CURRICULUM/GEN ED COMMITTEE
a standing committee of the Educational Advisory Council

AGENDA
for
January 5, 2005
3:00 pm
Sylvania CC President's Conference Room B

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

- Experimental Course Requests
  - None this month
- Course Inactivations
  - None this month
- Distance Learning Modality Approvals
  - None this month

OLD BUSINESS .

147. ENL 173 Grammar 1 – Contact/Credit Change
Lec: 4 Proposed: 2
Load: .272 Proposed: .136
Contact: 4 Proposed: 2
Credits: 4 Proposed: 2
148. ENL 183 Grammar 2 – Contact/Credit Change
Lec:4 Proposed: 2
Load: .272 Proposed: .136
Contact: 4 Proposed: 2
Credits: 4 Proposed: 2
149. ENL 193 Grammar 3 – New Course
See Full Request for Details

NEW BUSINESS

150. SP 100 – Requisite Change
Change prerequisite from None to Placement in WR 121 by ASSET or successful completion of WR 115
151. SP 105 Listening – Requisite Change
Change prerequisite from None to Placement in WR 121 by ASSET or successful completion of WR 115
152. SP 130 Business and Professional Communication – Requisite Change
Change prerequisite from None to Placement in WR 121 by ASSET or successful completion of WR 115
153. SP 140 Introduction to Intercultural Communication – Requisite Change
Change prerequisite from None to Placement in WR 121 by ASSET or successful completion of WR 115
154. SP 214 Interpersonal Communication – Requisite Change
Change prerequisite from None to Placement in WR 121 by ASSET or successful completion of WR 115
155. SP 215 Small Group Communication – Requisite Change
Change prerequisite from None to Placement in WR 121 by ASSET or successful completion of WR 115

156. SP 217 Theories of Persuasion – Requisite Change
    Change prerequisite from None to Placement in WR 121 by ASSET or successful completion of WR 115
157. SP 227 Nonverbal Communication – Requisite Change
    Change prerequisite from None to Placement in WR 121 by ASSET or successful completion of WR 115
158. SP 229 Oral Interpretation – Requisite Change
    Change prerequisite from None to Placement in WR 121 by ASSET or successful completion of WR 115
159. SP 237 Gender Communication – Requisite Change
    Change prerequisite from None to Placement in WR 121 by ASSET or successful completion of WR 115

160. MTH 243 Statistics I – Description Change
    Modify to read: TI graphing calculator with advanced statistical programs required *and/or computer software.*
161. MTH 244 Statistics II – Description Change
    Modify to read: TI graphing calculator with advanced statistical programs required *and/or computer software.*

162. CG 280A Cooperative Education: Career Development – Description Change
    Add: May be repeated up to 12 credits.

163. CS 271 Computer Systems II – Course Title, Description, Outcomes Change
    Proposed Title: Computer Architecture
    See full request for Description & Outcomes changes
164. CS 171 Computer Systems I – Course Title, Description, Outcomes Change
    Proposed Title: Assembly Language
    See full request for Description & Outcomes changes
165. CS 200 Computer Systems I – New Course Request
166. CS 201 Computer Systems II – New Course Request

167. EET 256 Electronics Project Lab – New Course Request
168. EET 242 Microcontroller Systems – New Course Request
169. EET 238 Operational Amplifier Circuits – Course Number & Requisite Change
    Proposed Number: EET 222
    Change Prerequisite from EET 218 to EET 221
170. EET 218 Semiconductor Devices and Circuits – Course Number & Requisite Change
    Proposed Number: EET 221
    Change Prerequisite from EET 131 to EET 221
171. EET 228 RF Communications Circuits – Course Number & Requisite Change
    Proposed Number: EET 223
    Change Prerequisite from EET 218 to EET 221
172. EET 188 Industrial Safety – Requisite Change
    Change Prerequisite from EET111 or EET 176 to EET111 or EET 121
173. EET 179 Digital Systems III– Course Number & Requisite Change
    Proposed Number EET 123
    Change Prerequisite from EET 177 to EET 122
174. EET 177 Digital Fundamentals II– Course Number, Title & Requisite Change
    Proposed Number EET 122
    Proposed Title: Digital Systems II
    Change Prerequisite from EET 176 to EET 121
175. EET 176 Digital Fundamentals I – Course Number and Title Change
    Proposed Number EET 121

Proposed Title Digital Systems I

176. EET 131 Electrical Circuit Analysis III– Course Number & Requisite Change
    Proposed Number EET 113
    Change Prerequisite from EET 121 to EET 112
177. EET 121 Electrical Circuit Analysis II– Course Number Change
    Proposed number EET 112

178. CST 264 C# Multi-Tier .NET Architecture Software Development – New Course Request

Curriculum Course Revision Form
Contact/Credit Hour Change

Course Number: ENL 173
Course Title: Grammar 1

Current Hours:
- Lecture: 4
- Load Total: .272
- Weekly Contact: 4
- Credits: 4

Proposed Hours
- Lecture: 4
- Load Total: .136
- Weekly Contact: 2
- Credits: 2

Reason for Change: Split a 2 course elective sequence (8 credits total) into a 3 course sequence (6 credits total). Fewer credits hours each term will make the class more appealing and affordable to students.

