

CURRICULUM/GEN ED COMMITTEE
a standing committee of the Education Advisory Committee

Agenda
March 7, 2007 3 pm
Sylvania CC, Conference Rm B

Information Items from the Curriculum Office:
(These items do not require curriculum committee recommendation)

Experimental Courses:

BA 199A – Project Management
BI 199 – Introduction to Immunology
INSP 199A – Introduction to Residential Inspection
INSP 199C – Fire Alarm Plan Review
INSP 199D – Fire Sprinkler Plan Review
TE 199 – Industrial Foundations

All course inactivations will be added to a consent agenda:

Course Inactivation:

DE 51 – Workplace Essential: Employment
DE 52 – Workplace Essential: Communication and Writing
DE 53 – Workplace Essential: Reading
DE 54 – Workplace Essential: Math
DE 55 – Workplace Essential Skills
DE 80 – Applied Economics/Personal Finance
ECE 237 – Science and Math in ECE
ECE 239 – Helping Children and Families Cope With Stress
ECE 273 – Team Building and Supervision
ECE 274 – Expanded Curriculum
INSP 225 – Multi-Family Housing

OLD BUSINESS

85. CMET 237 – Computer Aided Design III
Course Revision – Title

163. BA 104 – Business Math
[New Course](#)
Withdrawn at SAC request

235. DA 110 – Clinical Procedures I
Related Instruction

236. DA 111 – Clinical Procedures Lab I
Related Instruction

237. DA 113 – Clinical Procedures Lab II
Related Instruction

238. DA 115 – Clinical Procedures Lab III
Related Instruction

239. DA 118 – Expanded Duties I
Related Instruction

240. DA 119 – Expanded Duties II
Related Instruction

241. DA 120 – Dental Radiology I
Related Instruction

242. DA 121 – Dental Radiology Lab I
Related Instruction

243. DA 123 – Dental Radiology II
Related Instruction

244. DA 125 – Dental Radiology Lab III
Related Instruction

245. DA 131 – Dental Materials Lab I
Related Instruction

246. DA 132 – Dental Materials II
Related Instruction

247. DA 133 – Dental Materials Lab II
Related Instruction

248. DA 135 – Dental Materials Lab III
Related Instruction

249. DA 150 – Office Procedures I
Related Instruction

250. DA 152 – Office Procedures II
Related Instruction

251. DA 156 – Ethics and Jurisprudence
Related Instruction

NEW BUSINESS:

279. EET 111 – Electrical Circuit Analysis I
Course Revision – Description, Requisites, Outcomes

280. EET 112 – Electrical Circuit Analysis II
Course Revision – Description, Requisites, Outcomes
281. EET 113 – Electrical Circuit Analysis
Course Revision – Title, Description, Requisites, Outcomes
282. EET 121 – Digital Systems I
Course Revision – Description, Requisites, Outcomes
283. EET 122 – Digital Systems II
Course Revision – Outcomes
284. EET 123 – Digital Systems III
Course Revision – Outcomes
285. EET 178 – PC Architecture for Technicians
Course Revision – Description, Requisites, Outcomes
286. EET 188 – Industrial Safety
Course Revision – Description, Requisites, Outcomes
287. EET 241 – Microcomputer Systems
Course Revision – Description, Requisites, Outcomes
288. EET 242 – Microcontroller Systems
Course Revision – Outcomes
289. EET 255 – Industrial Control Systems
Course Revision – Description, Requisites, Outcomes
290. MTH 211 – Foundations of Elementary Math I
Course Revision – Description
291. MTH 213 – Foundations of Elementary Math III
Course Revision – Description
292. BA 205 – Solving Communication Problems with Technology
Course Revision – Outcomes
293. BA 223 – Principles of Marketing
Course Revision – Description, Outcomes
294. BCT 280C – Cooperative Education – BCT Design/Build Remodeling
Contact/Credit Hour Change
295. AB 101 – Basic Skills I
Contact/Credit Hour Change
296. AB 102 – Basic Skills II
Contact/Credit Hour Change

297. AB 103 – Panel Repair I
Contact/Credit Hour Change
298. AB 104 – Panel Repair II
Contact/Credit Hour Change
299. AB 110 – Auto Painting IA
Contact/Credit Hour Change
300. AB 111 – Auto Painting IB
Contact/Credit Hour Change
301. AB 112 – Auto Painting 2A
Contact/Credit Hour Change
302. AB 113 – Auto Painting 2B
Contact/Credit Hour Change
303. AB 114 – Auto Painting 3A
Contact/Credit Hour Change
304. AB 115 – Auto Painting 3B
Contact/Credit Hour Change
305. GER 101 – First Year German
Contact/Credit Hour Change
306. GER 102 – First Year German
Contact/Credit Hour Change
307. GER 103 – First Year German
Contact/Credit Hour Change
308. GER 150 – First Year German
Course Revision – Description
309. GER 151 – First Year German
Course Revision – Description
310. GER 201 – Second Year German
Course Revision – Description
311. GER 202 – Second Year German
Course Revision – Description
312. GER 203 – Second Year German
Course Revision – Description
313. GER 250 – Second Year German
Course Revision – Description

314. GER 251 – Second Year German
Course Revision – Description
315. GER 260A – German Culture Through Film
Course Revision – Description
316. GER 260B – German Culture Through Film
Course Revision – Description
317. GER 260C – German Culture Through Film
Course Revision – Description
318. GER 261A – German Culture Through Film
Course Revision – Description
319. GER 261B – German Culture Through Film
Course Revision – Description
320. GER 261C – German Culture Through Film
Course Revision – Description
321. GER 262A – German Culture Through Film
Course Revision – Description
322. GER 262B – German Culture Through Film
Course Revision – Description
323. GER 262C – German Culture Through Film
Course Revision – Description
324. RUS 241 – Great Russian Writers
[New Course](#)
325. MCH 229 – Rapid Prototyping
[New Course](#)
326. PHL 222 – Elementary Aesthetics: Philosophy of Art
Course Revision – Title, Description, Outcomes
327. INSP 201 – Plans Exam – Commercial
Course Revision – Description, Outcomes
328. INSP 251 – International Building Code 1
Course Revision – Description, Outcomes
329. FP 111 – Firefighting Skills I
Contact/Credit Hour Change
330. FP 111 – Firefighting Skills I
Course Revision – Title, Description, Outcomes

Curriculum Request Form
Course Revision

Change:	Course Title
Current course number:	CMET 237
Current course title:	Computer Aided Design III
Proposed course title:	MET Computer Aided Design Elective
Proposed transcript title:	MET CAD Elective
Reason for title change:	Better describes course content.
Will this impact other sacs?,is there an impact on other sacs?:	No
Will this impact other depts/campuses?,is there an impact on another dept or campus?:	No
Request term:	winter
Requested year:	2007
Contact name:	Jan Chambers
Contact e-mail:	jchamber@pcc.edu

Curriculum Request Form
Related Instruction

Current course number: DA 110

Current course title: Clinical Procedures I

Computation hours: 12

Content (activities, skills, concepts, etc.): Discuss, obtain and record normal vital sign readings for patients. Discuss and record perio charting readings. Discuss and record anesthetic ratio's

Communication hours: 0

Human relations hours: 3

Content (activities, skills, concepts, etc.): Team work during instrument identification and classroom presentation projects. Peer evaluation.

Contact name: Ginny Jorgensen

Contact email: gjorgens@pcc.edu

Curriculum Request Form
Related Instruction

Current course number: DA 111

Current course title: Clinical Procedures Lab I

Computation hours: 6

Content (activities, skills, concepts, etc.): Calculate correct pulse and respiration readings on patients. Measure and mix solutions for use in dental clinic.

Communication hours: 15

Content (activities, skills, concepts, etc.): Provide instructions for patients in the area of oral health care. Review patient health history and OCC clinic policy with patient. Write patient information in dental chart. Document dental conditions from patient oral cavities 10 times during term.

Human relations hours: 6

Content (activities, skills, concepts, etc.): Working together, students practice completing health history requirements for patients.

Contact name: Ginny Jorgensen

Contact email: gjorgens@pcc.edu

Curriculum Request Form
Related Instruction

Current course number: DA 113

Current course title: Clinical Procedures Lab II

Computation hours: 3

Content (activities, skills, concepts, etc.): Measure and mix solutions for use in dental clinic.

Communication hours: 15

Content (activities, skills, concepts, etc.): Communicate dental procedure post treatment instructions to students and patients. Review patient information and document in dental charts. Take and record vital signs in patient charts. Document dental conditions from patient oral cavities and radiographs.

Human relations hours: 6

Content (activities, skills, concepts, etc.): Students work in teams to complete activities assigned.

Contact name: Ginny Jorgensen

Contact email: gjorgens@pcc.edu

Curriculum Request Form
Related Instruction

Current course number: DA 115

Current course title: Clinical Procedures Lab III

Computation hours: 0

Communication hours: 20

Content (activities, skills, concepts, etc.): Clinical skills evaluations completed by extramural dental offices. Professionalism, communication and interaction with dental patients and staff are practiced and evaluated.

Human relations hours: 10

Content (activities, skills, concepts, etc.): Students work as members of the dental team to complete assigned activities during private practice externships.

Contact name: Ginny Jorgensen

Contact email: gjorgens@pcc.edu

Curriculum Request Form
Related Instruction

Current course number: DA 118

Current course title: Expanded Duties I

Computation hours: 0

Communication hours: 6

Content (activities, skills, concepts, etc.): Communicate with the patient while providing coronal polishing and sealant placement on a co-student's teeth.

Human relations hours: 3

Content (activities, skills, concepts, etc.): Students work with /on each other and with/on dental patients to practice and complete coronal polishing and sealant placement procedures.

Contact name: Ginny Jorgensen

Contact email: gjorgens@pcc.edu

Curriculum Request Form
Related Instruction

Current course number: DA 119

Current course title: Expanded Duties II

Computation hours: 3

Content (activities, skills, concepts, etc.): Trace landmarks on a cephalometric radiograph for preparation of mathematical measurements of the skull.

Communication hours: 6

Content (activities, skills, concepts, etc.): Students work together in pairs to explain and demonstrate wax bite registration procedures, extra oral photographs, and oral hygiene instructions for orthodontic patients.

Human relations hours: 0

Contact name: Ginny Jorgensen
Contact email: gjorgens@pcc.edu

Curriculum Request Form
Related Instruction

Current course number: DA 120

Current course title: Dental Radiology I

Computation hours: 6

Content (activities, skills, concepts, etc.): Describe and demonstrate the Inverse Square Law. Describe and demonstrate the Maximum Permissible Dose. Describe and demonstrate the mA's formula for patient radiation exposure.

Communication hours: 0

Human relations hours: 0

Contact name: Ginny Jorgensen

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Curriculum Request Form
Related Instruction

Current course number: DA 121

Current course title: Dental Radiology Lab I

Computation hours: 6

Content (activities, skills, concepts, etc.): Perform developing, fixing, and exposure experiments related to time/exposure settings/developer time and temperature/effect.

Communication hours: 6

Content (activities, skills, concepts, etc.): Evaluate and verbalize exposing/developing technique that is done correctly and also when errors exist. Document findings and corrections necessary.

Human relations hours: 12

Content (activities, skills, concepts, etc.): Working as part of a team, students expose and develop radiographs on dental manikins.

Contact name: Ginny Jorgensen

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Curriculum Request Form
Related Instruction

Current course number:	DA 123
Current course title:	Dental Radiology II
Computation hours:	3
Content (activities, skills, concepts, etc.):	Demonstrate proper extra-oral film placement and technique for the exposure of the panoramic radiograph.
Communication hours:	3
Content (activities, skills, concepts, etc.):	Verbalize procedures and record pertinent information for legal documentation in the patient chart.
Human relations hours:	3
Content (activities, skills, concepts, etc.):	Practice Student - to- student film placement. Interact with patients during radiographic exposure.
Contact name:	Ginny Jorgensen
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Curriculum Request Form
Related Instruction

Current course number: DA 125

Current course title: Dental Radiology Lab III

Computation hours: 3

Content (activities, skills, concepts, etc.): Expose films in order to determine the circumference of the xray beam. Expose films in order to determine the distance of the x-ray beam. Expose films in order to determine the kVp and mA's. Expose films to determine developing and exposing errors.

Communication hours: 3

Content (activities, skills, concepts, etc.): Record information in patient charts.

Human relations hours: 3

Content (activities, skills, concepts, etc.): Practice Student - to- student film placement. Interact with patients during radiographic exposure.

Contact name: Ginny Jorgensen
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Curriculum Request Form
Related Instruction

Current Course Number: DA 131

Current Course Title: Dental Materials Lab I

Communication Hours: 5

Content (Activities, Skills, Concepts, etc.): Classroom room discussion on daily lab results enabling an exchange of information and respect of others viewpoints.

Human Relations Hours: 5

Content (Activities, Skills, Concepts, etc.): Students work in teams on lab assignments, to include peer evaluations.

Contact Name: Ginny Jorgensen

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Curriculum Request Form
Related Instruction

Current course number: DA 132

Current course title: Dental Materials II

Communication hours: 3

Content (activities, skills, concepts, etc.): Students work in groups to research new technology and present information in both oral and written form.

Human relations hours: 3

Content (activities, skills, concepts, etc.): Student team work in group project.

Contact name: Ginny Jorgensen

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Curriculum Request Form
Related Instruction

Current course number: DA 133

Current course title: Dental Materials Lab II

Computation hours: 4

Content (activities, skills, concepts, etc.): Apply knowledge of angles and measurement during orthodontic model trimming.

Communication hours: 2

Content (activities, skills, concepts, etc.): Round Table discussion about experiences in rotations at OHSU. Self Evaluation of lab projects and presentation to instructor of results of results of evaluations.

Human relations hours: 9

Content (activities, skills, concepts, etc.): Interactions during OHSU rotations. Students work in teams on lab assignments, to include student evaluations.

Contact name: Ginny Jorgensen

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Curriculum Request Form
Related Instruction

Current course number: DA 135

Current course title: Dental Materials Lab III

Communication hours: 2

Content (activities, skills, concepts, etc.): Interact with guest speaker presentation on products and demonstration of fabrications of bleaching trays. Roundtable discussion of office practicum.

Human relations hours: 3

Content (activities, skills, concepts, etc.): Tour Dahlin Dental Lab.

Contact name: Ginny Jorgensen

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Curriculum Request Form
Related Instruction

Current course number:	DA 150
Current course title:	Office Procedures I
Computation hours:	10
Content (activities, skills, concepts, etc.):	Business and financial aspects of a dental office, including third party reimbursements.
Communication hours:	9
Content (activities, skills, concepts, etc.):	Scheduling/treatment planning. Dental Office Video Series Information Employer Interview Assignment.
Human relations hours:	4
Content (activities, skills, concepts, etc.):	Small group activities. Dental office video.
Contact name:	Ginny Jorgensen
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Curriculum Request Form
Related Instruction

Current course number: DA 152

Current course title: Office Procedures II

Computation hours: 8

Content (activities, skills, concepts, etc.): Design dental office to include floor plan, equipment, colors. Dental office scheduling on computer using different office management systems.

