

49306 Quality and Operations Management Systems

Course area UTS: Engineering and Information Technology

Delivery Autumn 2014; City

Credit points 6cp

Result type Grade and marks

Attendance: 3hpw; on campus, distance (distance mode is not suitable for international students)

Subject coordinator

Coordinator for this subject is Dr. Hasan Akpolat.

He has more than 20 years of industrial experience in both manufacturing and service industries, which spans over three continents and during which he successfully implemented operational improvement strategies and programmes in large and medium-sized organisations.

Previously with Johnson & Johnson and Siemens AG, Germany, Impresstik, and Sony, Australia, Dr. Akpolat held senior management positions involving strategic planning, change management, process re-engineering, implementation of management systems and programmes.

Dr. Akpolat is also a consultant to industry in development and implementation of operational management systems, deployment and assessment of business improvement initiatives including TQM, Six Sigma, and Lean.

If you have any ACADEMIC questions, please contact him via e-mail: hasan.akpolat@uts.edu.au

Teaching staff

The Lecturer for this subject is Tim Norris.

Mr Norris has more than 20 years experience in the food manufacturing industry during which he has held senior management positions involving site/line management and the development and successful implementation of management systems and programmes.

Mr Norris has a Food Science Degree from the University of Western Sydney and a Master of Business in Operations Management from UTS. He has worked for Dairy Farmers, Meadow Lea Foods, Goodman Fielder Milling and Baking and is currently with SunRice. At SunRice he has successfully developed and implemented the SunRice Six Sigma Program along with quality, safety, environment, product development and global trading logistic management systems.

For all ACADEMIC inquiries including your assignment (content, submission, etc.), final exam, etc. please contact the subject coordinator, Dr Hasan Akpolat: (hasan.akpolat@uts.edu.au).

Subject description

This subject helps students understand how to design, develop and implement operational management systems including the quality, environmental, safety, and risk management systems and how to achieve certification of the operational management systems according to the Australian and International Standards (ASNZS and ISO). The subject develops an understanding of the means of defining the structure of operational management systems in manufacturing and service organisations, determining what resources are needed to complete the documentation and the evaluation of operational management systems. It also highlights the use of an effective operational management system for continuous quality improvement.

Students with limited work experience and knowledge of these systems may find the study of ASNZS and ISO standards somewhat challenging. Thus, although this subject is available in distance study mode, it is highly recommended that these students enrol in the on campus mode and regularly attend the lectures where standards and other study materials are thoroughly discussed and studied in a team learning environment (group class exercises).

Subject objectives

Upon successful completion of this subject students should be able to:

1. how to design, develop and implement quality and operations management systems in manufacturing and service environments (refers to Graduate Attributes B, C, and E available at FEIT website).
2. the process of certification of quality and operations management systems according to the Australian and International Standards (refers to Graduate Attributes B, C, and E available at FEIT website).
3. the concept and methods of evaluation of quality and operations management systems (Auditing) (refers to Graduate Attributes B, C, and E available at FEIT website).
4. the relevance of effective quality and operations management systems for continual improvement strategies, initiatives and programs (refers to Graduate Attributes B, C, and E available at FEIT website).

This subject also contributes specifically to the development of the following course intended learning outcomes:

- Identify, interpret and analyse stakeholder needs. (A.1)
- Establish priorities and goals (A.2)
- Apply systems thinking to understand complex system behavior including interactions between components and with other systems (social, cultural, legislative, environmental, business etc.) (A.5)
- Identify and apply relevant problem solving methodologies (B.1)
- Design components, systems and/ or processes to meet required specification (B.2)
- Synthesise alternative/innovative solutions, concepts and procedures (B.3)
- Apply decision-making methodologies to evaluate solutions for efficiency, effectiveness and sustainability (B.4)
- Demonstrate research skills (B.6)
- Abstraction, modelling, simulation and visualization inform decision-making, and are underpinned by mathematics, as well as basic and discipline sciences. (C.0)
- Reflect on personal and professional experiences to engage in independent development beyond formal education for lifelong learning (D.2)
- Engineering and IT practice involves the coordination of a range of disciplinary and interdisciplinary activities to arrive at problem and design solutions. (E.0)
- Be able to conduct critical self-review and performance evaluation against appropriate criteria as a primary means of tracking personal development needs and achievements (F.1)
- Appreciate ethical implications of professional practice (F.2)
- Understand cross-cultural issues (regions or workplaces) (F.3)
- Be aware of global perspectives (needs, rules/regulations, and specifications) (F.4)

