The Curriculum Committee will meet at 2:00 PM on Tuesday, 3-2-04 in H345.

Agenda
1. Consideration of Minutes of February 10, 2004 meeting
2. Chair’s Report
3. New courses PH120 and PH121
4. New courses ET505 and ET507
5. New/old course HI136
6. Curriculum Committee Proactive Position issues (enclosed)
7. New Business
Department: Physics

<table>
<thead>
<tr>
<th>1. Course number</th>
<th>PH120</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Course title:</td>
<td>Introduction to Meteorology</td>
</tr>
<tr>
<td>3. Course description for the college catalog:</td>
<td>Introduces students to Meteorology and Atmospheric Sciences. The course presents basic scientific principles and how they apply to the atmosphere and oceans. Fulfills the science requirement without lab (or with lab if taken in conjunction with PH121).</td>
</tr>
<tr>
<td>4. Prerequisites and/or corequisites:</td>
<td></td>
</tr>
<tr>
<td>5. Hours and credits:</td>
<td>3 hrs.; 3 Cr.</td>
</tr>
<tr>
<td>6. Rationale - why the course is needed or desired; student demand; projected enrollment; how often it will be offered, etc.</td>
<td>This course is the same course as Principles of the Physical Environment. The name is being changed to be consistent with other college courses that cover the same material. This will make it easier for our students when transferring to other colleges to get credit for the course, eliminating some of the administrative problems that currently result.</td>
</tr>
<tr>
<td>7. Outcomes - specific goals that students are expected to achieve and competencies they are expected to develop</td>
<td>This course</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course objectives</th>
<th>Learning outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Students will specify how the physical environment affects their lives.</td>
<td>a. summarize how phenomena in the physical environment affect their lives. b. summarize how phenomena in the physical environment affect society. c. analyze environmental policies and their effect on society.</td>
</tr>
<tr>
<td>2. Students will apply the scientific method to phenomenon in the environment.</td>
<td>a. analyze environmental data and derive principles that drive the physical environment. b. show how scientists apply scientific methodology to explain and predict the physical environment.</td>
</tr>
<tr>
<td>3. Students will demonstrate knowledge of thermodynamic principles.</td>
<td>a. define various thermodynamic parameters. b. state thermodynamic principles. c. apply thermodynamic principles to solve various problem involving heat and temperature.</td>
</tr>
<tr>
<td>4. Students will demonstrate knowledge of the laws of motion.</td>
<td>a. state Newton’s Laws of Motion. b. quantify forces in the physical environment. c. apply Newton’s Laws to solve various problems involving motion.</td>
</tr>
<tr>
<td>5. Students will demonstrate knowledge of the gas laws.</td>
<td>a. recite the parameters used to describe gases. b. state gas laws and give examples for each. c. apply the gas laws to solve various problems.</td>
</tr>
<tr>
<td>6. Students will demonstrate knowledge of the physical properties of water.</td>
<td>a. evaluate how water properties are affected by different environments. b. state principles that can be used to predict the behavior of water. c. apply principles to solve various water related problems.</td>
</tr>
<tr>
<td>7. Students will demonstrate how basic scientific principles are applied to the physical environment.</td>
<td>a. apply laws and principles (outlined in objectives 3 – 6) to various problems relating to the physical environment.</td>
</tr>
<tr>
<td>8. Students will demonstrate knowledge of the weather and climate.</td>
<td>a. compare and contrast different phenomenon in the physical environment. b. specify the scientific principles behind different weather phenomenon.</td>
</tr>
<tr>
<td>9. Students will demonstrate skill in weather forecasting.</td>
<td>a. summarize how a weather forecast is made. b. make a weather forecast.</td>
</tr>
<tr>
<td>10. Students will specify how the physical environment affects their lives.</td>
<td>a. summarize how phenomena in the physical environment affect their lives. b. summarize how phenomena in the physical environment affect society. c. analyze environmental policies and their effect on society.</td>
</tr>
<tr>
<td>8. Assessment – methods used to determine the success of students (whether or not they achieved the goals and developed the competencies)</td>
<td>Paper and pencil tests, essays, oral questions</td>
</tr>
</tbody>
</table>
9. A detailed course outline (include a laboratory outline when applicable)

