

ITEC- 2024- 2025

Specialized Training Programme on Artificial Intelligence for Tanzania participants

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| A. | Name of the Institute | Centre for Development of Advanced Computing, Mohali |
| B. | Name/Title of the Course | Specialized Training Programme on Artificial Intelligence for Tanzania participants |
| C. | Proposed Dates and Duration of the Course in weeks/ months | Duration: Two week(s) 09 th to 22 nd October, 2024 |
| D. | Eligibility Criteria for Participants | |
| | 1. Educational Qualification | Technical Graduate (Computer Science/ Electronics or equivalent) with working knowledge of computers. |
| | 2. Work Experience | Relevant Experience |
| | 3. Age Limit | As per MEA guidelines |
| | 4. Target group (Level of participants and target ministry/department etc. may be identified) | Working Professional with basic knowledge of computer programming (any language) |
| E. | Aims & Objectives of the Course | <ul style="list-style-type: none"> • Introduce Python Programming concepts • Gain an insight on how python is used for data manipulation and visualization • Learn about Machine Learning Algorithms • Introduce Deep Learning Concepts |
| F. | Details / Content of the Course | <p>Contents of the course includes:</p> <ul style="list-style-type: none"> • Introduction to Artificial Intelligence (AI) <ul style="list-style-type: none"> ○ Applications of Artificial Intelligence • Python Programming <ul style="list-style-type: none"> ○ Python Basic Concepts ○ Python data structures ○ Control Structures ○ Functions • Python Libraries for Data Analysis <ul style="list-style-type: none"> ○ Mathematical Computing with Python (NumPy) ○ Data Manipulation with Pandas ○ Machine Learning with Scikit-Learn. ○ Introduction to Data Visualization in Python (matplotlib) • Mathematics for Artificial Intelligence |

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| | | <ul style="list-style-type: none"> ○ Vector, Scalar, Matrix and operations on matrix ○ Basics of Statistics ● Data Preparation & Visualization ● Machine Learning Concepts & Algorithms <ul style="list-style-type: none"> ○ Supervised and Unsupervised Learning ○ Classification and Regression ● Introduction to Deep Learning <ul style="list-style-type: none"> ○ Artificial Neural Networks ○ Activation Functions ● Case Studies |
| G. | Mode of Evaluation of Performance of the ITEC Participant | Written test |