



University of Colombo School of Computing

Module Descriptor

Master of Computer Science/Master of Science in Computer Science – 2025

| Module Outline | | | | |
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| Course Code: | MCS4204 | | | |
| Course Name: | Software Project management and Quality Assurance | | | |
| Number of Credits: | 3 | Semester: | 4 | |
| Rubric: | Assignments: | 40% | | |
| | Final Exam: | 60% | | |
| Prerequisites: | | | | |
| Mode of Delivery | | | Per Week | Total |
| | Lectures: | 2 Hours | 30 Hours | |
| | Laboratory/Tutorial: | - | 15 Hours | |

| Course Description | |
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| Goals | This course is designed to provide knowledge and skill in managing information technology projects. This course is mainly based on the ten project management knowledge areas presented in the internationally recognized Project Management Body of Knowledge. The first part of the course covers IT product development for those who are working (or intended to work) in software development organizations and the second part covers change management which includes social, economic, environmental, and political issues in deploying information systems. Various aspects of software quality attributes and means of achieving them, standards and frameworks are discussed in the last part of the course. |
| Learning Outcomes | Upon completion of this course, students will be able to do the following: LO1. Apply the ten general project management areas to IT related projects. LO2. Apply all five process groups--initiating, planning, executing, |

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| | <p>monitoring and controlling and closing in IT projects.</p> <p>LO3. Examine social, economic, environmental, and political issues in deploying IT projects and propose solutions to the identified issues.</p> <p>LO4. Appraise and select software tools for IT project management and software quality assurance.</p> | |
| Assessment Plan | Individual in-class assignment(s) - 20% | LO1, LO2 |
| | Individual Take Home Assignment(s) - 20% | LO3, LO4, |
| | | |
| Learning Resources | | <p>MOOC:</p> <ul style="list-style-type: none"> • Software Product Management Specialization - https://www.coursera.org/specializations/product-management • Learn to Program: Crafting Quality Code- https://www.coursera.org/learn/program-code • Software Testing for developers: https://www.coursera.org/learn/codio-software-testing-for-developers <p>Text Books:</p> <ul style="list-style-type: none"> • A Guide to the Project Management Body of Knowledge (<i>PMBOK® Guide</i>)—Fifth Edition (A new edition of the PMBOK® Guide will be released in Q3 2017.) • Information Technology Project Management, Revised 7th Edition (ISBN-13: 978-1285847092 , ISBN-10: 1285847091) • Software Quality Assurance: From Theory to Implementation 1st Edition (ISBN-13: 978-1285847092 , ISBN-10: 1285847091) Chapter 1-4 and Chapter 10 <p>Other Resources:</p> <ul style="list-style-type: none"> • Sri Lanka Software Testing Board - http://www.sl-stb.org • CSSL - Software Quality Assurance - https://www.cssl.lk/news/show/id/12 • Training Course on Software Quality Assurance Using Test Automation Framework - http://ucsc.cmb.ac.lk/training-course-on-software-quality-assurance-using-test-automation-framework/ |

Syllabus/Lesson Plan

| Week | Topic(s) | Assignments** | Recommended Reading/Activity |
|------|--|---------------|--|
| 1 | Introduction to the course and information technology project management | | Information Technology Project Management PMBOK, Chapter 1-2 |
| 2 | Project Integration Management | | Information Technology Project Management PMBOK |
| 3 | Project Scope Management | | Information Technology Project Management PMBOK |
| 4 | Project Time Management | Assignment 1 | Information Technology Project Management PMBOK |
| 5 | Project Cost Management | | Information Technology Project Management PMBOK, Reflection on Online Software Project Management and Quality Assurance Course. |
| 6 | IT Project Quality Management Part 1 | | Information Technology Project Management PMBOK |
| 7 | IT Project Quality Management Part 2 | | Information Technology Project Management PMBOK |

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| 8 | Project Communications Management | | Information Technology Project Management PMBOK |
| 9 | Project Human Resource Management | | Information Technology Project Management PMBOK |
| 10 | Project Procurement Management | | Information Technology Project Management PMBOK |
| 11 | Project Risk Management | Assignment 2 | Information Technology Project Management PMBOK |
| 12 | Financial Calculations for Project Appraisals | | Information Technology Project Management PMBOK |
| 13 | Software Quality Assurance -Part 1 | | Software Quality Assurance: From Theory to Implementation |
| 14 | Software Quality Assurance -Part 2 | Assignment 3 | Software Quality Assurance: From Theory to Implementation |
| 15 | Software Quality Assurance -Part 3 | | Software Quality Assurance: From Theory to Implementation |

** All assignment reports submitted via LMS unless specified

Course Administration

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| Lecturer(s)in-charge | Dr. T.A. Weerasinghe, VL | | |
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| Teaching Assistant(s) | | | |
| Telephone | | Email | |