

**OFF-CAMPUS PROGRAM ASSESSMENT
ASSESSMENT ACTIVITIES
Spring 2009**

Degree Program:	MBA/MSSE	Location:	Rose Orchard Tech Center
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SCHEDULE OF ASSESSMENT ACTIVITIES

Please complete the schedule of assessment activities below by listing all Program Outcomes (POs) by number down the left column and indicating when data were/will be collected (C) and when they were/will be discussed (D) by your faculty. You can also schedule/track program changes resulting from your assessment activities by indicating an "I" (implemented changes) where relevant. This schedule is meant to be fluid; providing a proposed schedule for future assessment while at the same time, providing a record of your efforts as the program planning cycle progresses.

	F07	S08	F08	S09	F09	S10	F10	S11	F11	S12	F12
PO 1	CD	CD	CD	CD	CDI	CDI	CDI	CDI	CDI	CDI	CDI
PO 2	CD	CD	CD	CD	CDI	CDI	CDI	CDI	CDI	CDI	CDI
PO 3		CD	CD		CDI	CDI	CDI			CDI	CDI
PO 4		CD				CDI					
PO 5		CD				CDI					
PO 6		CD	CD	CD	CDI	CDI	CDI	CDI	CDI	CDI	CDI
Cohort 10			295A 295B 297								
Cohort 12	272	202 203	273	275	295A 297		295B				
Cohort 16					272	202 203	273	275	297	295A	295B

Program Assessment Coverage

	202	203	272	273	275	295A	295B	297
PO 1	X		X	X	X	X	X	X
PO 2	X		X	X	X	X	X	X
PO 3		X				X	X	
PO 4		X						
PO 5		X						
PO 6	X	X	X		X	X	X	X

Student Learning Outcome 1

Be able to demonstrate an understanding of advanced knowledge of the practice of software engineering, from vision to analysis, design, validation and deployment.
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I. Data Collection:

[Fall 2007] CMPE 272

- Performance data - exams, case studies
- Indirect measurement - course survey, group discussion, and individual meetings
- Results - Instructor in one section (32 students), gave midterm and exams. Exam results indicated that 63% earned an A, 16% A-, 19% B+ and 3% B

[Spring 2008] CMPE 202

- Performance data – exams and tests, homework assignments, and projects
- Indirect measurement - course survey, group discussion, and individual meetings
- Results - Instructor in one section (27 students), gave midterm and exams. Exam results indicated that 52% earned an A, 19% A-, 19% B and 11% C

[Spring 2008] CMPE 203

- Performance data – exams, team presentations, in class exercises and individual research papers.
- Indirect measurement - course survey, group discussion, and individual meetings
- Results - Instructor in one section (24 students), gave midterm and exams. Exam results indicated that 46% earned an A, 13% A-, 8% B+ and 33% B

[Fall 2008] CMPE 273

- Performance data – exams and projects
- Indirect measurement – lecture and class discussion, observed during class discussion and evaluation of written portion of the project submissions, Course survey, group discussion, and individual meetings, and, Non-graded in-class labs (JMS, RMI, WS-SOAP)
- Results - Instructor in one section (26 students), gave 21 (81%) students A, 3 (12%) B+, and 2 (8%) B.

[Fall 2008] CMPE 297

- Performance data - 4 in-class tests, final exam, and project reports and project presentations
- Indirect measurement - group discussion, and individual meetings
- Results - Instructor in one section (18 students), gave 13 (72%) students A, and 5 (18%) A-.

[Summer 2008] CMPE 295A

- Performance data – project reports and project presentations
- Indirect measurement - course survey,
- Results – 84% of students learned more than 90% of “continuing to apply the principles of business and linking them with engineering solution in terms of products and /or services”
50% of students learned more than 90% vs 95% of them indicated very important to learn the CLO: ”
Understanding system engineering functions through the product and/or service”
Instructor in one section (24 students), gave 18 (75%) students A, and 6 (25%) A-.

