

Uganda Institute of Information and Communications Technology (UICT), in partnership with the Wits University working through its Joburg Center for Software Engineering (JCSE) is offering a certificate course in Solutions, Web and Mobile Programming

Format: Wits accredited online short course

Certification: Wits University certificate of competence

Duration: 6 weeks consecutive online lectures, one exam in week 6 Hours per week: 5 to 7

Language: English

COURSE OVERVIEW

Most ICT students in Uganda that have completed their formal ICT courses find themselves without the relevant skills to make an immediate impact in their new working environment. They are simply not work-ready ICT graduates. Those that go into the software development develop solutions that are not robust, nor are they secure enough to compete with other international options in the market.

There will therefore be two modules.

MODULE 1: SOFTWARE ENGINEERING AND SOLUTIONS DEVELOPMENT - GENERAL

The objectives will be for users to be able to do requirements specification, creating user stories, Design

thinking & Design patterns including: Service Oriented Architecture (SOA), UML etc. Object-oriented programming using proprietary and opensource: C++, C#, Java, Python, Ruby, PHP, R, etc. Software testing frameworks: Citrus, Test-Driven Development (TDD), Testing JavaScript with Jasmine etc.

Course Curriculum

- Creating user stories as a means of tracking project requirements
- Design thinking for engineers
- Team Organization and People Management
- Software development project management, practices and workflow transitions (JIRA, Agile, DevOps, etc)
- Design patterns including: Service Oriented Architecture (SOA), UML etc.
- Object-oriented programming using: proprietary and opensource: C++, C#, Java, Python, Ruby, PHP, R, etc
- Software Architecture to build larger, higher quality software systems using various structures and systems and teach learners what it takes to architect that software
- Software testing frameworks: Citrus, Test-Driven Development (TDD), Testing JavaScript with Jasmine etc
- User Interface (UI) and User Experience (UX) tools and application: Adobe XD, Figma, Invision Studio, etc.

- Capstone/Hackathon to demonstrate the skills acquired

MODULE 2: WEB AND MOBILE PROGRAMMING (E.G. ANDROID AND IOS)

The Web and Mobile Programming (e.g. Android and IOS) on the other hand shall enable the students to build User interfaces (UI) & design, User experience (UX) design, Hybrid mobile application development, Entrepreneurial business skills etc.

Course Curriculum

Regarding Module 2 : Web and Mobile Programming (e.g. Android and IOS) will entail

- User interface (UI) design
- User experience (UX) design
- Responsive web design
- Full-stack web development
- Hybrid mobile application development
- Native mobile application development
- Entrepreneurial business skills
- Capstone/Hackathon to demonstrate the skills acquired

Target Groups

This course is aimed at growing IT Professionals with less than 3 years working experience in an application development role in a commercial, industrial or public-sector environment.

Ideally attendees should have a degree or equivalent tertiary qualification, although this is not essential.

All participants should see themselves on a learning pathway to become senior developers, team leaders or project managers.

Course Evaluation and Monitoring

There are weekly quizzes (formative assessment) at the end of each module. Summative assessment consists of a written exam at the end of the programme. There will be an additional essay question assignment that will examine the Uganda-specific material.

Course & Lecture Overview

Dr. Lucienne Abrahams and Mr. Barry Myburgh

Dr. Abrahams specializes in matters of digital innovation and digital transformation in African economies and societies. Barry is MD and Principal Consultant of Insyte Information Systems Engineering and a Sessional Lecturer at Wits, teaching the Principles of Software Engineering, Software Project Management, Ethics of Software Engineering, and Disruptive Forces of Technology. Their expertise in the corporate and academic space has resulted in an exceptional, cross-disciplinary collaboration, including Wits Enterprise, the Wits School of Economic and Business Sciences, the Johannesburg Centre for Software Engineering, and the LINK Centre.

Contact Us:
Plot 19 - 21 Port Bell Road
P.O. Box 7187, Nakawa Kampala
+256 312 165 100 | +256 772 471 151
+256 702 471 151
info@uict.ac.ug | francis.bwire@uict.ac.ug



UICT/JCSE PARTNERSHIP

SOFTWARE ENGINEERING PRINCIPLES AND METHODS

TRAINING PROGRAMMES
DIPLOMA AND CERTIFICATES

DAY
EVENING
WEEKEND

INTAKES: MARCH AND AUGUST
EVERY ACADEMIC YEAR

