

Course Outline

Module 1: Python Programming

Lesson Plan

Lecture	Topic	Teaching-Learning Methodology	Assessment	Hours
Lecture: 1-2	Preparing Machine and environment Set up -Fundamentals of Python: <ul style="list-style-type: none"> • Introduction to python • Writing python code • Running python code Working with different types of data in python: <ul style="list-style-type: none"> • Data types and variables • Using numeric value Using string variables	<ul style="list-style-type: none"> • Lecture on theoretical background • Hands on demonstration on implementation 	quiz	03
Lecture: 3-4	Input & output methods in python: <ul style="list-style-type: none"> • Printing with parameters • Getting input from users • String formatting Simple and complex decisions making using “if-else” statement: <ul style="list-style-type: none"> • The “if” Statement • Logical Operators • More Complex Expressions 	<ul style="list-style-type: none"> • Lecture on theoretical background • Hands on demonstration on implementation 	Tests, quiz	03
Lecture: 5-6	Implement different types of loops and practice associated problems: <ul style="list-style-type: none"> • “for” loops • “while” loops Advanced data storage technique in python: <ul style="list-style-type: none"> • Indexing in list and dictionary • Create, update and delete list and dictionary elements • Perform basic operations on list and dictionary elements 	<ul style="list-style-type: none"> • Lecture on theoretical background • Hands on demonstration on implementation 	Tests, quiz, assignment	03
Lecture: 7-8	Learn about different string functions and implement them: <ul style="list-style-type: none"> • String input methods • Manipulate strings • Built-in string functions 	<ul style="list-style-type: none"> • Lecture on theoretical background • Hands on demonstration on implementation 	Tests, quiz, assignment	03
Lecture: 9-10	Implement basic I/O functions: <ul style="list-style-type: none"> • Opening and closing files • Different modes of accessing files • Create, update and delete a file 	<ul style="list-style-type: none"> • Lecture on theoretical background • Hands on demonstration on implementation 	Tests, quiz, assignment	03

Lecture: 11-12	-Different types of data analysis using Python -Data visualization and explainability of data for decision making	• Hands on demonstration on implementation	Tests, quiz	03
Lecture: 13-14	Evaluation	<i>Test, quiz, exam, project implementation</i>		02
Total (Hrs)				20

Module 2: AI and Machine Learning

Lesson Plan

Lecture	Topic	Teaching-Learning Methodology	Assessment	Hours
Lecture: 1-2	Introduction of AI & ML, History of AI, Weak and Strong AI, AI and Its Applications, AI+ML Current & Future Trends, Prospects of AI+ML, Necessary Skills for learning AI+ML	• Lecture on theoretical background • Hands on demonstration on implementation	Tests, quiz	03
Lecture: 3-4	Intelligent Agents, Uninformed Search, Informed Search, Heuristic Search	• Lecture on theoretical background • Hands on demonstration on implementation	Tests, quiz, assignment	03
Lecture: 5-6	Game AI (Mini-max & alpha-beta pruning, Constraint Satisfaction Problem)	• Lecture on theoretical background • Hands on demonstration on implementation	Tests, quiz, assignment	03
Lecture: 7-8	Propositional & Predicate Logic, Planning, Natural Language Processing, Frame Problem	• Lecture on theoretical background • Hands on demonstration on implementation	Tests, quiz, assignment	02
Lecture: 9-10	Difference between AI & ML, ML Applications, Importance of AI+ML on Industry 4.0	• Lecture on theoretical background • Hands on demonstration on implementation	Tests, quiz, assignment	03
Lecture: 11-12	Prediction problem in ML, Classification problems in ML,	• Lecture on theoretical background	Tests, quiz	02