   1. Introduction
   2. Composition and Structure of the Atmosphere
   3. Solar Radiation and the Seasons
   4. Energy Balance and Temperature
   5. Moisture
   6. Clouds
   7. Precipitation
   8. Pressure and Wind
   9. Atmospheric Circulation
  10. Air Masses and Fronts
  11. Mid-latitude Storms
  12. Thunder Storms and Tornadoes
  13. Tropical Storms
  14. Weather Forecasting
  15. Air Pollution
  16. Climate

10. Methods of Instruction (such as lecture, distance learning, the web, television, writing intensive)

   Lecture

11. Texts, references and aids. A bibliography for the course and supplementary material, if any.


12. Curricula into which the course would be incorporated and the requirements it will satisfy.

   Will satisfy the science requirement for most curricula without lab (and with lab if taken with PH121)

13. Transferability as an elective or course required by a major to senior colleges (with supporting documents if applicable). Include comparable courses at senior or other community colleges, if applicable.

   This is the standard introductory Meteorology course offered at most 4 year and community colleges. By changing the name to reflect this fact we facilitate the transferability of the course.

14. Faculty availability:

   Several faculty members in the Physics department have direct experience teaching this course. They are Paul Marchese, Don Cotten and Ihor Jadlicky. Other faculty members also have the necessary background to teach the course.

15. Facilities and technology availability:

   Equipment (physics and meteorological) is available for the course. These included weather measuring devices such as barometers, thermometers, anomometers, weather maps, clouds charts, in addition to material necessary to demonstrate related physical concepts.

16. List of courses to be withdrawn, or replaced by this course, if any:

   This course will replace Principles of Physical Environment PH120
<table>
<thead>
<tr>
<th>Course number</th>
<th>PH121</th>
</tr>
</thead>
</table>

2. Course title: Meteorology Laboratory

3. Course description for the college catalog:

Experiments related to physics of the atmosphere and ocean. Weather observation and weather map analysis.

4. Prerequisites and/or corequisites:

5. Hours and credits: 2 hrs.; 1 Cr.

6. Rationale - why the course is needed or desired; student demand; projected enrollment; how often it will be offered, etc.

This course is the same course as Principles of the Physical Environment. The name is being changed to be consistent with other college courses that cover the same material. This will make it easier for our students when transferring to other colleges to get credit for the course, eliminating some of the administrative problems that currently result.

7. Outcomes - specific goals that students are expected to achieve and competencies they are expected to develop

This course objectives | Learning outcomes
--- | ---
1. Students will apply the scientific method to phenomenon in the environment. | a. analyze environmental data and derive principles that drive the physical environment.  
b. show how scientists apply the scientific method to explain and predict the physical environment.
2. Students will demonstrate knowledge of thermodynamic principles. | a. define various thermodynamic parameters.  
b. measure thermodynamic parameters.  
c. state thermodynamic principles.
3. Students will demonstrate knowledge of the gas laws. | a. recite the parameters used to describe gases.  
b. measure gas parameters.  
c. state gas laws and give examples for each.  
d. apply the gas laws to solve various problems.
4. Students will demonstrate knowledge of the physical properties of water. | a. evaluate how the water properties are affected by different environments.  
b. state principles that can be used to predict the behavior of water.  
c. apply principles to solve various water related problems.
5. Students will demonstrate knowledge of the weather and climate. | a. compare and contrast different phenomenon in the physical environment.  
b. specify the scientific principles behind different weather phenomenon.
6. Students will demonstrate skill in weather forecasting. | a. make weather observations.  
b. make plot weather maps.

8. Assessment – methods used to determine the success of students (whether or not they achieved the goals and developed the competencies)

Lab reports, projects
9. A detailed course outline (include a laboratory outline when applicable)

   1. Density
   2. Temperature
   3. Pressure
   4. Heat Capacity
   5. Humidity
   6. Albedo
   7. Guy-Lussac’s Law
   8. Boyle’s Law
   9. Isopleths
  10. Weather Observations
  11. Weather Maps
  12. Weather Fronts
  13. Weather Analysis

10. Methods of Instruction (such as lecture, distance learning, the web, television, writing intensive)

    Laboratory exercises.

11. Texts, references and aids. A bibliography for the course and supplementary material, if any.


12. Curricula into which the course would be incorporated and the requirements it will satisfy.

    Will satisfy the science requirement for most curricula with lab if taken with PH120

13. Transferability as an elective or course required by a major to senior colleges (with supporting documents if applicable). Include comparable courses at senior or other community colleges, if applicable.

    This is the standard introductory Meteorology laboratory course offered at most 4 year and community colleges.