Does this affect course outcomes: NO

Does this affect Certificate or Degrees: NO

Indicate any impact on Campus or departments other than your own: NONE

Requested Implementation Term: Spring 2005

Curriculum Course Revision Form
Contact/Credit Hour Change

Course Number: ENL 183
Course Title: Grammar 2

Current Hours:
- Lecture: 4
- Load Total: .272
- Weekly Contact: 4
- Credits: 4

Proposed Hours
- Lecture: 4
- Load Total: .136
- Weekly Contact: 2
- Credits: 2

Reason for Change: Split a 2 course elective sequence (8 credits total) into a 3 course sequence (6 credits total). Fewer credits hours each term will make the class more appealing and affordable to students.

Does this affect course outcomes: NO

Does this affect Certificate or Degrees: NO

Indicate any impact on Campus or departments other than your own: NONE

Requested Implementation Term: Spring 2005

Curriculum Course Request Form
New Course

Course number:	ENL 193
Course title:	Grammar 3
Transcript title:	Grammar 3
Lecture hours:	2
Lab hours:	
Lec/lab hours:	
Load total:	.136
Weekly contact hours:	2
Total credits:	2
Reason for new course:	Split a 2 course elective sequence (8 credits total) into a 3 course sequence (6 credits total). Fewer credit and contact hours each term will make the class more appealing and affordable to students
Course description:	This elective class includes the identification and practice of the following grammatical structures: modals, conditionals, clause and phrase reductions, parallel structures, and reported speech. It is designed to reinforce concepts in both oral and written contexts. Does not replace courses in the core curriculum.
Prerequisite(s):	Placement in ENL 250 levels or above
Prereq/concurrent:	None
Corequisite(s):	None
Proposed Outcomes:	Identify grammatical structures and use them appropriately in a variety of oral and written contexts
Teaching Format:	On Campus
Are there similar courses existing:	NO
Required or elective:	Elective
Is there an impact on degrees or certificates:	NO

Is there an impact on departments/campus:	NO
Have other sacs been consulted:	NO
Is there an impact on the Library/AV Dept?:	NO
Implementation Term:	Spring
Implementation Year:	2005

Date: October 1, 2004
Course Number: ENL 193
Course Title: Grammar 3
Credit Hours: 2
Lecture Hours per week: 2
Lecture/Lab Hours per week: 0
Lab Hours per week: 0
Number of Weeks: 11/12
Special Fees: None

Course Description for Publication:
This elective class includes the identification oand practice of the following grammatical structure: modals, conditionals, clause and phrase reductions, parallel structures, and reported speech. It is designed to reinforce concepts in both oral and written contexts. Prerequisites: placement in ENL 250 levels or above. Does not replace courses in the core curriculum.

Intended outcomes for the course:
Identify grammatical structures listed under section A and use them appropriately in a variety of oral and written contexts.

Outcome Assessment Strategies:
Videotape analysis, assignments, quizzes, tests, and oral presentations.

Course Content: Themes, concepts, issues

- **A.** Grammar Review and Instruction
    a. Modals
    b. Conditionals
    c. Clause and phrase reductions
    d. Parallel structures
    e. Reported speech.
- **B.** Critical Thinking Skills

Competencies and Skills

- **A.** Grammar
    Verbs and Related Structures
    a. Use modals effectively
    b. Use conditionals effectively
    c. Use clause and phrase reductions effectively
    d. Use parallel structures effectively
    e. Use reported speech effectively
- **B.** Critical Thinking Skills
    a. Use supplemental materials to practice grammatical structures in a variety of oral and written contexts.
    b. Demonstrate an awareness of audience and purpose for various registers and settings.
    c. Distinguish between relevant and irrelevant information (eg. Choice of modals)
    d. Determine appropriate uses for various structures (eg. Choosing between quoted and reported speech)
    e. Learn to look at language in context in order to determine function and purpose.

Curriculum Course Revision Form
Course Changes for Number, Title, Description, Prerequisites, and Outcomes

Change:	Requisites
Current Course Number:	SP 100
Current Course Title:	Introduction to Speech Communication
Current Prerequisites:	none
Proposed Prerequisites:	Placement in WR 121 by ASSET or successful completion of WR 115
Will This Impact Other Sacs?:	no
Will This Impact Other Depts/Campuses?:	no
Implementation Term:	fall
Implementation Year:	2005
Contact Name:	Doris Werkman
Contact E-Mail:	dwerkman@pcc.edu

Curriculum Course Revision Form
Course Changes for Number, Title, Description, Prerequisites, and Outcomes

Change:	Requisites
Current Course Number:	SP 105
Current Course Title:	Listening
Current Prerequisites:	none
Proposed Prerequisites:	Placement in WR 121 by ASSET or successful completion of WR 115
Will This Impact Other Sacs?:	no
Will This Impact Other Depts/Campuses?:	no
Implementation Term:	fall
Implementation Year:	2005
Contact Name:	Doris Werkman
Contact E-Mail:	dwerkman@pcc.edu

Curriculum Course Revision Form
Course Changes for Number, Title, Description, Prerequisites, and Outcomes

Change:	Requisites
Current Course Number:	SP 130
Current Course Title:	Business and Professional Communication
Current Prerequisites:	none
Proposed Prerequisites:	Placement in WR 121 by ASSET or successful completion of WR 115
Will This Impact Other Sacs?:	no
Will This Impact Other Depts/Campuses?:	no
Implementation Term:	fall
Implementation Year:	2005
Contact Name:	Doris Werkman
Contact E-Mail:	dwerkman@pcc.edu

Curriculum Course Revision Form
Course Changes for Number, Title, Description, Prerequisites, and Outcomes