Communication hours: 12

Content (activities, skills, concepts, etc.): Cover letter/resume/thank you project. Guest speaker: Job interview skills/develop resume Complete interview questions using word processing Mock Job Interview.

Human relations hours: 9

Content (activities, skills, concepts, etc.): Small group office design project. Front desk rotation/Office practicum.

Contact name: Ginny Jorgensen

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Curriculum Request Form
Related Instruction

Current course number: DA 156

Current course title: Ethics and Jurisprudence

Communication hours: 3

Content (activities, skills, concepts, etc.): Discuss and identify laws for dentists. Discuss and identify laws for hygienists. Discuss and identify rules for dental assistants.

Human relations hours: 15

Content (activities, skills, concepts, etc.): Attend the Oregon Dental Conference. Write a paper regarding the duties, responsibilities and restriction for dentists, dental hygienists and dental assistants.

Contact name: Ginny Jorgensen

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Curriculum Request Form
Course Revision

Change: Course Description, Requisites, Learning Outcomes

Current course number: EET 111

Current course title: Electrical Circuit Analysis I

Current description: International System of Units, engineering notation and prefixes, definitions of current, voltage, resistance, power, work and efficiency. For DC circuits: Ohm's and Kirchoff's Laws, series, parallel, and series-parallel circuit principles, superposition, Thevenin and Norton theorems, mesh current and node voltage analysis. Includes a 3-hour per week laboratory. Prerequisite: Placement in WR 115; Prerequisite or concurrent registration: MTH 111C.

Proposed description: EET 111 Electrical Circuit Analysis I, 5 Cr. System of Units; engineering notation and prefixes; definitions of current, voltage, resistance, power, work and efficiency; Ohm's and Kirchoff's Laws; DC resistive networks including Thevenin and Norton equivalent circuits. Node voltage and mesh current analysis methods; Capacitance and RC transient response. Includes a 3-hour per week laboratory session. Prerequisite/concurrent: MTH 95.

Reason for description change: To better divide the study load over the three classes, EET 111, 112, 113. Changed the prerequisites to include more students in the program. EET tutoring in place to assist the students.

Proposed learning outcomes:

Intended Outcomes:

1.0 MATHEMATICAL FUNDAMENTALS

1.1 Achieve skill in applying the prefixes and suffixes used in electrical engineering.

1.2 Learn to use the correct number of significant figures in measurements and calculations.

1.3 Perform arithmetic operations when numbers are expressed in scientific notation.

2.0 MATTER, ELECTRICITY, AND RESISTANCE

2.1 Be able to describe the characteristics of electrical

conductors and insulators.

2.2 Be able to describe the concepts of electrical charge, current, and potential (voltage).

2.3 Given the resistivity of a material and its geometry, determine the resistance.

2.4 Be able to evaluate the change of resistance for a given a change of temperature.

2.5 Given a resistor and its color code, determine its labeled resistance.

2.6 State and discuss the rules for electrical safety.

3.0 THE BASIC CIRCUIT

3.1 Learn to draw electrical circuit schematic diagrams using standard symbols.

3.2 Be able to determine the voltage, current or resistance for a component using Ohm's Law. 3.3 Be able to determine the power supplied or consumed by a device using the power law.

3.4 Be able to determine the energy used or supplied by a device given the time and power. 3.5 Be able to analyze the affect of an open or short on the operation of a circuit.

4.0 SIGNALS and SOURCES

4.1 Be able to describe the characteristics of ideal voltage and current sources.

4.2 Be able to describe the characteristics of practical voltage sources (batteries and supplies).

4.3 Be able to describe the characteristics of practical current sources.

5.0 SERIES CIRCUIT

5.1 Be able to be able to identify circuits or circuit sections that are of the series type.

5.2 Be able to apply Kirchhoff's voltage law to a closed loop of a circuit.

5.3 Be able to determine the equivalent resistance for a group of resistors connected in series.

5.4 Be able to determine the current in a series circuit.

5.5 Be able to determine the voltage across any resistor in a series circuit.

5.6 Be able to apply the voltage divider rule to a series circuit.

5.7 Be able to determine the relationship of voltage, current,

resistance and power.

6.0 PARALLEL CIRCUIT

6.1 Be able to identify circuits or circuit sections that are of the parallel type.

6.2 Be able to apply Kirchhoff's current law to a parallel circuit.

6.3 Be able to determine the equivalent resistance for a group of resistors connected in parallel.

6.4 Be able to determine the currents in parallel circuits.

6.5 Be able to determine the current through parallel-connected resistors.

6.6 Be able to apply the current divider rule to a parallel circuit.

6.7 Be able to determine the relationship of voltage, current, resistance and power.

7.0 SERIES - PARALLEL CIRCUIT

7.1 Be able to identify circuits or circuit sections that are of the series-parallel type.

7.2 Be able to apply Kirchhoff's current and voltage laws to a series-parallel circuit.

7.3 Be able to determine the equivalent resistance of resistors connected in series-parallel.

7.4 Be able to determine the current in a series-parallel circuit.

7.5 Be able to determine the current through or voltage across any resistor.

7.6 Be able to determine the relationship of voltage, current, resistance and power.

8.0 NETWORK ANALYSIS

8.1 Be able to determine the currents and voltages in a circuit using the mesh current method.

8.2 Be able to determine the currents and voltages in a circuit using the node voltage method.

9.0 NETWORK THEOREMS

9.1 Be able to determine the Thevenin voltage and the Thevenin resistance of a circuit.

9.2 Be able to determine the Norton current and the Norton resistance of a circuit.

9.3 Be able to solve a multiple source circuit using the superposition method.

9.4 Be able to use Thevenin's circuit to determine load resistance for maximum power transfer.

9.5 Make delta to wye and wye to delta conversions for resistive circuits.

10.0 CAPACITORS

10.1 Understand the concepts of capacitance, charge storage, and the RC time constant.

10.2 Be able to calculate the energy stored in a capacitor given its voltage and capacitance. 10.3 Be able to determine the time constant of an RC circuit.

10.4 Be able to calculate the capacitance of capacitors connected in series and parallel. 10.5 Be able to determine the current and voltage as a function of time in RC circuits

Current prerequisites/concurrent:

Prerequisite or concurrent registration: MTH 111C

Proposed prerequisites/concurrent:

Prerequisite or concurrent registration: MTH 95

Is there an impact on other sacs?:

No

Is there an impact on another dept or campus?:

No

Request term:

winter

Requested year:

2007

Contact name:

sanda nedelcu

Contact e-mail:

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Curriculum Request Form
Course Revision

Change: Course Description, Requisites, Learning Outcomes

Current course number: EET 112

Current course title: Electrical Circuit Analysis II

Current description: Capacitance, inductance, reactance, and impedance. Transient analysis of RL and RC circuits. AC circuit phasor analysis. Power in AC circuits. Includes a 3 hour per week laboratory. Prerequisite: EET 111
Prerequisite or concurrent registration: MTH 112.

Proposed description: Inductance; RL transient response; sinusoidal waveforms; reactance and impedance; AC power. Phasor analysis of RLC circuits; node voltage and mesh current analysis; superposition, Thevenin's and Norton's network theorems. Includes a 3-hour per week laboratory. Prerequisite: EET 111;
Prerequisite/concurrent: MTH 111.

Reason for description change: Better divide load over the sequence and include more students in the program. EET tutoring in place to assist students.

Proposed learning outcomes: Intended Outcomes:

- 1.0 Inductors
- 1.1 Understand the concepts of magnetic field, inductance, and the RL time constant.
- 1.2 Be able to calculate the energy stored in a inductor given its current and inductance.
- 1.3 Be able to determine the time constant of an RL circuit.
- 1.4 Be able to calculate the inductance of inductors connected in series and parallel.
- 1.5 Be able to determine the current and voltage as a function of time in RL circuits.

2.0 Sinusoidal Waveforms

2.1 Be able to determine the frequency and magnitude of a sinusoidal waveform from its graphical time domain representation.

2.2 Be able to determine the frequency and magnitude of a sinusoidal waveform from its mathematical equation.

2.3 Be able to determine the phase angle between two sinusoidal waveform graphically and from their equations.

2.4 Understand the meaning of: peak to peak, peak, average, and rms.

2.5 Understand the basic operation of the AC meter and the oscilloscope.

3.0 Phasor Mathematics and Circuit Elements

3.1 Be able to perform mathematical calculations using complex numbers.

3.2 Relate the application of complex numbers to phasor analysis of AC circuits.

3.3 Understand and be able to convert between rectangular form and polar form phasors.

3.4 Be able to use the scientific calculator to perform phasor calculations.

3.5 Understand and be able to calculate the response of the inductor, capacitor, and resistor to sinusoidal voltages and currents.

4.0 Series and Parallel AC Circuits and Networks

4.1 Be able to calculate the impedance of series, parallel, and series-parallel connected circuits.

4.2 Understand the terms admittance and susceptance and be able to calculate the

susceptance of circuit elements and the admittance of circuits.

4.3 Understand the frequency response of inductors and capacitors.

4.4 Understand the phase relationships between voltages and currents in an AC RLC circuit.

5.0 Node Voltage and Mesh Current Analysis

5.1 Be able to solve for voltages and currents using phasors and the node voltage method.

5.2 Be able to solve for voltages and currents using phasors and the mesh current method.

5.3 Understand and be able to perform calculations for ac delta and wye connected circuits.

5.4 Be able to convert between ac delta and wye connected circuits. 6.0 Network Theorems

6.1 Be able to determine the Thevenin voltage and the Thevenin impedance of an AC circuit.

6.2 Be able to determine the Norton current and the Norton impedance of an AC circuit.

6.3 Be able to solve a multiple source AC circuit using the superposition method.

6.4 Be able to use Thevenin's circuit to calculate load impedance for maximum power transfer.

6.5 Make delta to wye and wye to delta conversions for AC reactive circuits.

7.0 AC Power

7.1 Understand the concept of apparent, reactive, and average power in AC reactive circuits.

7.2 Be able to calculate the apparent, reactive, and average power in AC reactive circuits.

7.3 Understand: "power factor" and be able to calculate the power factor of an AC circuit.

7.4 Understand power factor compensation and be able to perform power factor compensation

Current prerequisites: Prerequisite: EET 111

Proposed prerequisites: Prerequisite: EET 111

Current prerequisites/concurrent: Prerequisite or concurrent registration: MTH 112.

Proposed prerequisites/concurrent: Prerequisite/concurrent: MTH 111.

Is there an impact on other sacs?: No

Is there an impact on another dept or campus?: No

Request term: winter

Requested year: 2007

Contact name: sanda nedelcu

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Curriculum Request Form
Course Revision

Change: Course Title, Course Description, Requisites, Learning Outcomes

Current course number: EET 113

Current course title: Electrical Circuit Analysis

Proposed course title: Electrical Circuit Analysis III

Reason for title change: Existing Error

Current description: Superposition, Thevenin and Norton theorems applied to AC circuits, AC power and transformers. Series and parallel resonant circuits, low pass, high pass, bandpass, and band reject filters, Q and selectivity, transfer functions, decibels, frequency response and Bode diagrams. Includes a 3-hour per week laboratory. Prerequisite: EET 112

Proposed description: Series and parallel resonant circuits; Q and selectivity; RL and RC filters; decibels; transfer functions and Bode diagrams; Transformers, three phase power distribution; Fourier series and transform applied to circuit analysis. Includes a 3-hour per week laboratory. Prerequisite: EET 112; Prerequisite/concurrent: MTH 112

Reason for description change: To better divide the study load over the sequence

Current learning outcomes: None

Proposed learning outcomes: Intended Outcomes:

- 1.0 Resonance
 - 1.1 Understand the concepts of series and parallel resonance.
 - 1.2 Be able to calculate the resonant frequency of an RLC resonant circuit.
 - 1.3 Be able to calculate the bandwidth of an RLC resonant circuit.
 - 1.4 Be able to sketch the frequency response of an RLC resonant circuit.
- 2.0 Filter Circuits
 - 2.1 Be able to identify a low pass, high pass, band pass, and band stop filter.

- 2.2 Be able to derive the transfer function of a simple RC or RL filter.
- 2.3 Be able express voltage ratios and power ratios in decibels.
- 2.4 Be able to plot the frequency response (Bode phase and magnitude) of an RL or RC filter.
- 2.5 Be able to determine corner frequency and pass band of an RL or RC filter circuits.

3.0 Magnetic Circuits

- 3.1 Understand the concept of magnetic field strength and its relation ship to magnetic flux.
- 3.2 Understand the concept of a magnetic circuit and its similarity to an electric circuit.
- 3.3 Be able to apply Ohm's law of magnetic circuits ($\Phi = F / R$) to simple magnetic circuits.
- 3.4 Be able to apply Ampere's circuital law to simple magnetic circuits.
- 3.5 Understand the concept of Hysterisis and its effect magnetic circuits.

4.0 Transformers

- 4.1 Understand the concept of mutual inductance.
- 4.2 Be able to calculate mutual inductance given the self-inductance and coupling coefficient.
- 4.3 Be able to do the following given an ideal iron core transformer.
 - 4.31 Determine a transformer's voltage ratio given its turns ratio.
 - 4.32 Determine a transformer's current ratio given its turns ratio.
 - 4.33 Determine a transformer's impedance ratio given its turns ratio.
- 4.4 Understand how a transformer's frequency response relates to its application.
- 4.5 Be able to calculate transformer voltages and currents in 240/120 VAC power distribution.

5.0 Three Phase Power Systems

- 5.1 Be able to describe the mathematical relationship between sinusoidal voltages and currents.
- 5.2 Be able to describe and draw a schematic diagram of the following:
 - 5.21 Wye and delta connected sources.
 - 5.22 Wye and delta connected loads.
 - 5.23 Three and four wire connections.
 - 5.24 Wye and delta sources connected to wye and delta loads.
- 5.3 Be able to apply node voltage and mesh current analysis to three phase systems.
- 5.4 Be able to perform delta-wye transformations and relate

line and phase voltages.

5.5 Be able to define the phase sequence and the effect of changing it.

5.6 Be able to draw schematic diagrams of three phase power distribution systems, including three phase power transformer connections.

6.0 Fourier Analysis

6.1 Be able to use a table to write the first three terms of the Fourier series for a given square wave and triangle wave.

