

**UNDERGRADUATE  
COURSE AND CURRICULUM CHANGES**

**APPROVED BY THE  
COLLEGE OF TECHNOLOGY AND AVIATION FACULTY**

**November 18, 2008  
12:30 p.m. in STC 118**

**NON-EXPEDITED APPROVAL PROPOSAL**

**IMPACT STATEMENT:** These proposed changes do not impact other colleges.

## DEPARTMENT OF AVIATION

### NEW COURSES:

- ADD:** **PPIL 270. Introduction to Unmanned Aerial Systems.** (3) I. Introduction to the history of Unmanned Aerial Systems (UAS) and survey of current UAS platforms, terminology, challenges to airspace integration and operational theory. Pr.: PPIL 111, PPIL 113.
- RATIONALE:** This course will provide all students with a critical knowledge base from which to build as they further their UAS study.
- IMPACT:** No impact on any other department.
- EFFECTIVE DATE:** Fall 2009
- ADD:** **PPIL 360. Unmanned Aerial Systems I.** (3) I. UAS mission planning and operations, to include communication, mission planning, navigation, launch/recovery procedures and ground control station operations. Two hours lec. and two hours lab a week. Pr.: PPIL 112. Coreq.: PPIL 270.
- RATIONALE:** Provides the student's first exposure to core operational concepts critical to UAS platform integration.
- IMPACT:** No impact on any other department.
- EFFECTIVE DATE:** Fall 2009
- ADD:** **PPIL 460. Unmanned Aerial Systems II.** (3) II. Advanced UAS planning and operations. Topics include normal/abnormal and emergency procedures, safety/air vehicle pilot checklist procedures, and software-in-the-loop/hardware-in-the-loop simulated missions. Two hours lec. and two hours lab a week. Pr.: PPIL 360.
- RATIONALE:** Provides the culminating experience and final assessment platform for the UAS certificate program.
- IMPACT:** No impact on any other department.
- EFFECTIVE DATE:** Fall 2009
- ADD:** **PPIL 109. Private Pilot Glider.** (3) II. The subject areas necessary for completion and passing of the FAA Private Pilot Written Knowledge Test for Gliders are presented.
- RATIONALE:** Increases the flight opportunities available to our students including non-PPIL majors.
- IMPACT:** No impact on any other department.
- EFFECTIVE DATE:** Fall 2009
- ADD:** **PPIL 442. Advanced Air Traffic Control.** (3) An in-depth study of tower, TRACON, and enroute procedures. Also examines the FAA's future air navigation system concept. Pr.: PPIL 240, PPIL 112.
- RATIONALE:** Increases the aviation education opportunities available to our students and is necessary for the ATC certificate program.
- IMPACT:** No impact on any other department.
- EFFECTIVE DATE:** Fall 2009

**ADD:** **PPIL 461. Airport Planning and Management.** (3) An overview of the Federal Aviation Regulation Part 139 airport design standard and airport master planning process. Includes a study of the role of the airport in community development. Major course project required. Pr.: PPIL 111, PPIL 113, consent of Instructor.

**RATIONALE:** Increases the aviation education opportunities available to our students including non-PPIL majors and is necessary for the Airport Management certificate program.

**IMPACT:** No impact on any other department.

**EFFECTIVE DATE:** Fall 2009

**ADD:** **PPIL 464. Airport Certified Manager.** (1) Guided Study for the American Association of Airport Executives (AAAE) Certified Manager (CM) test. One hour lab a week. Pr.: PPIL 250, PPIL 430, PPIL 440, PPIL 445, PPIL 460, consent of Instructor.

**RATIONALE:** Increases the aviation education opportunities available to our students including non-PPIL majors and is necessary for the Airport Management certificate program.

**IMPACT:** No impact on any other department.

**EFFECTIVE DATE:** Fall 2009

**ADD:** **AVM 316. AET and FCC Training.** (1) A self-paced lab that allows students to prepare for their Aviation Electronics Technician certificate and their Federal Communication Commission license in Elements 1, 3 and 8. This is a credit/no-credit course and will not affect the student's GPA. Two hours lab a week.

