

BNM852 QUALITY MANAGEMENT

Academic Year 2013/14

Number of Aston Credits: 15

Number of ECTS Credits: 7.5

Staff Member Responsible for the Module:

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Availability: see office hours
Or contact the Operations and Information Management Group Administrator
John Morley, ABS266, Extension 3236

Pre-requisites for the Module:

None

Mode of Attendance:

On Campus

Module Objectives and Learning Outcomes:

Students completing this module will be able to answer the following questions. The answers will be discussed using currently popular tools, frameworks and examples in the area of quality management.

- > Why is quality important?
- > How is quality defined?
- > Who are the quality 'gurus'?
- > What are the costs of quality?
- > Why does quality need a strategic approach?
- > Why is there a need to have a process focus?
- > Who are the customers (internal and external)?
- > What structured techniques are there to build in quality?
- > Quality: large projects or small initiatives?
- > What methodologies / frameworks are there for quality management?



- > What are quality awards?
- > What standards are there for quality management?
- > What are quality programmes?
- > What are quality characteristics?
- > What is the difference between an attribute and a variable?
- > What are quality tools?
- > How and when should tools be used?
- > What is Statistical Process Control (SPC)?
- > How do you measure quality using sampling and quantitative techniques?
- > What is process capability and stability?
- > What are the different sorts of SPC control charts for variables?
- > How can attributes be monitored with control charts?
- > When to use which charts?
- > How can statistical techniques become a strategic differentiator?
- > What is acceptance sampling used? When is it used?
- > What is the 'service concept'?
- > Differences between manufacturing quality and service quality?
- > How do you characterise service operations?
- > What are the dimensions of service quality?
- > What service quality tools exist?
- > How do you 'benchmark' your organisation's performance against others?
- > How to decide which quality dimensions are most important?
- > How do you plan quality maintenance: prevention, appraisal and failures?
- > How do you make processes more tolerant / capable?
- > What is a quality system?

Module Content:

	Session 1	Session 2
Week 1:	Introduction to Quality Management: <ul style="list-style-type: none">> Basic concepts> Definitions of quality> The characteristics of quality> The quality gurus> Cost of Quality	Video case study: Discussions
Week 2:	Quality Management: A Strategic Approach <ul style="list-style-type: none">> Vision, Mission> Internal and external customers> Quality function deployment> Functions and processes> Critical success factors	Case study: Executive Holloware



Week 3:	Methodology, Standards Awards and Programmes <ul style="list-style-type: none">> Six Sigma> EFQM> Kaizen, improvement teams, quality circles> ISO standards> Managing quality programmes	Case study: Eurocamp Travel
Week 4:	Quality Characteristics and Quality Tools <ul style="list-style-type: none">> Variables and attributes> The 7 basic quality tools	Visiting Speaker: to be confirmed
Week 5:	Statistical Techniques I: Statistical Process Control (SPC) – Variables <ul style="list-style-type: none">> Theory of measuring> Control Charts> Tolerance levels and capability levels> Capability Index	Game: Statistical Process Control
Week 6:	Statistical Techniques II: Statistical Process Control (SPC) – Attributes <ul style="list-style-type: none">> Tolerance and capability levels Acceptance Sampling <ul style="list-style-type: none">> Sampling Errors	Case Study: 'Handles and Hinges' Control charts
Week 7:	Service Quality <ul style="list-style-type: none">> The service concept> Basic service tools> The SERVQUAL tool> Benchmarking	Case Study: London Zoo
Week 8:	Poor Quality: Detection, Prevention and Recovery <ul style="list-style-type: none">> Performance versus importance> Measuring failure, reliability and availability> Failure, Mode and Effect Analysis (FMEA)> Design of Experiments	Case Study: Better Late and Happy than just Late
Week 9:	Revision Session	
Week 10:	Examination	

Corporate Connections:

It is planned that an expert guest speaker from industry will be invited to present a session

International Dimensions:

The module will explore the above questions using UK and international companies. It will build on theories developed from around the world: principally Japan, USA and Europe.

