Document N: Course and Program Development:
IMAOACT AND APPROVAL SIGNATURES

See Course and Program Development Policy and Procedures (www.ubalt.edu/provost) for instructions.

SCHOOL:
- LAW
- MSB
- CAS
- CPA

CONTACT NAME: Cecelia Wright Brown
PHONE: 410-837-5004

DEPARTMENT/DIVISION: Division of Science, Information Arts and Technologies
DATE PREPARED: 3/16/12

PROPOSED SEMESTER OF IMPLEMENTATION: fall spring
YEAR: 2013

TYPE OF ACTION: add (new) deactivate modify other
LEVEL OF ACTION: noncredit undergraduate graduate other

ACTION BEING REQUESTED (select one category, either Course Actions or Program Actions):

**COURSE ACTIONS**
- Original Subject Code/Course Number: COSC 411
- Original Course Title: Object-Oriented Analysis and Design

**PROGRAM ACTIONS**
- Original Program Title:
- Select one or multiple actions from one of the lists below (review the list of necessary documents and signatures):
  
<table>
<thead>
<tr>
<th>COURSE ACTIONS</th>
<th>PROGRAM ACTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Experimental Course</td>
<td>10. Program Requirements</td>
</tr>
<tr>
<td>2. Course Title</td>
<td>11a. Undergraduate Specialization (12 credits or fewer)</td>
</tr>
<tr>
<td>3. Course Credits</td>
<td>11b. Master’s Specialization (12 credits or fewer)</td>
</tr>
<tr>
<td>4. Course Number</td>
<td>11c. Doctoral Specialization (18 credits or fewer)</td>
</tr>
<tr>
<td>5. Course Level</td>
<td>12. Minor (add or delete)</td>
</tr>
<tr>
<td>6. Pre- and Co-Prerequisite</td>
<td>13. Closed Site Program</td>
</tr>
<tr>
<td>7. Course Description</td>
<td>14. Program Suspension</td>
</tr>
<tr>
<td>8. New Course</td>
<td>15. Program Reactivation</td>
</tr>
<tr>
<td>9. Deactivate Course</td>
<td>16a. Certificate Program (UG/G) exclusively within existing degree program</td>
</tr>
<tr>
<td>22. Other</td>
<td>16b. Certificate Program (UG/G) outside of or across degree programs (12 or more credits)</td>
</tr>
<tr>
<td></td>
<td>17. Off-Campus Delivery of Existing Programs</td>
</tr>
<tr>
<td></td>
<td>18a. Undergraduate Concentration (exceeds 24 credits)</td>
</tr>
<tr>
<td></td>
<td>18b. Master’s Concentration (exceeds 12 credits)</td>
</tr>
<tr>
<td></td>
<td>18c. Doctoral Concentration (exceeds 18 credits)</td>
</tr>
<tr>
<td></td>
<td>19. Program Title Change</td>
</tr>
<tr>
<td></td>
<td>20. Program Termination</td>
</tr>
<tr>
<td></td>
<td>21. New Degree Program</td>
</tr>
<tr>
<td></td>
<td>22. Other</td>
</tr>
</tbody>
</table>

ADDITIONAL DOCUMENTATION (check all appropriate boxes of documents included; review the list of necessary documents):
- summary proposal (O) course definition document (P) full five-page MHEC proposal (Q)
- financial tables (MHEC) (R) other documents as may be required by MHEC/USM (S) other (T)
**IMPACT REVIEW (review the list of necessary signatures):**

<table>
<thead>
<tr>
<th>Impacted Entity</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Library</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. OTS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. University Relations</td>
<td></td>
<td></td>
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<tr>
<td>d. Admissions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Records</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- a. Library: 
  - No impact
  - Impact statement attached