[Fall 2008] CMPE 295B

- Performance data – project reports and project presentations
- Indirect measurement - course survey
- Results - Instructor in one section (24 students), gave 18 (75%) students A, 17 (2%) A-, 1 (4%) B, and 1 (4%) I.

[Spring 2009] CMPE 275

- Performance data – homework, team project, exam
- Indirect measurement - course survey
- Results - Instructor in one section (23 students), gave 8 (75%) students A, 8 (2%) A-, 2 (4%) B+, and 5 (4%) B.

II. What have you learn about this Student Learning Outcome?

Through a sequence of software engineering courses, students demonstrated their understanding of advanced knowledge of the practice of computer engineering from vision to analysis, design, and validation.

According to the assessment results of the Course Learning Objectives, this Student Learning Objective is considered “Achieved”. Although this Student Learning Outcome is considered “Achieved”, there are still some rooms for improvement.

- The system engineering function is not understood and not applied in the projects.
- Due to the limitation of operational environment, not all students can demonstrate fully their capability of deployment.
- Concepts of testing and strategic architecture concepts require additional emphasis for future classes.
- Students understand the significance of emerging technologies in software engineering and conduct independent research on specific technologies.

III. Action Item(s) (if necessary):

- Instructors of CMPE 202 and CMPE 203 should explain to the students the synergy between system engineering and software engineering.
- More joined industry projects will enhance the students' capability of deployment.
- Provide exercises that are specific to the use of metrics in project management.
- Engage student presentations with exposure to new methodologies such as Scrum and Lean Development.
- Stronger emphasis on OO/A/D concepts with small group interaction and discussion
- Stronger emphasis on testing with lecture/discussion feedback

Student Learning Outcome 2

Be able to tackle complex engineering problems and tasks, using contemporary engineering principles, methodologies and tools.

I. Data Collection:

[Fall 2007] CMPE 272

- Performance data - exams, case studies
- Indirect measurement - course survey, group discussion, and individual meetings
- Results - Instructor in one section (32 students), gave midterm and exams. Exam results indicated that 63% earned an A, 16% A-, 19% B+ and 3% B

[Spring 2008] CMPE 202

- Performance data – exams and tests, homework assignments, and projects
- Indirect measurement - course survey, group discussion, and individual meetings
- Results - Instructor in one section (27 students), gave midterm and exams. Exam results indicated that 52% earned an A, 19% A-, 19% B and 11% C

[Spring 2008] CMPE 203

- Performance data – exams, team presentations, in class exercises and individual research papers.
- Indirect measurement - course survey, group discussion, and individual meetings
- Results - Instructor in one section (24 students), gave midterm and exams. Exam results indicated that 46% earned an A, 13% A-, 8% B+ and 33% B

[Fall 2008] CMPE 273

- Performance data – exams and projects
- Indirect measurement – lecture and class discussion, observed during class discussion and evaluation of written portion of the project submissions, Course survey, group discussion, and individual meetings, and, Non-graded in-class labs (JMS, RMI, WS-SOAP)
- Results - Instructor in one section (26 students), gave 21 (81%) students A, 3 (12%) B+, and 2 (8%) B.

[Fall 2008] CMPE 297

- Performance data - 4 in-class tests, final exam, and project reports and project presentations
- Indirect measurement - group discussion, and individual meetings
- Results - Instructor in one section (18 students), gave 13 (72%) students A, and 5 (18%) A-.

[Fall 2008] CMPE 295A

- Performance data – project reports and project presentations
- Indirect measurement - 65% of students learned more than 90% of "continuing to enhance the ability to apply theory and analysis for problem solving and synthesis and integrate information in the engineering and business processes"
- Results - Instructor in one section (24 students), gave 18 (75%) students A, and 6 (25%) A-.