	Clustering problems in ML, AI & ML Tools, Libraries, Software	• Hands on demonstration on implementation		
Lecture: 13-14	Linear algebra, Statistics Probability theory	• Lecture on theoretical background • Hands on demonstration on implementation	Tests, quiz	03
Lecture: 15-16	Data processing, cleaning, and manipulation, exploratory data analysis	• Lecture on theoretical background • Hands on demonstration on implementation	Tests, quiz, assignment	03
Lecture: 17-18	Branches of ML: <ul style="list-style-type: none"> • Supervised learning • Unsupervised learning • Reinforcement learning 	• Lecture on theoretical background • Hands on demonstration on implementation	Tests, quiz	03
Lecture: 19-20	Evaluation 1	<i>Test, quiz, exam, project implementation</i>		03
Lecture: 21-22	Linear regression <ul style="list-style-type: none"> • Gradient descent • Loss computation • Evaluation Metrics - Solving a problem with linear regression	• Lecture on theoretical background • Hands on demonstration on implementation	Tests, quiz, assignment	03
Lecture: 23-24	Logistic regression <ul style="list-style-type: none"> • Hypothesis representation • Cost function • Advanced optimization - Solving a problem with logistic regression	• Lecture on theoretical background • Hands on demonstration on implementation	Tests, quiz, assignment	03
Lecture: 25-26	Data preparation and feature extraction <ul style="list-style-type: none"> • Vectorization • Computing on data • Plotting on data 	• Lecture on theoretical background • Hands on demonstration on implementation	Tests, quiz, assignment	03
Lecture: 27-28	Support vector machines <ul style="list-style-type: none"> • Optimization • Large margin intuitions • Kernels Overfitting & Underfitting <ul style="list-style-type: none"> • Reducing network size • Adding weight regularization 	• Lecture on theoretical background • Hands on demonstration on implementation	Tests, quiz, assignment	03

	<ul style="list-style-type: none">• Adding dropout			
Lecture: 29-30	Multinomial Naïve Bayes, Stochastic Gradient Descent, Decision Tree, Random forest	<ul style="list-style-type: none">•Lecture on theoretical background•Hands on demonstration on implementation	Tests, quiz, assignment	03
Lecture: 31-32	Unsupervised Learning <ul style="list-style-type: none">• K-means• KNN• PCA• SVD• ICA	<ul style="list-style-type: none">•Lecture on theoretical background•Hands on demonstration on implementation	Tests, quiz, assignment	03
Lecture: 33-34	Evaluating ML Models <ul style="list-style-type: none">• Training• Validation• Testing• Performance matrices• ML Tools & library packages	<ul style="list-style-type: none">•Lecture on theoretical background•Hands on demonstration on implementation	Tests, quiz, assignment	03
Lecture: 35-36	ML Applications in NLP <ul style="list-style-type: none">•Feature extraction (TF-IDF, BoW)•Model Development: Training, testing•Classification & Prediction•Error analysis	<ul style="list-style-type: none">•Lecture on theoretical background•Hands on demonstration on implementation	Tests, quiz, Project	03
Lecture: 37-38	ML Applications in Computer Vision <ul style="list-style-type: none">• Visual Feature extraction• Feature visualization• Model Interpretation• Model training and testing	<ul style="list-style-type: none">•Lecture on theoretical background•Hands on demonstration on implementation	Tests, quiz, Project	03
Lecture: 39-40	ML-based Project development <ul style="list-style-type: none">• Image Classification• Character Recognition• Text Classification• Face Recognition• Weather Prediction• Sentiment Analysis• Brand monitoring	<ul style="list-style-type: none">•Lecture on theoretical background•Hands on demonstration on implementation	Tests, quiz, Project	03
Lecture 41-42	Importance of Data on AI-ML based system, The Future with AI, AI Issues, Concerns & Ethical Considerations	<ul style="list-style-type: none">•Lecture•Examples	Tests, quiz	03
Lecture: 43-44	Evaluation 2	Test, quiz, exam, project implementation		03
Total (Hrs)				66

COURSE C: Deep Learning

Learning Outcomes:

- To implement the various embedding model generation and their evaluation
- To learn the various DL models: CNN, RNN, LSTM, DCNN and so on
- To learn the hyperparameters tuning and optimization techniques
- To develop the various applications of ML/DL models: image processing, computer vision, natural language processing
- To learn the various evaluation measures of ML/DL techniques
- Development of various ML/DL projects using **Scikit-Learn**, **Tensorflow** and **Keras** libraries, **Google colab**.