6.2 Be able to apply the Fourier series to simple RC and RL filters.

6.3 Be able to apply the FFT in circuit simulation software.

Current prerequisites: Prerequisite: EET 112

Proposed prerequisites: Prerequisite: EET 112

Proposed prerequisites/concurrent: Prerequisite/concurrent: MTH 112

Is there an impact on other sacs?: No

Is there an impact on another dept or campus?: No

Request term: winter

Requested year: 2007

Contact name: sanda nedelcu

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**Curriculum Request Form
Course Revision**

Change: Course Description, Requisites, Learning Outcomes

Current course number: EET 121

Current course title: Digital Systems I

Current description: A brief introduction to electrical fundamentals and circuit analysis. Digital fundamentals including: number systems, logic gates, combinational logic circuits, multiplexers and decoders. Laboratory skills include: component identification, construction and testing of logic circuits using prototype board, and use of an oscilloscope and digital multimeter. Prerequisite: MTH 65; placement into WR 115.

Proposed description: The first course in digital electronics covering basic electrical concepts, number systems, combinational gates (AND, OR, NOT, NAND, NOR, and XOR), electrical characteristics and internal structures of TTL gates, Boolean algebra, Karnaugh mapping, and use of MSI devices including adders, decoders, encoders, multiplexers and demultiplexers. Includes a 3 hour per week laboratory. Prerequisite/concurrent: MTH 95.

Reason for description change: update CCOGs

Current learning outcomes: None

Proposed learning outcomes: INTENDED OUTCOMES FOR THE COURSE:

1. The student will be able to describe the relationship between voltage, current, and resistance and be able to do simple Ohm's Law calculations using the units of volts, milliamperes (mA), ohms (W) and kilo-ohms (kW)
2. The student will be able to document the positional weights of a decimal number (up to 6 digits) and the positional weights of a binary number (up to 10 bits) and be able to convert a decimal number (integer) into the equivalent binary number and vice versa
3. The student will be able to document the positional weights of a hexadecimal ("hex") number (up to 4 digits) and be able to describe why one hexadecimal digit is equivalent to four bits
4. The student will be able to describe the characteristics of a BCD (binary coded decimal) value
5. The student will be able to draw the schematic symbol, write the Boolean equation, and write the truth table for the

following gates: AND, OR, NOT, NAND, NOR, and XOR

6. The student will be able to describe the input/output voltage characteristics of TTL-type gates
7. The student will be able to describe the difference between the ability of a TTL output to sink current vs. the ability of a TTL output to source current and to define the term fanout for a TTL output
8. The student will be able to use a manufacturer's data sheet for a TTL device to determine the important mechanical and electrical characteristics of the device including the pinout of the device, the allowable power supply voltage range, allowable temperature range, input voltage specifications, output voltage specifications, and the propagation delay of the device
9. The student will be able to use the commutative property, associative property, and the distributive property of Boolean algebra when manipulating Boolean equations
10. The student will be able to justify the basic Boolean algebra identities and use these identities to simplify Boolean equations
11. The student will be able to write a sum-of-product (SOP) expression from a given truth table and implement the SOP with gates
12. The student will be able to use DeMorgan's Theorem to convert the form of a Boolean equation into an equation that contains different Boolean operators (e.g., use DeMorgan's Theorem to change the logic for implementing a SOP expression from AND/OR gates to all NAND gates)
13. The student will be able to use DeMorgan's Theorem to draw schematic symbols that are equivalent to each of the basic combinational gates (i.e., AND, OR, NAND, and NOR)
14. The student will be able to use a Karnaugh map (with up to four input variables) to simplify the logic required to implement a given truth table
15. The student will be able to write the Boolean equation for each wire in a given combination logic circuit and determine the truth table from the logic circuit
16. The student will be able to create a timing diagram for a given combinational logic circuit that shows the output waveform for a given set of input values that change through time
17. The student will be able to create the truth table for a "half adder" and a "full adder" and implement each using gates
18. The student will be able to cascade full adders to

implement a circuit that will add two multi-bit numbers and the student will be able to explain the consequences of the propagation delay through each of the adders

19. The student will be able to describe the operation of a decoder (e.g., 7447) and predict the output values when given a set of input values

20. The student will be able to describe the operation of an encoder (e.g., 74147) and predict the output values when given a set of input values

21. The student will be able to describe the operation of 2:1, 4:1, and 8:1 multiplexers and predict the output value when given a set of input values

22. The student will be able to implement a truth table using a multiplexer (e.g., a three input truth table directly implemented using an 8:1 multiplexer as well as using a 4:1 multiplexer)

23. The student will be able to describe the operation of demultiplexers (e.g., 74LS138) and predict the output values when given a set of input values

24. The student will be able to describe the internal architecture of common programmable logic devices (PLDs) including the programmable read-only memory (PROM), programmable logic array (PLA), and programmable array logic (PAL)

25. The student will be able to draw the fusemap to implement a given SOP expression using a PAL

Current prerequisites: Prerequisite: MTH 65; placement into WR 115

Proposed prerequisites/concurrent: Prerequisite/concurrent: MTH 95.

Is there an impact on other sacs?: No

Is there an impact on another dept or campus?: No

Request term: winter

Requested year: 2007

Contact name: sanda nedelcu

Curriculum Request Form
Course Revision

Change: Learning Outcomes

Current course number: EET 122

Current course title: Digital Systems II

Current description: The second course in digital electronics presents sequential circuit elements (latches and D/JK flip-flops) with applications including counters, registers, and shift registers. Sequential network analysis and synthesis are covered including the use of state tables and state diagrams. An introduction to sampling and the Nyquist Sampling Theorem are included along with introductory coverage of analog-to-digital converters (ADC) and digital-to-analog converters (DAC). Includes a 3 hour per week laboratory. Prerequisite: EET 121.

Proposed learning outcomes: INTENDED OUTCOMES FOR THE COURSE:

1. The student will be able to use a timing diagram to predict the behavior of a set-reset (SR) latch, enabled SR latch, and D latch in response to various patterns of input signals
2. The student will be able to use a timing diagram to show how a SR latch can eliminate switch bounce from a mechanical switch
3. The student will be able to describe the operation of rising edge, and falling edge, D and JK flip-flops using truth tables and timing diagrams
4. The student will be able to describe the operational characteristics of the asynchronous inputs clear and preset which any given flip-flop may contain
5. The student will be able to describe the timing characteristics of flip-flops including propagation delay, setup time, hold time, and the circumstances when a flip-flop may exhibit "metastability" on its output(s)
6. The student will be able to use a timing diagram to predict the behavior, including the occurrence of glitch states, of a given asynchronous counter circuit (i.e., ripple counter) that contains JK and/or D flip-flops
7. The student will be able to design an asynchronous counter circuit for a specified modulus using a detected state for clearing the counter and will be able to describe why this design technique results in a "race condition"
8. The student will be able to use a timing diagram to predict the behavior of a given synchronous counter circuit that contains JK and/or D flip-flops
9. The student will be able to design a synchronous counter circuit for a specified counting sequence using a present state/next state table
10. The student will be able to use synchronous MSI (medium scale integration) IC counters (e.g., 74160/74163) in a cascaded fashion to

create a multi-IC synchronous counter

11. The student will be able to use a timing diagram to predict the behavior of the following types of shift registers: serial-in-serial-out, serial-in-parallel-out, parallel-in-serial-out, and parallel-in-parallel-out

12. The student will be able to describe the various uses of shift registers (e.g., serial-in-serial-out for digital time delay, serial-in-parallel-out for receiving data within a serial port, parallel-in-serial-out for transmitting data within a serial port, and parallel-in-parallel-out for use as a data register)

13. The student will be able to state the general principle of Fourier Series (i.e., any periodic waveform can be equivalently expressed as a potentially infinite series of sinusoidal waveforms that, instant-by-instant, add-up to the original waveform where the frequencies of the sinusoidal waveforms are integer multiples of the frequency of the original waveform)

14. The student will be able to explain the concept of sampling an analog signal, digitizing the samples using an analog-to-digital converter (ADC), communicating the digitized samples, converting the digitized samples back to analog values using a digital-to-analog converter (DAC), and using a low-pass filter to reconstruct the original analog signal

15. The student will be able to use the Nyquist Sampling Theorem to relate the highest frequency sinusoidal component within the analog signal to be sampled to the required sampling rate for preserving that sinusoidal component through the sampling process to reconstruction

16. The student will be able to describe the circuit action of a flash type analog-to-digital converter (ADC) and will be able to determine the number of comparators required in the circuit for a desired number of bits of resolution for the ADC

17. The student will be able to describe the meaning of quantization error and will be able to determine the quantization error for an ADC with a given number of bits of resolution

18. The student will be able to describe the general circuit action of a binary-weighted-resistor type digital-to-analog converter (DAC)

Current prerequisites:

Prerequisite: EET 121.

Is there an impact on other sacs?:

No

Is there an impact on another dept or campus?:

No

Request term: winter

Requested year: 2007

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Curriculum Request Form
Course Revision

Change: Learning Outcomes

Current course number: EET 123

Current course title: Digital Systems III

Current description: The third course in digital electronics continues prior coverage of digital-to-analog converters (DACs) and analog-to-digital converters (ADCs) with additional conversion topologies, a more detailed analysis of the Nyquist sampling theorem, additional coverage of programmable logic devices (PLDs), and the implementation of sequential state machines. Includes a 3 hour per week laboratory. Prerequisite: EET 122.

Proposed learning outcomes:

1. The student will be able to use a manufacturer's data sheet to determine the resolution, precision, and conversion rate for a DAC and ADC
2. The student will be able to analyze the binary-weighted resistor and the R/2R-ladder type DAC circuits for circuit currents and voltages
3. The student will be able to analyze and explain the internal operation of the following circuit topologies used for ADCs: digital ramp, tracking, single-slope integrator, dual-slope integrator, and successive-approximation register
4. The student will be able to describe the Nyquist Sampling Theorem and the significance to converting between continuous and sampled data
5. The student will be able to determine if the Nyquist criteria is met or not met for a given system
6. Given an analog signal the student will be able to design a sampling system which meets the Nyquist criteria
7. Given a sampled waveform including the input frequency range and sampling rate, the student will be able to determine the frequency content of the sampled data
8. The student will be able to use PC-based computer simulation software to determine the Fourier frequency components of common analog waveforms before and after sampling
9. The student will be able to describe the operation of common systems that are based on the Nyquist criteria such as CD players and digital storage oscilloscopes (DSOs)
10. The student will be able to determine if a given state machine is of the Moore or Mealy type
11. The student will be able to create the state diagram (state graph) and timing diagram for both Moore and Mealy type state machines

based on a problem description or circuit diagram
12. The student will be able to design the logic to implement a Moore or Mealy type state machine from a state diagram
13. The student will be able to describe the internal architecture of common programmable logic devices including the programmable read-only memory (PROM), programmable logic array (PLA), programmable array logic (PAL), and the generic array logic (GAL)
14. The student will be able to write a source code in a hardware definition language and perform the programming for a PAL to implement a combinational logic expression or truth table
15. The student will be able to determine the logic equation for a PAL when given the programmable connections
16. The student will be able to describe the use of a digital signal processor (DSP) and give several examples of its use in digital systems such as the CD player and digital storage oscilloscope (DSO)
17. The student will be able to describe the architecture of both Finite Impulse Response (FIR) and Infinite Impulse Response (IIR) DSP systems

Current prerequisites: Prerequisite: EET 122

Is there an impact on other sacs?: No

Is there an impact on another dept or campus?: No

Request term: winter

Requested year: 2007

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Curriculum Request Form
Course Revision

Change: Course Description, Requisites, Learning Outcomes

Current course number: EET 178

Current course title: PC Architecture for Technicians

Current description: Covers the architecture, assembly, and disassembly of IBM PC compatible computers. Includes basic operational concepts and identification, removal/installation, and configuration of motherboards, microprocessors, memory, power supplies, disk drives, video adapter boards, I/O boards and modems. Servicing hardware, software, and documentation will be reviewed. Includes a 3-hour per week laboratory. Prerequisites or concurrent: EET 111 or CST 106 or CIS 120.

Proposed description: Covers the architecture, assembly and disassembly of IBM PC compatible computers. Includes basic operational concepts and identification, removal/installation, and boards, I/O boards and modems. Servicing hardware, software, and documentation will be reviewed. Includes a 3-hour per week laboratory. Prerequisite: EET 111.

Proposed learning outcomes: The student will be able to:

1. Describe the purpose of, and physically locate, all the major components within a PC
2. Remove and replace all removable modules with in a PC
3. Describe the functional characteristics of all the major components within a PC and describe how a PC functions internally
4. Describe the basic operation of computer networks including common transmission media and media access control (MAC) protocols

Proposed prerequisites: Prerequisite: EET 111

Current prerequisites/concurrent: Prerequisites or concurrent: EET 111 or CST 106 or CIS 120.

Is there an impact on other sacs?: No

Is there an impact on
another dept or campus?:

No

Request term: winter

Requested year: 2007

Contact name: sanda nedelcu

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Curriculum Request Form
Course Revision

Change: Course Description, Requisites, Learning Outcomes

Current course number: EET 188

Current course title: Industrial Safety

Current description: Safety practices in the electronics industry. Emphasizes electrical and chemical hazards. Safe handling of electronic components in the manufacturing environment including ESD control.
Prerequisite: EET 111 or 121.

Proposed description: Safety practices in the electronics industry. Emphasizes electrical and chemical hazards. Safe handling of electronic components in the manufacturing environment including ESD control.
Prerequisites: EET 111.

Reason for description change: Update

Current learning outcomes: None

Proposed learning outcomes: After completing this course the student will:

- ◆ Be familiar with standard workplace hazard/warning signs and labels.
- ◆ Be familiar with standard categories of hazardous materials.
- ◆ Have a general understanding of the documentation used with hazardous materials, such as the MSDS.
- ◆ Be able to describe the different levels of danger that exist with electrical shock.
- ◆ Be able to describe several appropriate actions to take in the event of an electrical accident.
- ◆ Be able to describe the situations under which static electricity may cause damage to electrical components (ESD - electrostatic discharge).
- ◆ Be able to describe appropriate practices for handling and working with electrical components, or electrical equipment, that is sensitive to static electricity (ESD - electrostatic discharge).
- ◆ Be able to describe, in a general manner, the functions of the UL (Underwriters Laboratories), CSA (Canadian Standards Association), and VDE (Verband Deutscher Elektrotechniker) product testing/certification agencies.

◆ Be able to describe at least two examples of product design characteristics for meeting product electrical safety requirements.

Current prerequisites: Prerequisite: EET 111 or 121.