Change:	Requisites
Current Course Number:	SP 140
Current Course Title:	Introduction to Intercultural Communication
Current Prerequisites:	none
Proposed Prerequisites:	Placement in WR 121 by ASSET or successful completion of WR 115
Will This Impact Other Sacs?:	no
Will This Impact Other Depts/Campuses?:	no
Implementation Term:	fall
Implementation Year:	2005
Contact Name:	Doris Werkman
Contact E-Mail:	dwerkman@pcc.edu

Curriculum Course Revision Form
Course Changes for Number, Title, Description, Prerequisites, and Outcomes

Change:	Requisites
Current Course Number:	SP 214
Current Course Title:	Interpersonal Communication
Current Prerequisites:	none
Proposed Prerequisites:	Placement in WR 121 by ASSET or successful completion of WR 115
Will This Impact Other Sacs?:	no
Will This Impact Other Depts/Campuses?:	no
Implementation Term:	fall
Implementation Year:	2005
Contact Name:	Doris Werkman
Contact E-Mail:	dwerkman@pcc.edu

Curriculum Course Revision Form
Course Changes for Number, Title, Description, Prerequisites, and Outcomes

Change:	Requisites
Current Course Number:	SP 215
Current Course Title:	Small Group Communication
Current Prerequisites:	none
Proposed Prerequisites:	Placement in WR 121 by ASSET or successful completion of WR 115
Will This Impact Other Sacs?:	no
Will This Impact Other Depts/Campuses?:	no
Implementation Term:	fall
Implementation Year:	2005
Contact Name:	Doris Werkman
Contact E-Mail:	dwerkman@pcc.edu

Curriculum Course Revision Form
Course Changes for Number, Title, Description, Prerequisites, and Outcomes

Change:	Requisites
Current Course Number:	SP 217
Current Course Title:	Theories of Persuasion
Current Prerequisites:	none
Proposed Prerequisites:	Placement in WR 121 by ASSET or successful completion of WR 115
Will This Impact Other Sacs?:	no
Will This Impact Other Depts/Campuses?:	no
Implementation Term:	fall
Implementation Year:	2005
Contact Name:	Doris Werkman
Contact E-Mail:	dwerkman@pcc.edu

Curriculum Course Revision Form
Course Changes for Number, Title, Description, Prerequisites, and Outcomes

Change:	Requisites
Current Course Number:	SP 227
Current Course Title:	Nonverbal Communication
Current Prerequisites:	none
Proposed Prerequisites:	Placement in WR 121 by ASSET or successful completion of WR 115
Will This Impact Other Sacs?:	no
Will This Impact Other Depts/Campuses?:	no
Implementation Term:	fall
Implementation Year:	2005
Contact Name:	Doris Werkman
Contact E-Mail:	dwerkman@pcc.edu

Curriculum Course Revision Form
Course Changes for Number, Title, Description, Prerequisites, and Outcomes

Change:	Requisites
Current Course Number:	SP 229
Current Course Title:	Oral Interpretation
Current Prerequisites:	none
Proposed Prerequisites:	Placement in WR 121 by ASSET or successful completion of WR 115
Will This Impact Other Sacs?:	no
Will This Impact Other Depts/Campuses?:	no
Implementation Term:	fall
Implementation Year:	2005
Contact Name:	Doris Werkman
Contact E-Mail:	dwerkman@pcc.edu

Curriculum Course Revision Form
Course Changes for Number, Title, Description, Prerequisites, and Outcomes

Change:	Requisites
Current Course Number:	SP 237
Current Course Title:	Gender and Communication
Current Prerequisites:	none
Proposed Prerequisites:	Placement in WR 121 by ASSET or successful completion of WR 115
Will This Impact Other Sacs?:	no
Will This Impact Other Depts/Campuses?:	no
Implementation Term:	fall
Implementation Year:	2005
Contact Name:	Doris Werkman
Contact E-Mail:	dwerkman@pcc.edu

Curriculum Course Revision Form
Course Changes for Number, Title, Description, Prerequisites, and Outcomes

Change:	Course Description
Current course number:	MTH 243
Current course title:	Statistics I
Current description:	Topics include displaying data with graphs, numerical descriptions of data, producing data, elementary probability, probability distributions, and introduction to confidence intervals. Applications are investigated from science, business, and social science perspectives. Software is integrated throughout the course. TI graphing calculator with advanced statistical programs required, see instructor. Prerequisites: MTH 111B or MTH 111C and placement into WR 121.
Proposed description:	Topics include displaying data with graphs, numerical descriptions of data, producing data, elementary probability, probability distributions, and introduction to confidence intervals. Applications are investigated from science, business, and social science perspectives. TI graphing calculator with advanced statistical programs required and/or computer software, see instructor. Prerequisites: MTH 111B or MTH 111C and placement into WR 121.
Reason for description change:	The phrase "and/or computer software" was added to give instructors meeting in computer classrooms greater flexibility in using additional technology to meet the CCOG's (other than the TI calculators alone).
Will this impact other sacs?:	no
Will this impact other depts/campuses?:	no
Implementation term:	spring
Implementation year:	2005
Contact name:	Michael Marciniak
Contact e-mail:	mmarcini@pcc.edu

Curriculum Course Revision Form
Course Changes for Number, Title, Description, Prerequisites, and Outcomes

