

**UNDERGRADUATE
COURSE AND CURRICULUM CHANGES
APPROVED BY THE
COLLEGE OF TECHNOLOGY AND AVIATION FACULTY**

12:30 p.m. October 16, 2007

College Center Conference Room

IMPACT STATEMENT: This proposal does not impact other colleges

COURSE DELETIONS:

DROP: **PPIL 310. Aircraft Certification.**

RATIONALE: This course is no longer being taught and is not needed to support any curriculum.

IMPACT: No impact on other departments.

EFFECTIVE DATE: Fall 2008

COURSE ADDITIONS:

ADD: **PPIL 251. Private Pilot Helicopter Ground School.** (1) Ground instruction covering helicopter aircraft to develop the aeronautical knowledge to meet the ground school requirements for a private pilot rotorcraft helicopter class rating. Pr.: PPIL 111.

RATIONALE: Students will learn about the aerodynamics of rotary wing flight and the function of the controls. This course will help open a new field of aviation to our graduates.

IMPACT: This course addition will not affect other departments.

CONTACT PERSON: Barney King (785 826-2683; E-mail; kingb@ksu.edu)

EFFECTIVE DATE: Fall 2008

ADD: **PPIL 252. Private Pilot Helicopter Flight Lab.** (1) An introduction to the flight operations and maneuvers necessary to meet the aeronautical experience for the private pilot rotorcraft helicopter class rating. Three hours lab a week. Pr.: PPIL 113.

RATIONALE: Students will gain the flight proficiency and aeronautical experience required to obtain a private pilot rotorcraft helicopter class rating. This course will help open a new field of aviation to our graduates.

IMPACT: This course addition will not affect other departments.

CONTACT PERSON: Barney King 785 826-2683

EFFECTIVE DATE: Fall 2008

ADD: **PPIL 281. Instrument Helicopter Pilot Ground School.** (1) Ground instruction covering helicopter aircraft to develop the aeronautical knowledge to meet the ground school requirements for an instrument-helicopter rating. Pr.: PPIL 251.

RATIONALE: Students will learn about the procedures, regulations and techniques required to safely fly in instrument meteorological conditions within our national airspace system. This course will help open a new field of aviation to our graduates.

IMPACT: This course addition will not affect other departments.

CONTACT PERSON: Barney King (785 826-2683; E-mail; kingb@ksu.edu)

EFFECTIVE DATE: Fall 2008

ADD: **PPIL 282. Instrument Helicopter Pilot Flight Lab.** (1) Flight training necessary to maneuver a helicopter safely in actual or simulated instrument meteorological conditions within the national airspace system. Three hours lab a week. Pr.: PPIL 252.

RATIONALE: Students will gain the flight proficiency and aeronautical experience required to attain an instrument-helicopter rating. This course will help open a new field of aviation to our graduates.

IMPACT: This course addition will not affect other departments.

CONTACT PERSON: Barney King (785 826-2683; E-mail; kingb@ksu.edu)

EFFECTIVE DATE: Fall 2008

ADD: **PPIL 291. Commercial Pilot Helicopter Ground School.** (1) Ground instruction covering helicopter aircraft to develop the aeronautical knowledge to meet the ground school requirements for a commercial pilot rotorcraft helicopter class rating. Pr.: PPIL 251.

RATIONALE: Students will learn about performance, weight and balance, and helicopter flight maneuvers required for rotary wing flight. This course will help open a new field of aviation to our graduates.

IMPACT: This course addition will not affect other departments.

CONTACT PERSON: Barney King (785 826-2683; E-mail; kingb@ksu.edu)

EFFECTIVE DATE: Fall 2008

ADD: **PPIL 292. Commercial Pilot Helicopter Flight Lab.** (1) Flight instruction and experience in a helicopter to develop the aeronautical skills to meet the requirements for a commercial pilot rotorcraft helicopter class rating. Three hours lab a week. Pr.: PPIL 252.

RATIONALE: Students will gain the flight proficiency and aeronautical experience required to attain a commercial pilot rotorcraft helicopter rating. This course will help open a new field of aviation to our graduates.

