**EDGE-CSE CUET DIGITAL SKILLS TRAINING**

**Venue:** CSE, IIUC

**Training Type:** Intermediate

**Batch Number: CBF-023**

**Course Name: Python (Django)**

**Name of the Instructors with affiliations, emails and mobile number:**

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**Detail Training Schedule**

**Note that each slot should be of three hours and not more than a slot for a batch in a day.**

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| **Lecture** | **Date and Time** | **Topic** | **Location** |
| **Day 1: September 13, 2024** | | | |
| Training Session - 01 | 9:00 am – 01:00 pm | Introduction to Python   * Overview of Python programming * Basic syntax, variables, and data types | CX401 Lab, Dept. of CSE, IIUC |
| **Day 2: September 14, 2024** | | | |
| Training Session - 02 | 9:00 pm – 11:00 pm | Python Control Structures-1   * Conditional statements and loops | CX401 Lab, Dept. of CSE, IIUC |
| **Day 3: September 20, 2024** | | | |
| Training Session -03 | 9:00 am – 01:00 pm | Python Control Structures-2   * Functions and modules   Python Data Structures   * Lists, tuples, sets, and dictionaries * List comprehensions and lambda functions | CX401 Lab, Dept. of CSE, IIUC |
| **Day 4: September 21, 2024** | | | |
| Training Session - 04 | 9:00 pm – 11:00 pm | Object-Oriented Programming in Python - 1   * Classes and objects | CX401 Lab, Dept. of CSE, IIUC |
| **Day 5: September 27, 2024** | | | |
| Training Session - 05 | 9:00 am – 01:00 pm | Object-Oriented Programming in Python - 2   * Inheritance and polymorphism   Error Handling and File I/O   * Exception handling * File operations (reading, writing, and managing files) | CX401 Lab, Dept. of CSE, IIUC |
| **Day 6: September 28, 2024** | | | |
| Training Session - 06 | 9:00 pm – 11:00 pm | Introduction to Django   * Setting up Django environment * Overview of Django framework and architecture | CX401 Lab, Dept. of CSE, IIUC |
| **Day 7: October 4, 2024** | | | |
| Training Session - 07 | 9:00 am – 01:00 pm | Django Models   * Creating models and migrations * Understanding Django ORM | CX401 Lab, Dept. of CSE, IIUC |
| **Day 8: October 5, 2024** | | | |
| Training Session -08 | 9:00 pm – 11:00 pm | Django Views   * Function-based and class-based views | CX401 Lab, Dept. of CSE, IIUC |
| **Day 9: October 11, 2024** | | | |
| Training Session -09 | 9:00 am – 01:00 pm | Django Templates   * Template system and template tags   Django Forms   * Handling forms and form validation * Model forms | CX401 Lab, Dept. of CSE, IIUC |
| **Day 10: October 12, 2024** | | | |
| Training Session -10 | 9:00 pm – 11:00 pm | Django Authentication   * User authentication and authorization * Implementing login and registration systems | CX401 Lab, Dept. of CSE, IIUC |
| **Day 11: October 18, 2024** | | | |
| Training Session -11 | 9:00 am – 01:00 pm | Django REST Framework - Part 1   * Introduction to RESTful APIs * Setting up Django REST framework * Creating API endpoints | CX401 Lab, Dept. of CSE, IIUC |
| **Day 12: October 19, 2024** | | | |
| Training Session -12 | 09:00 pm – 11:00 pm | Django REST Framework - Part 2   * Serialization and deserialization | CX401 Lab, Dept. of CSE, IIUC |
| **Day 13: November 1, 2024** | | | |
| Training Session -13 | 9:00 am – 01:00 pm | Advanced Django Features   * Middleware and signals * Caching and performance optimization   Deployment   * Deploying Django applications | CX401 Lab, Dept. of CSE, IIUC |