Contribution of Research:

Examples will be drawn from current research into quality management, lean thinking and six sigma practices.

Ethics, Responsibility & Sustainability:

The role of ethics, corporate social responsibility and sustainability will be discussed in the context of Quality Management.

Method of Teaching:

The module will involve **three** main components:

1. Lectures and Discussions

The first half of the session each week will be devoted to a lecture / discussion on quality management topics shown in the module timetable. You will be expected to come the session having completed the essential readings for the session and discuss issues arising.

2. Case Study and Analyses

In the second half of the session each week there will usually be a case study (or exercise) that will have to be analysed. **Students should have read and individually prepared the case study prior to attending the session.** In small groups you will then analyse the case and be prepared to present back to the class in a plenary at the end of the session. This enables the critical analyses of the case studies and shared experience of the group to be communicated. Groups are arranged by the lecturer, usually with the agreement of the students concerned. Groups usually comprise of 3 students with mixed experiences.

3. Individual Study

A reading list is given to supplement lectures which includes not only essential material (that directly backs up lecture notes), but also a list of books, periodicals and websites that

form recommended reading. The purpose of the recommended reading is to enable students to conduct their own research in preparation for assessments.

Method of Assessment and Feedback:

The assessment will be in two parts:

- (1) A two hour examination at the end of the module. This will be 70% of the total marks for the module.
- (2) An essay issued at the beginning of the module. This will be worth 30% of the total marks for the module.

Further details of each will be given at the start of the Term.

Generic cohort feedback about the assessments will be put on Blackboard after the Board of Examiners' has met.

Learning Hours:

Pre-reading	25
Contact Hours:	27
Private Study:	49
Exam preparation and coursework writing:	49
Total	150

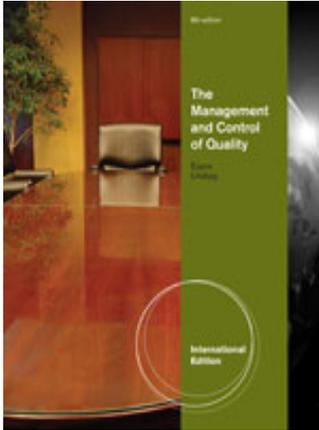
The following essential and recommended readings are subject to change. Students should not therefore purchase textbooks prior to commencing their course. If students wish to undertake background reading before starting the course, many of the chapters/readings are available in electronic form via on-line library catalogues and other resources.

Pre-reading:

Pre-reading can be done from any of the material on the essential reading list. Best to start with Chapter 13 from Paton, Clegg, Hsuan & Pilkington for an overview of the topic followed by further in-depth reading from Evans and Lindsay and then Foster for more advanced reading, particularly about the statistical elements.

Essential Reading:

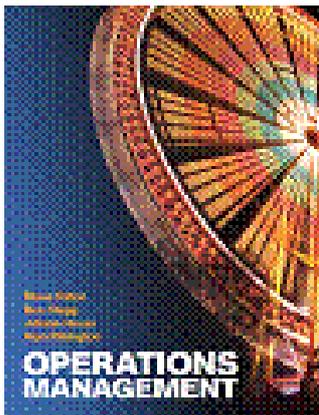
Books



The Management and Control of Quality,
James R. Evans, William M. Lindsay
2011.

ISBN-10: 0538452609
ISBN-13: 9780538452601

<http://www.cengage.com>



Paton, S, Clegg, B., Hsuan, J., Pilkington, A., 'Operations
Management'. McGraw Hill Education. Chapter 13.

