National Institute of Electronics and Information Technology, Kolkata

COURSE PROSPECTUS

Name of the Course: AI Development Associate

Course Code: QG-04-IT-00141-2023-V1-NIELIT

Starting Date: 25th March 2024 (Tentative)

Duration: 570 Hrs

Course Coordinator: Bhaskar Banerjee

Last date of Registration: 15th March 2024

Preamble:

Governments worldwide are working on creating comprehensive national AI strategies to create sustainable, inclusive and positive impact on its citizens, industries and overall societies. However, AI skill crisis is recognized as the biggest barrier for wider AI adoption. There is an urgent need for demystifying AI and democratizing understanding of AI through appropriate AI readiness programs for current & future workforce. A skilled and competent workforce is the foundation for growth of any nation and industries, enabling the economy to adjust to disruptions. An AI driven economy will require a new look at the nation's workforce development approach including ways to empower non tech audience with AI social and tech skills for real world applications.

Objective of the Course:

• Gain AI technical confidence: Demystify AI and equip the future workforce with the confidence to learn and apply AI skills independently.

• Enhance employability for AI-related jobs: Build necessary technology, career growth and social skills on AI for jobs ahead

• Entrepreneurship Development.

Moreover, the objectives of this course are aligned to the National Policy on Electronics (NPE) by the Govt of India. Please refer this page: http://meity.gov.in/esdm for more details.

Skills gained by the participants after completing the Course:

• **Technical Skills** – Programming and Coding, Data Science, Computer Vision, Natural Language Processing, Algorithmic and Computational Thinking

• **Social Skills** – AI ethics and bias reduction, critical thinking, problem solving, system mapping and solutions building

• **Career Growth Skills** – Self management skills like personal management, growth mindset. Entrepreneurial mindset, design & system thinking. Technical confidence and social emotional skills.

Course Structure:

S.No	Module Title	Duration (in Hrs.)
1	**Implementation of Basic Al Solution using Python programming language and SMART Framework**. •SMART component and tell what each acronym means. •AI project cycle •Orange Data Mining Tool •An introduction to Python programming language • Tableau Public	30
2	**Solving use cases using Al models along with building up Entrepreneurial Mindset** • Introduction to Python libraries • AI models to solve various industry applications using Python. • Design Thinking and AI bias • Entrepreneurial Mindset	60
3	**Realization of Project in AI domains with understanding of AI Project Pitfalls** • Supervised, Unsupervised, and Reinforcement Learning • Computer Vision, Statistical Data, Natural Language Processing and current applications of the technology • 5 pillars of Social Emotional Skills • AI ethics • Project Pitfalls in relation to the AI project cycle • IoT • Intel's one API library	150
4	**Solving of Real time industrial problem statements using AI** • Qualify data from multiple sources • Evaluate data for attributes • Bias and variance • Define and qualify AI models	30
5	**Employability Skills** • Introduction to Employability Skills • Career Development & Goal Setting • Becoming a Professional in the 21st Century • Basic English Skills • Communication Skills • Financial and Legal Literacy • Entrepreneurship • Diversity & Inclusion • Constitutional values – Citizenship • Essential Digital Skill	60

6	On Job Training / Implementation of AI project in Virtual Environment	240
	Total	**570**

Other Details:

Course Fees: Course fee is Rs 25,000 + GST (* Nil for SC/ST Candidates)

However, the above Training fee shall be refunded on a few special cases as given below:

1. If the course is postponed and the new date is not convenient for the student.
2. If the course is canceled.

Registration Fee: An amount of Rs.500/- (including all taxes as applicable) (non-refundable) should be paid at the time of registering for the course.

Course Fee Instalment Structure: - Can be paid in two instalments

Payment schedule: The Fee can be paid in two instalments as given below.

Instalment No.	Timeline	Amount (in Rs.)
1	At the time of admission	Rs.12,500/-
2	After two months from the start of the course	Rs.12,500/-

Prerequisite: Knowledge of basic Mathematics

Eligibility:

Pursuing 1st Year of UG in any discipline/12th Grade Pass/Completed Second Year of the 3-Year diploma in CS/IT/EC/EE/allied after 10th

Counselling/Admission: 18/03/2024 to 22/03/2024

Course Timings: 02:00 Hrs to 05:00 Hrs in week days.

Number of Seats: 30

Important Dates (Tentative):

Starting Date for Registration	7/11/2023
Last date to submit application form:	15/03/2024
Counselling/Admission	18/03/2024 & 22/03/2024
Last Date for Payment of Registration Fee	15/03/2024
Commencement of class work:	25/03/2024

How to apply:

Candidates can apply online using the Google Form link https://forms.gle/YSKXgnPUXg4dy2d37 . Payment towards the Registration Fee & Course fee can be paid through any one of the following modes:

- **ACCOUNT DETAILS** :**Account Name**: NIELIT Kolkata Tax, **Account No**: 3194198019**Branch**: Central Bank of India, Jadavpur, Kolkata. **IFSC Code**: CBIN0281247
- Pay through UPI Mobile Apps Eg: Google Pay, Paytm, BHIM, Phone Pe

Note: Institute will not be responsible for any mistakes done by either the bank concerned or by the depositor while remitting the amount into our account.

Last date of Registration:15th March 2024

Selection of candidates: Selection is based on a first-come basis (subject to fulfilling the eligibility criteria)

Admission Procedure:

All interested candidates are required to fill out the Registration form (in Google Form) with the registration fees on or before 15th March 2024.You are required to send the scanned copy (soft copy) of the following documents and make it into a single pdf and send it to mail id: b.banerjee@nielit.gov.in on or before 15th March 2024.

- Self-attested copy of Degree certificate /Consolidated Mark sheet
- Self-attested copy of Semester mark sheets and College ID (only applicable for candidates who are currently studying)
- Self-attested copy of Govt. issued photo ID card (Only Aadhar Card)
- Passport size photograph
- Screenshot of the Successful Payment of the Registration Fee & Course fee done.

Discontinuing the course: No fees under any circumstances shall be refunded in case of a student discontinues the course. No certificate shall be issued if discontinued.

Mode of Training: Offline Classroom Based Training

Certification: After Successful completion of the course, the examination will be conducted, and accordingly Certificate will be issued.

Grading Scheme:
Following Grading Scheme (on the basis of total marks) will be followed:

Grade	S	A	B	C	D	Fail
Marks Range (in %)	85 to 100	75 to 84	65 to 74	55 to 64	50 to 54	Below 50

National Institute of Electronics and Information Technology, Kolkata

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Contact Person: Bhaskar Banerjee, Mobile: 9073304896

Lab Facilities: LIST OF EQUIPMENT (For a batch of 30 students)

Sr No	Description	Quantity
1	Classroom	**2**
2	Student Chair	**30**
3	Student Table	**15**
4	Smart Interactive Display	**2**
5	White Board	**2**
6	Desktop computer with Accessories: installed with: NumPy Pandas Matplotlib Seaborn Scikit-Learn SciPy Scrapy Selenium PyTorch OpenCV Pyrealsense2 Intel bigdl-nano OpenVINO TensorFlow Keras Plotly Tabulate RSA QtPy, NLTK iPython Imbalanced-learn Graphviz, h5py Gensim, Beautiful soup	**30**