Lesson Plan

Lecture	Topic	Teaching-Learning Methodology	Assessment	Hours
Lecture: 1-2	Why DL, Difference between ML and DL, Real-world applications of DL, Popular DL techniques	<ul style="list-style-type: none">• Lecture on theoretical background• Hands on demonstration on implementation	Tests, quiz	03
Lecture: 3-4	DL Tools and library, Set up of DL frameworks, Experience with Tensorflow/Keras libraries, Google colab	<ul style="list-style-type: none">• Lecture on theoretical background• Hands on demonstration on implementation	Tests, quiz	03
Lecture: 5-6	Data preparation <ul style="list-style-type: none">• Data accumulation, Data cleaning, noise removal, Data annotation• Annotation quality measures with Kappa,• Numeric mapping	<ul style="list-style-type: none">• Lecture on theoretical background• Hands on demonstration on implementation	Tests, quiz, project	03
Lecture: 7-8	Manual labelling vs. automatic labelling -Automatic labelling techniques	<ul style="list-style-type: none">• Lecture on theoretical background• Hands on demonstration on implementation	Tests, quiz	03
Lecture: 9-10	Feature extraction <ul style="list-style-type: none">• Understanding the data• Extracting the textual, visual, speech features• Normalization of features• Features fusion	<ul style="list-style-type: none">• Lecture on theoretical background• Hands on demonstration on implementation	Tests, quiz, assignment	03

Lecture: 11-12	Visualization of word vectors with Word Cloud, histogram, heatmap, Plots, Tableau	<ul style="list-style-type: none"> •Lecture on theoretical background •Hands on demonstration on implementation 	Tests, quiz, assignment	03
Lecture: 13-14	Embedding Models <ul style="list-style-type: none"> • Word representation • Embedding matrix • Word2Vec, FastText and Glove 	<ul style="list-style-type: none"> •Lecture on theoretical background •Hands on demonstration on implementation 	Tests, quiz, project	03
Lecture: 15-16	Evaluation 1	<i>Test, quiz, exam, project implementation</i>		03
Lecture: 17-18	Pre-trained word embedding <ul style="list-style-type: none"> • Implications of pre-trained word vectors • Tuning the word vectors • Embedding model (Intrinsic & Extrinsic) evaluation 	<ul style="list-style-type: none"> •Lecture on theoretical background •Hands on demonstration on implementation 	Tests, quiz, assignment	03
Lecture: 19-20	ANN & CNN <ul style="list-style-type: none"> • Network design • Convolution operation • Max-pooling operation • Building network • Training, testing, validation 	<ul style="list-style-type: none"> •Lecture on theoretical background •Hands on demonstration on implementation 	Tests, quiz, assignment	03
Lecture: 21-22	CNN Variations: AlexNet, VGG-16, VGG-19, GoogLeNet, ResNet-18, ResNet-34, ResNet-50, ResNet-101, ResNet-152 MobileNet	<ul style="list-style-type: none"> •Lecture on theoretical background •Hands on demonstration on implementation 	Tests, quiz, assignment	03
Lecture: 23-24	CNN Variations: ResNet-18, ResNet-34, ResNet-50, ResNet-101, ResNet-152, MobileNet	<ul style="list-style-type: none"> •Lecture on theoretical background •Hands on demonstration on implementation 	Tests, quiz, assignment	03
Lecture: 25-26	Optimization of hyperparameters <ul style="list-style-type: none"> • Understanding parameters and hyperparameters • Tuning hyperparameters • Effect of hyperparameter tuning 	<ul style="list-style-type: none"> •Lecture on theoretical background •Hands on demonstration on implementation 	Tests, quiz, project	03