Program

Week/Session	Dates	Description
1		<p>Lecture 1: Introduction</p> <p>Following topics are typically discussed during this lecture: Subject content, structure and resources; Semester time table; Lecture slide; Assessment tasks and their submission due dates; Subject website and learning materials (UTSOnline); Case studies and additional materials; Discussions (in-class & online); Guest Lectures.</p> <p>No audio recording is made during this session. However, lecture notes (all slides and other materials will be made available at subject website (UTSOnline).</p>

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- 2 Lecture 2: Chapter 1 (Management Standards and ISO 9000).
Lecture notes and audio recordings are available at subject website (UTSOnline).
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- 3 Lecture 3: Chapter 2 (Quality Management Systems).
Lecture notes and audio recordings are available at subject website (UTSOnline).
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- 4 Lecture 4: Chapter 2 (Quality Management Systems).
Lecture notes and audio recordings are available at subject website (UTSOnline).
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- 5 Lecture 5: Chapter 2 (Quality Management Systems).
Lecture notes and audio recordings are available at subject website (UTSOnline).
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- 6 Lecture 6: Chapter 3 (Environmental Management Systems).
Lecture notes and audio recordings are available at subject website (UTSOnline).
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- 7 Lecture 7: Chapter 3 (Environmental Management Systems).
Lecture notes and audio recordings are available at subject website (UTSOnline).
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- 8 Lecture 8: Chapter 4 (OHS Management Systems).
Lecture notes and audio recordings are available at subject website (UTSOnline).
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- 9 Lecture 9: Chapter 4 (OHS Management Systems).
Lecture notes and audio recordings are available at subject website (UTSOnline).
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- 10 Lecture 10: Chapter 5 (Risk Management Systems).
Lecture notes and audio recordings are available at subject website (UTSOnline).
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- 11 Lecture 11: Chapter 6 (Management System Auditing and Certification).
Lecture notes and audio recordings are available at subject website (UTSOnline).
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- 12 Lecture 12: Chapter 6 (Management System Auditing and Certification).
Lecture notes and audio recordings are available at subject website (UTSOnline).
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- 13 Lecture 13: Guest Lecture

No audio recording is made during this session. However lecture notes (all slides and other materials) will be made available at subject website (UTSOnline).
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The topic of this lecture typically includes the following:

Brief summary of the subject, discussion of the final exam requirements (structure, format, etc.).

No audio recording is made during this session. However, lecture notes (all slides and other materials) will be made available at subject website (UTSOnline).

The above listed program is intended as a generic schedule only.

The actual semester schedule with calendar details will be published on subject website (UTSOnline) at start of each semester.

The subject 49306 - Quality and Operations Management Systems consists of the following six chapters:

Chapter 1: International Standards and ISO 9000

Chapter 2: Quality Management Systems (QMS)

Chapter 3: Environmental Management Systems (EMS)

Chapter 4: Occupational Health & Safety Management Systems (OHSMS)

Chapter 5: Risk Management Systems (RMS)

Chapter 6: Management System Implementation, Audits and Certification

Additional information

In this subject, you have to achieve at least 50% of marks in both assessment tasks, the "Assignment" and the "Final exam" as well as minimum 50% of the total marks in order to pass the subject.

If your final result is $\geq 50\%$ of the total marks, but you have failed in one of the assessment tasks ("Assignment" or "Final exam"), you will be awarded a Fail (X) grade for the subject.

Assessment

This subject has several formal and informal assessment items. Formal assessment items (conducted by the coordinator) include an individual assignment and the final exam while the informal assessment (self-assessment) consists of the online quizzes.

The online quizzes will not count towards subject marks. They are informative only and will provide you instant feedback on your knowledge of the subject materials.

The online quizzes consist of real examples of questions selected from past exam papers and should provide you an idea of the type of questions that could be asked in the final exam.

