

# The University Of Toledo

## Existing Graduate Course Modification Form

\* denotes required fields

Contact Person\*: P. S. Sundararaghavan Phone: 530-2456 (xxx - xxxx) Email: p.sundararaghavan@utoledo.

### Present

Supply all information asked for in this column.  
Supply core, research intensive and transfer module info if applicable)

College\*: College Business and Innovation ▼

Dept/Academic Unit\*:

Info Operations and Tech Management ▼

Course Alpha/Numeric\*: OPMT -  
8680

Course Title:

Total Quality Management And Spc

Credit hours: Fixed: 03 or Variable: to

**CrossListings:**

Insert

▲ To add a course, type in course ID and click the Insert button.  
▼ To remove a course, select the course on left and click the Remove button.

Remove

**Prerequisite(s)**(if longer than 50 characters, please place it in Catalog Description):

**Corequisite(s)**(if longer than 50 characters, please place it in Catalog Description):

### Proposed

Fill in appropriate blanks only where entry differs from first column.

College: College Business and Innovation ▼

Dept/Academic Unit:

Info Operations and Tech Management ▼

Course Alpha/Numeric: OSCM -  
8680

Course Title:

Quality Management and Six Sigma

Credit Hours: Fixed: 03 or Variable: to

**CrossListings:**

Insert

▲ To add a course, type in course ID and click the Insert button.  
▼ To remove a course, select the course on left and click the Remove button.

Remove

**Prerequisite(s)**(if longer than 50 characters, please place it in Catalog Description):

OPMT 5520 or OSCM 5520 with C or better

**Corequisite(s)**(if longer than 50 characters, please place it in Catalog Description):

**Catalog Description (only if changed) 75 words max:** **Catalog Description (only if changed) 75 words max:**

The course introduces students to the TQM philosophy, concepts and statistical theory behind the tools will be discussed. Provides students with an overall approach for the design of a system to manage quality and reliability along the entire value adding chain. Doctoral students will be assigned a significant project. Pre-requisites: OPMT 5520 FOR LEVEL GR WITH MIN. GRADE OF Of D-

The course introduces students to the TQM philosophy, concepts and statistical theory behind the tools will be discussed. It also addresses process improvement, lean, six sigma and related topics. Provides students with an overall approach for the design of a system to manage quality and reliability along the entire value chain. Pre-requisite: OSCM 5520 or OPMT 5520 FOR LEVEL GR WITH MIN. GRADE OF D-

Has course content changed?  Yes  No

If course content is changed, give a brief topical outline of the revised course below( less than 200 words)

Content was changed to fit the title and trend in quality management.

Proposed effective term\*:  ( e.g. 201140 for 2011 Fall)

File Type	View File
Syllabus	<a href="#">View</a>

List any course or courses to be deleted.

Effective Date:  








Effective Date:  

Comments/Notes:

**Rationale:**

In general, Operations and Supply Chain Management is a better description of the program we are doing and the name for the undergraduate major was changed in 2015 along with all courses renamed and modified as needed to OSCM from OPMT. We are carrying out a similar process for the graduate courses. That is OPMT will be phased out and OSCM will be used for courses in the area offered by the department.

**Approval:**

Department Curriculum Authority:	<input type="text" value="Bassam Hasan"/>	Date	<input type="text" value="2017/04/10"/>
			
Department Chairperson:	<input type="text" value="P. S. Sundararaghavan"/>	Date	<input type="text" value="2017/04/11"/>
			
College Curriculum Authority or Chair:	<input type="text" value="Michael Mallin"/>	Date	<input type="text" value="2017/04/11"/>
			
College Dean:	<input type="text" value="Anand S. Kunnathur"/>	Date	<input type="text" value="2017/04/11"/>
			
Graduate Council:	<input type="text" value="Constance Schall, GC mtg 5/2/17"/>	Date	<input type="text" value="2017/05/03"/>
			
Dean of Graduate Studies:	<input type="text" value="Amanda C. Bryant-Friedrich"/>	Date	<input type="text" value="2017/05/04"/>
			
Office of the Provost :	<input type="text" value="marcia king-blandford"/>	Date	<input type="text" value="2017/05/10"/>
			

**Administrative Use Only**

**Effective Date:**   (YYYY/MM/DD)

**CIP Code:**


**Subsidy Taxonomy:**

**Program Code:**

**Instructional Level:**

**Registrar's Office Use Only**

**Processed in Banner on:**

**Processed in Banner by:**

**Banner Subject Code:**

**Banner Course Number:**

**Banner Term Code:**

**Banner Course Title:**



# OSCM 8680 Quality Management and Six Sigma

The University of Toledo  
MBA, College of Business and Innovation  
OSCM 8680

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<b>Instructor:</b>	P. S. Sundararaghavan (Sundar)	<b>Term:</b>	Spring 2017
<b>Email:</b>	p.sundararaghavan@utoledo.edu	<b>Class Location:</b>	Savage Business Complex 2160
<b>Office Hours:</b>	2:00 to 7:00 PM Thursdays and by appointment	<b>Class Day/Time:</b>	7:20 to 9:50 PM Thursdays
<b>Office Location:</b>	Stranahan 4034	<b>Lab Location:</b>	NA
<b>Office Phone:</b>	419 530 2456. Cell 734 972 0982	<b>Lab Day/Time:</b>	NA
		<b>Credit Hours:</b>	03

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## COURSE/CATALOG DESCRIPTION

The course introduces students to the TQM philosophy, concepts and statistical theory behind the tools will be discussed. It also addresses process improvement, lean, six sigma and related topics. Provides students with an overall approach for the design of a system to manage quality and reliability along the entire value chain.