**RATIONALE:** This course addition will give the students the opportunity to obtain the avionics endorsements. Although self-studying, there will be a faculty member there to assist the student.

**IMPACT:** No impact on any other department. Laser Grade is already equipped to give the FCC and AET exams.

**EFFECTIVE DATE:** Fall 2009

**ADD:** **AVM 415. Aviation Maintenance Management.** (3) II. Provides an understanding of general aviation and commercial aviation maintenance programs. Includes regulations, maintenance levels, technical publications, quality assurance, inspections, human factors, and unions. Provides an understanding of the difficulties in managing a line operation. Case studies of maintenance scenarios are used.

**RATIONALE:** This course addition will expand offered electives and help give career options to our students.

**IMPACT:** No impact on any other department.

**EFFECTIVE DATE:** Fall 2009

## **NEW CERTIFICATE PROGRAM**

### **Unmanned Aerial Systems (UAS) Operators Certificate**

1) Purpose:

This certificate program provides students with solid foundational knowledge in the emerging and rapidly growing field of Unmanned Aerial Systems. It builds on a basic knowledge of aviation flight theory and application and prepares students for future positions in which they will operate or coordinate the operation of unmanned aerial systems.

Prerequisites for courses in this certificate necessitate basic airman certification and training by the FAA or its International Civil Aviation Organization (ICAO) member equivalent agency.

This certificate program enhances student opportunities at K-State by allowing them to take advantage of growing career opportunities previously unavailable to them.

2) Requirements:

PPIL 270 Introduction to Unmanned Aerial Systems (3)

PPIL 360 Unmanned Aerial Systems I (3)

PPIL 460 Unmanned Aerial Systems II (3)

3) Desired outcomes:

The UAS Certificate Program prepares students to:

- a. Demonstrate the skills necessary to safely integrate the operation of Unmanned Aerial Systems into the national and international airspace systems.
- b. Understand the complexities of unmanned aerial systems integration into the airspace system and realize the hazards to air navigation if accomplished improperly.

4) Assessment procedures:

- a. Students shall demonstrate satisfactory subject matter mastery by maintaining a GPA of 3.0 for courses within the certificate program.
- b. In the final course (Unmanned Aerial Systems II) of the certificate program each student is required to pass a final comprehensive practical and written examination during which the students demonstrate, in an actual or electronically simulated environment, the procedures necessary to plan, execute (to include launch and recovery), and complete a successful mission involving using an unmanned aerial system to include payload integration.
- c. Full assessment plan is attached.

5) Estimated budget and staff required:

Budgetary and staff impacts shall be minimal, since existing part-time faculty members will be used to deliver the required courses. In addition, existing department faculty possess the skills necessary to deliver the certificate course content if needed. Resources for this program will be supported by resources from the K-State Unmanned Aerial Systems Office.

**Degree Program**  
**Assessment of Student Learning Plan**  
**Department of Aviation**  
**Unmanned Aerial Systems (UAS) Operators Certificate**  
Kansas State University

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**College, Department, and Date**

College: Technology and Aviation  
Department: Aviation  
Date: 10 October 2008

**Contact Person(s) for the Assessment Plans**

Dr. Kurt Barnhart (785) 826-2972

Degree Program

Certificate Program in Unmanned Aerial Systems Operation

Assessment of Student Learning Three-Year Plan

**1. Student Learning Outcome(s)**

**a. List (or attach a list) all of the student learning outcomes for the program.**

Graduates of the Unmanned Aerial Systems Operators Certificate Program will be prepared to:

- Demonstrate the skills necessary to safely integrate the operation of Unmanned Aerial Systems into the national and international airspace systems.
- Understand the complexities of unmanned aerial systems integration into the airspace system and realize the hazards to air navigation if accomplished improperly.
- Understand and be able to convey the role unmanned aerial systems play in industrial, military, and homeland security missions.