Lecture: 27-28	Recurrent neural networks <ul style="list-style-type: none">• Backpropagation• Why RNNs• Vanishing gradient in RNNs• GRU, LSTM• Bidirectional RNNs	<ul style="list-style-type: none">• Lecture on theoretical background• Hands on demonstration on implementation	Tests, quiz, assignment	03
Lecture: 29-30	Ensemble of DL Models <ul style="list-style-type: none">-Why ensemble?-How to ensemble?-Average ensemble-Weighted ensemble-Voting ensemble	<ul style="list-style-type: none">• Lecture on theoretical background• Hands on demonstration on implementation	Tests, quiz	03
Lecture: 31-32	Project development using DL <ul style="list-style-type: none">-Handwritten character/digit recognition-Image classification-Object recognition-Face detection	<ul style="list-style-type: none">• Lecture on theoretical background• Hands on demonstration on implementation	Quiz, Project	03
Lecture: 33-34	Project development using DL <ul style="list-style-type: none">-Language modelling-Recommender system-Sentiment analysis-Emotion Analysis-Text classification-Aggressive text detection-Multimodal meme detection	<ul style="list-style-type: none">• Lecture on theoretical background• Hands on demonstration on implementation	Quiz, Project	03
Lecture 35-36	Introduction to transformer-based models Why use transformer-base models? Transformer vs. DL models Design of m-BERT, distil-BERT, XLM-R, RoBERTa	<ul style="list-style-type: none">• Lecture on theoretical background• Hands on demonstration on implementation	Test, quiz	03
Lecture 37-38	Evaluation of DL models <ul style="list-style-type: none">-Performance matrices-Error analysis	<ul style="list-style-type: none">• Lecture on theoretical background• Hands on demonstration on implementation	Test, quiz, assignment	03
Lecture 39-40	Evaluation 2	Test, quiz, exam, project implementation		03
Total (Hrs)				60

COURSE C: Training on Augmented Reality (AR), Virtual Reality (VR), Mixed Reality (MR) and Extended Reality (XR)

Level: Mixed

Entry Qualifications: Any Science or Engineering Graduates

Prerequisite: Intermediate programming ability in C# or other object-oriented languages, Familiarity with 3D game engines or strong desire to learn, Basic linear algebra

Learning Outcomes:

- Demonstrate understanding and perspective on the AR/VR/MR/XR landscape; past, present and future
- Demonstrate understanding of fundamental computer vision, computer graphics and human-computer interaction techniques related to AR/VR/MR/XR
- Demonstrate insights to key application areas for AR/VR/MR/XR
- Demonstrate the ability to design and implement AR/VR/MR/XR experiences
- Familiarity with popular Tools like Unity to build AR/VR/MR/XR experiences

Lesson Plan

Lecture	Topic	Teaching-Learning Methodology	Assessment	Hours
Lecture 1-2	Introduction to Immersive Technologies -A Brief History of AR/VR/MR/XR - Components of a AR/VR/MR/XR Systems -Reality, Virtuality & Immersion	•Lecture on theoretical background •Hands on demonstration on implementation	Test, quiz	03
Lecture 3-4	-VR, AR, MR, XR: similarities and differences -Current trends and state of the art in immersive technologies, developing platforms and consumer devices -The future of human experience	•Lecture on theoretical background •Hands on demonstration on implementation	Test, quiz	03
Lecture 5-6	Motion tracking, navigation and controllers -Position and Motion Trackers -Inside Out/Outside In -Tracker Performance Parameters -Optical - Active and Passive Trackers -Inertial and Hybrid Trackers - HMD Trackers -Magnetic Trackers -Mechanical Trackers -Ultrasonic Trackers	•Lecture on theoretical background •Hands on demonstration on implementation	Test, quiz	03
Lecture 7-8	- HMD Trackers -Magnetic Trackers -Mechanical Trackers -Ultrasonic Trackers -Laser Sensors, Vision Sensors -Control devices	•Lecture on theoretical background •Hands on demonstration on implementation	Test, quiz, assignment	03