ISBN 0077126173 and 978-0077126179
<http://www.mcgraw-hill.co.uk/html/0077126173.htm>

S.T. Foster, 'Managing Quality: An Integrative Approach'. International Edition. 2nd Edition.
Pearson Prentice Hall. 2004. Website <http://www.prenhall.com/foster>

Journal Papers and Cases

Omachonu V.K; Suthummanon S; Einspruch N.G (2004) The Relationship between
quality and quality cost for a manufacturing company. International Journal of Quality &
Reliability Management, Vol 21, (3). pp. 277-290.

Clegg, B and Tan, Boon (2007) Using QFD for e-business planning and analysis in a
micro-sized enterprise International Journal of Quality & Reliability Management. Vol 24
(8), pp813 – 828

Scholes, Kevin (2003) Executive Holloware Ltd In Johnston, R., Chambers, S., Harland, C., *et al* Cases in Operations Management. Harlow: FT Prentice Hall. 3rd Edition. Case 42, Case Date 1990. pp405-412 .

Chambers, Stuart and Crew, Jim (2003) Eurocamp Travel, in Johnston, R., Chambers, S., Harland, C., *et al* Cases in Operations Management. Harlow: FT Prentice Hall. 3rd Edition. Case 52. Case Date 1996. pp475-485

Parasuraman, A., Zeithaml, V. A. and Berry, L., L (1985) A Conceptual Model of Service Quality and Its Implications for Future Research Journal of Marketing, Vol.49 (4). pg 41-50

Zeithaml, V. A. and Barry, L., L ., Zeithaml, V. A and Parasuraman, A (1990) Five Imperatives for Improving Service Quality Sloan Management Review. Vol. 31 (4). pp. 29–38

Watt, Adrian and Chambers, Stuart (2003) “London Zoo”. in Johnston, R., Chambers, S., Harland, C., *et al* Cases in Operations Management. Harlow: FT Prentice Hall. 3rd Edition. Case 49, Case Date 1995. pp442-458

Slack, Nigel *et al*, (2001) "Case exercise: Better Late and Happy than just Late" in Operations Management. 3rd Edition. page 667, Harlow: FT Prentice Hall

Slack, Nigel *et al*, (2001) "Handles and Hinges" in Operations Management. 3rd Edition. page 589-591. Harlow: FT Prentice Hall

van der Wiele, Ton, Dale, Barrie and Williams, R., (2000) "ISO 9000 series and excellence models: Fad to Fashion to Fit" from n/a, Journal of general management. 25 (3) pp.50-66, UK: Braybrooke Press

Yilmaz, M.R. and Chatterjee, S., (2000) "Six Sigma beyond manufacturing-a concept for robust management" from n/a, IEEE Engineering Management Review 28 (4) pp.73-80, USA: IEEE Publications

Further Suggested Reading:

V.A. Zeithmal, A. Parasuraman and L.L. Berry, 'Delivering Quality Service: Balancing Customer Perception and Expectations'. 1990. Free Press. ISBN 0-029-357012

J Bicheno and P. Catherwood, 'Six Sigma and the Quality Toolbox'. 2005. PICSIE Books. ISBN-10: 0954124421 and ISBN-13: 978-0954124427.

J. Bicheno and M. Holweg, 'The Lean Toolbox: The Essential guide to Lean Transformation'. 4th Edition. ISBN 978-0-9541244-5-8 PICSIE Books 2009.

J.S. Oakland, 'TQM: Text with Cases'. 2003. 3rd Ed. Butterworth Heinemann. ISBN 0-7506-5740-5



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Journals for Further Research:

Total Quality Management (TQM) Journal

Total Quality Management and Business Excellence Journal

Benchmarking: an International Journal

International Journal of Quality and Reliability Management

Recommended Websites for Further Research:

European Federation of Quality Management – copies of the EFQM model
<http://www.efqm.org>

International Organization for Standardization - copies of ISO standards
<http://www.iso.org>

British Quality Foundation
<http://www.quality-foundation.co.uk>

American Centre for Quality
<http://www.asq.org>



For further information on any of the opportunities that Aston Business School offers, please contact:

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