[Fall 2008] CMPE 295B

- Performance data – project reports and project presentations
- Indirect measurement - course survey
- Results - Instructor in one section (24 students), gave 18 (75%) students A, 17 (2%) A-, 1 (4%) B, and 1 (4%) I.

[Spring 2009] CMPE 275

- Performance data – homework, team project, exam

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- Indirect measurement - course survey
- Results - Instructor in one section (23 students), gave 8 (75%) students A, 8 (2%) A-, 2 (4%) B+, and 5 (4%) B.

II. What have you learn about this Student Learning Outcome?

- Students demonstrated general concepts, practical experience to solve software engineering problems with emerging software technologies such as distributed systems, software components, Web engineering, etc.
- Although this Student Learning Outcome is considered "Achieved", there are still some rooms for improvement.

[Spring 2009] CMPE 275 (Cohort 10)

- Considering the limited duration of this class, the instructor use two ways to teach and evaluate students' capabilities on tackle complex engineering problems and tasks using contemporary engineering principles, methodologies and tools.
- Assign students to work a selected team project, which requires them to learn, study, analyze the emerging issues and solutions in modern component engineering.
- Given students a take-home exam and an open-book exam to ask them to work on the given exam questions. These exams require them to learn and identify new engineering issues and problems in building complex components, and explore emerging solutions and methods to cope with these issues.
- Based on the received results, students demonstrated their satisfactory capability

III. Action Item(s) (if necessary):

- Reinforce each student's understanding of object-oriented paradigm through design patterns and refactorings.
- Ensure all students have sufficient background in object-oriented programming, data structures, and algorithm design before taking CMPE 202.
- Stronger emphasis on OO/A/D concepts with small group interaction and discussion
- Stronger emphasis on testing with lecture/discussion feedback

Student Learning Outcome 3

Be able to demonstrate leadership and the ability to participate in teamwork in an environment with different disciplines of engineering, science and business.

I. Data Collection:

[Spring 2008] CMPE 203

- Performance data – exams, team presentations, in class exercises and individual research papers.
- Indirect measurement - course survey, group discussion, and individual meetings
- Results - Instructor in one section (24 students), gave midterm and exams. Exam results indicated that 46% earned an A, 13% A-, 8% B+ and 33% B

[Fall 2008] CMPE 295A

- Performance data – project reports and project presentations
- Indirect measurement - 65% of students learned more than 90% of “continuing to enhance and improve students ability to collaborate with their colleagues in various disciplines in engineering, science, and business
- Results - Instructor in one section (24 students), gave 18 (75%) students A, and 6 (25%) A-.

[Fall 2008] CMPE 295B

- Performance data – project reports and project presentations
- Indirect measurement - course survey
- Results - Instructor in one section (24 students), gave 18 (75%) students A, 17 (2%) A-, 1 (4%) B, and 1 (4%) I.

II. What have you learn about this Student Learning Outcome?

According to the assessment results of the Course Learning Objectives of CMPE 203, 295a, and 295B, this Student Learning Objective is considered “Achieved”.

III. Action Item(s) (if necessary):

None.

Student Learning Outcome 4

Be aware of ethical, economic and environmental implications of their work, as appropriate.

I. Data Collection:

[Spring 2008] CMPE 203

- Performance data – exams, team presentations, in class exercises and individual research papers.
- Indirect measurement - course survey, group discussion, and individual meetings
- Results - Instructor in one section (24 students), gave midterm and exams. Exam results indicated that 46% earned an A, 13% A-, 8% B+ and 33% B

II. What have you learn about this Student Learning Outcome?

CMPE 203 has a course assessment report to state its assessment its assessment results. It has established several Course Learning Objectives. Course Learning Objectives of three courses have contributed to this Student Learning Objective.

According to the assessment results of the Course Learning Objectives, this Student Learning Objective is considered "Achieved".

III. Action Item(s) (if necessary):

None.

Student Learning Outcome 5

Be able to advance successfully in the engineering profession, and sustain a process of life-long learning in engineer or other professional areas.