Lecture 9-10	<ul style="list-style-type: none"> -Navigation and Manipulation Interfaces -Tracker-Based Navigation/Manipulation Interfaces -Three-Dimensional Probes and Controllers -Data Gloves and Gesture Interfaces 	<ul style="list-style-type: none"> •Lecture on theoretical background •Hands on demonstration on implementation 	Test, quiz, assignment	03
Lecture 11-12	The Human behind the lenses <ul style="list-style-type: none"> -Human Perception and Cognition -The Human Visual System -The Human Auditory System -The Human Vestibular System -Physiology, Psychology and the Human Experience 	<ul style="list-style-type: none"> •Lecture on theoretical background •Hands on demonstration on implementation 	Test, quiz, assignment	03
Lecture 13-14	<ul style="list-style-type: none"> -Adaptation and Artefacts -Ergonomics -Ethics -Scientific Concerns -VR Health and Safety Issues -Effects of VR Simulations on Users -Cybersickness, before and now 	<ul style="list-style-type: none"> •Lecture on theoretical background •Hands on demonstration on implementation 	Test, quiz, assignment	03
Lecture 15-16	<ul style="list-style-type: none"> -Guidelines for Proper VR Usage -User-centered Design, User Experience and an Ethical Code of Conduct 	<ul style="list-style-type: none"> •Lecture on theoretical background •Hands on demonstration on implementation 	Test, quiz, assignment	03
Lecture 17-18	Emergence of XR in the Workplace <ul style="list-style-type: none"> -Areas and industries for immersive reality applications -Entertainment -Education -Training -Medical -Industrial -Military 	<ul style="list-style-type: none"> •Lecture on theoretical background •Hands on demonstration on implementation 	Test, quiz	03
Lecture 19-20	<ul style="list-style-type: none"> -Use-cases, applications and production pipelines -From Sensing to Rendering -Mobile, Standalone and high- end immersive computing platforms -VR, Immersive Tech and the Society -Impact on Professional Life -Impact on Private Life -Impact on Public Life 	<ul style="list-style-type: none"> •Lecture on theoretical background •Hands on demonstration on implementation 	Test, quiz	03
Lecture 21-22	Camera tracking and 3D Rendering for Immersive Environments <ul style="list-style-type: none"> •Inside-Out Camera tracking -Depth Sensing -Microsoft HoloLens 	<ul style="list-style-type: none"> •Lecture on theoretical background •Hands on demonstration on implementation 	Test, quiz, assignment	03

	<ul style="list-style-type: none"> -Vrvana Totem -Low cost AR and MR systems -Mobile Platforms • Full-Body tracking -Inverse & Forward Kinematics -Kinect -Intel Realsense -Full body inertial tracking -Ikinema -Holographic Video • Rendering Architecture <ul style="list-style-type: none"> -Graphics Accelerators, -3D Rendering API's, OpenGL, DirectX, Vulkan, Metal, -Best practices and Optimization techniques • Distributed VR Architectures <ul style="list-style-type: none"> -Multi-Pipeline Synchronization -Co-located Rendering Pipelines -Distributed Virtual Environments 			
Lecture 23-24	Modelling the Physical World <ul style="list-style-type: none"> • Geometric Modelling <ul style="list-style-type: none"> -Virtual Architecture -Virtual Object Shape -Virtual Object Appearance -Procedural Textures -Advanced Material Properties -Procedural Objects -Photogrammetry • Kinematics Modelling <ul style="list-style-type: none"> -Homogeneous Transformation Matrices -Object Position -Transformation Invariants -Object Hierarchies -Scale, Perspective and Perception -Physical Modelling -Collision Detection -Surface Deformation -Force computation -Force Smoothing and Mapping -Haptic Texturing • Behaviour Modelling • Model Management <ul style="list-style-type: none"> -Level-d-Detail Management -Cell Management 	<ul style="list-style-type: none"> • Lecture on theoretical background • Hands on demonstration on implementation 	Test, quiz, assignment	03
Lecture 25-26	Sound in Immersive Environments <ul style="list-style-type: none"> • Evolution of Sound Systems <ul style="list-style-type: none"> -From mono to stereo to surround -Object Based Sound -Ambisonics -HRTF 	<ul style="list-style-type: none"> • Lecture on theoretical background • Hands on demonstration on implementation 	Test, quiz, assignment	03