14. Faculty availability:

    Several faculty members in the Physics department have direct experience teaching this course. They are Paul Marchese, Don Cotten and Ihor Jadicky. Other faculty members also have the necessary background to teach the course.

15. Facilities and technology availability:

    Equipment (physics and meteorological) is available for the course. These included weather measuring devices such as barometers, thermometers, anomometers, weather maps, clouds charts, in addition to material necessary to demonstrate related physical concepts.

16. List of courses to be withdrawn, or replaced by this course, if any:

    This course will replace Environmental Lab PH121
# Course Revision Proposal for ET-505

**Electrical and Computer Engineering Technology**

<table>
<thead>
<tr>
<th>1. Course number</th>
<th>ET-505</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Course title:</td>
<td>Introduction to C++ Object Oriented Programming</td>
</tr>
<tr>
<td>3. Course description for the college catalog:</td>
<td>Introduction to C++ with object oriented programming emphasizes applications and their solutions. Topics include data types, and their operators, I/O, control statements, functions, classes and objects. Students will be introduced to Microsoft's Integrated Development Environment (IDE) and learn how to create, compile, link and debug their own C++ programs. Each student will be given extensive hands on experience on their own computer workstation, provided through the department's computer facility.</td>
</tr>
<tr>
<td>Current Course Description:</td>
<td>Introduction to the &quot;C&quot; programming language emphasizing applications and their solutions. Topics include: data types and operators, input/output statements, control statements, functions and program structure, pointers, arrays, and lists. A hands-on approach will be emphasized by using the Department's computer facility. Laboratory hours complement class work.</td>
</tr>
<tr>
<td>4. Prerequisites:</td>
<td>None</td>
</tr>
<tr>
<td>5. Hours and credits:</td>
<td>3 class hours - 3 laboratory hours - 4 credits</td>
</tr>
<tr>
<td>6. Rationale:</td>
<td>C++ with object oriented programming has become the preeminent applications language of the twenty first century. Recent graduates, especially graduates of electrical and computer engineering programs, are finding that a growing number of the jobs for which they apply, call for a knowledge of C++ programming language. Many are reaching the conclusion that the growth of C++ programming in industry in not merely a passing fancy of one branch of engineering but rather a natural consequence of advances taking place in the use of microprocessors. Object-oriented programs are easier to understand and maintain than their traditional counterparts (Fortran, Pascal and Basic). Object-oriented methods are the key to reusable software and can greatly reduce the costs and time of developing and adapting software to meet new requirements. C++, a super set of C, has become a well-established mainstream language used across a broad range of applications. This course teaches C++ as a first step to real programming and offers a solid foundation for the novice to become a competent programmer. What distinguishes this course is the valuable hands on practical experience that the students will glean from developing object-oriented programs using C++ on their own computer workstations.</td>
</tr>
<tr>
<td>7. Outcomes:</td>
<td>Portfolio of C++ programming projects</td>
</tr>
<tr>
<td>8. Assessment:</td>
<td>Examinations, Portfolio Review</td>
</tr>
<tr>
<td>9. A detailed course outline (include a laboratory outline when applicable)</td>
<td>see attached</td>
</tr>
<tr>
<td>10. Methods of Instruction:</td>
<td>Lecture, demonstrations and weekly laboratory assignments.</td>
</tr>
</tbody>
</table>
Author: Tony Gaddis, Judy Walters and Godfrey Muganda  
Text is bundled with the following student material: Student Data Disk, Borland and Microsoft Visual C++ compilers |
| 12. Curricula into which the course would be incorporated and the requirements it may satisfy: | This course is intended as an elective course for all ET, CT, and EM (New Media) students and will fulfill part of their technical elective credit requirements. |
| 13. Transferability as an elective or course required by a major to senior colleges (with supporting documents if applicable). | As part of the AAS Degree curriculum, this course has been fully transferable to senior colleges for students entering a BET program. |
| 14. Faculty availability: | Present ECET Faculty |
| 15. Facilities and technology availability: | All ECET Computer Laboratories |
| 16. List of courses to be withdrawn, or replaced by this course, if any: | None |
| 17. Enrollment limit and frequency the course is offered (each semester, once a year, alternating years): | This course will be offered every semester. |
## LABORATORY OUTLINE