**b. Identify outcomes that will be assessed in the first three years of the plan.**

*All SLOs will be assessed during the first three years of the program.*

*Relationship to K-State Student Learning Outcomes (insert the program SLOs and check all that apply):*

Program SLOs	University-wide SLOs (Undergraduate Programs)					Program SLO is conceptually different from university SLOs
	Knowledge	Critical Thinking	Communication	Diversity	Academic / Professional Integrity	
1.	X	X				No
2.	X	X	X			No
3.	X	X	X			No

**2. How will the learning outcomes be assessed? What groups will be included in the assessment?**

*[Briefly describe the assessment tools, measures, or forms of evidence that will be utilized to demonstrate students' accomplishment of the learning outcomes selected in the three-year plan. Also indicate whether each measure is direct or indirect. If you are unsure, then write "Unsure of measurement type". There is an expectation that half of the assessment methods/measures will be direct measures of student learning (see Measures, Rubrics, & Tools for Assessing Student Learning Outcomes on the APR website for examples of direct and indirect measures).]*

SLO	MEASURES		WHO IS ASSESSED?
	DIRECT	INDIRECT	
Airspace Integration Skills	<ol style="list-style-type: none"> <li>1. Student Self report after completion of PPIL 460</li> <li>2. Cumulative assessment upon completion of PPIL 460.</li> <li>3. Employer Feedback</li> </ol>	Observation and class participation in PPIL 270, PPIL 360, and PPIL 460.	<ol style="list-style-type: none"> <li>1. Students</li> <li>2. Employers</li> </ol>
Hazards to integration	Cumulative Assessment given upon completion of PPIL 460.	Observation and class participation in PPIL 270, PPIL 360, and PPIL 460.	Students
UAS mission role	Cumulative Assessment given upon completion of PPIL 460.	Observation and class participation in PPIL 270, PPIL 360, and PPIL 460.	Students

**3. When will these outcomes be assessed? When and in what format will the results of the assessment be discussed?**

*[Briefly describe the timeframe over which your unit will conduct the assessment of the learning outcomes selected for the three-year plan. For example, provide a layout of the semesters or years (e.g., year 1, year 2, and year 3), list which outcomes will be assessed, and which semester/year the results will be discussed and used to improve student learning (e.g., discussed with faculty, advisory boards, students, etc).]*

SLO	TIMETABLE FOR ASSESSMENT OF SLO			CREATION OF BASELINE
	2009-2010	2010-2011	2011-2012	
Airspace Integration Skills	PPIL 270	Cumulative Assessment in PPIL 460	Cumulative Assessment in PPIL 460	After fall of 2012
Hazards to integration	PPIL 270	Cumulative Assessment in PPIL 460	Cumulative Assessment in PPIL 460	After fall of 2012
UAS mission role	PPIL 270	Cumulative Assessment in PPIL 460	Cumulative Assessment in PPIL 460	After fall of 2012

**4. What is the unit's process for using assessment results to improve student learning?**

*[Briefly describe your process for using assessment data to improve student learning.]*

Faculty involved will coordinate and solicit feedback annually from industrial partners and employers following the establishment of a baseline in the fall of 2012. This solicitation will serve as a basis for any needed curriculum additions or deletions.

## **NEW CERTIFICATE PROGRAM**

### **Air Traffic Control Certificate**

1) Purpose:

This certificate program provides students with core foundational knowledge in the field of Air Traffic Control in order to help meet a growing demand in the field. It builds on a basic knowledge of aviation flight theory and application and helps prepare students for FAA Air Traffic Controller Training.

Prerequisites for courses in this certificate necessitate basic airman certification and training by the FAA or its International Civil Aviation Organization (ICAO) member equivalent agency.

This certificate program enhances student opportunities at K-State by allowing them to take advantage of growing career opportunities in the field of Air Traffic Control.