	<ul style="list-style-type: none"> • Sound Design Basics <ul style="list-style-type: none"> -Sound as Information -Earcons -Impact of Sound in Objects and Actions -Natural vs Real Sound 			
Lecture 27-28	Familiarity with Unity Engine, Set up and running the applications	<ul style="list-style-type: none"> • Lecture on theoretical background • Hands on demonstration on implementation 	Test, quiz, assignment	03
Lecture 29-30	Development with Unity <ul style="list-style-type: none"> -Build Interactivity with Timeline -Create Animated Stories with Unit -Create Compelling Shots with Cinemachine 	<ul style="list-style-type: none"> • Lecture on theoretical background • Hands on demonstration on implementation 	Test, quiz, assignment	03
Lecture 31-32	<ul style="list-style-type: none"> -Create High-Fidelity Lighting in the High Definition Render Pipeline -Create Real-Time Visualizations with Unity -DOTS (Data-Oriented Technology Stack) Fundamentals - Data-Oriented Design 	<ul style="list-style-type: none"> • Lecture on theoretical background • Hands on demonstration on implementation 	Test, quiz, assignment	03
Lecture 33-34	Develop 3D Mobile Games Develop Interactive User Interfaces in Unity Develop Mobile AR Applications	<ul style="list-style-type: none"> • Lecture on theoretical background • Hands on demonstration on implementation 	Test, quiz, assignment	03
Lecture 35-36	Develop VR & XR Applications with Unity, Unreal Engines and the XR Interaction Toolkit	<ul style="list-style-type: none"> • Lecture on theoretical background • Hands on demonstration on implementation 	Test, quiz, assignment	03
Lecture 37-38	Introduction to Mixed Reality (MR) <ul style="list-style-type: none"> -Explore MR devices -Understand holograms -Design and develop in MR -Use cases and examples -MR cloud services and applications -Introduction to the MR Toolkit--Set Up Project & Use Hand Interaction -Configure Windows MR -Import and configure resources -Interaction models -Add hand interaction scripts to an object 	<ul style="list-style-type: none"> • Lecture on theoretical background • Hands on demonstration on implementation 	Test, quiz, assignment	03
Lecture 39-40	Types of MR apps & Hardware <ul style="list-style-type: none"> -Enhanced environment apps (HoloLens only) 	<ul style="list-style-type: none"> • Lecture on theoretical background 	Test, quiz, assignment	03

	-Blended environment apps -Immersive environment apps -Techniques for expanding the design process -MR Hardware: HoloLens 2, Immersive headset	• Hands on demonstration on implementation		
Lecture 41-42	Designing Holograms -Designing for mixed reality -Exploring the doll house -1:1 vs 1:10 prototypes -Using Mixed Reality Capture -Manipulating captures and virtual objects -Head Gaze Adjustment -Syncing Animated Objects -UI creative process	• Lecture on theoretical background • Hands on demonstration on implementation	Test, quiz, assignment	03
Lecture 43-44	Design & Develop MR Applications -Structural elements: App model, coordinate systems, spatial mapping, scene understanding -Interactions: system gesture, instinctual interaction, hands & motion controllers model, hand-free model, eye-based interaction -UX elements: Visual, spatial sound, controls and behaviours	• Lecture on theoretical background • Hands on demonstration on implementation	Test, quiz, assignment	03
Lecture 45-46	Evaluation	<i>Test, quiz, exam, project implementation</i>		04
Total Hours				70

Hardware: The Microsoft HoloLens*, Google Glass*, and the Meta 2* headset, Samsung HMD Odyssey+

Software: Unity, Unreal, Mixed Reality Toolkit (MRTK), Microsoft Azure Cloud

Total Training Course Summary

Course category	Couse title	Hours
COURSE A	AI and Machine Learning with Python	
Module 1	Python Programming	20
Module 2	Training on AI and Machine Learning	66
COURSE B	Training on Deep Learning	60
COURSE C	Training on Augmented Reality (AR), Virtual Reality (VR), Mixed Reality (MR) and Extended Reality (XR)	70
Total (Hours) [two hundred sixteen hours]		216

M2. Communicative English for employability

Course Objective: Participants need to present themselves to demonstrate their employability which creates their persona among employers and entrepreneurs. The main objective of this course is developing the effective communication skills in English for home and abroad with bench mark quality. It is 100% outcome- based education (soft skills). In **Outcome based Education (OBE)** empowers students to choose what they would like to study and how they would like to study it.

