduction to Vector Store * Exploring Chroma DB * Hands-on session on RAG and Chroma DB * **Sample programs and assignment** | **3** |
| * Developing Custom chatbot using RAG * Prepare data source for RAG * Configure chroma db * Developing search api * Deployment and testing * Assessment | **3** |
| **Day 4**  **Development of Chatbot** | * Ideation for Chatbot * Identifying suitable use case and model * Develop Gen AI model * Train and test model | **3** |
|  | * Develop front end * Integration of front end with back end * Testing | **3** |
| **Day 5**  **Demonstration and project ideas/Research work** | * Demonstration of Chatbot * Discussion of Gen AI Project ideas/Research work * Assessment and feedback | **4** |