2) Requirements:

PPIL 240 Introduction to Air Traffic Control (3)  
PPIL 342 Aviation Meteorology (4)  
PPIL 440 Air Carrier Operations (3)  
PPIL 442 Advanced Air Traffic Control (3)

3) Desired outcomes:

The Air Traffic Control Certificate Program allows students to:

- a. Develop an understanding of the operational complexities of the national airspace system and an understanding of the responsibilities of the elements within that system.
- b. Understand the constraints of the current ATC system and relate these to the FAA's future airspace system plan.

4) Assessment procedures:

- a. Students shall demonstrate satisfactory subject matter mastery by maintaining a GPA of 3.0 for courses within the certificate program.
- b. Full assessment plan is attached.

5) Estimated budget and staff required:

Budgetary and staff impacts shall be minimal since three of the four courses are already existing courses and part-time faculty are available to teach the fourth.

**Degree Program**  
**Assessment of Student Learning Plan**  
**Department of Aviation**  
**Air Traffic Control Certificate**  
Kansas State University

**College, Department, and Date**

College: Technology and Aviation  
Department: Aviation  
Date: 10 October 2008

**Contact Person(s) for the Assessment Plans**

Dr. Kurt Barnhart (785) 826-2972

Degree Program

Certificate Program in Air Traffic Control

Assessment of Student Learning Three-Year Plan

**1. Student Learning Outcome(s)**

**a. List (or attach a list) all of the student learning outcomes for the program.**

Graduates of the Air Traffic Control Certificate Program will:

1. Develop an understanding of the operational complexities of the national airspace system and an understanding of the responsibilities of the elements within that system including the terminal, enroute, and trans-oceanic air traffic environments.
2. Understand the constraints of the current ATC system and relate these to the FAA's future airspace system plan.

**b. Identify outcomes that will be assessed in the first three years of the plan.**

*Both SLOs will be assessed during the first three years of the program.*

Relationship to K-State Student Learning Outcomes (insert the program SLOs and check all that apply):

Program SLOs	University-wide SLOs (Undergraduate Programs)					Program SLO is conceptually different from university SLOs
	Knowledge	Critical Thinking	Communication	Diversity	Academic / Professional Integrity	
1.	X	X				No
2.	X	X	X			No

## 2. How will the learning outcomes be assessed? What groups will be included in the assessment?

[Briefly describe the assessment tools, measures, or forms of evidence that will be utilized to demonstrate students' accomplishment of the learning outcomes selected in the three-year plan. Also indicate whether each measure is direct or indirect. If you are unsure, then write "Unsure of measurement type". There is an expectation that **half of the assessment methods/measures** will be direct measures of student learning (see **Measures, Rubrics, & Tools for Assessing Student Learning Outcomes** on the APR website for examples of direct and indirect measures).]

SLO	MEASURES		WHO IS ASSESSED?
	DIRECT	INDIRECT	
Appreciate Operational Complexity	<ol style="list-style-type: none"> <li>1. Student Self report after completion of PPIL 442</li> <li>2. Cumulative assessment upon completion of PPIL 442.</li> <li>3. Employer Feedback</li> </ol>	Observation and class participation in PPIL 240, PPIL 342, PPIL 440 and PPIL 442.	<ol style="list-style-type: none"> <li>1. Students</li> <li>2. Employers</li> </ol>
Future ATC constraints	Cumulative Assessment given upon completion of PPIL 442.	Observation and class participation in PPIL 240, PPIL 342, PPIL 440 and PPIL 442.	Students

## 3. When will these outcomes be assessed? When and in what format will the results of the assessment be discussed?

[Briefly describe the timeframe over which your unit will conduct the assessment of the learning outcomes selected for the three-year plan. For example, provide a layout of the semesters or years (e.g., year 1, year 2, and year 3), list which outcomes will be assessed, and which semester/year the results will be discussed and used to improve student learning (e.g., discussed with faculty, advisory boards, students, etc).]