IMPACT: This course addition will not affect other departments.

CONTACT PERSON: Barney King (785 826-2683; E-mail; kingb@ksu.edu)

EFFECTIVE DATE: Fall 2008

ADD: **PPIL 351. Flight Instructor Helicopter Ground School.** (1) Ground instruction covering helicopter aircraft to develop the aeronautical knowledge to meet the ground school requirements for a certified flight instructor rotorcraft helicopter class rating. Pr.: PPIL 312 and PPIL 291.

RATIONALE: Students will apply the fundamentals of instruction they learned in PPIL 312 to rotary wing aircraft. They will learn how to teach the maneuvers unique to helicopters. This course will help open a new field of aviation to our graduates.

IMPACT: This course addition will not affect other departments.

CONTACT PERSON: Barney King (785 826-2683; E-mail; kingb@ksu.edu)

EFFECTIVE DATE: Fall 2008

ADD: **PPIL 352. Flight Instructor Helicopter Flight Lab.** (1) Flight instruction and experience in a helicopter to develop the aeronautical skills to meet the requirements for a helicopter instructor rating. Three hours lab a week. Pr.: PPIL 314 and PPIL 292.

RATIONALE: Students will learn to apply the fundamentals of instruction and learn how to give flight instruction in a helicopter.

IMPACT: This course addition will not affect other departments.

CONTACT PERSON: Barney King (785 826-2683; E-mail; kingb@ksu.edu)

EFFECTIVE DATE: Fall 2008

ADD: **AVM 242. Navigational Aids and Communication Systems for Avionics.** (3) I. A survey study of the aids to navigation and communications used in light and intermediate class aircraft. Operation and installation of the various types of equipment is stressed. Two hours lec. and three hours lab a week. Pr.: AVM 111 or ECET 100.

RATIONALE: This course addition will allow the Electronic and Computer Engineering Technology option to add a sub-field in avionics.

IMPACT: This may impact the Engineering Technology department and notification has been provided. This course will be taught in conjunction with AVM 241, the only difference is that AVM 242 does not meet FAA Part 147 requirements.

CONTACT PERSON: Raylene Alexander (785 826-2978; E-mail; raylene@sal.ksu.edu)

EFFECTIVE DATE: Fall 2008

ADD: **COT 020. University Honors Program.** (0) I,II. This course is for record keeping purposes to allow the University Honors Program and the College of Technology and Aviation to monitor and track students who are a part of the Honors Program.

RATIONALE: To monitor and track College of Technology and Aviation students enrolled in the University Honors Program.

IMPACT: No other colleges are affected by this proposal.

CONTACT PERSON: Robert D. Homolka (Homolka@ksu.edu, 785-826-2995)

EFFECTIVE DATE: Fall 2008.

ADD: **COT 189. Introduction to University Honors Program.** (1) I, II. An overview of the University Honors Program including directions, goals, and student requirements for completion of the program. Pr.: Acceptance into the College Honors Program.

RATIONALE: To develop a personal plan for achieving both the university learning outcomes and our personal goals.

To establish an initial format and collection of a learning portfolio that will be updated throughout your college career.

To demonstrate our ability to think critically about various problems and potential solutions in today's world (e.g., poverty, delivery of medical care, political systems, the role of the individual in being part of the solution, etc.), oftentimes using knowledge and methods from the past to guide your thinking.

To exhibit effective communication skills through writing and speaking.

To describe your perceived role in community development and begin to enact those intentions.

To understand the range of opportunities that exists for senior honors projects.

IMPACT: No other colleges are affected by this proposal.

CONTACT PERSON: Robert D. Homolka (Homolka@ksu.edu, 785-826-2995)

EFFECTIVE DATE: Fall 2008.