Proposed prerequisites: Prerequisites: EET 111

Is there an impact on other sacs?: No

Is there an impact on another dept or campus?: No

Request term: winter

Requested year: 2007

Contact name: sanda nedelcu

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Curriculum Request Form Course Revision

Change:	Course Description, Requisites, Learning Outcomes
Current course number:	EET 241
Current course title:	Microcomputer Systems
Current description:	Introduces X86 assembly language programming for the IBM PC compatible computer including the use of BIOS and DOS function calls and the use of procedures. Structured programming techniques will be used to write programs and accept keyboard input and create displayed results. Appropriate program testing and debugging methods will be emphasized. Prerequisites: EET 177 and (CST 109 or CST 116).
Proposed description:	Introduces X86 microprocessor architecture and assembly language programming for the IBM PC compatible computer including the use of BIOS and DOS functions calls and the use of procedures. Structured programming techniques will be used to write programs that accept keyboard input and create displayed results. Appropriate program testing and debugging methods will be emphasized. Includes a 3 hour per week laboratory. Prerequisites: EET 122 and either CS 133U or CS 161.
Proposed learning outcomes:	<ol style="list-style-type: none">1. The student will be able to draw a block diagram of a simple computer consisting of a processor, RAM and ROM memory, ports, and the buses that interconnect these components2. The student will be able to describe the instruction cycle (i.e., fetch/decode/execute) and relate the instruction cycle to what actions occur for various instruction types using a block diagram of a computer (see outcome #1)3. The student will be able to draw a block diagram of an X86 processor showing the general purpose registers, the segment registers, the ALU, the flags register, the instruction pointer (IP) register, and the instruction register4. The student will be able to describe how an X86 processor, operating in real mode, creates a physical address from a segment value and an offset5. The student will be able to describe how a 16-bit word is accessed by an X86 processor from memory (i.e., in little endian order)6. The student will be able to predict the memory locations accessed by a program given the segment value for the data segment and the offsets of the individual data structures7. The student will be able to identify the five operand addressing modes available with X86 processors (i.e., immediate operands, register operands, direct addressing, register indirect addressing, register indirect addressing with displacement) and describe the use of each operand addressing mode

8. The student will be able to describe the formats used to store 8-bit and 16-bit unsigned and signed integer values
9. The student will be able to predict the value of the zero flag and carry flag after an arithmetic or logical instruction is executed by an X86 processor and be able to predict the value of the sign flag and overflow flag after an addition or subtraction instruction is executed by an X86 processor
10. The student will be able to describe the action of the following X86 assembly language instructions: MOV, INC, ADD, DEC, SUB, CMP, AND, OR, IN, OUT, JMP, CALL, RET, INT, PUSH, POP as well as the shift/rotate instructions, the string instructions, and the conditional jump instructions including JZ, JNZ, JE, JNE, JA, JAE, JB, JBE
11. The student will be able to translate the high-level language selection structure IF THEN ELSE into X86 assembly language
12. The student will be able to translate each of the following high-level language iteration structures WHILE DO , REPEAT UNTIL , and FOR VAR = x TO y DO into X86 assembly language
13. The student will be able to describe the purpose of a stack and be able to predict the contents of a stack and what the stack pointer (SP) is pointing to as a program is executed
14. The student will be able to write, test, and debug X86 assembly language programs that use BIOS and DOS function calls and procedures to process keyboard input in a specified manner and then generate displayable results
15. The student will be able to describe the actions performed by an X86 processor when a hardware interrupt occurs
16. The student will be able to write, test, and debug X86 interrupt service routines (ISRs) for timer tick interrupts and/or keyboard interrupts
17. The student will be able to describe the difference between X86 real mode and protected mode operation

Current prerequisites:

Prerequisites: EET 177 and (CST 109 or CST 116).

Proposed prerequisites:

Prerequisites: EET 122 and either CS 133U or CS 161.

Is there an impact on other sacs?: No

Is there an impact on another dept or campus?: No

Request term: winter

Requested year: 2007

Contact name: sanda nedelcu

Curriculum Request Form
Course Revision

Change:	Learning Outcomes
Current course number:	EET 242
Current course title:	Microcontroller Systems
Current learning outcomes:	None
Proposed learning outcomes:	<ol style="list-style-type: none">1. The student will be able to program a microcontroller system in assembly code.2. The student will be able to build and test a small 8051-based microcontroller system.3. The student will be able to interface the system to switches, keypads, displays.4. The student will be able to interface the system to A/D and D/A converters.5. The student will be able to describe the internal architecture of the 8051, including counters, timers, ports, memory, and serial communications.
Reason for learning outcomes change:	Update
Is there an impact on other sacs?:	No
Is there an impact on another dept or campus?:	No
Request term:	winter
Requested year:	2007
Contact name:	sanda nedelcu
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Curriculum Request Form
Course Revision

Change: Course Description, Requisites, Learning Outcomes

Current course number: EET 255

Current course title: Industrial Control Systems

Current description: Introduces electronic feedback control systems using analog and digital methods. Topics include temperature control, motor speed control, and servo systems. Lab exercises will include the interfacing and programming of a microcontroller IC. Prerequisite: EET 241. Prerequisite or concurrent: EET 238.

Proposed description: Introduces electronic feedback control systems using analog and digital methods. Topics include temperature control, motor speed control, servo systems. Lab exercises will include the interfacing and programming of a microcontroller IC. Prerequisite: EET 241 or EET 242. Prerequisite or concurrent: EET 222.

Proposed learning outcomes: Upon successful completion of this course, the student will have completed the goals and objectives listed in this course content guide.

1.0 INTRODUCTION TO INDUSTRIAL CONTROL/ROBOTICS Instructional Goal: The goal is to develop an understanding of the basics of industrial control systems and a historical perspective of industrial automation and its role in economic development. Objectives:

1.1.0 List the three basic components of a control system: input, logic, and output.

1.1.1 Give a general description of the function of each of the three basic system components.

1.1.2 Give several examples of the types of devices which may be used for each of the three basic system components.

1.1.3 Give several examples of how the types of devices used in control systems have changed since the year 1900, in particular, use of gears and pulleys to servomechanisms, and use of relay logic to microcomputers.

1.2.0 List several advantages gained by the use of industrial control systems, including the following:

1.2.1 Use of robots in environments hazardous to humans.

1.2.2 Improved product quality.

1.2.3 Economic competition.

2.0 BASICS OF SWITCHES, RELAYS, AND

SEMICONDUCTORS Instructional Goal: The goal is to develop an understanding of how switches, relays, transistors, and thyristors are used in control systems.

Objectives:

2.1.0 Describe several methods of debouncing switches including RC time constant and latch methods.

2.2.0 Interpret relay logic diagrams, specifically:

2.2.1 Normally open and closed contacts.

2.2.2 Actuating relays.

2.3.0 State several advantages and disadvantages of relay logic, including why relays may be used in modern day equipment.

2.4.0 State several applications of the transistor as an input and output device, and precautions to be taken when the transistor is connected to inductive devices such as relay coils or transformers.

2.5.0 Describe the operation of thyristors, including the following:

2.5.1 State how the SCR or TRIAC is triggered on and how the devices are turned off.

2.5.2 Describe how the SCR or TRIAC may be triggered by a unijunction transistor, DIAC, PUT, SBS, and four-layer diode.

2.5.3 Describe the use of a DIAC and how it is used in conjunction with an SCR or TRIAC.

2.5.4 Describe the application of thyristors to power control, such as motor speed control and light intensity control.

2.5.5 Explain why thyristors may need to be electrically isolated from the trigger circuit and state how optical and magnetic isolation methods may be used.

2.5.6 Given a typical "solid state relay", with data able to interface it with a microprocessor port.

2.6.0 Construct a thyristor controlled circuit which uses resistor firing and unijunction transistor firing methods, and perform the following:

2.6.1 Measure the thyristor firing angle and relate the measurement to theoretical expectations.

2.6.2 Measure the average load voltage and current.

2.6.3 Repair a malfunctioning circuit using a systematic and logical procedure.

2.7.0 Construct a thyristor controlled circuit using voltage feedback for regulation, and perform the following:

2.7.1 Measure the range of the "set" control and the corresponding range of the output duty cycle.

2.7.2 Measure the effect of a load impedance change on the output duty cycle.

2.7.3 Measure the circuits regulation with and without feedback.

3.0 PROGRAMMABLE CONTROLLERS Instructional Goal:

The goal is to develop an understanding of how the microprocessor is used to control industrial processes, in particular, the processor- control interface and the methods of programming process control. Objectives:

- 3.1.0 Name the three parts of a programmable controller and describe the function of each part: input/output section, processing section, and the programming section.
- 3.1.1 Given an input device, such as a switch or sensor, state how the microprocessor reads the input, and how the input information is processed to generate the desired result or output. Describe the operation of the interface circuit between the input device and the processor.
- 3.1.2 Given an output device, such as a relay or motor, state how the microprocessor controls that device. Describe the operation of the interface circuit between the processor and the controlled device.
- 3.1.3 Develop and interpret assembly programs used by a control type microprocessor. Understand the following terms and operations:
 - 3.1.3.1 The programmable controllers scan cycle (input scan, output scan, program execution, interrupts, timer).
 - 3.1.3.2 Input and output condition storage (input and output image tables).
 - 3.1.3.3 Central processing unit functions.
 - 3.1.3.4 User/program memory and data memory.
- 3.1.4 State how a typical programmable controller is programmed by the user, including the following:
 - 3.1.4.1 Dedicated ROM based systems.
 - 3.1.4.2 Using a programmer such as the Allen-Bradley PLC-2.
 - 3.1.4.3 Using higher level languages, such as Basic.
- 3.2.0 Describe how a closed loop control system is implemented with a microprocessor.
 - 3.2.1 Describe the use of A to D and D to A converters in the closed loop.
 - 3.2.2 Describe how feedback control modes are implemented in software and the relationship of the modes to response time and damping.
- 3.3.0 Interface a servo motor-generator system with a micro- computer. Perform the following operations:
 - 3.3.1 Use the microcomputer timer to measure motor speed. Use a D to A converter to drive the motor. Program the microcomputer to read the motor speed and write it to a port, and to input "set" speed from a port and output it to the D to A converter.
 - 3.3.2 Program the microcomputer to control the motor speed by means of proportional feedback. Measure the system response to a change of load on the generator: settling time, offset, and plot of system response to a load disturbance.
- 3.4.0 Interface a simple on-off control system with a

microcomputer. Measure and compare the system response with a small differential gap (2%), and a large differential gap (10%).

3.5.0 Interface a stepper motor with a microcomputer and perform the following operations:

3.5.1 Program the motor to rotate a given number of steps and verify program by measurements.

3.5.2 Program the motor to rotate at a given rate and verify by measurements.

4.0 BASICS OF ELECTRO-MECHANICAL DEVICES

Instructional Goal: The goal is to develop an understanding of the basic operating principles of relays, solenoids, and AC and DC motors used in industrial control systems. The emphasis will be on comparison and application rather than detailed theory of operation. Objectives:

4.1.0 Use the basic concepts of magnetism, such as attraction and repulsion of magnetic poles, that field strength is directly proportional to the ampere-turn product of an electromagnet, and magnetic permeability and conduction, to explain and contrast the operating characteristics of the following devices: solenoid, relay, DC motors, AC motors, and stepper motors.

4.2.0 State how speed control is accomplished with DC, AC, and stepper motors, and the effect of each method on motor efficiency and torque. Specifically, the effects caused by varying the following, as applicable: field current, armature current, frequency, and phase.

5.0 PROCESS CONTROL CIRCUITS Instructional Goal: The goal is to develop an understanding of process control systems as implemented by both open and closed loop electronic circuits, including interface circuits to a microprocessor type industrial controller. Objectives:

5.1.0 Compare the characteristics of open loop and closed loop control systems, their advantages and disadvantages. Give several applications for both systems.

5.2.0 Develop an understanding of the operation of a closed loop control system and the terms: set point, measured value, and error.

5.2.1 List the following closed loop feedback control modes: on-off, proportional, integral, and differential.

5.2.2 Describe the general effect of each of the control modes on the response of a closed loop control system, including the use of combinations of the basic modes.

5.2.3 Discuss the problem of offset in the proportional control mode and how it is overcome by proportional plus integral control.

5.2.4 Describe the effect of changing the time constant in the differential and integral control parts of the feedback, specifically on delay and damping (settling time).

5.3.0 Given a process control circuit example, such as a

temperature or pressure controller, describe the circuit operation and identify the mode of control.

5.4.0 Describe the general operating characteristics of the following input devices or transducers:

5.4.1 Photo voltaic device, photo conductor, and photo diode.

5.4.2 Thermistor, thermocouple, bi-metallic, and semi-conductor temperature sensors.

5.4.3 Strain gauges and accelerometers.

5.4.4 Hall effect sensor and magnetic tachometers.

5.5.0 Describe the operating characteristics of the following output devices or transducers in both open and closed loop control systems:

5.5.1 Relays and solenoids.

5.5.2 DC and AC servo motors.

5.5.3 Stepper motors.

5.6.0 Describe the basic operation of the following motor speed control devices and associated circuits:

5.6.1 Op amps, power BJT's and FET's.

5.6.2 SCR's and TRIAC's.

5.6.3 Variable frequency inverters (circuit).

5.7.0 Construct a PID control loop with op-amps and a motor-generator servo system. Perform the following operations:

5.7.1 Measure the system response to a load change on the generator with only the proportional feedback enabled.

Compare the responses obtained with a wide proportional band (50%) and a narrow proportional band (10%).

5.7.2 Measure the system response with the integral feedback loop added and adjust it for reduced off-set.

5.7.3 Measure the system response with the derivative feedback loop added and adjust it for reduced settling time.

6.0 INDUSTRIAL ROBOTS Instructional Goal: The goal is to develop a basic understanding of the concept of "industrial Robot", and of the applications of various robot mechanisms in industry. Objectives:

6.1.0 Define the term "degrees of freedom" as applied to robot mechanical motion.

6.2.0 Differentiate the meanings of the terms "articulated-arm", and spherical and cylindrical configurations.

6.3.0 State how the following hardware may be applied to the robot: pulleys, belts, sprockets, link chain, and gears.

6.4.0 Describe the following motions of a robot arm: waist, elevation, extension, pitch, yaw, and roll.

6.5.0 Describe the advantages and disadvantages of the three main methods of actuation: electric, hydraulic, and pneumatic.

6.6.0 Describe the categories of software for industrial robots, in terms of: positive-stop programs, point-to-point programs, and continuous path programs.

Current prerequisites: Prerequisite: EET 241

Proposed prerequisites: Prerequisite: EET 241 or EET 242

Current prerequisites/concurrent: Prerequisite or concurrent: EET 238.

Proposed prerequisites/concurrent: Prerequisite or concurrent: EET 222.

Is there an impact on other sacs?: No

Is there an impact on another dept or campus?: No

Request term: winter

Requested year: 2007

Contact name: sanda nedelcu

Contact e-mail: sanda.nedelcu@pcc.edu

Curriculum Request Form
Course Revision

CHANGE: Course Description

Current Course Number: MTH 211

Current Course Title: Foundations of Elementary Math I

Current Description: Surveys mathematical topics for those interested in the presentation of mathematics at the K - 9 levels. Emphasizes problem solving, patterns, sequences, set theory, logic, numeration systems, number bases, arithmetic operations and number theory. Various manipulatives and problem solving strategies are used. Prerequisite: MTH95 or higher; placement into WR121.