Change:	Course Description
Current course number:	MTH 244
Current course title:	Statistics II
Current description:	Topics include confidence interval estimation; tests of significance including z-tests, t-tests, ANOVA, and chi-square; and inference for linear regression. Applications are investigated from science, business, and social science perspectives. Software is integrated throughout the course. TI graphing calculator with advanced statistical programs required, see instructor. Prerequisites: MTH 243; placement into WR 121.
Proposed description:	Topics include confidence interval estimation; tests of significance including z-tests, t-tests, ANOVA, and chi-square; and inference for linear regression. Applications are investigated from science, business, and social science perspectives. TI graphing calculator with advanced statistical programs required and/or computer software, see instructor. Prerequisites: MTH 243; placement into WR 121.
Reason for description change:	The phrase "and/or computer software" was added to give instructors meeting in computer classrooms greater flexibility in using additional technology to meet the CCOG's (other than the TI calculators alone).
Will this impact other sacs?:	no
Will this impact other depts/campuses?:	no
Implementation term:	spring
Implementation year:	2005
Contact name:	Michael Marciniak
Contact e-mail:	mmarcini@pcc.edu

Curriculum Course Revision Form
Course Changes for Number, Title, Description, Prerequisites, and Outcomes

Change:	Course Description
Current course number:	CG 280A
Current course title:	Cooperative Education: Career Development
Current description:	Students earn credit for learning from practical experience at a worksite related to their major or career goal. Appropriate work experiences provide opportunities for new learning and skill development.
Proposed description:	Students earn credit for learning from practical experience at a worksite related to their major or career goal. Appropriate work experiences provide opportunities for new learning and skill development. May be repeated up to 12 credits.
Reason for description change:	PCC Financial Aid will not allow repeated classes unless it is allowed in the course description. In the Oregon public university system, 12 credits of cooperative education can count toward the bachelor's degree.
Will this impact other sacs?:	no
Will this impact other depts/campuses?:	no
Implementation term:	winter
Implementation year:	2005
Contact name:	Catherine Sills
Contact e-mail:	csills@pcc.edu

Curriculum Course Revision Form
Course Changes for Number, Title, Description, Prerequisites, and Outcomes

Type of Change: Course Title, Course Description, Learning Outcomes

Current Course Number: CS271

Current Course Title: Computer Systems II
Proposed Course Title: Computer Architecture
Proposed 30 Char Title for Student Transcript: Computer Architecture
Reason for Title Change: We are matching PSU's curriculum, our CS271 content has been changed to match PSU's CS201 but in the current OCCC (state wide) guidelines CS271 should remain the same as in the past, so we are changing back the content of CS271 and creating CS201 with new content.

Current Course Description:
Exceptions and interrupts. Processes, process control, measuring program performance. Storage technology, memory hierarchy, caches, virtual memory. Recommended: CS 161 and CS 171.

Proposed Course Description:
Topics include: instruction sets, performance measurements, floating point numbers, logic design, arithmetic and logic units, bus operation/management, memory, hierarchy, input/output, pipelining and multiprocessor systems. Recommended: CS 171.

Reason for Change: We are matching PSU's curriculum, our CS271 content has been changed to match PSU's CS201 but in the current OCCC (state wide) guidelines CS271 should remain the same as in the past, so we are changing back the content of CS271 and creating CS201 with new content.

Current Learning Outcomes:
On completion of this course students should be able to:

Software Engineering Process

- Follow the software development process (requirements analysis, design, implementation, and test) in the development of small programs.
- Employ good software engineering practices such as incremental development, encapsulation, data integrity checking, and adherence to style guidelines.
- Create appropriate user interfaces for simple programs.
- Identify and use standard design patterns where appropriate.

Computer Science Theory

- Understand exceptions and interrupts.
- Understand and use system calls.
- Be able to measure performance and execution time.

- Understand storage technologies and memory hierarchy.

Technology and Tools

- Effectively use software development tools including libraries, compilers, editors, linkers and debuggers.

Communication

- Identify and comprehend technical documentation.
- Outcome Assessment Strategies

Proposed Learning Outcomes:

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

Software Engineering Process

- Design simple assembler and C programs that use assembler language modules.
- Employ algorithms that use proper memory organization and addressing concepts, including:
- Base / displacement addressing
- Relative and absolute offset addressing
- Simple parameter passing
- Data structure and array parameter passing

Computer Science Theory

- Make use of efficient data representation structures and arithmetic algorithms based upon knowledge of internal representation of numeric and other data types.
- Understand basic computer architecture and organization including processors, bus control, ALU, memory cache, system buses, disk drive controllers / input/Output devices
- Demonstrate mastery of Boolean algebra and basic digital logic circuits.
- Understand micro-instruction, micro-program control, pipelined design and other modern processor concepts.
- Understand the importance and use of system calls and interrupts.
- Differentiate between RISC and CISC systems and low level programming techniques.

Technology and Tools

- Demonstrate an understanding of processor instruction sets, architecture, register management conventions, and memory management while developing C programs that interface with assembler language modules.
- Develop diagrams for simple digital logic circuits.

Communication

- Identify and comprehend technical documentation.
- Work well with peer developers in team situations including mentoring and peer reviews.
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Reason for Change: We are matching PSU's curriculum, our CS271 content has been changed to match PSU's CS201 but in the current OCCC (state wide) guidelines CS271

should remain the same as in the past, so we are changing back the content of CS271 and creating CS201 with new content.

