

SWEN90010 High Integrity Systems Engineering

| Credit Points: | 12.50 | | | | | | |
|--|---|----------------|----------------------------|----------------|--|------------------|-------|
| Level: | 9 (Graduate/Postgraduate) | | | | | | |
| Dates & Locations: | This subject is not offered in 2013. | | | | | | |
| Time Commitment: | Contact Hours: 36 hours, comprising of two one-hour lectures and one 1-hour workshop per week Total Time Commitment: 120 hours | | | | | | |
| Prerequisites: | <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>SWEN90006 Software Engineering Methods</td> <td>Not offered 2013</td> <td>12.50</td> </tr> </tbody> </table> | Subject | Study Period Commencement: | Credit Points: | SWEN90006 Software Engineering Methods | Not offered 2013 | 12.50 |
| Subject | Study Period Commencement: | Credit Points: | | | | | |
| SWEN90006 Software Engineering Methods | Not offered 2013 | 12.50 | | | | | |
| Corequisites: | None | | | | | | |
| Recommended Background Knowledge: | <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>SWEN40004 Modelling Complex Software Systems</td> <td>Semester 1</td> <td>12.50</td> </tr> </tbody> </table> | Subject | Study Period Commencement: | Credit Points: | SWEN40004 Modelling Complex Software Systems | Semester 1 | 12.50 |
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| SWEN40004 Modelling Complex Software Systems | Semester 1 | 12.50 | | | | | |
| Non Allowed Subjects: | None | | | | | | |
| Core Participation Requirements: | <p><p>For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Student Support and Engagement Policy, academic requirements for this subject are articulated in the Subject Overview, Learning Outcomes, Assessment and Generic Skills sections of this entry.</p> <p>It is University policy to take all reasonable steps to minimise the impact of disability upon academic study, and reasonable adjustments will be made to enhance a student's participation in the University's programs. Students who feel their disability may impact on meeting the requirements of this subject are encouraged to discuss this matter with a Faculty Student Adviser and Student Equity and Disability Support: http://services.unimelb.edu.au/disability</p></p> | | | | | | |
| Contact: | Email: tmiller@unimelb.edu.au (mailto:tmiller@unimelb.edu.au) | | | | | | |
| Subject Overview: | High integrity systems are systems that must be engineered to a high level of dependability, that is, a high level of safety, security, reliability and performance. In this subject students will explore the aims, principles, techniques and tools that are used to analyse, design and implement dependable systems. Topics include: an introduction to dependable systems; testing methods for dependable systems; fault tolerant systems; safety critical systems; and validating dependable systems. | | | | | | |
| Objectives: | On completion of this subject students should be able to: <ul style="list-style-type: none"> # Classify the characteristics of a dependable system and identify these characteristics in domains # Apply advanced testing methods to the validation and measurement of system properties # Apply a range of techniques to the analysis, design and validation of high integrity systems | | | | | | |
| Assessment: | Project work during semester, expected to take about 36 hours (50%) 2-hour examination held in the examination period (50%) To pass the subject, students must obtain at least: 25/50 in project work, And 25/50 in the written examination | | | | | | |

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| Prescribed Texts: | None |
| Breadth Options: | This subject is not available as a breadth subject. |
| Fees Information: | Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees |
| Generic Skills: | <p>On completion of this subject students should have the:</p> <ul style="list-style-type: none"> # Ability to apply knowledge of science and engineering fundamentals # Ability to undertake problem identification, formulation, and solution # Ability to utilise a systems approach to complex problems and to design and operational performance Proficiency in engineering design # Ability to manage information and documentation # Capacity for creativity and innovation # Understanding of professional and ethical responsibilities, and a commitment to them |
| Related Course(s): | <p>Master of Philosophy - Engineering Ph.D.- Engineering</p> |
| Related Majors/Minors/ Specialisations: | <p>B-ENG Software Engineering stream Master of Engineering (Software)</p> |