I. Data Collection:

[Fall 2007] CMPE 272

- Performance data - exams, case studies
- Indirect measurement - course survey, group discussion, and individual meetings
- Results - Instructor in one section (32 students), gave midterm and exams. Exam results indicated that 63% earned an A, 16% A-, 19% B+ and 3% B

[Spring 2008] CMPE 202

- Performance data – exams and tests, homework assignments, and projects
- Indirect measurement - course survey, group discussion, and individual meetings
- Results - Instructor in one section (27 students), gave midterm and exams. Exam results indicated that 52% earned an A, 19% A-, 19% B and 11% C

[Spring 2008] CMPE 203

- Performance data – exams, team presentations, in class exercises and individual research papers.
- Indirect measurement - course survey, group discussion, and individual meetings
- Results - Instructor in one section (24 students), gave midterm and exams. Exam results indicated that 46% earned an A, 13% A-, 8% B+ and 33% B

II. What have you learn about this Student Learning Outcome?

CMPE 202, 203, and 272 have contributed to this Student Learning Objectives. Each course has a course assessment report to state its assessment its assessment results. Each course has established several Course Learning Objectives. Course Learning Objectives of three courses have contributed to this Student Learning Objective.

According to the assessment results of the Course Learning Objectives, this Student Learning Objective is considered "Achieved".

III. Action Item(s) (if necessary):

None.

Student Learning Outcome 6

Be able to communicate effectively, in both oral and written forms.

I. Data Collection:

[Fall 2007] CMPE 272

- Performance data - exams, case studies
- Indirect measurement - course survey, group discussion, and individual meetings
- Results - Instructor in one section (32 students), gave midterm and exams. Exam results indicated that 63% earned an A, 16% A-, 19% B+ and 3% B

[Spring 2008] CMPE 202

- Performance data – exams and tests, homework assignments, and projects
- Indirect measurement - course survey, group discussion, and individual meetings
- Results - Instructor in one section (27 students), gave midterm and exams. Exam results indicated that 52% earned an A, 19% A-, 19% B and 11% C

[Spring 2008] CMPE 203

- Performance data – exams, team presentations, in class exercises and individual research papers.
- Indirect measurement - course survey, group discussion, and individual meetings
- Results - Instructor in one section (24 students), gave midterm and exams. Exam results indicated that 46% earned an A, 13% A-, 8% B+ and 33% B

[Summer 2008] CMPE 297

- Performance data - project reports and project presentations
- Indirect measurement - group discussion, and individual meetings
- Results - Instructor in one section (18 students), gave 13 (72%) students A, and 5 (18%) A-.

[Summer 2008] CMPE 295A

- Performance data – Project report and project presentations
- Indirect measurement - course survey, 75% of students learned more than 90% of "effective communication of problem analysis and solutions" and "delivering effective presentations of engineering and business activities in written and oral formats"
- Results - Instructor in one section (24 students), gave 18 (75%) students A, and 6 (25%) A-.

[Fall 2008] CMPE 295B

- Performance data – project reports and project presentations
- Indirect measurement - course survey
- Results - Instructor in one section (24 students), gave 18 (75%) students A, 17 (2%) A-, 1 (4%) B, and 1 (4%) I.

[Spring 2009] CMPE 275

- Performance data – homework, team project, exam
- Indirect measurement - course survey
- Results - Instructor in one section (23 students), gave 8 (75%) students A, 8 (2%) A-, 2 (4%) B+, and 5 (4%) B.

II. What have you learn about this Student Learning Outcome?

These seven courses have contributed to this Student Learning Objectives. Each course has a course assessment report to state its assessment its assessment results. Each course has established several Course Learning Objectives. Course Learning Objectives of these courses have contributed to this

Student Learning Objective.

According to the assessment results of the Course Learning Objectives, this Student Learning Objective is considered "Achieved".

III. Action Item(s) (if necessary):

- None.