Current Prerequisite(s): Recommended: CS161, CS 171
Proposed Prerequisite(s): Recommended: CS 171
Impact on Other SAC's: no
If Yes, please explain:

Impact on Other Departments & Campuses: no
If Yes, please explain:

Implementation Term: winter
Implementation Year: 2005

Contact Name: Walter Morales
Contact Email: wmorales@pcc.edu

Curriculum Course Revision Form
Course Changes for Number, Title, Description, Prerequisites, and Outcomes

Type of Change: Course Title, Course Description, Learning Outcomes

Current Course Number: CS171
Proposed Course Number: CS171

Current Course Title: Computer Systems I
Proposed Course Title: Assembly Language
Proposed 30 Char Title for Student Transcript: Assembly Language
Reason for Title Change: We are matching PSU's curriculum, our CS171 content has been changed to match PSU's CS200 but in the current OCCC (state wide) guidelines CS171 should remain the same as in the past, so we are changing back the content of CS171 and creating CS200 with new content.

Current Course Description:
Data representation. Mapping of C control structures to machine code. Stacks, procedure calls, reading and writing assembler code. Mechanisms for linking and loading programs. Recommended: CS 161 or CS 234u

Proposed Course Description:
Provides a knowledge of internal organization of a computer and of assembly language programming. Develop programs in the x86 assembly language and gain perspective on performance issues that affect computer software in general. Topics include numeric data representation, instruction formats, instruction fetch and execution, instruction sets, register utilization, interrupt processing and the assembly process. Recommended: CS 161.
Reason for Change: We are matching PSU's curriculum, our CS171 content has been changed to match PSU's CS200 but in the current OCCC (state wide) guidelines CS171 should remain the same as in the past, so we are changing back the content of CS171 and creating CS200 with new content.

Current Learning Outcomes:

- On completion of this course the student should be able to:
- Develop and analyze algorithms for numeric computation, array manipulation, and simple character based input/output.
- Design, code, and test simple assembler language programs.
- Demonstrate representation of numeric and character data in digital form.
- Describe the operation of a microcomputer, including instruction fetch and execution, bus operations, register usage, memory utilization, and input/output operations.
- Use a variety of problem-solving strategies.
- Describe basic digital logic and Boolean algebra, including thee preparation of simple logic diagrams.

- Analyze combinational and sequential logic circuits.
- Communicate with team members and the instructor, orally and using program design and test documentation and logic diagrams.

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

- Develop and analyze algorithms for numeric computation, array manipulation, and simple character based input/output.
- Design, code, and test simple assembler language programs.
- Demonstrate representation of numeric and character data in digital form.
- Describe the operation of a microcomputer, including instruction fetch and execution, bus operations, register usage, memory utilization, and input/output operations.
- Use a variety of problem-solving strategies.
- Describe basic digital logic and Boolean algebra, including the preparation of simple logic diagrams.
- Analyze combinational and sequential logic circuits.
- Communicate with team members and the instructor, orally and using program design and test documentation and logic diagrams.

Reason for Change: We are matching PSU's curriculum, our CS171 content has been changed to match PSU's CS200 but in the current OCCC (state wide) guidelines CS171 should remain the same as in the past, so we are changing back the content of CS171 and creating CS200 with new content.

Current Prerequisite(s): CS161 (RECOMMENDED)
Proposed Prerequisite(s): Recommended: CS 161

Impact on Other SAC's: no
If Yes, please explain:

Impact on Other Departments & Campuses: no
If Yes, please explain:

Implementation Term: winter
Implementation Year: 2005

Contact Name: Walter Morales
Contact Email: wmorales@pcc.edu

Curriculum New Course Form

Course Number:	CS200
Course Title:	Computer Systems I
Transcript Title:	Computer Systems I
Lecture Hours:	3
Lab Hours:	3
Lec/Lab Hours:	0
Load Total:	6
Weekly Contact Hours:	6
Total Credits:	4
Reason For New Course:	PSU has modified some of their Computer Science courses and we need to match theirs for transferability.
Course Description:	Introduction to computer systems from a software perspective. Systems programming using C and assembly language. Basic computer organization. Representation of data. Machine instruction sets and assembly programming, relationship between C code and assembly code, C pointers and structures and their machine-level representation. Linking and loading. Program debugging. Recommended: CS 140u and either CS 162 or CS 234u.
Prerequisite :	None
Prerequisite/Concurrent :	None
Corequisite :	None
Outcomes:	On completion of this course students should be able to: Software Engineering Process Follow the software development process (requirements analysis, design, implementation, and test) in the development of small programs. Employ good software engineering practices such as incremental development, encapsulation, data integrity checking, and adherence to style guidelines. Create appropriate user interfaces for simple programs. Identify and use standard design patterns where appropriate. Computer Science Theory Understand the relationship between a high-level language and machine code. Be able to interpret assembly language on a mixed listing. Technology and Tools Use appropriate tools to compile and debug programs. Communication Identify and comprehend technical documentation.

Transfer List A:	YES, Transfer List A requested
Diversity Designation:	YES, Diversity Designation Requested
Transfer List B:	YES, Transfer List B Requested
On Campus Format:	YES
Do similar courses Exist:	NO
Is Course Required or an Elective:	Required
Does this impact any Degrees or Certificates?:	NO
Does this impact Departments or Campuses:	NO
Have Other Sacs Been Consulted:	NO
Is there an impact on the Libraries or A/V Dept?:	NO
Requested Implementation Term:	Winter
Requested Implementation Year:	2005
Contact Name:	Walter Morales
Contact E-mail:	wmorales@pcc.edu

