OBJECT ORIENTED ANALYSIS AND DESIGN

MULTI-FACULTY

TYPE OF COURSE
Rerun | Core | UG / PG

COURSE DURATION
8 weeks (26 July’21 - 17 Sep’21)

EXAM DATE
26 Sep 2021

INTENDED AUDIENCE
UG, PG Course, BCA, MCA, B.Tech., M.Tech.

PRE-REQUISITES
1. Basic Knowledge of Programming & Data Structure
2. Experience of Programming Projects would help; but is not mandatory
3. Attending a course on C++ with this course will help

INDUSTRIES APPLICABLE TO
Object-Oriented Analysis and Design is at the core of software development processes. Hence all software development companies have a need for the same. These include – Microsoft, Samsung, Xerox, Yahoo, Google, IBM, TCS, Infosys, Amazon, Flipkart, etc.

COURSE OUTLINE:
The complexity of software systems is ever on the rise – more complex problem domains being attempted (complex embedded systems), ever growing number of developers engaged in increasingly intricate development processes to turnaround in shorter and shorter time, flexibility of software and models of implementation being stretched to the limit with XaaS, platforms getting challenging with widely expanding distribution, cloud computation etc. Hence the analysis and design of software require well-organized and structured approaches to manage the challenges of complexity – even more than ever before.

ABOUT INSTRUCTOR:
Prof. Partha Pratim Das received his BTech, MTech and PhD degrees in 1984, 1985 and 1988 respectively from IIT Kharagpur. He served as a faculty in Department of Computer Science and Engineering, IIT Kharagpur from 1988 to 1998. In 1998, he joined Alumnius Software Ltd as a Business Development Manager. From 2001 to 2011, he worked for Interra Systems, Inc. as a Senior Director and headed its Kolkata Center. In 2011, he joined back to Department of Computer Science and Engineering, IIT Kharagpur as Professor. Dr. Das has also served as a Visiting Professor with Institute of Radio Physics and Electronics, Calcutta University from 2003 to 2013.

Prof. Samiran Chattopadhyay obtained his B Tech and M Tech degree in 1987 and 1989 respectively from IIT Kharagpur. He obtained his PhD degree from Jadavpur University in 1993. He served as a faculty in the Department of Computer Science and Engineering, Jadavpur University from 1989 to 1993. In 1993, he moved to industry and joined back the same department in Jadavpur University as an Associate Professor in 1997. Since 2001, he is a Professor of Information Technology in Jadavpur University.

Prof. Kausik Datta has over 23 years of experience in engineering and management at the EDA industry. Currently he is working as Principal Engineer and Manager at Mentor Graphics (India) Pvt. Ltd., Kolkata and leading the Front-end Analyzer Group. Prior to working with Mentor Kausik had worked with Interra Systems, Delsoft and Siemens on software development in EDA and Telecom domain. Kausik received his Bachelor of Engineering degree in Electrical Engineering from Jadavpur University, and his M. Tech. in Computer Science from the Indian Statistical Institute, Kolkata.

COURSE PLAN:

Week 1: Software Complexity: Understanding the challenges OOAD can address
Week 2: Object Model: Defining the primitives of the OO paradigm
Week 3: Classes and Objects: Bringing in the broader perspectives
Week 4: Classes and Objects: Identification approaches using OOAD
Week 5: Unified Modeling Language
Week 6: Unified Modeling Language
Week 7: Unified Modeling Language
Week 8: OOAD Case Studies: Applying OOAD in different contexts