<table>
<thead>
<tr>
<th>WEEK #</th>
<th>TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introductory Lecture</td>
</tr>
<tr>
<td>2</td>
<td>Lab #1: Introduction to Computers</td>
</tr>
<tr>
<td>3</td>
<td>Lab #2: Introduction to Microsoft’s C++ Integrated Development Environment (IDE)</td>
</tr>
<tr>
<td>4</td>
<td>Lab #3: Write, Compile, Link, Debug &amp; Execute Simple C++ Programs</td>
</tr>
<tr>
<td>5</td>
<td>Lab #4: Investigate Data Input</td>
</tr>
<tr>
<td>6</td>
<td>Lab #5: Interactive C++ Programs</td>
</tr>
<tr>
<td>7</td>
<td>Lab #6: Relational Operators &amp; Simple IF Control Statement</td>
</tr>
<tr>
<td>8</td>
<td>Lab #7: Complex Decision Making (IF/Else &amp; Switch Statements)</td>
</tr>
<tr>
<td>9</td>
<td>Lab #8: Introduction to File Input/Output</td>
</tr>
<tr>
<td>10</td>
<td>Lab #9: Introduction to Loops – (While &amp; Do Loops)</td>
</tr>
<tr>
<td>11</td>
<td>Lab #10: FOR Loop</td>
</tr>
<tr>
<td>12</td>
<td>Lab #11: Introduction to Functions</td>
</tr>
<tr>
<td>13</td>
<td>Lab #12: Passing &amp; Returning Parameters to Functions by Value &amp; Reference</td>
</tr>
<tr>
<td>14</td>
<td>Practical</td>
</tr>
</tbody>
</table>
ECET ET-505
Course Outline
ET-505: Introduction to C++ with object oriented programming

Week 1

Chapter 1: Introduction to Computers and Programming
1.1 Why Program?
1.2 Computer Systems: Hardware and Software
1.3 Programs and Programming Languages
1.4 What Is a Program Made of?
1.5 Input, Processing, and Output
1.6 The Programming Process
1.7 Procedural and Object-Oriented Programming
Review Questions and Exercises

Week 2

Appendix M—Introduction to Microsoft Visual C++ .NET
- This appendix shows the student how to set up a project workspace, compile, link, edit, execute and debug a C++ program.

Weeks 3 & 4

Chapter: 2 Introduction to C++
2.1 The Parts of a C++ Program
2.2 The cout Object
2.3 The #include Directive
2.4 Variables and Literals
2.5 Identifiers
2.6 Integer Data Type
2.7 The char Data Type
2.8 Floating-Point Data Type
2.9 The bool Data Type
2.10 Determining the Size of a Data Type
2.11 Variable Assignments and Initialization
2.12 Scope
2.13 Arithmetic Operators
2.14 Comments
2.15 Focus on Software Engineering: Programming Style
2.16 If You Plan to Continue in Computer Science: Standard and Prestandard C++
Review Questions and Exercises

Weeks 5 & 6

Chapter 3: Expressions and Interactivity
3.1 The cin Object
3.2 Mathematical Expressions
3.3 When You Mix Apples and Oranges: Type Conversion
3.4 Overflow and Underflow
3.5 Type Casting
3.6 Named Constants
3.7 Multiple Assignments and Combined Assignment
3.8 Formatting Output
3.9 Formatted Input
3.10 **Focus on Object-Oriented Programming**: *More About Member Functions*
3.11 More Mathematical Library Functions
3.12 Introduction to File Input and Output
Review Questions and Exercises
**Focus on Problem Solving**: *A Case Study (on CD)*

**Chapter 4: Making Decisions**
4.1 Relational Operators
4.2 The if Statement
4.3 Flags
4.4 Expanding the if Statement
4.5 The if/else Statement
4.6 The if/else if Statement
4.7 Using a Trailing else
4.8 Menus
4.9 **Focus on Software Engineering**: *Nested if Statements*
4.10 Logical Operators
4.11 Checking Numeric Ranges with Logical Operators
4.12 **Focus on Software Engineering**: *Validating User Input*
4.13 More About Variables Definitions and Scope
4.14 Comparing Strings
4.15 The Conditional Operator
4.16 The switch Statement
4.17 Testing for File Open Errors
Review Questions and Exercises
**Focus on Problem Solving and Program Design**: *A Case Study (on CD)*

**Chapter 5: Looping**
5.1 The Increment and Decrement Operators
5.2 Introduction to Loops: The while loop
5.3 Counters
5.4 Letting the User Control the Loop
5.5 Keeping a Running Total
5.6 Sentinels
5.7 Using a Loop to Read Data from a File
5.8 The do-while and for Loops
5.9 **Focus on Software Engineering**: *Deciding Which Loop to Use*
5.10 Nested Loops
5.11 Breaking Out of a Loop
5.12 The continue Statement
5.13 **Focus on Software Engineering**: Using Loops for Data Validation