Curriculum New Course Form

Course Number:	CS201
Course Title:	Computer Systems II
Transcript Title:	Computer Systems II
Lecture Hours:	3
Lab Hours:	3
Lec/Lab Hours:	0
Load Total:	6
Weekly Contact Hours:	6
Total Credits:	4
Reason For New Course:	PSU has modified some of their Computer Science courses and we need to match theirs for transferability.
Course Description:	Further introduction to computer systems from a software perspective. Basic operating systems concepts and calls. Defining, measuring and improving program performance. The memory hierarchy: storage technologies, caches, virtual memory, memory allocation techniques. Recommended: CS 200.
Prerequisite :	None
Prerequisite/Concurrent :	None
Corequisite :	None
Outcomes:	On completion of this course students should be able to: Software Engineering Process Follow the software development process (requirements analysis, design, implementation, and test) in the development of small programs. Employ good software engineering practices such as incremental development, encapsulation, data integrity checking, and adherence to style guidelines. Create appropriate user interfaces for simple programs. Identify and use standard design patterns where appropriate. Computer Science Theory Understand exceptions and interrupts. Understand and use system calls. Be able to measure performance and execution time. Understand storage technologies and memory heirarchy. Technology and Tools Effectively use software development tools including libraries, compilers, editors, linkers and debuggers. Communication Identify and comprehend technical documentation.

Transfer List A:	YES, Transfer List A requested
Diversity Designation:	YES, Diversity Designation Requested
Transfer List B:	YES, Transfer List B Requested
On Campus Format:	YES
Do similar courses Exist:	NO
Is Course Required or an Elective:	Required
Does this impact any Degrees or Certificates?:	NO
Does this impact Departments or Campuses:	NO
Have Other Sacs Been Consulted:	NO
Is there an impact on the Libraries or A/V Dept?:	NO
Impterm:	Winter
Impyr:	2005

Name:	Walter Morales
From:	wmorales@pcc.edu

Curriculum Course Request Form
New Course

Course number:	EET256
Course title:	Electronics Project Lab
Transcript title:	Electronics Project Lab
Lecture hours:	0/0
Lab hours:	2/6
Lec/lab hours:	
Load total:	2/6
Weekly contact hours:	6
Total credits:	2
Reason for new course:	This course provides the student the team experience of working on a project. It addresses the technician's need for teamwork and communications skills, an issue often raised by our advisory committee.
Course description:	EET 256 Electronics Project Lab, 2 cr. Students learn how to work as teams on instructor approved projects. Typical project activities include the research and design phase, the execution phase, and the project report phase. A written report and oral presentation is required.
Prerequisite(s):	EET 241 or EET 242, and EET 222.
Prereq/concurrent:	None
Corequisite(s):	None
Outcomes:	1. The student will be able to research a project and develop a plan to execute it. 2. The student will be able to work as part of a team with divided up responsibilities. 3. The student will be able to communicate with the team members and a manager. 4. The student will be able to understand the theory involved in the project. 5. The student will be able to measure and analyze the performance of the project. 6. The student will be able to contribute to the project report, using circuit simulation software, spreadsheet software, and a word processor. 7. The student will be able to present an oral report on their part of the project.
Teaching Format:	On Campus

Are there similar courses existing:	NO
Required or elective:	Required
Is there an impact on degrees or certificates:	YES EET AAS Degree is affected
Is there an impact on departments/campus:	YES Columbia Gorge Community College (CGCC) also offers the PCC EET degree. The PCC-EET SAC is in communication with the CGCC-EET SAC regarding all program changes.
Have other SACs been consulted:	NO
Is there an impact on the Library/AV Dept?:	NO
Implementation Term:	Fall
Implementation Year:	2005
Name:	Sid Antoch
From:	santoch@pcc.edu

Curriculum Course Request Form
New Course

Course number:	EET242
Course title:	Microcontroller Systems
Transcript title:	Microcontroller Systems
Lecture hours:	3/3
Lab hours:	1/3
Lec/lab hours:	
Load total:	4/6
Weekly contact hours:	6
Total credits:	4
Reason for new course:	This course enhances the EET program's coverage of microcontrollers, which are used in a wide range of products. It gives the student practical experience with the hardware, software, and interfacing of a microcontroller.
Course description:	EET 242 Microcontroller Systems, 4 cr. Introduces the student to the popular 8051 microcontroller. Topics include the hardware, software, and interfacing of the Intel 8051 microcontroller. The emphasis is on interfacing the 8051 to real-world devices such as switches, displays, motors, and A/D converters, through assembly language and possibly C language programming.
Prerequisite(s):	EET 122 and (CST 109 or CST 116).
Prereq/concurrent:	None
Corequisite(s):	None
Outcome:	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.
Teaching Format:	On Campus

Are there similar courses existing:	NO
Required or elective:	Required
Is there an impact on degrees or certificates:	YES EET AAS Degree is affected
Is there an impact on departments/campus:	YES Columbia Gorge Community College (CGCC) also offers the PCC EET degree. The PCC-EET SAC is in communication with the CGCC-EET SAC regarding all program changes.
Have other sacs been consulted:	NO
Is there an impact on the Library/AV Dept?:	NO
Implementation Term:	Fall
Implementation Year:	2005
Name:	Sid Antoch
From:	santoch@pcc.edu

Curriculum Course Revision Form
Course Changes for Number, Title, Description, Prerequisites, and Outcomes

Change:	Course Number, Requisites
Current course number:	EET238
Proposed course number:	EET222
Current course title:	Operational Amplifier Circuits
Current prerequisites:	EET218
Proposed prerequisites:	EET221
Will this impact other sacs?:	no
Will this impact other depts/campuses?:	no
Implementation term:	fall
Implementation year:	2005
Contact name:	Sid Antoch
Contact e-mail:	santoch@pcc.edu

Curriculum Course Revision Form
Course Changes for Number, Title, Description, Prerequisites, and Outcomes

