

Tamkang University Academic Year 105, 2nd Semester Course Syllabus

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| Course Title | SIX SIGMA MANAGEMENT | Instructor | HSU-HUA LEE |
| Course Class | TLGXD1A DOCTORAL PROGRAM, DEPARTMENT OF MANAGEMENT SCIENCES, 1A | Details | <ul style="list-style-type: none"> ◆ Selective ◆ One Semester ◆ 3 Credits |
| Departmental Aim of Education | | | |
| <ul style="list-style-type: none"> I. Become proficient at Management Sciences skills. II. Learn about self-development and personal growth. III. Make connections between theory and practice. IV. Enhance team cooperation and communication. V. Cultivate analytical and decision making skills. VI. Value the sustainable operation of organizations. | | | |
| Departmental core competences | | | |
| <ul style="list-style-type: none"> A. Decision-making analysis ability. B. Statistical analysis ability. C. Finance and economics analysis ability. D. Organizational business management ability. E. Teamwork ability. F. Self-management ability. G. Ethics application ability. | | | |
| Course Introduction | To learn the practice and the research about Six Sigma Management using the approach of DMAIC | | |
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The Relevance among Teaching Objectives, Objective Levels and Departmental core competences

I.Objective Levels (select applicable ones) :

- (i) Cognitive Domain : C1-Remembering, C2-Understanding, C3-Applying,
C4-Analyzing, C5-Evaluating, C6-Creating
- (ii) Psychomotor Domain : P1-Imitation, P2-Mechanism, P3-Independent Operation,
P4-Linked Operation, P5-Automation, P6-Origination
- (iii) Affective Domain : A1-Receiving, A2-Responding, A3-Valuing,
A4-Organizing, A5-Charaterizing, A6-Implementing

II.The Relevance among Teaching Objectives, Objective Levels and Departmental core competences :

- (i) Determine the objective level(s) in any one of the three learning domains (cognitive, psychomotor, and affective) corresponding to the teaching objective. Each objective should correspond to the objective level(s) of ONLY ONE of the three domains.
- (ii) If more than one objective levels are applicable for each learning domain, select the highest one only. (For example, if the objective levels for Cognitive Domain include C3,C5,and C6, select C6 only and fill it in the boxes below. The same rule applies to Psychomotor Domain and Affective Domain.)
- (iii) Determine the Departmental core competences that correspond to each teaching objective. Each objective may correspond to one or more Departmental core competences at a time. (For example, if one objective corresponds to three Departmental core competences: A,AD, and BEF, list all of the three in the box.)

| No. | Teaching Objectives | Relevance | |
|-----|-----------------------------------------------------------------------------------------------|------------------|-------------------------------|
| | | Objective Levels | Departmental core competences |
| 1 | To learn the practice and the research about Six Sigma Management using the approach of DMAIC | C4 | AB |

Teaching Objectives, Teaching Methods and Assessment

| No. | Teaching Objectives | Teaching Methods | Assessment |
|-----|-----------------------------------------------------------------------------------------------|----------------------------------------------------------------|----------------------------------|
| 1 | To learn the practice and the research about Six Sigma Management using the approach of DMAIC | Lecture, Discussion, Practicum, Visit, Problem solving, Speech | Practicum, Report, Participation |
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This course has been designed to cultivate the following essential qualities in TKU students

| Essential Qualities of TKU Students | Description |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| ◇ A global perspective | Helping students develop a broader perspective from which to understand international affairs and global development. |
| ◇ Information literacy | Becoming adept at using information technology and learning the proper way to process information. |
| ◆ A vision for the future | Understanding self-growth, social change, and technological development so as to gain the skills necessary to bring about one's future vision. |
| ◇ Moral integrity | Learning how to interact with others, practicing empathy and caring for others, and constructing moral principles with which to solve ethical problems. |
| ◆ Independent thinking | Encouraging students to keenly observe and seek out the source of their problems, and to think logically and critically. |
| ◇ A cheerful attitude and healthy lifestyle | Raising an awareness of the fine balance between one's body and soul and the environment; helping students live a meaningful life. |
| ◇ A spirit of teamwork and dedication | Improving one's ability to communicate and cooperate so as to integrate resources, collaborate with others, and solve problems. |
| ◇ A sense of aesthetic appreciation | Equipping students with the ability to sense and appreciate aesthetic beauty, to express themselves clearly, and to enjoy the creative process. |

Course Schedule

| Week | Date | Subject/Topics | Note |
|------|--------------------------|--------------------------------------|------|
| 1 | 106/02/13 ~ 106/02/19 | Introduction to six sigma management | |
| 2 | 106/02/20 ~ 106/02/26 | DMAIC definition | |
| 3 | 106/02/27 ~ 106/03/05 | Define phase (1) VOC | |
| 4 | 106/03/06 ~ 106/03/12 | Define phase (2) QFD | |
| 5 | 106/03/13 ~ 106/03/19 | Define phase (3) Kano Model | |
| 6 | 106/03/20 ~ 106/03/26 | Measure phase (1) FMEA | |
| 7 | 106/03/27 ~ 106/04/02 | Measure phase (2) C&E Matrix | |
| 8 | 106/04/03 ~ 106/04/09 | Measure phase (3) Measurement | |
| 9 | 106/04/10 ~ 106/04/16 | Define and Measure Study | |
| 10 | 106/04/17 ~ 106/04/23 | Midterm Exam Week | |
| 11 | 106/04/24 ~ 106/04/30 | Analyze phase (1) basic analysis | |
| 12 | 106/05/01 ~ 106/05/07 | Analyze phase (2) Analysis method | |

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| 13 | 106/05/08 ~ 106/05/14 | Improve phase (1)/ join the conference in May held by Department of Management Sciences | |
| 14 | 106/05/15 ~ 106/05/21 | Improve phase (2) | |
| 15 | 106/05/22 ~ 106/05/28 | Control phase | |
| 16 | 106/05/29 ~ 106/06/04 | Invite for Speech | |
| 17 | 106/06/05 ~ 106/06/11 | Outgoing teaching by joining the conference or visiting company/ field trip | |
| 18 | 106/06/12 ~ 106/06/18 | Final exam week | |
| Requirement | Pay attention to attendance, attention, and assignment | | |
| Teaching Facility | Computer | | |
| Textbook(s) | Quality management, six sigma management | | |
| Reference(s) | Six sigma management related papers and books | | |
| Number of Assignment(s) | (Filled in by assignment instructor only) | | |
| Grading Policy | ◆ Attendance : 15.0 % ◆ Mark of Usual : 15.0 % ◆ Midterm Exam : 30.0 % ◆ Final Exam : 40.0 % ◆ Other < > : % | | |
| Note | This syllabus may be uploaded at the website of Course Syllabus Management System at http://info.ais.tku.edu.tw/csp or through the link of Course Syllabus Upload posted on the home page of TKU Office of Academic Affairs at http://www.acad.tku.edu.tw/CS/main.php . ※ Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications. | | |