SLO	TIMETABLE FOR ASSESSMENT OF SLO			CREATION OF BASELINE
	2009-2010	2010-2011	2011-2012	
Airspace Integration Skills	PPIL 240	Cumulative Assessment in PPIL 342	Cumulative Assessment in PPIL 442	After fall of 2012
Hazards to integration	PPIL 240	Cumulative Assessment in PPIL 342	Cumulative Assessment in PPIL 442	After fall of 2012

## 4. What is the unit's process for using assessment results to improve student learning?

[Briefly describe your process for using assessment data to improve student learning.]

Faculty involved will coordinate and solicit feedback annually from industrial partners and employers following the establishment of a baseline in the fall of 2012. This solicitation will serve as a basis for any needed curriculum additions or deletions.

## **NEW CERTIFICATE PROGRAM**

### **Airport Management Certificate**

1) Purpose:

The purpose of this certificate is to prepare students with foundational knowledge necessary for a job or career in airport management. Recognizing that airport management is a discipline unto itself, and recognizing that Kansas currently has 142 public-use airports with no formal training for the professional management of those airports, this certificates seeks to bridge that gap within the state.

2) Requirements:

PPIL 250 Safety and Security of Airport Ground Operations (3)

PPIL 430 Corporate and Business Aviation Management (3)

PPIL 440 Air Carrier Operations (3)

PPIL 445 Aviation Law (3)

PPIL 460 Airport Planning and Management (3)

PPIL 461 Airport Certified Manager (1)

3) Desired outcomes:

The Airport Management Certificate Program prepares students to:

- a. Assume an entry-level management position in airport management.
- b. Understand the complexities and structure of the FAA's National Plan of Integrated Airport Systems and an understanding of the critical role airports play in economic development.
- c. Prepare the students to pass the certified manager (CM) exam administered by the American Association of Airport Executives.

4) Assessment procedures:

- a. Students shall demonstrate satisfactory subject matter mastery by maintaining a GPA of 3.0 for courses within the certificate program.
- b. 80% of students will pass the AAAE CM test with a grade of 80% or better on the first attempt.
- c. Full assessment plan is attached.

5) Estimated budget and staff required:

Budgetary and staff impacts shall be minimal since all but one of the lecture courses are existing courses and part-time faculty are available to teach the remainder.

**Degree Program**  
**Assessment of Student Learning Plan**  
**Department of Aviation**  
**Airport Management**  
Kansas State University

**College, Department, and Date**

College: Technology and Aviation  
Department: Aviation  
Date: 10 October 2008

**Contact Person(s) for the Assessment Plans**

Dr. Kurt Barnhart (785) 826-2972

Degree Program

Certificate Program in Airport Management

Assessment of Student Learning Three-Year Plan

**1. Student Learning Outcome(s)**

**a. List (or attach a list) all of the student learning outcomes for the program.**

The Airport Management Certificate Program will prepare students to:

1. Assume an entry-level management position in airport management.
2. Understand the complexities and structure of the FAA's National Plan of Integrated Airport Systems (NPIAS) and understand of the critical role airports play in economic development.
3. Pass the certified manager (CM) test administered by the American Association of Airport Executives.

**b. Identify outcomes that will be assessed in the first three years of the plan.**

*Both SLOs will be assessed during the first three years of the program.*

Relationship to K-State Student Learning Outcomes (insert the program SLOs and check all that apply):

Program SLOs	University-wide SLOs (Undergraduate Programs)					Program SLO is conceptually different from university SLOs
	Knowledge	Critical Thinking	Communication	Diversity	Academic / Professional Integrity	
1.	X	X	X	X	X	No
2.	X	X	X			No
3.	X	X			X	No

## 2. How will the learning outcomes be assessed? What groups will be included in the assessment?

[Briefly describe the assessment tools, measures, or forms of evidence that will be utilized to demonstrate students' accomplishment of the learning outcomes selected in the three-year plan. Also indicate whether each measure is direct or indirect. If you are unsure, then write "Unsure of measurement type". There is an expectation that **half of the assessment methods/measures** will be direct measures of student learning (see **Measures, Rubrics, & Tools for Assessing Student Learning Outcomes** on the APR website for examples of direct and indirect measures).]