Proposed Description: Surveys mathematical topics for those interested in the presentation of mathematics at the K-9 levels. Topics emphasized are problem solving, patterns, sequences, set theory, logic, numeration systems, number bases, arithmetic operations, and number theory. Various manipulatives and problem solving strategies are used. Prerequisite: MTH 95 or higher, and placement into WR 121.

Reason for Description Change: Clarify wording to better reflect the course content.

Will this impact other SACs?,Is there an impact on other SACs?: No

Will this impact other Depts/Campuses?,Is there an impact on another dept or campus?: No

Request Term: fall

Requested Year: 2007

Contact Name: Kimberly Neuburger

Contact E-Mail: kneuburg@pcc.edu

Curriculum Request Form
Course Revision

CHANGE: Course Description

Current Course Number: MTH 213

Current Course Title: Foundations of Elementary Math III

Current Description: Surveys mathematical topics for those interested in the presentation of mathematics at the K - 9 levels. Various manipulatives and problem solving approaches are used to explore algebra and functions, informal geometry, transformational geometry, and measurement systems. Prerequisite: MTH 211

Proposed Description: Surveys mathematical topics for those interested in the presentation of mathematics at the K-9 levels. Various manipulatives and problem solving approaches are used to explore informal geometry, transformational geometry, and measurement systems. Prerequisite: MTH 211

Reason for Description Change: Clarify wording to better reflect the course content.

Will this impact other SACs?,Is there an impact on other SACs?: No

Will this impact other Depts/Campuses?,Is there an impact on another dept or campus?: No

Request Term: fall

Requested Year: 2007

Contact Name: Kimberly Neuburger

Contact E-Mail: kneuburg@pcc.edu

Curriculum Request Form
Course Revision

CHANGE: Learning Outcomes

Current Course Number: BA 205

Current Course Title: Solving Communication Problems with Technology

Current Learning Outcomes: Students will be able to
Develop listening, speaking, and writing skills necessary for effective business communications.
Research, write, and edit business documents.
Select and use appropriate technology for business communication needs.
Enhance collaborative teamwork skills.
Create resume and cover letter.

Proposed Learning Outcomes: Upon successful completion of this course, students will be able to:

- ◆ Demonstrate listening, speaking, and writing skills necessary for effective business communications through written business documents and business presentations.
- ◆ Research, write, and edit business documents using on-line and library resources and using business software applications common to the contemporary business environment.
- ◆ Demonstrate an awareness of the strengths and weaknesses of differing communications technology and select and use appropriate technology for business communication needs.
- ◆ Work collaboratively with teams as demonstrated through successful engagement in group exercises and projects.
- ◆ Create a resume and cover letter.

Reason for Learning Outcomes Change: Update outcomes to reflect current practice.

Will this impact other SACs?,Is No

there an impact on other SACs?:

Will this impact other Depts/Campuses?, Is there an impact on another dept or campus?: No

Request Term: spring
Requested Year: 2007

Contact Name: Phil Seder
Contact E-Mail: phillip.seder@pcc.edu

Curriculum Request Form
Course Revision

CHANGE: Course Description, Learning Outcomes

Current Course Number: BA 223

Current Course Title: Principles of Marketing

Current Description: Provides a general knowledge of marketing with emphasis on the marketing mix elements and target markets for consumer and industrial products. Covers marketing strategies, customer behavior and international markets.

Proposed Description: Provides a general knowledge of marketing with emphasis on the marketing mix elements and target markets for consumer and industrial products. Marketing strategies, customer behavior, and international marketing are topics addressed. BA 101 recommended.

Reason for Description Change: Added BA 101 recommended.

Current Learning Outcomes: None listed.

Proposed Learning Outcomes: Upon successful completion of Principles of Marketing, students will be able to:

- ◆ Demonstrate an understanding of the marketing concept and the factors that differentiate market-driven enterprises from non market-driven enterprises in a capitalist economy.
- ◆ Demonstrate knowledge of some of the basic approaches to formulating a marketing strategy.
- ◆ Demonstrate knowledge of the marketing planning process.
- ◆ Identify elements of the marketing mix and the functional disciplines of marketing such as research and marketing communications.
- ◆ Demonstrate understanding of both the product and marketing lifecycle including professional roles and responsibilities within that lifecycle.

◆ Communicate using basic marketing terminology.

Reason for Learning
Outcomes Change:

None listed in current system.

Will this impact other
SACs?,Is there an impact on
other SACs?:

No

Will this impact other
Depts/Campuses?,Is there an
impact on another dept or
campus?:

No

Request Term:

spring

Requested Year:

2007

Contact Name:

Phil Seder

Contact E-Mail:

phillip.seder@pcc.edu

Curriculum Request Form
Contact/Credit Hour Change

Current course number: BCT 280 C

Current course title: Cooperative Education-BCT Design/Build Remodeling

	Current	Proposed
credit hours:	8	1-5

Reason for change: Changing the 8 credit BCT Co-op course, to a variable credit Co-op course specifically designed for the Design/Build Remodeling AAS.

Are outcomes affected?: YES

Are degrees/certs affected?: No

Is there an impact on other dept/campus?: NO

Is there potential conflict with another sac?: NO

Implem. Term: Winter
Implementation year, implem. Year: 2007

Contact name: Spener Hinkle
Contact email: shinkle@pcc.edu

Curriculum Request Form
Contact/Credit Hour Change

Current Course Number:	AB 101	
Current Course Title:	Basic Skills I	
Current Lecture Hours:	Current	Proposed
Lecture Hours:	shop3	0
Lab Hours:	shop9	0
Current Lec/Lab Hours:	0	10
Current Load:		
Total Contact Hours:	12	10
Current Credits:	6	6

Reason for Change: Change to accurately reflect workload and to remove the shop schedule type.

Are outcomes affected?: NO

Are degrees/certs affected?: No

Is there an impact on other Dept/Campus?: NO

Is there potential conflict with another SAC?: NO

Implem. Term: Fall
Implementation Year, Implem. Year: 2007

Contact Name: Jim Jeffery
Contact Email: jjeffery@pcc.edu

Curriculum Request Form
Contact/Credit Hour Change

Current Course Number:	AB 102		
Current Course Title:	Basic Skills II		
	Current	Proposed	
Lecture Hours:	shop3	0	
Lab Hours:	shop9	0	
Proposed Lec/Lab Hours:	0	10	
Current Load:	.538	.540	
Total Contact Hours:	12	10	
Current Credits:	6	6	
Reason for Change:	Change to accurately reflect workload		
Is there potential conflict with another SAC?:	NO		
Implem. Term:	Fall		
Implementation Year,Implem. Year:	2007		
Contact Name:	Jim Jeffery		
Contact Email:	jjeffery@pcc.edu		

Curriculum Request Form
Contact/Credit Hour Change

Current Course Number:	AB 103	
Current Course Title:	Panel Repair I	
	Current	Proposed
Lecture Hours:	shop3	0
Lab Hours:	shop9	0
Proposed Lec/Lab Hours:	0	10
Current Load:	.538	.540
Total Contact Hours:	12	10
Current Credits:	6	6
Reason for Change:	Change to accurately reflect workload and change in schedule type.	
Is there potential conflict with another SAC?:	NO	
Implem. Term:	Fall	
Implementation Year,Implem. Year:	2007	
Contact Name:	Jim Jeffery	
Contact Email:	jjeffery@pcc.edu	

Curriculum Request Form
Contact/Credit Hour Change

Current Course Number:	AB 104	
Current Course Title:	Panel Repair II	
	Current	Proposed
Lecture Hours:	shop3	0
Lab Hours:	shop9	0
Proposed Lec/Lab Hours:	0	10
Current Load:	.538	.540
Total Contact Hours:	12	10
Current Credits:	6	6
Reason for Change:	Change to accurately reflect workload and change in schedule type.	
Is there potential conflict with another SAC?:	NO	
Implem. Term:	Fall	
Implementation Year,Implem. Year:	2007	
Contact Name:	Jim Jeffery	
Contact Email:	jjeffery@pcc.edu	

Curriculum Request Form
Contact/Credit Hour Change

Current Course Number: AB 110

Current Course Title: Auto Painting IA

	Current	Proposed
Lecture Hours:	shop3	0

Lab Hours:	shop9	0
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Proposed Lec/Lab Hours:	0	10
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Current Load:	.538	.540
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Total Contact Hours:	12	10
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Current Credits:	6	6
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Reason for Change: Change to accurately reflect workload and change in schedule type.

Is there potential conflict with another SAC?: NO

Implem. Term: Fall

Implementation Year, Implem. Year: 2007

Contact Name: Jim Jeffery

Contact Email: jjeffery@pcc.edu

Curriculum Request Form
Contact/Credit Hour Change

Current Course Number: AB 111

Current Course Title: Auto Painting IB

	Current	Proposed
Lecture Hours:	shop3	0

Lab Hours:	shop9	0
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Proposed Lec/Lab Hours:	0	10
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Current Load:	.538	.540
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Total Contact Hours:	12	10
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Current Credits:	6	6
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Reason for Change: Change to accurately reflect workload and change in schedule type.

Is there potential conflict with another SAC?: NO

Implem. Term: Fall
Implementation Year, Implem. Year: 2007

Contact Name: Jim Jeffery
Contact Email: jjeffery@pcc.edu

Curriculum Request Form
Contact/Credit Hour Change

Current Course Number: AB 112

Current Course Title: Auto Painting 2A

	Current	Proposed
Lecture Hours:	shop3	0

Lab Hours:	shop9	0
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Proposed Lec/Lab Hours:	0	10
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Current Load:	.538	.540
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Total Contact Hours:	12	10
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Current Credits:	6	6
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Reason for Change: Change to accurately reflect workload and change in schedule type.

Is there potential conflict with another SAC?: NO

Implem. Term: Fall
Implementation Year, Implem. Year: 2007

Contact Name: Jim Jeffery
Contact Email: jjeffery@pcc.edu

Curriculum Request Form
Contact/Credit Hour Change

Current Course Number:	AB 113	
Current Course Title:	Auto Painting 2B	
	Current	Proposed
Lecture Hours:	shop3	0
Lab Hours:	shop9	0
Proposed Lec/Lab Hours:	0	10
Current Load:	.538	.540
Total Contact Hours:	12	10
Current Credits:	6	6
Reason for Change:	Change to accurately reflect workload and change in schedule type.	
Is there potential conflict with another SAC?:	NO	
Implem. Term:	Fall	
Implementation Year,Implem. Year:	2007	
Contact Name:	Jim Jeffery	
Contact Email:	jjeffery@pcc.edu	

Curriculum Request Form
Contact/Credit Hour Change

Current Course Number:	AB 114	
Current Course Title:	Auto Painting 3A	
	Current	Proposed
Lecture Hours:	shop3	0
Lab Hours:	shop9	0
Proposed Lec/Lab Hours:	0	10
Current Load:	.538	.540
Total Contact Hours:	12	10
Current Credits:	6	6
Reason for Change:	Change to accurately reflect workload and change in schedule type.	
Is there potential conflict with another SAC?:	NO	
Implem. Term:	Fall	
Implementation Year,Implem. Year:	2007	
Contact Name:	Jim Jeffery	
Contact Email:	jjeffery@pcc.edu	

Curriculum Request Form
Contact/Credit Hour Change

Current Course Number: AB 115

Current Course Title: Auto Painting 3B

	Current	Proposed
Lecture Hours:	shop3	0

Lab Hours:	shop9	0
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Proposed Lec/Lab Hours:	0	10
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Current Load:	.538	.540
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Total Contact Hours:	12	10
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Current Credits:	6	6
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Reason for Change: Change to accurately reflect workload and change in schedule type.

Is there potential conflict with another SAC?: NO

Implem. Term: Fall
Implementation Year, Implem. Year: 2007

Contact Name: Jim Jeffery
Contact Email: jjeffery@pcc.edu

Curriculum Request Form
Course Revision

CHANGE: Course Description

Current Course Number: GER 101

Current Course Title: First Year German

Current Description: Emphasizes active communication in German which includes listening, speaking, reading, writing, pronunciation, structure, vocabulary and culture. Proficiency target level: Novice high.

Proposed Description: FOR BEGINNERS. First term of a three-term sequence. Students develop basic language skills in German: listening, speaking, reading, writing, pronunciation, structure, and vocabulary. At the end of this course the student will begin to communicate in common day-to-day interactions.

Reason for Description Change: We are emphasizing that this is a beginning course. We are also updating the language to better match what we do in the course. We are also deleting language from ACTFL (American Council on the Teaching of Foreign Languages), as we do not evaluate our students' oral skills directly based on these guidelines and most students are not familiar with this terminology ("Proficiency target level: Novice high.")

Is there an impact on other SACs?: No

Is there an impact on another dept or campus?: No

Request Term: fall
Requested Year: 2007

Contact Name: Kristi Tompkins
Contact E-Mail: ktompkin@pcc.edu

Curriculum Request Form
Course Revision

CHANGE: Course Description

Current Course Number: GER 102

Current Course Title: First Year German

Current Description: Emphasizes active communication in German which includes listening, speaking, reading, writing, pronunciation, structure, vocabulary and culture. Proficiency target level: Novice high.

Proposed Description: SECOND TERM of a three-term sequence. Continues the work of GER 101. Students continue to develop skills in listening, speaking, reading, writing, pronunciation, structure, and vocabulary. At the end of this course the student will communicate in common day-to-day interactions.
Recommended: completion of GER 101, 150 or instructor permission.

Reason for Description Change: We are emphasizing that this is the second term of the course. We are also updating the language to better match what we do in the course. We are also deleting language from ACTFL (American Council on the Teaching of Foreign Languages), as we do not evaluate our students' oral skills directly based on these guidelines and most students are not familiar with this terminology ("Proficiency target level: Novice high.")

Is there an impact No
on other SACs?:

Is there an impact No
on another dept
or campus?:

Request Term: fall
Requested Year: 2007

Contact Name: Kristi Tompkins
Contact E-Mail: ktompkin@pcc.edu

Curriculum Request Form
Course Revision

CHANGE: Course Description

Current Course Number: GER 103

Current Course Title: First Year German

Current Description: Emphasizes active communication in German which includes listening, speaking, reading, writing, pronunciation, structure, vocabulary and culture. Proficiency target level: Novice high.

Proposed Description: THIRD TERM of a three-term sequence. Continues the work of GER 102. Students become adept at skills in listening, speaking, reading, writing, pronunciation, structure, and vocabulary. On completion, the student will be able to converse in a variety of situations.
Recommended: completion of GER 102, 151 or instructor permission.