Change:	Course Number,Requisites
Current course number:	EET218
Proposed course number:	EET221
Current course title:	Semiconductor Devices and Circuits
Current prerequisites:	EET131
Proposed prerequisites:	EET113
Will this impact other sacs?:	no
Will this impact other depts/campuses?:	no
Implementation term:	fall
Implementation year:	2005
Contact name:	Sid Antoch
Contact e-mail:	santoch@pcc.edu

Curriculum Course Revision Form
Course Changes for Number, Title, Description, Prerequisites, and Outcomes

Change:	Course Number,Requisites
Current course number:	EET228
Proposed course number:	EET223
Current course title:	RF Communications Circuits
Current prerequisites:	EET218
Proposed prerequisites:	EET221
Will this impact other sacs?:	no
Will this impact other depts/campuses?:	no
Implementation term:	fall
Implementation year:	2005
Contact name:	Sid Antoch
Contact e-mail:	santoch@pcc.edu

Curriculum Course Revision Form
Course Changes for Number, Title, Description, Prerequisites, and Outcomes

Change:	Requisites
Current course number:	EET188
Current course title:	Industrial Safety
Current prerequisites:	EET111 or EET176
Proposed prerequisites:	EET111 or EET121
Will this impact other sacs?:	no
Will this impact other depts/campuses?:	no
Implementation term:	fall
Implementation year:	2005
Contact name:	Sid Antoch
Contact e-mail:	santoch@pcc.edu

Curriculum Course Revision Form
Course Changes for Number, Title, Description, Prerequisites, and Outcomes

Change:	Course Number, Requisites
Current course number:	EET179
Proposed course number:	EET123
Current course title:	Digital Systems III
Current prerequisites:	EET177
Proposed prerequisites:	EET122
Will this impact other sacs?:	no
Will this impact other depts/campuses?:	no
Implementation term:	fall
Implementation year:	2005
Contact name:	Sid Antoch
Contact e-mail:	santoch@pcc.edu

Curriculum Course Revision Form
Course Changes for Number, Title, Description, Prerequisites, and Outcomes

Change:	Course Number, Course Title, Requisites
Current course number:	EET177
Proposed course number:	EET122
Current course title:	Digital Fundamentals II
Proposed course title:	Digital Systems II
Proposed transcript title:	Digital Systems II
Reason for title change:	To match current third term title
Current prerequisites:	EET176
Proposed prerequisites:	EET121
Will this impact other sacs?:	no
Will this impact other depts/campuses?:	no
Implementation term:	fall
Implementation year:	2005
Contact name:	Sid Antoch
Contact e-mail:	santoch@pcc.edu

Curriculum Course Revision Form
Course Changes for Number, Title, Description, Prerequisites, and Outcomes

Change:	Course Number,Course Title
Current course number:	EET176
Proposed course number:	EET121
Current course title:	Digital Fundamentals I
Proposed course title:	Digital Systems I
Proposed transcript title:	Digital Systems I
Reason for title change:	To match present third term title
Will this impact other sacs?:	no
Will this impact other depts/campuses?:	no
Implementation term:	fall
Implementation year:	2005
Contact name:	Sid Antoch
Contact e-mail:	santoch@pcc.edu

Curriculum Course Revision Form
Course Changes for Number, Title, Description, Prerequisites, and Outcomes

Change:	Course Number,Requisites
Current course number:	EET131
Proposed course number:	EET113
Current course title:	Electrical Circuit Analysis III
Current prerequisites:	EET121
Proposed prerequisites:	EET112
Current prerequisites/concurrent:	MTH112
Proposed prerequisites/concurrent:	MTH112 (no change)
Will this impact other sacs?:	no
Will this impact other depts/campuses?:	no
Implementation term:	fall
Implementation year:	2005
Contact name:	Sid Antoch
Contact e-mail:	santoch@pcc.edu

Curriculum Course Revision Form
Course Changes for Number, Title, Description, Prerequisites, and Outcomes

Change:	Course Number
Current course number:	EET121
Proposed course number:	EET112
Current course title:	Electrical Circuit Analysis II
Will this impact other sacs?:	no
Will this impact other depts/campuses?:	no
Implementation term:	fall
Implementation year:	2005
Contact name:	Sid Antoch
Contact e-mail:	santoch@pcc.edu

Curriculum Course Request Form
New Course

Course number:	CST264
Course title:	C# Multi-tier .NET Architecture Software Development
Transcript title:	C# Multi-tier .NET SW Dev.
Lecture hours:	3
Lab hours:	3
Lec/lab hours:	0
Load total:	6
Weekly contact hours:	6
Total credits:	4
Reason for new course:	To train students in the second of the two principle distributed software development architectures, Microsoft's .NET architecture. We already have the first of these architectures covered in CST 263.
Course description:	Prepares students to participate in developing multi-tier systems including the selection of appropriate architecture and evaluation of scalability. Students will participate in designing, implementing, and testing prototypical multi-tier software applications and reusable software components to be deployed on multiple platforms using Microsoft's .NET architecture, WebForms and C#. Special consideration will be given to security and multithreading issues.
Prerequisite(s):	CST 258 and CST 263
Prereq/concurrent:	CST 268
Learning outcomes:	Upon successful completion of this course, the student will be able to participate in developing multi-tier systems including the selection of appropriate architecture and evaluation of scalability, describe the concepts, techniques and tools of distributed application development in the Microsoft .NET environment and use those tools and techniques to develop prototypical distributed applications and reusable software components in the C# language giving special consideration to security and multithreading issues.
Course format:	On Campus