Assessment task 1: Major individual assignment

Objective(s): This assessment task addresses subject learning objectives:

2, 3 and 4

This assessment task contributes to the development of the following course intended learning outcomes:

A.1, A.2, A.5, B.1, B.2, B.4, B.6, C.0, E.0, F.3 and F.4

Weight: 40%

Due:**When to submit:**

Submission details will be posted on subject website at UTS Online at the start of each semester.

Assignment submission due dates apply to all students, including standard mode, distance mode, and HKMA students, as well as to all forms of assignment submission, including hard copy and soft copy submissions.

What to submit:

All assignment tasks must be submitted together as one complete single assignment. Use a cover sheet (available on subject website at UTS Online) for both the hard and soft copy of your assignment.

For hard copy assignments, please do not use any paper or plastic folders. Just staple the entire assignment and submit it as one single file.

The soft copy (electronic version) of your assignment must be the same assignment that you have submitted as hard copy. Do not alter or manipulate anything when submitting your assignment copies.

The hard copy (paper form) of your assignment will be used for marking while the soft copy (electronic form) will be used for plagiarism assessment.

Where to submit:

Please check subject website on UTS Online for further details.

Task:**Task 1 (10 marks): Quality Management System (QMS) / ISO 9001:2008**

Complete the following tasks using the example of a "Bank" (e.g. Westpac, NBA, CBA, etc.) with operations based in Australia, USA, or Europe.

1. 1: Write a Quality Policy for the company in accordance with the ISO 9001:2008 requirements (approx. 1 page).
1. 2: Identify at least 5 stakeholders. For each stakeholder identify at least 1 stakeholder need (what the stakeholder may want from the company). Now, identify at least 5 processes that may be required to fulfil stakeholder needs (approx. one page).
1. 3: Pick one process from previous task; identify at least 10 inputs and 5 outputs for that process (approx. half page)
1. 4: For the process used in 1.3, determine 5 performance parameters and 5 methods that can be used to measure those performance parameters (approx. half page).
1. 5: Identify at least 5 key elements (components) that are needed to implement a continuous improvement program for this organisation. Provide a brief description for each element (approx. one page).

Task 2 (20 marks): Environmental Management System (EMS) / ISO 14001:2004

Complete the following tasks using the example of a "Printing" company (e.g. newspaper, magazine, stationary, labels, etc.) with operations based in Australia

2. 1: Determine at least 5-6 legislations and their specific sections that are applicable to this type of operations. The legislations may include both generic and specific legislations as well as any federal or state laws and regulations (approx. one page which should include a brief description of what is mentioned in the specific sections).
2. 2: Determine at least 5 stakeholders of the organisation and minimum 2 stakeholder needs for each stakeholder (approx. one page).
2. 3: Determine 5 processes that describe the organisation's operations. For each process determine at least 2 sub-processes. These may include both manufacturing or non-manufacturing type processes (approx. one page).

2. 4: Select 2 main processes from the above list and identify at least 5 environmental aspects for each of those 2 main processes (altogether 10 environmental aspects, approx. one page) .
2. 5: Now, identify at least 5 environmental impacts for each the 2 main processes selected above (altogether 10 environmental impacts) (approx. one page).
2. 6: Write down at least 1 objective for each of the 10 environmental aspects previously identified (altogether 10 environmental objectives) (approx. one page).
2. 7: Determinethe (realistic and relevant) targets for all of the 10 environmental objectives identified above (altogether 10 environmental targets) (approx. one page).
2. 8: Identify at least 2 actions for each environmental target identified above (altogether 20 environmental actions) (approx. one page).
2. 9: Determine at least 5 methods that can be used to measure or monitor the progress of the implementation of the environmental actions (approx. one page).

Task 3 (10 marks): Occupational Health and Safety Management System (OHSMS) / AS 4801:2001.

Complete the following tasks using the example of an "University" with operations based in Australia.