COURSE MODIFICATIONS:

FROM: **AVM 315. Advanced Avionics.** (3) I. ~~This course covers~~ the latest developments and trends in navigation and communication systems. Topics ~~will~~ include Future Aviation Navigation Systems (FANS), fiber optics, enhanced vision as well as other advancements in avionics. ~~Three hours lec. a week.~~ Pr.: AVM 241 ~~and AVM 162.~~

TO: **AVM 315. Advanced Avionics.** (3) I. Advanced coverage of the latest developments and trends in navigation and communication systems. Topics include Future Aviation Navigation Systems (FANS), fiber optics, enhanced vision and other advancements in avionics. Coreq.: AVM 241 or AVM 242.

RATIONALE: This course change will open our avionics course offerings to Engineering Technology majors.

IMPACT: This may impact the Engineering Technology department and notification has been provided.

Contact Person: Raylene Alexander (785-826-2978; E-mail; raylene@sal.ksu.edu)

EFFECTIVE DATE: Fall 2008

CURRICULUM CHANGES:

ASSOCIATE OF TECHNOLOGY IN ENGINEERING TECHNOLOGY, MECHANICAL ENGINEERING TECHNOLOGY OPTION

(Current)

Freshman year

Fall semester.

MET 111	Technical Graphics.....	3
MET 121	Manufacturing Methods.....	3
MATH 100	College Algebra	3
MATH 151	Applied Plane Trigonometry	2
CMST 101	Applied Basic Programming	2
ENGL 100	Expository Writing I.....	3
ETA 020	Engineering Technology Seminar0	
		16

Spring semester

MET 117	Mechanical Detailing.....	3
MET 125	Computer-Numerical Controlled Machine Processes	2
CHM 110	General Chemistry.....	3
CHM 111	General Chemistry Laboratory.....	1
PHYS 113	Gen. Physics I	4
SPCH 105	Public Speaking 1A2 Hum./Social Science elective	3
ETA 020	Engineering Technology Seminar	0
		18

Sophomore year

Fall semester

MET 231	Physical Materials and Metallurgy	3
MET 252	Fluid Power Technology	3
CET 211	Statics.....	3
ECET 100	Basic Electronics	4
MATH 220	Analytic Geom. & Calculus I	4
		17

Spring semester

MET 230	Automated Manufacturing Systems I....	3
MET 245	Material Strength and Testing.....	3
MET 246	Dynamics of Machines.....	3
MET 264	Machine Design Technology I.....	4
ENGL 202	Technical Writing	3
		16

TOTAL HOURS REQUIRED: 67

ASSOCIATE OF TECHNOLOGY IN ENGINEERING TECHNOLOGY, MECHANICAL ENGINEERING TECHNOLOGY OPTION

(Proposed)

Freshman year

Fall semester.

MET 111	Technical Graphics.....	3
MET 121	Manufacturing Methods.....	3
MATH 100	College Algebra	3
MATH 151	Applied Plane Trigonometry	2
CMST 110	Introduction to Visual Basic.....	3
ENGL 100	Expository Writing I.....	3
ETA 020	Engineering Technology Seminar	0
		17

Spring semester

MET 117	Mechanical Detailing.....	3
MET 125	Computer-Numerical Controlled Machine Processes	2
CHM 110	General Chemistry.....	3
CHM 111	General Chemistry Laboratory.....	1
PHYS 113	Gen. Physics I	4
SPCH 105	Public Speaking 1A.....	2
	Hum./Social Science Elective.....	3
		18

Sophomore year

Fall semester

MET 231	Physical Materials and Metallurgy	3
MET 252	Fluid Power Technology	3
CET 211	Statics.....	3
ECET 100	Basic Electronics	4
MATH 220	Analytic Geom. & Calculus I	4
		17

Spring semester

MET 230	Automated Manufacturing Systems I....	3
MET 245	Material Strength and Testing.....	3
MET 246	Dynamics of Machines.....	3
MET 264	Machine Design Technology I.....	4
ENGL 202	Technical Writing	3
		16

TOTAL HOURS REQUIRED: 68

RATIONALE:

Deletion of ETA 020 Engineering Technology Seminar from the freshman spring semester accompanies the restructuring of the two-semester ETA 020 course into a single-semester version.