Reason for Description Change: We are emphasizing that this is the third term of the sequence. We are also updating the language to better match what we do in the course. We are also deleting language from ACTFL (American Council on the Teaching of Foreign Languages), as we do not evaluate our students' oral skills directly based on these guidelines and most students are not familiar with this terminology ("Proficiency target level: Novice high.")

Is there an impact on other SACs?: No

Is there an impact on another dept or campus?: No

Request Term: fall
Requested Year: 2007

Contact Name: Kristi Tompkins
Contact E-Mail: ktompkin@pcc.edu

Curriculum Request Form
Course Revision

CHANGE: Course Description

Current Course Number: GER 150

Current Course Title: GER 150 First Year German, 6 cr.

Current Description: For beginners. Emphasizes active communication in German which includes listening, speaking, reading, writing, pronunciation, structure, vocabulary and culture. Proficiency target level: Novice high to intermediate low.

Proposed Description: FOR BEGINNERS. First term of a two-term sequence which equals one full year of German. Students develop basic language skills in German: listening, speaking, reading, writing, pronunciation, structure, and vocabulary. At the end of this course the student will communicate in common day-to-day interactions.

Reason for Description Change: We are emphasizing that this is a beginning course. We are also updating the language to better match what we do in the course. We are also deleting language from ACTFL (American Council on the Teaching of Foreign Languages), as we do not evaluate our students' oral skills directly based on these guidelines and most students are not familiar with this terminology ("Proficiency target level: Novice high.")

Is there an impact No on other SACs?:

Is there an impact No on another dept or campus?:

Request Term: fall
Requested Year: 2007

Contact Name: Kristi Tompkins
Contact E-Mail: ktompkin@pcc.edu

Curriculum Request Form
Course Revision

CHANGE: Course Description

Current Course Number: GER 151

Current Course Title: GER 151 First Year German

Current Description: Continues the work of GER 150. Further emphasis on active communication in German. Also provides review for students entering second year. Proficiency target level: Novice high to intermediate low.

Proposed Description: SECOND TERM of a two-term sequence. Continues the work of GER 150. Students become adept at skills in listening, speaking, reading, writing, pronunciation, structure, and vocabulary. On completion, the student will be able to converse in a variety of situations.
Recommended: Completion of GER 150 or instructor permission.

Reason for Description Change: We are emphasizing that this is the second course in a two-term sequence. We are also updating the language to better match what we do in the course. We are also deleting language from ACTFL (American Council on the Teaching of Foreign Languages), as we do not evaluate our students' oral skills directly based on these guidelines and most students are not familiar with this terminology ("Proficiency target level: Novice high.")

Is there an impact No
on other SACs?:

Is there an impact No
on another dept
or campus?:

Request Term: fall

Requested Year: 2007

Contact Name: Kristi Tompkins

Contact E-Mail: ktompkin@pcc.edu

Curriculum Request Form
Course Revision

CHANGE: Course Description

Current Course Number: GER 201

Current Course Title: GER 201 Second Year German, 4 cr.

Proposed Transcript Title: GER 201 Second Year German

Current Description: Continues the work of first year German, reviewing, expanding, and perfecting pronunciation, structure, and vocabulary for the purpose of active communication. Proficiency target level: Intermediate mid. Recommended: Completion of first year German at the college level or instructor permission.

Proposed Description: FIRST TERM of a three-term sequence that continues the work of first year German. Students expand on their skills in the five language areas: listening, speaking, writing, reading, and culture. Emphasizes proficiency in spoken German. Recommended: Completion of first year college German or instructor permission.

Reason for Description Change: We are emphasizing that this is the first term of second year German and is a three-term sequence. We are also updating the language to better match what we do in the course. We are also deleting proficiency target level language from ACTFL (American Council on the Teaching of Foreign Languages), as we do not evaluate our students' oral skills directly based on these guidelines and most students are not familiar with this terminology.

Is there an impact No on other SACs?:

Is there an impact No on another dept or campus?:

Request Term: fall

Requested Year: 2007

Contact Name: Kristi Tompkins

Contact E-Mail: ktompkin@pcc.edu

Curriculum Request Form
Course Revision

CHANGE: Course Description

Current Course Number: GER 202

Current Course Title: GER 202 Second Year German, 4 cr.

Proposed Transcript Title: GER 202 Second Year German

Current Description: Continuation of German 201. Emphasizes active communication in German with additional practice in reading and writing. Proficiency target level: Intermediate mid to high. Recommended: Completion of GER 201, 250 or instructor permission.

Proposed Description: SECOND TERM of a three-term sequence. Students continue to expand on their skills in the five language areas: listening, speaking, writing, reading, and culture. Emphasizes proficiency in spoken German. Recommended: Completion of GER 201, 250 or instructor permission.

Reason for Description Change: We are emphasizing that this is the second term of second year German, which is a three-term sequence. We are also updating the language to better match what we do in the course. We are also deleting proficiency target level language from ACTFL (American Council on the Teaching of Foreign Languages).

Reason for Learning Outcomes Change: no changes

Is there an impact on other SACs?: No

Is there an impact on another dept or campus?: No

Request Term: fall

Requested Year: 2007

Contact Name: Kristi Tompkins

Contact E-Mail: ktompkin@pcc.edu

Curriculum Request Form
Course Revision

CHANGE: Course Description

Current Course Number: GER 203

Proposed Course Number: GER 203

Current Course Title: GER 203 Second Year German, 4 cr.

Proposed Transcript Title: GER 203 Second Year German

Reason for Title Change: no changes

Current Description: Continuation of GER 202. Emphasizes active communication in German with additional practice in reading and writing. Proficiency target level: Intermediate high. Recommended: Completion of GER 202 or instructor permission.

Proposed Description: THIRD TERM of a three-term sequence. Students continue to expand on their skills in the five language areas: listening, speaking, writing, reading, and culture. Emphasizes proficiency in spoken German. Recommended: Completion of GER 202, 250 or instructor permission.

Reason for Description Change: We are emphasizing that this is the third term of second year German, which is a three-term sequence. We are also updating the language to better match what we do in the course. We are also deleting proficiency target level language from ACTFL (American Council on the Teaching of Foreign Languages), as we do not evaluate our students' oral skills directly based on these guidelines and most students are not familiar with this terminology.

Is there an impact No
on other SACs?:

Is there an impact No
on another dept
or campus?:

Request Term: fall
Requested Year: 2007

Contact Name: Kristi Tompkins
Contact E-Mail: ktompkin@pcc.edu

Curriculum Request Form
Course Revision

CHANGE: Course Description

Current Course Number: GER 250

Current Course Title: GER 250 Second Year German, 6 cr.

Proposed Transcript Title: GER 250 Second Year German

Reason for Title Change: no change

Current Description: Continues the work of first year German, reviewing, expanding, and perfecting pronunciation, structure, and vocabulary for the purpose of active communication. Includes practice in reading and writing. Recommended: Completion of first year German at the college level or instructor permission.

Proposed Description: FIRST TERM of a two-term sequence that continues the work of first year German. Students expand on their skills in the five language areas: listening, speaking, writing, reading and culture. Emphasizes proficiency in spoken German. Recommended: Completion of first year German at the college level or instructor permission.

Reason for Description Change: We are emphasizing that this is the first term of second year in a two-term format. We are also updating the language to better match what we do in the course. We are also deleting proficiency target language from ACTFL (American Council on the Teaching of Foreign Languages), as we do not evaluate our students' oral skills directly based on these guidelines and most students are not familiar with this terminology.

Is there an impact on other SACs?: No

Is there an impact on another dept or campus?: No

Request Term: fall

Requested Year: 2007

Contact Name: Kristi Tompkins

Contact E-Mail: ktompkin@pcc.edu

Curriculum Request Form
Course Revision

CHANGE: Course Description

Current Course Number: GER 251

Current Course Title: GER 251 Second Year German, 6 cr.

Proposed Transcript Title: GER 251 Second Year German

Reason for Title Change: no change

Current Description: Continuation of GER 250. Emphasizes active communication in German with additional practice in reading and writing. Recommended: Completion of (GER 202, 250) or instructor permission.

Proposed Description: SECOND TERM of a two-term sequence. Students continue to expand on their skills in the five language areas: listening, speaking, writing, reading and culture. Emphasizes proficiency in spoken German. Recommended: Completion of GER 202, 250 or instructor permission.

Reason for Description Change: We are emphasizing that this is the second term of second year in a two-term format. We are also updating the language to better explain what we do in the course.

Is there an impact on other SACs?: No

Is there an impact on another dept or campus?: no

Request Term: fall

Requested Year: 2007

Contact Name: Kristi Tompkins

Contact E-Mail: ktompkin@pcc.edu

Curriculum Request Form
Course Revision

CHANGE: Course Description

Proposed Course Number: GER 260A

Current Course Title: GER 260A German Culture Through Film, 3 cr.

Proposed Transcript Title: GER 260A German Culture Film

Reason for Title Change: No change; however, it would be nice to fit the entire title on the student transcript: GER 260A German Culture Through Film

Current Description: German Culture Through Film. Enhances understanding of German culture and contemporary society through analysis of cultural and social issues presented in seven German films. May explore issues including but not limited to: interracial and cultural relations, ethnic conflict, Germany during the Second World War, economic, social and historical perspectives in post-war Germany, roles of German men and women, self-discovery, German humor, East versus West. Course conducted in English and all films with English subtitles. Students may take only one of 260 a,b, or c.

Proposed Description: German Culture Through Film. Enhances understanding of German culture and contemporary society through analysis of cultural and social issues presented in seven German films. May explore issues including but not limited to: interracial and cultural relations, ethnic conflict, Germany during the Second World War, economic, social and historical perspectives in post-war Germany, roles of German men and women, self-discovery, German humor, East versus West. Course conducted in English and films have English subtitles. Students may take only one course in the 260 series: A, B or C.

Reason for Description Change: To correct typos and make statement clearer. Previous language was not exact enough and the letters should be capitalized.

Is there an impact on other SACs?: No

Is there an impact on another dept or campus?: No

Request Term: fall

Requested Year: 2007

Contact Name: Kristi Tompkins

Curriculum Request Form
Course Revision

CHANGE: Course Description

Current Course Number: GER 260B

Current Course Title: GER 260B German Culture Through Film, 2 cr.

Proposed Transcript Title: GER 260B German Culture

Reason for Title Change: No change; however, it would be nice to fit the entire title on the student transcript: GER 260B German Culture Through Film

Current Description: German Culture Through Film. Enhances understanding of German culture and contemporary society through analysis of cultural and social issues presented in five German films. May explore issues including but not limited to: interracial and cultural relations, ethnic conflict, Germany during the Second World War, economic, social and historical perspectives in post-war Germany, roles of German men and women, self-discovery, German humor, East versus West. Course conducted in English and films with English subtitles. Students may take only one of 260 a,b, or c.

Proposed Description: German Culture Through Film. Enhances understanding of German culture and contemporary society through analysis of cultural and social issues presented in five German films. May explore issues including but not limited to: interracial and cultural relations, ethnic conflict, Germany during the Second World War, economic, social and historical perspectives in post-war Germany, roles of German men and women, self-discovery, German humor, East versus West. Course conducted in English and films have English subtitles. Students may take only one course in the 260 series: A, B or C.

Reason for Description Change: To correct typos and make statement clearer. Previous language was not exact enough and the letters should be capitalized.

Is there an impact on other SACs?: No

Is there an impact on another dept or campus?: No

Request Term: fall

Requested Year: 2007

Curriculum Request Form
Course Revision

CHANGE: Course Description

Current Course Number: GER 260C

Current Course Title: GER 260C German Culture Through Film, 1 cr.

Proposed Transcript Title: GER 260C German Culture

Current Description: German Culture Through Film. Enhances understanding of German culture and contemporary society through analysis of cultural and social issues presented in four German films. May explore issues including but not limited to: interracial and cultural relations, ethnic conflict, Germany during the Second World War, economic, social and historical perspectives in post-war Germany, roles of German men and women, self-discovery, German humor, East versus West. Course conducted in English and all films with English subtitles. Students may only take one course of 260 a, b, or c.

Proposed Description: German Culture Through Film. Enhances understanding of German culture and contemporary society through analysis of cultural and social issues presented in four German films. May explore issues including but not limited to: interracial and cultural relations, ethnic conflict, Germany during the Second World War, economic, social and historical perspectives in post-war Germany, roles of German men and women, self-discovery, German humor, East versus West. Course conducted in English and films have English subtitles. Students may take only one course in the 260 series: A, B or C.

Reason for Description Change: To correct typos and make statement clearer. Previous language was not exact enough and the letters should be capitalized.

Reason for Learning Outcomes Change: no changes

Is there an impact on other SACs?: No

Is there an impact on another dept or campus?: No

Request Term: fall

Requested Year: 2007

Contact Name: Kristi Tompkins

Contact E-Mail: ktompkin@pcc.edu

Curriculum Request Form
Course Revision

CHANGE: Course Description

Current Course Number: GER 261A

Current Course Title: GER 261A German Culture Through Film, 3 cr.

Proposed Transcript Title: GER 261A German Culture

Reason for Title Change: No change; however, it would be nice to fit the entire title on the student transcript: GER 260B German Culture Through Film

Current Description: German Culture Through Film. Enhances understanding of German culture and contemporary society through analysis of cultural and social issues presented in five German films. May explore issues including but not limited to: interracial and cultural relations, ethnic conflict, Germany during the Second World War, economic, social and historical perspectives in post-war Germany, roles of German men and women, self-discovery, German humor, East versus West. Course conducted in English and films with English subtitles. Students may take only one of 260 a,b, or c.

Proposed Description: German Culture Through Film. Enhances understanding of German culture and contemporary society through analysis of cultural and social issues presented in seven German films. May explore issues including but not limited to: interracial and cultural relations, ethnic conflict, the New German Cinema, morality of the bourgeoisie, alienation of youth, roles of German men and women, self-discovery, moral disaster of the Nazi legacy, authority and rebellion. Course conducted in English and all films with English subtitles. Students may take only one course in the 261 series: A, B or C.

Reason for Description Change: To correct typos and make statement clearer. Previous language was not exact enough, the letters should be capitalized, and current course description refers to 260, not 261.

Is there an impact No on other SACs?:

Is there an impact No on another dept or campus?:

Request Term: fall

Requested Year: 2007

Curriculum Request Form
Course Revision

CHANGE: Course Description

Current Course Number: GER 261B

Current Course Title: GER 261B German Culture Through Film, 2 cr.

Proposed Transcript Title: GER 261B German Culture

Reason for Title Change: No change; however, it would be nice to fit the entire title on the student transcript.