Review Questions and Exercises

**Focus on Problem Solving and Program Design**: A Case Study (on CD)

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**Chapter 6: Functions**

6.1 **Focus on Software Engineering**: Modular Programming
6.2 Defining and Calling Functions
6.3 Function Prototypes
6.4 Sending Data Into a Function
6.5 Passing Data by Value
6.6 **Focus on Software Engineering**: Using Functions in a Menu-Driven Program
6.7 The return Statement
6.8 Returning a Value from a Function
6.9 Returning a Boolean Value
6.10 Local and Global Variables
6.11 Static Local Variables
6.12 Default Arguments
6.13 Using Reference Variables as Parameters
6.14 Overloading Functions
6.15 the exit() Function
6.16 Stubs and Drivers

Review Questions and Exercises

**Focus on Problem Solving and Program Design**: A Case Study (on CD)

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**Chapter 7: Introduction to Classes**

7.10 Introduction to Classes
7.11 Introduction to objects
7.12 Defining member functions
7.13 **Focus on Software Engineering**: Some Design Considerations
7.14 Using a Constructor with a class
7.15 Overloading Constructors
7.16 Destructors
7.17 Input Validation Objects
7.18 Using Private Member Functions
7.19 Home Software Company OOP Case Study
7.20 **Focus on Software Engineering**: Object-Oriented Analysis
7.21 Additional case studies
    - Review Questions and Exercises

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### Course Revision Proposal for ET-507

<table>
<thead>
<tr>
<th>6. Course number</th>
<th>ET-507</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Course title:</td>
<td>Advanced C++ Object Oriented Programming</td>
</tr>
<tr>
<td>8. Course description for the college catalog:</td>
<td>A detailed study of advanced concepts in C++ programming with emphasis on structure, modularity, efficiency and good programming design. Selected topics include: arrays, strings, file I/O, pointers, data structures, recursion, stacks, queues and dynamic memory allocation. Each students will be given intensive hands on instruction on his/her own computer workstation. Current Course Description: A detailed study of advanced concepts in “C” programming with emphasis on structure, modularity, efficiency, and good programming design. Selected topics include: data structures, stacks, queues, file I/O, pointer arithmetic, and recursion. Each student will be given intensive hands-on instruction on his/her own computer workstation.</td>
</tr>
<tr>
<td>9. Prerequisites :</td>
<td>ET-505 or permission of the Department</td>
</tr>
<tr>
<td>10. Hours and credits:</td>
<td>3 class hours - 3 laboratory hours - 4 credits</td>
</tr>
<tr>
<td>Rationale:</td>
<td>C++ with object oriented programming has become the preeminent applications language of the twenty first century. Recent graduates, especially graduates of electrical and computer engineering programs, are finding that a growing number of the jobs for which they apply, call for a knowledge of C++ programming language. Many are reaching the conclusion that the growth of C++ programming in industry is not merely a passing fancy of one branch of engineering but rather a natural consequence of advances taking place in the use of microprocessors. Object-oriented programs are easier to understand and maintain than their traditional counterparts (Fortran, Pascal and Basic). Object-oriented methods are the key to reusable software and can greatly reduce the costs and time of developing and adapting software to meet new requirements. C++, a super set of C, has become a well-established mainstream language used across a broad range of applications. This course teaches C++ as a first step to real programming and offers a solid foundation for the novice to become a competent programmer. What distinguishes this course is the valuable hands on practical experience that the students will glean from developing object-oriented programs using C++ on their own computer workstations.</td>
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<td>12. Outcomes :</td>
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<td>13. Assessment:</td>
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<td>14. A detailed course outline (include a laboratory outline when applicable):</td>
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| 19. Transferability as an elective or course required by a major to senior colleges (with supporting documents if applicable). | As part of the AAS Degree curriculum, this course has been fully transferable to senior colleges for students entering a BET program. |
| 20. Faculty availability: | Present ECET Faculty |
| 21. Facilities and technology availability: | All ECET Computer Laboratories |
| 22. List of courses to be withdrawn, or replaced by this course, if any: | None. |
| 23. Enrollment limit and frequency the course is offered (each semester, once a year, alternating years): | This course will be offered every Spring semester. |
LABORATORY OUTLINE