Are there similar courses existing:	YES
Description of existing courses:	Existing CIS courses are designed for students developing business applications rather than being infrastructure and tools oriented. While they touch upon the same issues, they do not cover them to the depth presented by this course. Students taking this course have taken more than twice as many object-oriented software development courses as most CIS students.
Required or elective:	Required
Is there impact on degrees or certificates:	YES In light of entering students being generally more technically literate when they enter CSET, a first-term course dropped. On advise of our advisory committee, this course is being added in the last term as part of a planned two-course sequence in multi-tier software development.
Is there an impact on another dept or campus?:	NO
Have other sacs been contacted?:	YES Discussion with CIS faculty teaching other courses revealed no reconcilable duplication or content overlap. Further, there is no enrollment impact on existing CIS courses since no comparable courses are being taken by CSET students.
Is there an increase in costs for library or AV dept?:	NO
Implementation term:	Spring
Implementation year:	2005
Contact name:	Taylor Hanna and Colin Goble
Contact e-mail:	thanna@pcc.edu and cgoble@pcc.edu

PORTLAND COMMUNITY COLLEGE
COURSE CONTENT AND OUTCOME GUIDE

DATE: 5/30/04 PREPARED BY: Taylor Hanna

COURSE NUMBER: CST 264
COURSE TITLE: C# MULTI-TIER .NET ARCHITECTURE SOFTWARE DEVELOPMENT
CREDIT HOURS: 4
LECTURE HOURS PER WEEK: 3
LEC/LAB HOURS PER WEEK: 0
LAB HOURS PER WEEK: 3
NUMBER OF WEEKS: 11/12

COURSE DESCRIPTION FOR PUBLICATION:
Prepares students to participate in developing multi-tier systems including the selection of appropriate architecture and evaluation of scalability. Students will participate in designing, implementing, and testing prototypical multi-tier software applications and reusable software components to be deployed on multiple platforms using Microsoft's .NET architecture, WebForms and C#. Special consideration will be given to security and multithreading issues.

ADDENDUM TO DESCRIPTION:
This is a four (4) credit hour course that meets three (3) hours per week in lecture/discussion sessions and three (3) hours per week working on course projects in a closed laboratory setting for one (1) academic term. This course is a requirement for an Associate of Applied Science Degree in Computer Software Engineering Technology.

This course will not satisfy required or elective credit toward a degree if it is taken for fewer than the number of credit hours enumerated above.

Transferability of credit depends entirely upon the institution to which the student wishes to transfer.

The student will be advised of the materials required for the course by the instructor during the first week of class.

Course Activities and Design:
This course will be presented by means of lecture/discussion sessions, closed lab sessions, guest speakers and/or audio-visual presentations. Students will utilize essential tools to master course skills and to complete assigned projects.

Prerequisite Knowledge and Skills:

- The content of the following courses are prerequisites for course enrollment:
  CST 258 and CST 263

- Or Departmental permission.

The student must have satisfactorily completed the courses listed above or be able to demonstrate equivalent skills to the Computer Software Engineering department prior to registration.

INTENDED OUTCOMES FOR THE COURSE:
Upon successful completion of this course, the student will be able to participate in developing multi-tier systems including the selection of appropriate architecture and evaluation of scalability, describe the concepts, techniques and tools of distributed application development in the Microsoft .NET environment and use those tools and techniques to develop prototypical distributed applications and reusable software components in the C# language giving special consideration to security and multithreading issues.

OUTCOME ASSESSMENT STRATEGIES:
The student's grade will be based upon understanding of course material as demonstrated by:

1. A comprehensive in-class written final examination and optional midterm exams or quizzes
   and
2. Proper and timely completion of lab projects which demonstrate effective use of requisite tools.

and one or more of the following:

1. In-class oral presentations
2. A lab notebook or portfolio documenting such things as command usage, utility program usage, error messages and their correction, programming language statements, scripts, standard library usage, and operating system standards
3. Contributory participation in classroom and lab discussions.

The instructor will discuss evaluation procedures during the first week of the course. Specific evaluation procedures will be given to the student in writing in the form of a course handout.

COURSE CONTENT (Themes, Concepts, Issues, Competencies and Skills):

Upon successful completion of this course, the student will have satisfactorily accomplished the goals and objectives listed in this content guide.

Distributed Application Architecture
The student will be able to

1. Define the terminology used in the development of distributed software systems as practiced under Microsoft's .NET.

2. Describe design tradeoffs for client, server, component, object, and backend database portions of a distributed, multi-tier software system.

3. Extend Microsoft's .NET application architecture when developing distributed software applications.

Distributed Application Development
The student will be able to

1. Design and program simple C# WebForms client applications.

2. Design and program simple C# server applications that can process data requests from/to client applications.

3. Design and program reusable software components to extend .NET libraries.

4. Design and program various design patterns for creating distributed objects.

Distributed Applications Infrastructure
The student will be able to

1. Program a simple database application, which could serve to transmit information between a middle-layer server and a database server.

2. Describe multithreading design alternatives for client and server applications, and reusable software components.

3. Describe security issues relevant to distributed client and server applications, and reusable software components.

4. Use the security features of .NET to develop solutions for common security problems as part of distributed client and server applications, and reusable software components.

5. Describe how memory is managed in various parts of a distributed application such as on the client, server, or some other component.

Distributed Application Supporting Technologies
The student will be able to

1. Describe how data is packaged and transferred in distributed software applications.

2. Describe the use of database systems in a multi-tier software system.