Learning outcome of the course:

1. Through speaking module participants will be able to communicate in English to enter into the domestic and global job market
2. It will create their confidence and better gesture during interpersonal communication in the corporate world and digital era
3. They will gather the capacity in writing communication regarding formal and informal correspondence in their professional life
4. Reading and Listening Module will also help them to comprehend in English for demonstrating their percussive skills and employability.

Modules and marks skim

1. Speaking 50 % (39 classes)
2. Writing 20 % (15 Classes)
3. Reading 15% (9 Classes)
4. Listening 15% (9 Classes)

Examination and marks allocation:

Total Marks: 100

- 1. Attendance: 10**
2. Effective participation in class activity: 10
- 3. Continuous assessment (Power point presentation): 10**
4. Mid exam: 30
- 5. Final Exam: 40**

Duration and class hours:

- Total Duration of the Course: 6 Months
- Total class hour: 72 Hours
- Week per month: 4 Weeks
- Classes per week: 3 classes
- Class duration: 01 (one) hour
- Summary: 3 days x 4 weeks x 6 months = 72 Hours

- Mode of teaching and learning: Not Pedagogy but Andragogy
- Pretest for testing the base line of English Language
- Mapping learning outcomes: Posttest for testing the level of achievements which is comparable with primary assessment and also authority will be able to see the visible output of the learners at the end of the course.

Teaching methodology: Interactive method, role play, fun and learn, buzz group, normal group, Focus Group Discussion (FGD), brain storming, counseling, individual care for each student, self-assessment technique, English Debate, short time open topic writing contest, speech contest, improvisation technique, surprise test, creating progress report for every participant.

Logistic Support: Sound system, multimedia projector, Wi-Fi, Special copy (Khata/diary) for keeping class and progress report.

Contents and methods for speaking: (Students will participate in Focus Group Discussion for developing their own topics to make them enthusiastic)

- 100% practical based
- Daily life activity based
- Job oriented words/vocabulary/ jargon
- Current issues
- Story telling

Speaking and Writing Core content:

- Subject Verb Agreement
- Antonyms
- Synonyms
- Prefix and Suffix
- Parts of Speech
- Use of phrasal words

Special Writing Skills:

WRITING SKILLS

- ☐ Composing simple paragraph-Ordering information in a logical manner (coherence).
- ☐ Essay Writing (250 words)-Argumentative, Descriptive, Imaginative
- ☐ Writing Advertisement
- ☐ Feature Writing: Coherence and Cohesion
- ☐ Making summery
- ☐ Writing Welcome Speech & Vote of Thanks.

Book Reference: List of books will be finalized after pretest / baselineassessment of the students

Reading Skills:

- Interesting materials will be created, collected and providedby course teacher
- Faster reading technique
- Skimming
- Skipping
- Finding detailed information

reference:

World Best Selling Books will be provided with readers friendly English.

Apart from course students will learn the following issues:

1. How to learn English very quickly
2. How to be effective learner
3. How to be fasters learner
4. Cognitive secrecy on not to forget anything you want especiallyEnglish language
5. Time management
6. English skills and knowledge management

List of essential reference books for self-study and group study:

1. Practical English Usage (New-3rd edition) By Michael Swan, Oxford Publication
2. Word Smart 1 & 2 : The Princeton Review (1523 Effective words)
3. Oxford Student's Dictionary (New Edition)
4. Special notes provided by Course teacher/ course coordinator /Master trainer

Word best-selling English Books for further development for creating impalpability, lifeskills and employability:

1. The 8th Habit by Stephen R. Covey
2. Think and Grow Rich by Napoleon Hill
3. The Unfinished Memories by Sheikh Mujibur Rahman
4. Utopian by Dr. Zohir Biswas
5. The Power of Positive Thinking by Dr. Norman Vincent
6. Awaken the Giant Within by Tony Robbins
7. The Alchemist by Paulo Coelho
8. Cambridge IELTS Book -16 (Latest one)