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<thead>
<tr>
<th>WEEK #</th>
<th>TOPIC</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Introductory Lecture</td>
</tr>
<tr>
<td>2</td>
<td>Lab #1: Review Lab</td>
</tr>
<tr>
<td>3</td>
<td>Lab #2: Structures</td>
</tr>
<tr>
<td>4</td>
<td>Lab #3: Introduction to Objects &amp; Classes</td>
</tr>
<tr>
<td>5</td>
<td>Lab #4: Constructors</td>
</tr>
<tr>
<td>6</td>
<td>Lab #5: Arrays</td>
</tr>
<tr>
<td>7</td>
<td>Lab #6: Pointers</td>
</tr>
<tr>
<td>8</td>
<td>Lab #7: Strings</td>
</tr>
<tr>
<td>9</td>
<td>Lab #8: String Arrays</td>
</tr>
<tr>
<td>10</td>
<td>Lab #9: More Objects &amp; Classes</td>
</tr>
<tr>
<td>11</td>
<td>Lab #10: Operator Overloading</td>
</tr>
<tr>
<td>12</td>
<td>Lab #11: Inheritance</td>
</tr>
<tr>
<td>13</td>
<td>Lab #12: Polymorphism</td>
</tr>
<tr>
<td>14</td>
<td>Practical</td>
</tr>
</tbody>
</table>
ECET ET-507

Course Outline
ET-507: Advanced C++ with object oriented programming

WEEK 1

CHAPTER 8 Arrays
8.1 Arrays Hold Multiple Values
8.2 Accessing Array Elements
8.3 Inputting and Displaying Array Contents
8.4 Array Initialization
8.5 Processing Array Contents
8.6 Using Parallel Arrays
8.7 The typedef Statement
8.8 Arrays as Function Arguments
8.9 Two-Dimensional Arrays
8.10 Arrays with Three or More Dimensions
8.11 Vectors
8.13 Arrays of Structures
8.14 Arrays of Class Objects
8.15 Additional Case Studies
Review Questions and Exercises

WEEK 2 & 3

CHAPTER 10 Pointers
10.1 Getting the Address of a Variable
10.2 Pointer Variables
10.3 The Relationship Between Arrays and Pointers
10.4 Pointer Arithmetic
10.5 Initializing Pointers
10.6 Comparing Pointers
10.7 Pointers as Function Parameters
10.8 Focus on Software Engineering: Dynamic Memory Allocation
10.9 Focus on Software Engineering: Returning Pointers from Functions
10.10 Pointers to Structures and Class Objects
10.12 United Cause Relief Agency Case Study
Review Questions and Exercises

WEEK 4 & 5

CHAPTER 11 More About Classes and Object-Oriented Programming
11.1 The this Pointer and Constant Member Functions
11.2 Static Members
11.3 Friends of Classes
11.4 Memberwise Assignment
11.5 Copy Constructors
11.6 Operator Overloading
11.7 Type Conversion Operators
11.8 Convert Constructors
11.9 Object Composition
11.10 Inheritance
11.11 Protected Members and Class Access
11.12 Constructors, Destructors, and Inheritance
11.13 Overriding Base Class Functions
Review Questions and Exercises

WEEK 6 & 7

CHAPTER 12 More About Characters, Strings, and the string Class
12.1 C-strings
12.2 Library Functions for Working with C-Strings
12.3 String/Numeric Conversion Functions
12.4 Character Testing
12.5 Character Case Conversion
12.6 Writing Your Own C-String Handling Functions
12.7 More About the C++ string Class
12.8 Creating Your Own String Class
12.9 Advanced Software Enterprises Case Study
12.10 Additional Case Studies
Review Questions and Exercises

WEEK 8 & 9
CHAPTER 13 Advanced File and I/O Operations
13.1 Files
13.2 Output Formatting
13.3 Passing File Stream Objects to Functions
13.4 More Detailed Error Testing
13.5 Member Functions for Reading and Writing Files
13.6 Working with Multiple Files
13.7 Binary Files
13.8 Creating Records with Structures
13.9 Random-Access Files
13.10 Opening a File for Both Input and Output
13.11 Online Friendship Connections Case Study: Object Serialization
13.12 Additional Case Studies
Review Questions and Exercises

WEEK 10
CHAPTER 14 Recursion
14.1 Introduction to Recursion
14.2 The Recursive Factorial Function
14.3 The Recursive gcd Function
14.8 Focus on Software Engineering: Recursion Versus Iteration
Review Questions and Exercises