| **Day 14: November 2, 2024** | | | |
| Training Session -14 | 9:00 pm – 11:00 pm | Maintenance   * Best practices for maintenance and scaling | CX401 Lab, Dept. of CSE, IIUC |
| **Day 15: November 8, 2024** | | | |
| **Mid-Term Examination** | 9:00 am – 01:00 pm | Based on the contents of Training Session- 01 to 14 | CX401 Lab, Dept. of CSE, IIUC |
| **Day 16: November 15, 2024** | | | |
| Training Session -15 | 9:00 am – 01:00 pm | Real-World Project - Part 1   * Project planning and setup * Designing database schema * Implementing core functionalities | CX401 Lab, Dept. of CSE, IIUC |
| **Day 17: November 16, 2024** | | | |
| Training Session -16 | 9:00 pm – 11:00 pm | Real-World Project - Part 2   * Integrating third-party APIs | CX401 Lab, Dept. of CSE, IIUC |
| **Day 18: November 22, 2024** | | | |
| Training Session -17 | 9:00 am – 01:00 pm | Real-World Project - Part 3   * Building user interfaces * Ensuring security and data protection * Testing and debugging | CX401 Lab, Dept. of CSE, IIUC |
| **Day 19: November 23, 2024** | | | |
| Training Session -18 | 9:00 pm – 11:00 pm | Real-World Project - Part 4   * Finalizing and deploying the project | CX401 Lab, Dept. of CSE, IIUC |
| **Day 20: November 29, 2024** | | | |
| Training Session -19 | 9:00 am – 01:00 pm | Real-World Project - Part 5   * Project review and feedback * Preparing project documentation | CX401 Lab, Dept. of CSE, IIUC |
| **Day 21: November 30, 2024** | | | |
| Training Session -20 | 9:00 pm – 11:00 pm | Real-World Project - Part 6   * Presenting the project * Q&A and discussions | CX401 Lab, Dept. of CSE, IIUC |
| **Day 22: December 6, 2024** | | | |
| Training Session -21 | 9:00 am – 01:00 pm | Advanced Topics in Django - Part 1   * Custom Django management commands * Advanced query techniques | CX401 Lab, Dept. of CSE, IIUC |
| **Day 23: December 7, 2024** | | | |
| Training Session -22 | 9:00 pm – 11:00 pm | Advanced Topics in Django - Part 2   * Working with Django channels * Implementing real-time features | CX401 Lab, Dept. of CSE, IIUC |
| **Day 24: December 13, 2024** | | | |
| Training Session -23 | 9:00 am – 01:00 pm | Advanced Topics in Django - Part 3   * Celery for asynchronous tasks * Django admin customization | CX401 Lab, Dept. of CSE, IIUC |
| **Day 25: December 14, 2024** | | | |
| Training Session -24 | 9:00 pm – 11:00 pm | Advanced Topics in Django - Part 4   * Using Docker with Django | CX401 Lab, Dept. of CSE, IIUC |
| **Day 26: December 20, 2024** | | | |
| Training Session -25 | 9:00 am – 01:00 pm | Advanced Topics in Django - Part 5   * Django signals and middleware * Implementing custom authentication * Multi-tenancy in Django applications | CX401 Lab, Dept. of CSE, IIUC |
| **Day 27: December 21, 2024** | | | |
| Training Session -26 | 9:00 pm – 11:00 pm | Advanced Topics in Django - Part 6   * Performance optimization and scaling | CX401 Lab, Dept. of CSE, IIUC |
| **Day 28: December 27, 2024** | | | |
| Training Session -27 | 9:00 am – 01:00 pm | Capstone Project Presentation   * Final project presentations * Course wrap-up and feedback | CX401 Lab, Dept. of CSE, IIUC |
| **Day 29: January 10, 2025** | | | |
| **Final Examination** | 9:00 am – 01:00 pm | Based on the contents of Training Session- 15 to 27 | CX401 Lab, Dept. of CSE, IIUC |