3. 1: Determine at least 5-6 legislations and their specific sections that are applicable to this type of operations. The legislations may include both generic and specific legislations as well as any federal or state laws and regulations (approx. one page which should include a brief decription of what is mentioned in the specific sections).
3. 2: Describe at least 10 risks for company's operations in accordance with the AS/NZS 4801 (approx. one page).
3. 3: Develop a risk assessment chart and assess all the risks identified under 3.2 (approx. one page).
3. 4: Describe at least 2 actions for all the risks identified under 3.2 (approx. one page).

Note: All tasks have to be completed and submittd as one single assignment.

Further information:

Please read the guidelines at the following UTS website (URL: <http://www.bell.uts.edu.au/awg/common/plagiarism>) carefully and follow strictly all the UTS policies and rules for plagiarism. Incorrect use of quotations, paraphrasing, references, etc. may result in high penalties.

Two main criteria will be applied to determine whether an assignment breaches plagiarism rules:

i) The assignment must be ORIGINAL.

Use of information (i.e. data, text, pictures, graphs, etc.) that have been published before is not permitted (even if that information belongs to you).

ii) The assignment must be the result of your OWN work.

Almost all of the information (more than 95%) used in the assignment must be created by yourself and not copied from elsewhere. Information up to 5% of the total amount can be as used from other sources, provided they do not breach UTS guidelines for referencing, paraphrasing, quotation, etc. Each assignment will be checked individually and higher percentages may be allowed in some circumstances. (Examples will be posted online at subject website).

Extensions to the stated times will be granted ONLY for illness and on the basis of a doctor certificate. Work or travel pressures are NOT valid grounds for an extension.

Marks will be deducted for late submissions on the basis of 5 marks for every week late.

We will attempt to return the marked assignments within 2-3 weeks of receipt.

Assessment task 2: Final Examination

Objective(s): This assessment task addresses subject learning objectives:

1, 2, 3 and 4

This assessment task contributes to the development of the following course intended learning outcomes:

A.1, A.2, A.5, B.1, B.2, B.3, B.4, B.6, C.0, D.2, E.0, F.1, F.3 and F.4

Weight: 60%

Task: A closed book final examination will be held at the end of semester. It is a formal exam which will be held in the official exam period. Please check the exam-website for date, time and location of your exam.

All students, including distance mode students who live within the Sydney basin, must attend the exam at UTS. For only distance mode students who live outside of the Sydney basin, the faculty will organise for the exam to be held near the student's place of work or home.

Distance mode students – please refer to the 'Rules for Distance Study' for information on your examination, available at:

http://my.feit.uts.edu.au/pages/course/postgraduate/distance_mode

Past exam papers are not available. The quizzes posted at the subject website (UTSOnline) are a good comparison for structure and format of the exam. Most of the quiz questions have been used in the past exams.

Assessment task 3: Online Quizzes: No marks given / informative only

Objective(s): This assessment task addresses subject learning objectives:

1, 2, 3 and 4

This assessment task contributes to the development of the following course intended learning outcomes:

A.1, A.2, A.5, B.1, B.2, B.3, B.4, B.6, C.0, D.2, E.0, F.2, F.3 and F.4

Use of plagiarism detection software

This subject makes use of the "turnitin" software for plagiarism detection. For this purpose, in addition to the hard copy students are also required to submit one electronic copy (directly at subject website).

Supplementary assessments

No supplementary assessment is available for this subject.

Required texts

This subject does not require any specific text book as the relevant materials are provided in the LRM and on subject website at UTSOnline.

References

The following web sites may provide further information on the material covered in the subject:

International Organization for Standardization: <http://www.iso.org/iso/en/>

WorkCover NSW: <http://www.workcover.nsw.gov.au/>

Safety Institute of Australia: <http://www.sia.org.au/>

Other resources

UTSOnline (<http://online.uts.edu.au/webapps/login/>) is a web-based learning tool used in many UTS subjects. It can be accessed from inside and outside UTS via most web-browsers.

This subject makes use of UTSOnline as a means of communication between teaching staff and students. You should be registered automatically if you have enrolled correctly. If you do not want to receive emails at your default UTS email account then you should forward emails to your preferred email address.

Students need to familiarise themselves with UTSOnline. Announcements will be made using this facility. Students are expected to regularly check the announcements page for information.