WEEK 11
CHAPTER 15 Polymorphism, Virtual Functions, and Multiple Inheritance
15.1 Type Compatibility in Inheritance Hierarchies
15.2 Polymorphism and Virtual Member Functions
15.3 Abstract Base Classes and Pure Virtual Functions
15.4 Multiple and Virtual Inheritance
15.5 Focus on Object-Oriented Programming: Composition Versus Inheritance
15.6 Secure Encryption Systems, Inc. Case Study
Review Questions and Exercises

ECET ET-507

WEEK 12
CHAPTER 17 Linked Lists
17.1 Introduction to the Linked List ADT
17.2 Linked List Operations
17.3 A Linked List Template
17.4 Recursive Linked List Operations
17.5 Variations of the Linked List
17.6 The STL list Container
17.7 Reliable Software Systems, Inc. Case Study
17.8 Additional Case Studies
Review Questions and Exercises

WEEK 13
CHAPTER 18 Stacks and Queues
18.1 Introduction to the Stack ADT
18.2 Dynamic Stacks
18.3 The STL stack Container
18.4 Introduction to the Queue ADT
18.5 Dynamic Queues
18.6 The STL deque and queue Containers
18.7 Focus on Problem Solving and Program Design: Eliminating Recursion
Review Questions and Exercises

CHAPTER 19 Binary Trees
19.1 Definition and Applications of Binary Trees
19.2 Binary Search Tree Operations
19.3 Template Considerations for Binary Search Trees
19.4 Case Studies
Review Questions and Exercises
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<tr>
<td><strong>1.</strong> Course number</td>
<td>HI 136</td>
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<td><strong>2.</strong> Course title: African-American History</td>
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<td><strong>3.</strong> Course description for the college catalog:</td>
<td>Survey of major developments in the history of Africans in America from the colonial era to the present day. Themes will include changes in the legal status of Africans in America, evolving ideas about racial identity, and the politics of civil rights. Topics will include the economics of slavery, African cultural survival, and the roles of religion and family in black communities. Major events surveyed include the Civil War, Reconstruction, the Great Migration, the Harlem Renaissance, the Civil Rights Movement, the Black Power Movement, and recent changes in black America due to immigration.</td>
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<td><strong>4.</strong> Prerequisites and/or co-requisites:</td>
<td>BE 112, 121, or successful passage of the ACT test.</td>
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<td><strong>5.</strong> Hours and credits</td>
<td>Three class hours and three credits</td>
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<td><strong>6.</strong> Rationale – why the course is needed or desired; student demand; projected enrollment; how often it will be offered, etc:</td>
<td>This is a course which is taught at virtually every college throughout the country. It was taught previously at Queensborough, but has not been taught because of lack of staff to teach it. Staff is now available. The course will be offered once a year. Expected enrollment, based on figures for other courses of this type, will be about 30 students</td>
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<td><strong>7.</strong> Outcomes – specific goals that students are expected to achieve and competencies they are expected to develop:</td>
<td>Students will demonstrate knowledge of the major events, figures, and themes of African American history. Students will demonstrate the ability to apply historical analysis to primary and secondary source material. Students will demonstrate research skills and the ability to identify and critically analyze major issues in African American history by writing a ten page research paper. The paper will be written in several stages so that students may demonstrate their ability to edit and revise their own writing.</td>
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<td><strong>8.</strong> Assessment – methods used to determine the success of students (whether or not they achieved the goals and developed the competencies):</td>
<td>Students in this course will take two midterms and a final to assess their comprehension of the material and will be required to complete a research paper which demonstrates engagement with the issues involved in African-American history.</td>
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9. A detailed course outline of pertinent courses (include a laboratory outline when applicable)
I The Colonial Era: Degrees of Freedom
Discussion of how Africans came to America in the Colonial Era and how the system of race-based slavery developed.
II Africans and the American Revolution
Exploration of African American participation in the revolution and consideration of how issues of slavery were handled in the creation of the American constitution. Attention will be paid to how republican ideas affected lives of African Americans after the revolution.
III The Institutionalization of Slavery
This unit will focus on the development of slavery as an institution in the upper and lower south, covering work roles, systems of control, and the economics of slavery.
This unit will also consider differences between the lives of free and enslaved African Americans.
IV Methods of Resistance: Rebellions and Escapes
This unit considers the institution of slavery from the perspective of slaves. How did slavery impact the lives of slaves? What resources were available to them in their interactions with the system? How did religion, violence, and escape work as tactics of resistance?
V The Civil War
Discussion of the role of African Americans in the Civil War and the impact of the war on the lives of black men and women.
VI Reconstruction
This unit covers the politics of the three eras of reconstruction. Discussing the transition from Radical to Congressional reconstruction and the death of the project in 1877. Close attention will be paid both to governmental programs and to black participation in reconstruction.
VII Life Under Jim Crow
Consideration of life after reconstruction, focusing on the development of the sharecropping system, the emergence of white supremacy groups, and the growth of the black church.
VIII The Talented Tenth: The Emergence of a Black Middle Class
Focus on the growth of a black intelligentsia, paying particular attention to the work of W.E. B. DuBois and emerging ideas about black identity.
IX World War I and the Great Migration
Discussion of African American contributions to the war effort and the postwar wave of migration into northern and urban areas.
X The Harlem Renaissance and the “New Negro”
This unit focuses on the artistic elements of the Harlem Renaissance and the political implications of this movement.
XI African Americans in the Great Depression and World War II
African American experience of and response to the Great Depression and bias in the New Deal. Black contributions to the war effort and post-war disillusionment with American culture.
XII The Civil Rights Movement
This unit focuses on the major events and figures of the Civil Rights Movement.
XIII Black Power and White Flight
Focus on the Black Power movement's ideals and methodology and on the politics of busing. This unit also focuses on the changing complexion of American cities in the 1970s.
XIV African Americans and the Politics of Diversity
This final unit considers the growth of Black Studies in the 1980s and considers recent court activity on the issue of affirmative action.

