GSOE9810

PRODUCT AND PROCESS QUALITY IN ENGINEERING

Contents

1. Staff contact details

Contact details and consultation times for course convenor

Name: Dr Erik van Voorthuysen
Office Location: Ainsworth Building (J17), Room 507
Tel: (02) 9385 4147
Email: erikv@unsw.edu.au

Consultation concerning this course is available immediately after the classes. Face-to-face consultation is preferred.

Contact details and consultation times for additional lecturers/demonstrators/lab staff

Name: Dr Ronald Chan
Tel: (02) 9385 1535
Office Location: Ainsworth Building (J17), Room 507
Email: r.chan@unsw.edu.au

Consultation concerning this course is available immediately after the classes. Face-to-face consultation is preferred.

Please see the course Moodle.

Contact hours

	Day	Time	Location
Lecture	Tuesday (weeks 1-10)	18:00 . 19:30	Ainsworth G03
Demonstrations	Tuesday (weeks 1-10)	19:30 . 21:00	Ainsworth G03

Please refer to your class timetable for the learning activities you are enrolled in and attend only those classes.

Summary and Aims of the course

This course will introduce you to the cornerstones of creating and sustaining an effective

After successfully completing this course, you should be able to:

Learning Outcome		EA Stage 1 Competencies
1.	State what an organization needs to do to remain &[{]^ããç^Ág Á[åæê q Á æ}˘ æ8c¦ã*Á}ã[}{^}È	PE2.1, PE2.2, PE2.4, PE3.4
2.	State how an organization can improve its processes and integrate its several functions through the best use of quality engineering.	PE1.3, PE1.5
3.	Be able to determine whether a process is capable of producing a product or service to specifications	PE1.2, PE1.3
4.	Be able to integrate very popular topics like total quality management, Six-Sigma, and Benchmarking into organizations.	PE1.6, PE2.2, PE3.4

4. Teaching strategies

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Therefore, a wide variety of concepts and tools of analysis will be covered, and you will be interacting with other students in the lectures and demonstration sessions, either online or face-to-face, sometimes in teams or individually. You become more engaged in the learning process if you can see the relevance of your studies to professional, disciplinary and/or personal contexts, and the relevance is shown in the lectures, face-to-face and web-based contents by way of examples drawn from different industries.

Several case discussions will take place in lectures and face-to-face demonstrations as well as through UNSW Moodle page. These aim to give several opportunities to each of you to interact, exchange ideas, knowledge and experiences with the facilitators and other students through:

reading from a wide range of cases studies and synthesize a range of perspectives,

reflecting on your own experience and knowledge in the light of new learning,

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analyzing case studies and relate learnings to your own context working collaboratively on a hypothetical project.

Lectures, demonstration sessions and assessments in the course are designed to cover the core knowledge are

5.

Date	Lecture Content (Ainsworth G03) 18:00-19:30	Suggested Readings	Demonstration (Ainsworth G03) 19:30-21:00
Week 1	Perspectives and scope of Quality Engineering and Issue analysis	Chapter 1 and Lecture notes	Assignment I discussion and Team forming instruction
Week 2	Quality Theory and KFS analysis	Chapter 2 and Lecture notes	Fedex case study

Week 3

Date	Lecture Content (Ainsworth G03) 18:00-19:30	Suggested Readings	Demonstration (Ainsworth G03) 19:30-21:00
Week 9	Statistical Process Control II	Chapter 12 and Lecture notes	Questions on attribute control charts and capability analysis
Week 10	Six-Sigma Management and Tools, Revision	Chapter 13 and Lecture notes	Assignment II Support

6. Assessment

Assessment overview

Assessment	Group Project?	If Group, # Students per group	Length	Weight	Learning outcomes assessed	Assessment criteria	Due date and submission requirements	Deadline for absolute fail	Marks returned
Quiz (online)	No	N/A	10 multiple choice	5%	1	Lecture material from weeks 1-3.	During week 4, demonstration class	N/A	The class after the assessment
Group assignment 1	Yes	4-5	15 pages main body text	20%	1 and 4	Issue Analysis and Strategy	End of Week 6 via Moodle	One week later	Two weeks after submission
Group assignment 2	Yes	4-5	15 pages main body text	25%	1 and 4	Process Performance, Capability and Strategy	End of Week 10 via Moodle	One week later	Upon release of final results
Final exam	No	N/A	2 hours	50%	1, 2 and 3	All course content from weeks 1-10 inclusive.	Exam period, date TBC	N/A	Upon release of final results

Assignments

The assignments will be posted on Moodle

The late penalty is applied per calendar day (including weekends and public holidays) that the assessment is overdue. There is no pro-rata of the late penalty for submissions made part way through a day.

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Australian Engineering Competencies

Stage 1 Competencies for Professional Engineers