SLO	MEASURES		WHO IS ASSESSED?
	DIRECT	INDIRECT	
Assume Entry-level management position	<ol style="list-style-type: none"> <li>Employer Feedback</li> <li>Score on American Association of Airport Executives (AAAE) Certified Manager (CM) test.</li> </ol>	Observation and class participation in PPIL 250, PPIL 430, PPIL 460 and PPIL 461.	<ol style="list-style-type: none"> <li>Students</li> <li>Employers</li> </ol>
NPIAS role	Cumulative Assessment given upon completion of PPIL 460.	Observation and class participation in PPIL 250, PPIL 430, PPIL 460 and PPIL 461.	Students
Pass AAAE CM test	AAAE Exam score	Student feedback	Students

## 3. When will these outcomes be assessed? When and in what format will the results of the assessment be discussed?

[Briefly describe the timeframe over which your unit will conduct the assessment of the learning outcomes selected for the three-year plan. For example, provide a layout of the semesters or years (e.g., year 1, year 2, and year 3), list which outcomes will be assessed, and which semester/year the results will be discussed and used to improve student learning (e.g., discussed with faculty, advisory boards, students, etc.)]

SLO	TIMETABLE FOR ASSESSMENT OF SLO			CREATION OF BASELINE
	2009-2010	2010-2011	2011-2012	
Assume Entry-level management position	PPIL 460	CM test score	CM test score and employer feedback	After fall of 2012
NPIAS role	PPIL 460	PPIL 460 and CM test score.	PPIL 460 and CM test score.	After fall of 2012
Pass AAAE CM test	CM test score	CM test score	CM test score	After fall of 2012

## 4. What is the unit's process for using assessment results to improve student learning?

[Briefly describe your process for using assessment data to improve student learning.]

Faculty involved will coordinate and solicit feedback annually from industrial partners and employers following the establishment of a baseline in the fall of 2012. This solicitation will serve as a basis for any needed curriculum additions or deletions.

## DEPARTMENT OF ENGINEERING TECHNOLOGY

### PROPOSAL SUMMARY:

The Department of Engineering Technology does not currently offer lower-level problems or special topics courses, even though the need exists for courses at both levels. This results in upper-level problems or special topic courses being used for introductory courses that really should be identified by a lower-level course number. This upper/lower course number discrepancy will affect students' tuition bills if a tiered tuition structure is approved in the future.

The proposed solution is to remove all of the problems courses currently listed in the department. One lower-level and one upper-level problems course are added. Problems courses are meant to be used as independent study credits. These courses are not advertised through the course schedules, so ET course numbers can be used with minimal student confusion. This has the affect of keeping the number of new courses to a minimum and still maintains the courses within the department catalog descriptions.

However, special topic courses will benefit by having a course prefix in common with other courses in that program option. Since the course schedule lists courses by course number, having a common prefix means that special topic courses will be listed along side regular program option courses. This will make it easy for students to find the special topic courses on the schedule. For this reason, lower-level topic courses are added for each department option. Upper-level topic courses are kept, but modified for consistency.

### COURSE DELETIONS:

The following problems courses will be deleted:

- CET 300 Problems in CET
- CMST 492 Problems in CMST
- ECET 492 Problems in Electronic and Computer Engineering Technology
- MET 492 Problems in Mechanical Engineering Technology

**RATIONALE:** These courses will no longer be needed.

**IMPACT:** No impact on other departments.

**EFFECTIVE DATE:** Fall 2009

### COURSE MODIFICATIONS:

**FROM:** ~~CMST 499. Selected Topics in CMST. (Var.) I, II, S. Provides an opportunity for CMST faculty to present topics not covered by other courses. Course title is determined in advance each time the course is offered. Students may repeat for additional credit different titled instances of the course. Pr. Consent of Instructor.~~

**TO:** CMST 499. Advanced Topics in Computer Systems Technology. (Var.) I, II, S. Provides an opportunity for faculty to present advanced computer systems technology topics. Pr.; Consent of Instructor.