10. Methods of Instruction (such as lecture, distance learning, the web, television, writing intensive)
This will be a lecture based course with significant time spent analyzing primary source material which will include slave narratives accessed through the Library of Congress web site, court cases, and excerpts from major works of African-American literature.
In addition, movies and documentaries will be used as teaching aids.
11. Texts, references and aids. A bibliography for the course and supplementary material, if any.

Textbook:


Bibliography


12. Curricula into which the course would be incorporated and the requirements it will satisfy:

This course meets HI 100 requirement for the AA curriculum and will serve as a history or social science elective for all curricula.

13. Transferability as an elective or course required by a major to senior colleges (with supporting documents if applicable). Include comparable courses at senior or other community colleges, if applicable.

The course meets either history or elective requirements at all other colleges.

14. Faculty availability:

Faculty will be available to teach this course once a year

15. Facilities and technology availability:

No special facilities or technology are needed.

16. List of courses to be withdrawn, or replaced by this course, if any.

none

17. Enrollment limit and frequency the course is offered (each semester, once a year, alternating years):

The course will be limited to 36 students and will be offered once a year.

18. What changes in any programs will be necessitated or requested as a result of this course's additions/charges.

No changes will be required in any programs in order to offer this course.
Possible issues in 2003-2004 for the Curriculum Committee that would have the committee take a proactive position or role.

1. Academic Planning Process at QCC
2. Monitoring of the progress of the WI classes and the WID WAC program and the 2005 degree requirements
3. The seat limits for WI classes and Learning Communities
4. The manner in which curriculum planning/approval will take place for DE at QCC
5. The effectiveness of the remediation program in relation to QCC classes
   - Do BE classes prepare people well enough to enter EN 101 and other classes that have BE as a pre or co requisite?
   - Possible faculty survey of those who teach classes with a BE pre or co requisite or have EN 101 as co requisite

Philip A. Pecorino, Ph.D.
Professor, Philosophy
Social Sciences Department

1. Review of the CUNY inquiry into general education and how it relates to all curricula.
2. Review of the WID WAC Program, Learning Communities and Outcomes Assessment, in accordance with the general education inquiry, to coordinate common goals.
3. Review of curricula for course overlap both intra-department and inter-department.
4. Review of feasibility of requiring a basic technology course across the curriculum.
5. Review of transferability of QCC courses to other CUNYs.
6. Review of “infusing technology into existing courses” (from p.6 of the Technology Plan, 2001).
7. Review of content in ST100/ST101 to include, but not limited to:
   a. Academic Integrity
   b. Student email
   c. Blackboard
   d. Writing Intensive courses (requirements for graduation and how to identify WI courses when registering).
   e. CPE requirements.
   f. Learning Communities.
   g. Library research/internet research

Kathy Villani
Business