## OVERVIEW

This course will consider quality of products and services from different perspectives and discuss tools and methods to achieve and maintain highest level of quality. Statistical tools for quality management will also be emphasized.

## STUDENT LEARNING OUTCOMES

1. Overview of quality
2. Tools for designing quality (voice of the customer & market)
3. Tools for implementing quality: SQC and SPC
4. Tools for implementing & improving quality: Six Sigma and others
5. Process Improvement

## TEACHING STRATEGIES

*All classes will be face to face except for some pre-announced class discussions through the BB collaborate system. Case presentations, project presentations and professional presentations will be used as needed. Email, Blackboard collaborate, and office meetings may be used. Students with specific academic learning issues may call my office or cell during reasonable times. Other learning activities like games may be used.*

## PREREQUISITES AND COREQUISITES

*OPMT 5520 or BUAD 3020 or equivalent.*

## REQUIRED TEXTS AND ANCILLARY MATERIALS

**Text:** Fundamentals of Quality Control and Improvement, Amitava Mitra, 4<sup>th</sup> edition, John Wiley. (2016).

Readings:

1. Innovating Lean Six Sigma by Kimberly Watson-Hemphill, Mvgraw Hill (2016)



2. Best Practices in Lean Six Sigma Process Improvement A deeper look by Richard J. Schonberger, John Wiley.
3. The Lean Turnaround: Art Byrne, McGrawHill

### TECHNOLOGY REQUIREMENTS

Blackboard, accessing Blackboard collaborate (within BB), statistical packages available in the COBI computer labs.

### UNIVERSITY POLICIES

Policy Statement on Non-Discrimination on the basis of Disability (ADA)

The University is an equal opportunity educational institution. Please read [The University's Policy Statement on Nondiscrimination on the Basis of Disability Americans with Disability Act Compliance](#).

### Academic Accommodations

The University of Toledo is committed to providing equal access to education for all students. If you have a documented disability or you believe you have a disability and would like information regarding academic accommodations/adjustments in this course please contact the [Student Disability Services Office](#).

### ACADEMIC POLICIES

Important points:

1. Attend all classes. (Attendance will be taken every day. Participation and attendance will be graded and included in the overall course grade.
2. Check Blackboard and your emails from me regularly.
3. Anticipate the skills/knowledge you will be tested on.
4. Feel free to ask me questions in class or make me go over materials you do not understand,
5. Visit with me during office hours, call me when needed urgently, etc.

The syllabus may be modified to improve effectiveness and meet the needs of the course. **No make-up exams will be given, unless you have an extreme emergency on the day of the exam (some supporting documents required). Contact me as soon as possible. COBI student code of conduct will be followed.**

### COURSE EXPECTATIONS

You are expected to submit assignments on time and take exams as per schedule and attend all classes and participate in all classes. If there are any extraordinary problems contact me as soon as possible.

### GRADING

Item	Points
Midterm exam	250
Final exam	250
Cases, quizzes, HW, in-class activities, Games, in-class presentations, participation, etc.	250



Term project: Research based term project required for this course.	250
Total	1000

Points distribution may be adjusted slightly to keep up with the amount of coverage and variance in emphasis/interests, etc. Full disclosure will be made if any changes are done.

**Midterm Grading**

*Midterm test grade is a reasonable reflection of your current status in the course.*

**Final Grading**

Score range (%)	Letter grade	Score range (%)	Letter grade	Score range (%)	Letter grade	Score range (%)	Letter grade
93-100	A	83.3-86.6	B	73.3-76.6	C	63.3-66.6	D
90-93.0	A-	80.0 - 83.2	B-	70.0-73.2	C-	60-63.2	D-
86.7-89.9	B+	76.7-79.9	C+	66.7-69.9	D+	< 60.0	F

**COMMUNICATION GUIDELINES**

*Email is the best way to get to communicate. You can call my cell number if there is an urgency at reasonable times. Emails will be replied within 48 hours.*

**STUDENT SUPPORT SERVICES**

*See me in my office hours or request an appointment.*

**COURSE SCHEDULE**

<u>Date</u>	<u>Topic</u>	<u>Chapter</u>
01/12/17 Th	Introduction to quality control and total quality system and Some philosophies and their impact on quality	1 and 2
01/19/17 Th	Quality Management, practices, tools and standards	3
01/26/17 Th	Fundamental of statistics: Review and a quality Game	4
02/02/17 Th	Data analysis and sampling	5
02/09/17 Th	Statistical process control using control charts	6
02/16/17 Th	Control chart for variables	7
02/23/17 Th	Catch up and review	



03/02/16 Th	Review as needed and Midterm (a one page cheat sheet 8.5 by 11 both sides will be allowed.)	
March 6-10, 2017	<b>Spring Break</b>	
03/16/17 Th	Initial Project Presentation and Control chart for attributes	8
03/23/17 Th	Process capability analysis	9
03/30/17 Th	Acceptable sampling plans for attributes and variables & project presentations	10
04/06/17 Th	Process Improvement and Six Sigma	Notes and outside readings
04/13/17 Th	Process Improvement and Six Sigma	Notes and readings
04/20/17 Tu	Quality in service industry and Quality Strategy & project presentations	Notes/case
04/27/17 Th	Review Reliability, Experimental design and Taguchi method & Project Presentations	11 and 12
<b>Final exam Tuesday May 04, 2017, Tuesday 7:30 to 9:30 PM</b> (a one page cheat sheet 8.5 by 11 both sides will be allowed.)		

**Details of presentations, in-class case discussions and homework will be given on an as needed basis.**