The change in title and course number for the Basic programming course resulted from recent changes to the Basic programming course offerings. The total number of credit hours required in the Associate of Technology and Bachelor of Science degrees will increase to 68 and 129, respectively.

CONTACT: Raju Dandu, Program Coordinator, Mechanical Engineering Technology Option, 826-2629, rdandu@ksu.edu

IMPACT: No departments outside Engineering Technology of College of Technology and Aviation will be affected by the proposed changes.

EFFECTIVE DATE: Fall 2008.

**ASSOCIATE OF TECHNOLOGY IN
ENGINEERING TECHNOLOGY,
ELECTRONIC AND COMPUTER ENGINEERING
TECHNOLOGY OPTION**

(Current)

Freshman year

Fall semester.

ECET 100	Basic Electronics	4
MATH 100	College Algebra	3
MATH 151	Applied Plane Trigonometry	2
ENGL 100	Expository Writing I	3
SPCH 105	Public Speaking 1A	2
ETA 020	Engineering Technology Seminar	0
		14

Spring semester

ECET 101	Direct Current Circuits	3
ECET 110	Semiconductor Electronics	4
MATH 220	Analytic Geom. & Calculus I	4
PHYS 113	Gen. Physics I	4
CMST 101	Applied Basic Programming	2
ETA 020	Engineering Technology Seminar	0
		17

Sophomore year

Fall semester

ECET 201	Alternating Current Circuits	4
ECET 210	Linear Circuit Applications	4
ECET 240	Electronic Manufacturing	3
ECET 250	Digital Logic	4
ENGL 202	Technical Writing	3
		18

Spring semester

CMST 250	Computer Networking I	3
ECET 330	Industrial Controls	4
ECET 350	Microprocessor Fundamentals	4
CHM 110	General Chemistry	3
CHM 111	General Chemistry Laboratory	1
	Humanities/Social Science Elective	3
		18

TOTAL HOURS REQUIRED:67

**ASSOCIATE OF TECHNOLOGY IN
ENGINEERING TECHNOLOGY,
ELECTRONIC AND COMPUTER ENGINEERING
TECHNOLOGY OPTION**

(Proposed)

Freshman year

Fall semester.

ECET 100	Basic Electronics	4
MATH 100	College Algebra	3
MATH 151	Applied Plane Trigonometry	2
ENGL 100	Expository Writing I	3
SPCH 105	Public Speaking 1A	2
ETA 020	Engineering Technology Seminar	0
		14

Spring semester

ECET 101	Direct Current Circuits	3
ECET 110	Semiconductor Electronics	4
MATH 220	Analytic Geom. & Calculus I	4
PHYS 113	Gen. Physics I	4
CMST 110	Introduction to Visual Basic	3
		18

Sophomore year

Fall semester

ECET 201	Alternating Current Circuits	4
ECET 210	Linear Circuit Applications	4
ECET 240	Electronic Manufacturing	3
ECET 250	Digital Logic	4
ENGL 202	Technical Writing	3
		18

Spring semester

CMST 250	Computer Networking I	3
ECET 330	Industrial Controls	4
ECET 350	Microprocessor Fundamentals	4
CHM 110	General Chemistry	3
CHM 111	General Chemistry Laboratory	1
	Humanities/Social Science Elective	3
		18

TOTAL HOURS REQUIRED:68

RATIONALE:

Deletion of ETA 020 Engineering Technology Seminar from the freshman spring semester accompanies the restructuring of the two-semester ETA 020 course into a single-semester version.

The change in title and course number for the Basic programming course resulted from recent changes to the Basic programming course offerings. The total number of credit hours required in the Associate of Technology and Bachelor of Science degrees will increase to 68 and 129, respectively.

CONTACT: Saeed Khan, Program Coordinator, Electronic and Computer Engineering Technology Program, 826-2675, saeed@sal.ksu.edu

IMPACT: No departments outside Engineering Technology of College of Technology and Aviation will be affected by the proposed changes.

EFFECTIVE DATE: Fall 2008.