Current Description: German Culture Through Film. Enhances understanding of German culture and contemporary society through analysis of cultural and social issues presented in five German films. May explore issues including but not limited to: interracial and cultural relations, ethnic conflict, the New German Cinema, morality of the bourgeoisie, alienation of youth, roles of German men and women, self-discovery, moral disaster of the Nazi legacy, authority and rebellion. Course conducted in English and films with English subtitles. Students may take only one of 260 a,b, or c.

Proposed Description: German Culture Through Film. Enhances understanding of German culture and contemporary society through analysis of cultural and social issues presented in five German films. May explore issues including but not limited to: interracial and cultural relations, ethnic conflict, the New German Cinema, morality of the bourgeoisie, alienation of youth, roles of German men and women, self-discovery, moral disaster of the Nazi legacy, authority and rebellion. Course conducted in English and all films with English subtitles. Students may take only one course in the 261 series: A, B or C.

Reason for Description Change: To correct typos and make statement clearer. Previous language was not exact enough, the letters should be capitalized, and current course description refers to 260, not 261.

Is there an impact on other SACs?: No

Is there an impact on another dept or campus?: No

Request Term: fall

Requested Year: 2007

Curriculum Request Form
Course Revision

CHANGE: Course Description

Current Course Number: GER 261C

Current Course Title: GER 261C German Culture Through Film, 1 cr.

Proposed Transcript Title: GER 261C German Culture

Reason for Title Change: No change; however, it would be nice to fit the entire title on the student transcript.

Current Description: German Culture Through Film. Enhances understanding of German culture and contemporary society through analysis of cultural and social issues presented in four German films. May explore issues including but not limited to: interracial and cultural relations, ethnic conflict, the New German Cinema, morality of the bourgeoisie, alienation of youth, roles of German men and women, self-discovery, moral disaster of the Nazi legacy, authority and rebellion. Course conducted in English and films with English subtitles. Students may take only one of 260 a,b, or c.

Proposed Description: German Culture Through Film. Enhances understanding of German culture and contemporary society through analysis of cultural and social issues presented in four German films. May explore issues including but not limited to: interracial and cultural relations, ethnic conflict, the New German Cinema, morality of the bourgeoisie, alienation of youth, roles of German men and women, self-discovery, moral disaster of the Nazi legacy, authority and rebellion. Course conducted in English and all films with English subtitles. Students may take only one course in the 261 series: A, B or C.

Reason for Description Change: To correct typos and make statement clearer. Previous language was not exact enough, the letters should be capitalized, and current course description refers to 260, not 261.

Is there an impact on other SACs?: No

Is there an impact on another dept or campus?: No

Request Term: fall

Requested Year: 2007

Curriculum Request Form
Course Revision

CHANGE: Course Description

Current Course Number: GER 262A

Current Course Title: GER 262A German Culture Through Film, 3 cr.

Proposed Transcript Title: GER 262A German Culture

Reason for Title Change: No change; however, it would be nice to fit the entire title on the student transcript.

Current Description: German Culture Through Film. Enhances understanding of German culture and contemporary society through analysis of cultural and social issues presented in seven German films. May explore issues including but not limited to: love as a medium for representing changing ideas in Germany, east vs. west, personal and national identity struggles, foreigners in Germany, stereotypes, roles of women in German society. Course conducted in English and films with English subtitles. Students may take only one of 260 a,b, or c.

Proposed Description: German Culture Through Film. Enhances understanding of German culture and contemporary society through analysis of cultural and social issues presented in seven German films. May explore issues including but not limited to: love as a medium for representing changing ideas in Germany, east vs. west, personal and national identity struggles, foreigners in Germany, stereotypes, roles of women in German society. Course conducted in English and all films with English subtitles. Students may take only one course in the 262 series: A, B or C.

Reason for Description Change: To correct typos and make statement clearer. Previous language was not exact enough, the letters should be capitalized, and current course description refers to 260, not 261.

Is there an impact on other SACs?: No

Is there an impact on another dept or campus?: No

Request Term: fall

Requested Year: 2007

Curriculum Request Form
Course Revision

CHANGE: Course Description

Current Course Number: GER 262B

Current Course Title: GER 262B German Culture Through Film, 2 cr.

Proposed Transcript Title: GER 262B German Culture

Reason for Title Change: No change; however, it would be nice to fit the entire title on the student transcript.

Current Description: German Culture Through Film. Enhances understanding of German culture and contemporary society through analysis of cultural and social issues presented in five German films. May explore issues including but not limited to: love as a medium for representing changing ideas in Germany, east vs. west, personal and national identity struggles, foreigners in Germany, stereotypes, roles of women in German society. Course conducted in English and films with English subtitles. Students may take only one of 260 a,b, or c.

Proposed Description: German Culture Through Film. Enhances understanding of German culture and contemporary society through analysis of cultural and social issues presented in five German films. May explore issues including but not limited to: love as a medium for representing changing ideas in Germany, east vs. west, personal and national identity struggles, foreigners in Germany, stereotypes, roles of women in German society. Course conducted in English and all films with English subtitles. Students may take only one course in the 262 series: A, B or C.

Reason for Description Change: To correct typos and make statement clearer. Previous language was not exact enough, the letters should be capitalized, and current course description refers to 260, not 261.

Is there an impact on other SACs?: No

Is there an impact on another dept or campus?: No

Request Term: fall

Requested Year: 2007

Curriculum Request Form
Course Revision

CHANGE: Course Description

Current Course Number: GER 262C

Current Course Title: GER 262C German Culture Through Film, 1 cr.

Proposed Transcript Title: GER 262C German Culture

Reason for Title Change: No change; however, it would be nice to fit the entire title on the student transcript.

Current Description: German Culture Through Film. Enhances understanding of German culture and contemporary society through analysis of cultural and social issues presented in four German films. May explore issues including but not limited to: love as a medium for representing changing ideas in Germany, east vs. west, personal and national identity struggles, foreigners in Germany, stereotypes, roles of women in German society. Course conducted in English and films with English subtitles. Students may take only one of 260 a,b, or c.

Proposed Description: German Culture Through Film. Enhances understanding of German culture and contemporary society through analysis of cultural and social issues presented in four German films. May explore issues including but not limited to: love as a medium for representing changing ideas in Germany, east vs. west, personal and national identity struggles, foreigners in Germany, stereotypes, roles of women in German society. Course conducted in English and all films with English subtitles. Students may take only one course in the 262 series: A, B or C.

Reason for Description Change: To correct typos and make statement clearer. Previous language was not exact enough, the letters should be capitalized, and current course description refers to 260, not 261.

Is there an impact on other SACs?: No

Is there an impact on another dept or campus?: No

Request Term: fall

Requested Year: 2007

Curriculum Request Form
New Course

Course Number: RUS 241

Course Title: Great Russian Writers

Transcript Title: Great Russian Writers

Lecture Hours: 4

Load Total: .272

Weekly Contact Hours: 4

Total Credits: 4

Reason for New Course: I would like to offer RUS 241 to increase the breadth of Russian course offerings at PCC. Most other universities offer at least one lower division course on Russian Literature in translation. PCC currently does not have one, and students regularly request this course. Because we are changing first year Russian courses from 5 credits to 4 credits, we would have money in the current budget offer this course. Students majoring in Russian would be able to use this toward their major. Students not majoring in Russian could earn Arts and Letters elective credit with this course. This same course with the identical course number is currently offered on a regular basis at the University of Oregon. I have consulted with the instructor teaching the course in creating the PCC course.

Course Description: Introduction to Russian literature's greatest writers including Pushkin, Lermontov, Gogol, Dostoevsky, Tolstoy, Zoschenko, Olesha and Bulgakov. Explores themes, genres, style, historical context, social, and cultural issues. Course conducted in English and all readings in English. No knowledge of Russian needed.

Prerequisite(s): None

Prereq/Concurrent: None

Corequisite(s): None

Learning Outcomes:

1. Gain an appreciation of Russian literature.
2. Gain knowledge of Russian cultural issues.
3. Read a variety of texts by major Russian writers and discuss themes, genre, style, historical context, social and cultural issues, and literary elements in them.
4. Gain an understanding of how major Russian writers influenced and contributed to the development of Russian literature.
5. Explore how such influences as culture, religion, political and social history are revealed through literary expression.
6. Communicate effectively using response journals and short analytical essays.

Course Format: On Campus

Are there similar courses existing: NO

Required or Elective: Elective

Is there impact on degrees or certificates: NO

Is there an impact on another dept or campus?: NO

Have other SACs been contacted?: NO

Description of Contact: Since Russian literature is not taught by another SAC there is no duplication, content overlap or enrollment impact.

Is there an increase in costs for Library or AV Dept?: NO

Implementation Term: Spring

Implementation Year: 2008

Contact Name: Kristine Shmakov

Contact E-mail: kshmakov@pcc.edu

Date: January 20, 2007 Prepared by Kristine Shmakov

Course number: RUS 241

Course title: Great Russian Writers

Credit hours: 4

Lecture hours per week: 4

Number of weeks: 10/11

Special fee: None

COURSE DESCRIPTION FOR PUBLICATION:

Introduction to short works by some of Russian literature's greatest writers. Explores themes, genres, style, historical context, social, and cultural issues. Authors may include, but not limited to Pushkin, Lermontov, Gogol, Dostoevsky, Tolstoy, Chekhov, Zoshchenko, Olesha, Bulgakov, Andreev, Sologub, Blok, Akhmatova, Mandelstam, Solzheitsyn, and Voinovich. Conducted in English and all readings in English. No knowledge of Russian needed.

INTENDED OUTCOMES FOR THE COURSE:

Students will:

1. Gain an appreciation of Russian literature.
2. Gain knowledge of Russian cultural issues.
3. Read a variety of texts by major Russian writers and discuss themes, genre, style, historical context, social and cultural issues, and literary elements in them.
4. Gain an understanding of how major Russian writers influenced and contributed to the development of Russian literature.
5. Explore how such influences as culture, religion, political and social history are revealed through literary expression.
6. Communicate effectively using response journals and short analytical essays.

OUTCOME ASSESSMENT STRATEGIES:

The following tools may be used to assess students' progress in the course:

1. Large group discussions
2. Small group discussions
3. Written responses to discussion questions
4. Response journals
5. Short analytical essays
6. Oral presentations
7. Written or oral exams

THEMES, CONCEPTS, ISSUES

1. Use of literary conventions such as theme, setting, plot, character, point of view, narrative styles, symbolism, and imagery.
2. Development of early-mid 19th century literature as represented by Pushkin, Lermontov and/or Gogol.
3. Romanticism in Russian literature.
4. Romanticism in Russian painting.
5. Myth of St. Petersburg and its depictions in Russian literature.
6. Russian society in 19th century, the role of rank, and Westernization.
7. Russian beliefs about fate and pre-determination.
8. Madness in Russian literature and cultural beliefs about it.
9. Development of Mid-late 19th century literature as represented by Dostoevsky, Tolstoy, and or Chekhov.
10. Realism in Russian literature and Russian painting.
11. The superfluous man in Russian literature and culture.
12. Cultural beliefs about redemption through suffering.
13. Russian death traditions.
14. Russian Symbolist and Acmeist movements in poetry and prose as represented by Blok, Sologub, Andreev, Akhmaktova and/or Mandelstam.
15. Development of Soviet satire as represented by Zoschenko, Bulgakov, Olesha
16. Soviet satire vs. Socialist Realism
17. Utopian society vs. communist reality as depicted by Zoschenko, Bulgakov, Olesha and/or Voinovich.
18. Role of the writer in Russian society and culture.

COMPETENCIES AND SKILLS

1. Demonstrating knowledge about major Russian writers and their contributions to Russian literature.
2. Demonstrating understanding of cultural issues presented in texts.
3. Critical analysis of themes and style of a text.
4. Understanding texts through cultural, social, historical, political, artistic, and other contexts.
5. Increased critical thinking skills.
6. Increased competency in writing about literature.
7. Small group collaboration.
8. Speaking and listening reflectively

Curriculum Request Form
New Course

Course Number: MCH 229

Course Title: Rapid Prototyping

Transcript Title: Rapid Prototyping

Lec/Lab Hours: 5

Load Total: .540

Weekly Contact Hours: 10

Total Credits: 5

Reason for New Course: Support of recently purchased Rapid Prototyping machine (additive manufacturing) by the Machine Manufacturing Technology Department

Course Description: This is a preparatory course designed to introduce the student to the proper setups, uses and operations associated with additive and rapid manufacturing processes including but not limited to the Dimension BST Rapid Prototyping machine and its accessory devices.

Prerequisite(s): MCH 276 or instructor approval

Prereq/Concurrent: None

Corequisite(s): None

Learning Outcomes: INTENDED OUTCOME

- ◆ Demonstrate the potential applications, setups, uses and operations associated the additive and rapid manufacturing processes.

OUTCOMES AND SKILLS

This course is based on performance outcomes. The following performance outcomes are based upon established industry standards. The student will demonstrate knowledge and understanding of the subject by:

- ◆ Provide an understanding of the history, mechanics and applications of additive fabrication
- ◆ Provide an understanding of the history, mechanics and

applications of 3D printing

- ◆ Provide an understanding of orthographic projections
- ◆ Provide an understanding of basic dimensioning skills
- ◆ Provide an understanding of assembly process for plastic parts.
- ◆ Provide an understanding of redesign process for plastic molding.

Course Format:	On Campus
Course Format:	Online
Other Format:	Other Format Selected
Other Format:	Hybird - web and lab
Are there similar courses existing:	NO
Required or Elective:	Elective
Is there impact on degrees or certificates:	NO
Is there an impact on another dept or campus?:	NO
Have other SACs been contacted?:	NO
Is there an increase in costs for Library or AV Dept?:	NO
Implementation Term:	Summer
Implementation Year:	2007
Contact Name:	Michael Flaman
Contact E-mail:	mflaman@pcc.edu

MACHINE MANUFACTURING TECHNOLOGY

RAPID PROTOTYPING

COURSE OUTCOME GUIDE

DATE: 2/21/07

Prepared By: Michael Flaman, CMfgE

COURSE NUMBER: MCH 229
COURSE TITLE: RAPID PROTOTYPING
CREDIT HOURS: 5.0
LECTURE/LAB HOURS PER WEEK: 10.0
NUMBER OF WEEKS: 10

COURSE DESCRIPTION

This is a preparatory course designed to introduce the student to the proper setups, uses and operations associated with additive and rapid manufacturing processes including but not limited to the Dimension BST Rapid Prototyping machine and its accessory devices.

INTENDED OUTCOME

- Demonstrate the potential applications, setups, uses and operations associated the additive and rapid manufacturing processes.

PREREQUISITE

MCH 276 or Instructor Approval

INSTRUCTIONAL APPROACH

MCH 229 will be presented by means of reading assignments, audio-visual presentations, demonstrations, lab experiences, and research activities. The course activities and design emphasize the development of skills and knowledge outcomes prescribed by established industry standards.