Out of box thinking: 5 awards will be provided (Special certificate and Crest)

1. Best speaker will be awarded
2. Best writer will be awarded
3. Best reader will be awarded
4. Best listener will be awarded
5. Best organizer in classroom activities

Course outline:

Month 1	
Week	Topics/ Session titles
Week 1	Class 1: Introductory and ice breaking session, class rules, motivations, theoretical and practical work-based briefing, to do and not to do list for this course Class 2: Introducing 4 modules and assessing their expectations Class 3: Introducing with new people, times and greetings practice
Week 2	Class 4: Pronunciation practice Class 5: Modulation, Intonation practice Class 6: Formal and informal conversation practice
Week 3	Class 7: How to write a latest and persuasive CV and job application Class 8: Formal and informal email writing Class 9: Use of tense and parts of speech for professional correspondence
Week 4	Class 10: Reading comprehension and finding out the jargon of ICT, CSE, Internet, Wi-Fi, digitalization Class 11: Reading techniques: Skimming, scanning, and other techniques Class 12: Techniques of faster reading
Month 2	

Week 5	Class 13: Listening (Practical from easy task of Cambridge IELTS materials) understanding primary information Class 14: Conversational listening Class 15: Listening practice based on the level of participants
Week 6	Class 16: Speaking practical: Role play and conversation Class 17: Practicing job interview in English (Role play) Class 18: Practicing job interview in English (Role play)
Week 7	Class 19: Understanding phonetics Class 20: Using phonetics in conversation Class 21: Understanding various English accent
Week 8	Class 22: Describing objects, picture, building
	Class 23: Describing objects, picture, building Class 24: English Story telling
Month 3	
Week 9	Class 25: English debate Class 26: English Story telling Class 27: English Debate
Week 10	Class 28: Writing job application practical Class 29: Writing job application practical Class 30: Writing persuasive email letter practical
Week 11	Class 31: Practicing fluency Class 32: Identifying grammatical errors in speaking using tense Class 33: Identifying grammatical errors in speaking using tense
Week 12	Class 34: How to create reading habit and reading comprehension Class 35: How to create reading habit and reading comprehension Class 36: Reading world best-selling book and telling summary (HW)
Month 4	
Week 13	Class 37: Situational conversation and given circumstances Class 38: Situational conversation and given circumstances Class 39: Assessment class (Mid Mock test)
Week 14	Class 40: Suffix and prefix practice Class 41: Phrasal verb practice Class 42: Subject verb agreement
Week 15	Class 43: Advance English Conversation: Using various Tense Class 44: Advance English Conversation: Using various Tense Class 45: Advance English Conversation: Using various Tense
Week 16	Class 46: Synonyms, antonyms practice in writing Class 47: Using parts of speech for developing vocabulary Class 48:
Month 5	
Week 17	Class 49: Topic based Speech contest practical Class 50: Topic based Speech contest practical Class 51: Advance improvisation techniques in speaking
Week 18	Class 52: Topic based writing: Importance of digitalization in a country Class 53: Essay writing: Self-development Class 54: Topic: Knowledge management

Week 19	Class 55: Topic: Recent development of Bangladesh Class 56: Significance of ICT Class 57: 10 Proposals to ensure further development of Bangladesh
Week 20	Class 58: Understanding English lecture of Martin Luther King Class 59: Understanding persuasive lecture of Barak Obama Class 60: Audio book: Power of believing
	Month 6
Week 21	Class 61: Round table discussion in English (Group Work) Class 62: Round table discussion in English (Group Work) Class 63: Individual Speech contest
Week 22	Class 64: Watching BBC documentary Class 65: Watching 'Power of Ten' Class 66: Mock test
Week 23	Class 67: Advance speaking for identifying grammatical errors Class 68: Advance speaking for identifying grammatical errors Class 69: Developing vocabularies in speaking
Week 24	Class 70: Speaking contest: open topic Class 71: Speaking contest: Given topic Class 72: Final Test

N.B: The Training course curriculum and student entry qualification may be changed on prior decision of project authority.