Having problems logging on? The Service Desk is the first point of contact for staff and students in relation to IT Support and Audio Visual Services: Service Desk <https://servicedesk.uts.edu.au>

Note, use the login button if you are an existing student or staff member; use your student or staff number with your UTS Access (email) password to login. Guest login is for all other customers.

Ask UTS is the first point of contact for staff, students, and the general community in relation to Student Centre inquiries: Ask UTS www.ask.uts.edu.au

UTS administrative information: www.uts.edu.au/students

Engineering postgraduate information: www.eng.uts.edu.au/Current_Students/postgraduate

For further information see the faculty's Student Guide at: http://my.feit.uts.edu.au/modules/myfeit/downloads/StudentGuide_Online.pdf

Assessment: faculty procedures and advice

Special consideration

Special consideration requests for the following are submitted and resolved through the UTS Special Consideration Process:

www.sau.uts.edu.au/assessment/consideration

Special needs

Students should email the subject coordinator as soon as possible (and prior to the assessment deadline) to indicate how their ability to meet an assessment component or requirement is impacted, and that they are seeking assistance through UTS Special Needs as detailed in Section 5.1.3 of Procedures for the Assessment of Coursework Subjects.

Academic integrity

This subject outline should be read in conjunction with the information on assessment in both the course guide and the UTS Policy and Procedures for the Assessment of Coursework Subjects, including details of assessment submission, late penalties, misconduct, plagiarism, etc.

Academic liaison officer

Academic Liaison Officers (ALOs) are academic staff in each faculty who assist three groups of students: students with disabilities and ongoing illnesses; students who have difficulties in their studies because of their family commitments (e.g. being a primary carer for small children or a family member with a disability); and students who gained entry through the UTS Educational Access Scheme or Special Admissions.

ALOs are responsible for determining alternative assessment arrangements for students with disabilities. Students who are requesting adjustments to assessment arrangements because of their disability or illness are requested to see a Disability Services Officer in the Special Needs Service before they see their ALO.

The ALO for Engineering students is:

Dr Bruce Moulton

telephone +61 2 9514 2681

email Bruce.Moulton@uts.edu.au

The ALO for IT students is:

Support

Improve your academic and English language skills: HELPS (Higher Education Language and Presentation Support) Service provides assistance with English language proficiency and academic language. Students who need to develop their written and/or spoken English should make use of the free services offered by HELPS, including academic language workshops, vacation intensive courses, drop-in consultations, individual appointments and Conversations@UTS (www.ssu.uts.edu.au/helps).

HELPS is located in Student Services, on level 3 building 1. Phone 9514 9733.

Statement about assessment procedures and advice

This subject outline must be read in conjunction with the policy and procedures for the assessment for coursework subjects, available at:

www.gsu.uts.edu.au/policies/assessment-coursework.html

Querying marks/grades and final results

If a student disagrees with a mark or a final result awarded by a marker:

- where a student wishes to query a mark, the deadline for a query during teaching weeks is 10 working days from the date of the return of the task to the student
- where a student wishes to query an examination result, the deadline is 10 working days from the official release of the final subject result.

More information can be found at:

https://my.feit.uts.edu.au/pages/course/student_policies_rules

Retention of student work

The University reserves the right to retain the original or one copy of any work executed and/or submitted by a student as part of the course including, but not limited to, drawings, models, designs, plans and specifications, essays, programs, reports and theses, for any of the purposes designated in Rule 3.9.2

(www.gsu.uts.edu.au/rules/student/section-3.html#r3.9). Such retention is not to affect any copyright or other intellectual property right that may exist in such student work. Copies of student work may be retained for a period of up to five years for course accreditation purposes. Students are advised to contact their subject coordinator if they do not consent to the University retaining a copy of their work.

Statement on UTS email account

Email from the University to a student will only be sent to the student's UTS email address. Email sent from a student to the University must be sent from the student's UTS email address. University staff will not respond to email from any other email accounts for currently enrolled students.

Disclaimer

This outline serves as a supplement to the Faculty of Engineering and Information Technology Student Guide. On all matters not specifically covered in this outline, the requirements specified in the Student Guide apply.

https://my.feit.uts.edu.au/modules/myfeit/downloads/StudentGuide_Online.pdf