OUTCOMES AND SKILLS

This course is based on performance outcomes. The following performance outcomes are based upon established industry standards. The student will demonstrate knowledge and understanding of the subject by:

- Provide an understanding of the history, mechanics and applications of additive fabrication
- Provide an understanding of the history, mechanics and applications of 3D printing
- Provide an understanding of orthographic projections
- Provide an understanding of basic dimensioning skills
- Provide an understanding of assembly process for plastic parts.
- Provide an understanding of redesign process for plastic molding.

OUTCOME ASSESSMENT STRATEGIES

POLICY - Student performance measurements are based on established industry standards. The various areas of study during the course will be evaluated by a variety of activities. Typical of those activities are the following;

1. READING ASSIGNMENTS - Information sheets, videos & textbooks, are potential sources of information that the student will reference as directed in the modules identified in the introduction.

2. PRACTICE EXAM - Completion of tasks and projects identified in the reading assignments, information sheets, and textbooks. Students are required to complete practice activities with 100% competency.

3. FINAL EXAM - An assessment in the form of a written exam and/or practical application that

addresses the subject areas identified in the module packets.

4. LAB ACTIVITIES - Participation in structured laboratory exercises with the emphasis on developing skills or increasing expertise in the areas of study identified in the module packets.

TEXT

Required

“Rapid Prototyping – Principles and Applications”, by Rafiq Noorani, published by Wiley; ISBN 978-0-471-73001-9

Reference

“Machinery's Handbook” by Oberg, published by Industrial Press, 27th Edition, ISBN: 0831127996

“Users Guide to Rapid Prototyping” by Todd Grimm, published by the Society of Manufacturing Engineers; ISBN: 0-87263-697-6

File: MCH 229 COG.doc 2/21/07

Curriculum Request Form
Course Revision

CHANGE: Course Title, Course Description, Learning Outcomes

Current Course Number: PHL 222

Current Course Title: Elementary Aesthetics: Philosophy of Art

Proposed Course Title: The Philosophy of Art and Beauty
Proposed Transcript Title: Philosophy of Art and Beauty

Reason for Title Change: Give the title more modern significance

Current Description: Discusses what makes something a work of art, what is involved in the notions of beauty, taste and aesthetic qualities, the role of the critic and in the notion of aesthetic experience. The course will focus on the works of major philosophical thinkers.

Proposed Description: This is a class for all students, artists, philosophers, writers, and teachers. Applying a philosophical approach to the study of art forms from many world cultures, this course explores both individual and cultural assumptions about the nature of art and aesthetic expression. In seminar/workshop format, the class involves the study of a variety of media forms and genres, with possible field trips to museums, galleries, gardens, and performing arts events.

Reason for Description Change: Update course and give prospective students more relevant information.

Current Learning Outcomes: Students completing this course should be able to

- Recognize the philosophical assumptions embedded in the students' own ideas about the nature of art and its role in culture.
- Recognize and reflect on the interconnectedness of and the historical development of basic ideas about art.
- Read and critically assess writings within the philosophy of art.
- Understand the issues around which aesthetics as a discipline is organized.

Proposed Learning Outcomes:

Students completing this course should be able to:

read and critically assess writings within the philosophy of art, understand the issues around which aesthetics as a discipline is organized, recognize and understand cultural perspectives in aesthetics which differ from their own.

Reason for Learning Outcomes Change:

Update the content to reflect what is being taught.

Will this impact other SACs?,Is there an impact on other SACs?:

No

Will this impact other Depts/Campuses?,Is there an impact on another dept or campus?:

No

Request Term:

fall

Requested Year:

2007

Contact Name:

John Farnum

Contact E-Mail:

jfarnum@pcc.edu

Curriculum Request Form
Course Revision

CHANGE: Course Description, Learning Outcomes

Current Course Number: INSP 201

Proposed Course Number: INSP 201

Current Course Title: Plans Exam – Commercial

Current Description: Covers development of procedures in plans examination to determine code compliance of building permit applications. Includes blueprint reading and code administration. This course is 30 total contact hours and also worth 60 LU credits to AIA members. Recommended: ARCH 161 and 162; INSP 251, 252 and 253.

Proposed Description: Covers development of procedures in plans examination to determine code compliance of building permit applications. Includes blueprint reading and code administration. Emphasis is placed on presenting plan review processes and procedures for the student with limited construction background. This course is 40 total contact hours and also worth 60 LU credits to AIA members. Prerequisite: INSP 252, Placement into MTH65.

Reason for Description Change: To coordinate the description of the course with the change to 4 credits and to clarify the additional competency in commercial plan reviews for more complex structures necessitated by changes in the State certification requirements.

Current Learning Outcomes: **INTENDED OUTCOMES FOR THE COURSE:**

On completion of this course the student should be able to:

Demonstrate skills in the application of building codes to the design and construction of buildings.

Determine the basic building requirements for occupancy groups and types of construction.

Identify structural standards, systems and requirements

used in building construction.

Identify the energy conservation requirements of the State Structural Specialty Code.

Proposed Learning Outcomes:

INTENDED OUTCOMES FOR THE COURSE:

On completion of this course the student should be able to:

1. Demonstrate skills in the application of building codes to the design and construction of buildings including new construction, remodels and multi-story structures.
2. Determine the basic building requirements for occupancy groups and types of construction including mixed occupancies.
3. Identify structural standards, systems and requirements used in building construction.
4. Identify the energy conservation requirements of the State Structural Specialty Code.
5. Recognize rated and non-rated elements, assemblies and systems regulated by the commercial building code.

Reason for Learning Outcomes Change:

To coordinate the outcomes of the course with the change to 4 credits and to clarify the additional competency in commercial plan reviews for more complex structures necessitated by changes in the State certification requirements.

Will this impact other SACs?,Is there an impact on other SACs?:

No

Will this impact other Depts/Campuses?,Is there an impact on another dept or campus?:

No

Request Term:

fall

Requested Year:

2007

Contact Name:

Debra Anderson

Contact E-Mail:

debra.anderson4@pcc.edu

Curriculum Request Form
Course Revision

CHANGE: Course Description, Learning Outcomes

Current Course Number: INSP251

Proposed Course Number: INSP251

Current Course Title: International Building Code 1

Current Description: Covers non-structural standards of the International Building Code, including occupancy classifications, building area height and locations limits, exit requirements and fire-resistive standards. This is 30 total contact hours and is also worth 60 HSW credits to AIA members. Prerequisites: None.

Proposed Description: Covers nonstructural standards of the International Building Code, including occupancy classifications, building area height and location limits, exit requirements and fire resistive standards including multi-troy structures. Emphasis is placed on presenting basic code and building element concepts for the student with limited construction background. This is 40 total contact hours and is also worth 60 HSW credits to AIA members. Prerequisites: RD115 or WR115, Placement in MTH 60.

Reason for Description Change: To coordinate the course description with the change to 4 credits that was necessitated by changes to the State certification requirements allowing inspection of more complex structures by those with no construction background but who possess a 2 year degree in Building Inspection Technology.

Current Learning Outcomes: INTENDED OUTCOMES FOR THE COURSE:
On completion of this course the student should be able to:

1. Understanding of the history and development of the building codes as they relate to commercial buildings.
2. Apply commercial building codes to the design and construction of commercial buildings.
3. Determine basic allowable areas of buildings based on the requirements for occupancy groups and types of

construction.

4. Recognize proper exiting schemes for commercial buildings.

Proposed Learning Outcomes:

On completion of this course the student should be able to:

1. Relate the history and development of the building codes to commercial buildings.

2. Apply commercial building codes to the design and construction of commercial buildings.

3. Determine basic allowable areas of buildings based on the requirements for occupancy groups, types of construction, number of stories, and location on property.

4. Recognize proper exiting schemes for commercial buildings including new construction, remodels and multi-story structures.

Will this impact other SACs?,Is there an impact on other SACs?:

No

Will this impact other Depts/Campuses?,Is there an impact on another dept or campus?:

No

Request Term:

fall

Requested Year:

2007

Contact Name:

Debra Anderson

Contact E-Mail:

debra.anderson4@pcc.edu

Curriculum Request Form
Contact/Credit Hour Change

Current Course Number: FP111

Current Course Title: Firefighter I Skills Academy

	Current	Proposed
Current Lecture Hours:	2	5
Current Lab Hours:	0	3
Current Lec/Lab Hours:	6	8
Current Load:	.460	.910
Total Contact Hours:	8	16
Current Credits:	5	10

Reason for Change: FP111 does not currently meet all requirements for the National Fire Protection Association's (NFPA) Firefighter I Training Standard, which is the fire service's standard training level for entry-level firefighters. Contact Hours for FP111 are being doubled to meet all requirements for NFPA Firefighter I Certification. FP111 Credit Hours are doubled, due to expansion of Lecture, Lecture/Lab and Lab Credit Hours and overall course Contact Hour increase.

Are outcomes affected?: YES

Are degrees/certs affected?: YES

Is there an impact on other Dept/Campus?: NO

Is there potential conflict with another SAC?: NO

Implem. Term: Fall
Implementation Year, Implem. Year: 2007

Contact Name: Danial Myers-Special Projects Coordinator-PCC Fire Science
Contact Email: danial.myers@pcc.edu

Curriculum Request Form
Course Revision

CHANGE: Course Title, Course Description, Learning Outcomes

Current Course Number: FP111

Current Course Title: Firefighting Skills I

Proposed Course Title: Firefighter I Skills Academy

Proposed Transcript Title: Firefighter I Skills Academy

Reason for Title Change: To more accurately describe course learning objectives for FP111, and to demonstrate how course fits into the PCC Fire Protection Technology Curriculum, overall.

Current Description: FP111 Firefighting Skills I, 5 cr.- Studies basic tools, procedures, techniques and safety precautions utilized by fire fighter during fire ground operations. Cardiopulmonary Resuscitation, Hazardous materials Awareness and FSAB Basic Firefighter training requirements. PCC department application acceptance required.

Proposed Description: Provides a program that presents comprehensive training in all aspects of basic firefighting skills. Knowledge obtained from classroom instruction is transferred to drill ground application, during hands-on training. Students study basic tools, procedures, techniques and safety precautions utilized by fire fighters, during fire ground operations. This course meets 3 days per week. PCC department application acceptance required.

Reason for Description Change: To update outdated title of certifying agency (F.S.A.B. to N.F.P.A.). To more accurately describe course learning objectives, and to clarify how the course fits into the PCC Fire Protection Technology Curriculum, overall.

Current Learning Outcomes: Required student competencies:

- ◆ Demonstrate basic knowledge and skills of first aid and emergency medical care, under the direct supervision of an Emergency Medical Technician.
- ◆ Develop an individual physical fitness routine.
- ◆ Identify and utilize small tools, knots, ladders, salvage covers and portable fire extinguishers, under the direct supervision of

emergency service personnel.

- ◆ Demonstrate basic knowledge and skills to utilize various types of fire streams with standard nozzles, adapters, and appliances, based on the specific design of the appliances and the purpose of each stream.
- ◆ Demonstrate basic knowledge of ventilation practices and perform safe utilization of proper tools and techniques.
- ◆ Demonstrate basic knowledge and skills of basic rescue practices and safely utilize proper tools and procedures.
- ◆ Demonstrate the method for inspecting and donning self contained breathing apparatus (SCBA), prior to performing basic fire fighting and rescue procedures.
- ◆ Complete the Hazardous Materials Awareness Level Training Program.

Proposed Learning
Outcomes:

Required student competencies:

- ◆ Demonstrate basic knowledge of the organization of the fire department.
- ◆ Demonstrate basic knowledge of the critical aspects of NFPA 1500, Standard on Fire Department Occupational Safety and Health Program.
- ◆ Demonstrate the ability to don personal protective clothing within one minute; doff personal protective clothing and prepare for reuse.
- ◆ Demonstrate basic knowledge and skills in initiating responses, receiving telephone calls, and using fire department communications equipment to correctly relay verbal or written information.
- ◆ Demonstrate basic knowledge and skills in use of Self Contained Breathing Apparatus (SCBA) during emergency operations.
- ◆ Demonstrate basic knowledge and skills to hoist tools and equipment using ropes and the correct knot; tie a bowline, clove hitch, figure eight on a bight, half hitch, becket or sheet bend, and

safety knots.

- ◆ Demonstrate basic knowledge and skills to operate in established work areas at emergency scenes.
- ◆ Demonstrate basic knowledge and skills to carry ladders, raise ladders, extend ladders and place the ladder to avoid obvious hazards.
- ◆ Demonstrate basic knowledge of principles of fire streams; types, design, operation, nozzle pressure effects, flow capabilities of nozzles and the application of each size and type of attack line.
- ◆ Demonstrate basic knowledge and skills to perform horizontal and vertical ventilation on a structure, as part of a team.
- ◆ Demonstrate basic knowledge and skills to overhaul a fire scene and ensure fire cause evidence is preserved.
- ◆ Demonstrate basic knowledge and skills to perform salvage/conservate property as a member of a team.
- ◆ Demonstrate basic knowledge and skills to attack a passenger vehicle fire, operating as a member of a team.
- ◆ Demonstrate basic knowledge and skills to conduct a search and rescue in a structure, operating as a member of a team.
- ◆ Demonstrate basic knowledge and skills to connect a fire department pumper to a water supply, as a member of a team.
- ◆ Demonstrate basic knowledge and skills to extinguish incipient Class A, Class B, and Class C fires, given a selection of portable fire extinguishers.
- ◆ Demonstrate basic knowledge and skills to operate fire department power supply and lighting equipment.
- ◆ Demonstrate basic knowledge and skills to extinguish Class A fires in materials, structures or storage containers that can be fought from the exterior.
- ◆ Demonstrate basic knowledge and skills to combat a ground cover fire, operating as a member of a team.

- ◆ Demonstrate basic knowledge and skills to attack an interior structure fire, operating as a member of a team.
- ◆ Demonstrate basic knowledge and skills to perform a fire safety survey in a private dwelling.
- ◆ Demonstrate basic knowledge and skills to clean and check ladders, ventilation equipment, self-contained breathing apparatus (SCBA), ropes, salvage equipment, and hand tools, and to clean, inspect, and return fire hose to service.
- ◆ Demonstrate basic knowledge and skills to present fire safety information to fire station visitors or small groups, given prepared materials.
- ◆ Complete the Hazardous Materials Awareness Level Training Program.
- ◆ Complete an accredited CPR and First Aid Program.

Reason for Learning Outcomes Change:

To reflect the updated course content and required student competencies, as detailed in the National Fire Protection Association (NFPA) Standard 1001, Chapter 5, Firefighter I.

Will this impact other SACs?,Is there an impact on other SACs?:

No

Will this impact other Depts/Campuses?,Is there an impact on another dept or campus?:

No

Request Term:

fall

Requested Year:

2007

Contact Name:

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