**RATIONALE:** Course name specifies that this course is intended for higher level courses. Description changes are made to provide consistency with other topic courses within the department and college.

**IMPACT:** No impact on other departments.

**EFFECTIVE DATE:** Fall 2009

**FROM:** ~~ECET 499. **Special Topics in Electronic and Computer Engineering Technology.** (Var.) I, II, S. Offered on sufficient demand. Advanced topics in electronic engineering technology. Pr.: Varies with the announced topic.~~

**TO:** **ECET 499. Advanced Topics in Electronic and Computer Engineering Technology.** (Var.) I, II, S. Provides an opportunity for faculty to present advanced electronic and computer engineering technology topics. Pr.: Consent of Instructor.

**RATIONALE:** Course name specifies that this course is intended for higher level courses. Description changes are made to provide consistency with other topic courses within the department and college.

**IMPACT:** No impact on other departments.

**EFFECTIVE DATE:** Fall 2009

**FROM:** ~~**MET 499. **Selected Topics in MET.** (Var. 1-6) I, II, S. Group or individual study of a selected topic in mechanical engineering technology, title to be determined in advance of each time the course is offered. Total credits limited to 6 credit hours, with a maximum of 3 credit hours per semester. Instruction is by lecture, laboratory, or a combination of both. Pr.: Permission of MET program coordinator.**~~

**TO:** **MET 499. Advanced Topics in Mechanical Engineering Technology.** (Var.) I, II, S. Provides an opportunity for faculty to present advanced mechanical engineering technology topics. Pr.: Consent of Instructor.

**RATIONALE:** Course name specifies that this course is intended for higher level courses. Description changes are made to provide consistency with other topic courses within the department and college.

**IMPACT:** No impact on other departments.

**EFFECTIVE DATE:** Fall 2009

## COURSE ADDITIONS:

**ADD:** **ETA 292. Problems in Engineering Technology.** (Var.) I, II, S. Independent study in specific topics in engineering technology. Pr.: Consent of instructor.

**RATIONALE:** This course will be appropriate for lower-level problems course applications.

**IMPACT:** No impact on other departments.

**EFFECTIVE DATE:** Fall 2009

**ADD:** **ETB 492. Advanced Problems in Engineering Technology.** (Var.) I, II, S. Advanced independent study in specific topics in engineering technology. Pr.: Consent of instructor.

**RATIONALE:** This course will be appropriate for upper-level problems course applications.

**IMPACT:** No impact on other departments.

**EFFECTIVE DATE:** Fall 2009

**ADD:** **CET 299. Topics in Construction Engineering Technology.** (Var.) I, II, S. Provides an opportunity for faculty to present construction engineering technology topics. Pr.: Consent of instructor.

**RATIONALE:** This course will be appropriate for lower-level special topic course applications.

**IMPACT:** No impact on other departments.

**EFFECTIVE DATE:** Fall 2009

**ADD:** **CMST 299. Topics in Computer Systems Technology.** (Var.) I, II, S. Provides an opportunity for faculty to present computer systems technology topics. Pr.: Consent of instructor.

**RATIONALE:** This course will be appropriate for lower-level special topic course applications.

**IMPACT:** No impact on other departments.

**EFFECTIVE DATE:** Fall 2009

**ADD:** **ECET 299. Topics in Electronic and Computer Engineering Technology.** (Var.) I, II, S. Provides an opportunity for faculty to present electronic and computer engineering technology topics. Pr.: Consent of instructor.

**RATIONALE:** This course will be appropriate for lower-level special topic course applications.

**IMPACT:** No impact on other departments.

**EFFECTIVE DATE:** Fall 2009

**ADD:** **MET 299. Topics in Mechanical Engineering Technology.** (Var.) I, II, S.  
Provides an opportunity for faculty to present mechanical engineering technology topics. Pr.: Consent of instructor.

**RATIONALE:** This course will be appropriate for lower-level special topic course applications.

**IMPACT:** No impact on other departments.

**EFFECTIVE DATE:** Fall 2009