- b. OTS: 
  - No impact
  - Impact statement attached

- c. University Relations: 
  - No impact
  - Impact statement attached

- d. Admissions: 
  - No impact
  - Impact statement attached

- e. Records: 
  - No impact
  - Impact statement attached

**APPROVAL SEQUENCE (review the list of necessary signatures):**

<table>
<thead>
<tr>
<th>Approval Level</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Department/Division (Chair)</td>
<td>Deborah Koth</td>
<td>4-8-13</td>
</tr>
<tr>
<td>B. General Education (for No. 7, 8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Final Faculty Review Body Within Each School (Chair)</td>
<td>Miguel</td>
<td>4/8/13</td>
</tr>
<tr>
<td>D. Dean</td>
<td>Daniel B.</td>
<td>4/8/13</td>
</tr>
<tr>
<td>E. University Faculty Senate (Chair)</td>
<td>Beverly Schneller</td>
<td>6/11/13</td>
</tr>
<tr>
<td>F. University Council (Chair)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G. Provost and Senior Vice President for Academic Affairs</td>
<td>Beverly Schneller</td>
<td>6/11/13</td>
</tr>
<tr>
<td>H. President</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I. Board of Regents (notification only)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Board of Regents (approval)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K. MHEC (notification only)</td>
<td></td>
<td></td>
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<tr>
<td>L. MHEC (approval)</td>
<td></td>
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<tr>
<td>M. Middle States Association notification</td>
<td>Required only if the University's mission is changed by the action</td>
<td></td>
</tr>
</tbody>
</table>

1 University Council review (for recommendation to the president or back to the provost) shall be limited to curricular or academic policy issues that may potentially affect the University's mission and strategic planning, or have a significant impact on the generation or allocation of its financial resources.
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CONTACT NAME:  Cecelia Wright Brown  
PHONE:  410-837-5004

DEPARTMENT/DIVISION:  Division of Science, Information Arts and Technologies  
DATE PREPARED:  3/16/12

PROPOSED SEMESTER OF IMPLEMENTATION:  
- fall  
- spring  
YEAR:  2013

ACTION BEING REQUESTED (select one category, either Course Actions or Program Actions):

- COURSE ACTIONS

Original Subject Code/Course Number:  
COSC 451

Original Course Title:  
Object-Oriented Analysis and Design

Select one or multiple actions from one of the lists below (review the list of necessary documents and signatures):

- Experimental Course
- Course Title
- Course Credits
- Course Number
- Course Level
- Pre- and Co-Requisite
- Course Description
- New Course
- Deactivate Course
- Other

PROGRAM ACTIONS

- Program Requirements
- Undergraduate Specialization (24 credits or fewer)
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- Doctoral Concentration (exceeds 18 credits)
- Program Title Change
- Program Termination
- New Degree Program
- Other

For changes to existing courses:

<table>
<thead>
<tr>
<th>OLD TITLE</th>
<th>SUBJECT CODE/COURSE NO.</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEW TITLE</td>
<td>SUBJECT CODE/COURSE NO.</td>
<td>CREDITS</td>
</tr>
</tbody>
</table>
DESCRIBE THE REQUESTED COURSE/PROGRAM ACTION (additional pages may be attached if necessary):

To create a new course COSC 451, Object-Oriented Analysis and Design a course requirement for the Applied Information Technology (AIT) students in the Applications and Web Development track, and essential to the 4 year Program.  

SET FORTH THE RATIONALE FOR THIS PROPOSAL:

Presently one course exists in the concentration of database, web and programming which is COSC 416 Advanced Web Development. This new course addition to the curriculum would complement learning for AIT majors in the Applications and Web Development track. This course would enhance knowledge needed in database, web and programming for advanced study in computing.
1. DATE PREPARED
March 16, 2012

2. PREPARED BY
Cecelia Wright Brown

3. DEPARTMENT/DIVISION
Division of Science, Information Arts and Technologies

4. COURSE NUMBER(S) with SUBJECT CODE(S)
COSC 451

5. COURSE TITLE
Object-Oriented Analysis and Design

6. CREDIT HOURS
3

7. CATALOG DESCRIPTION
Presents concepts and techniques in the development of robust design models and of applications of the United Modeling Language to fundamental object-oriented analysis and design concepts, including architecture, objects, classes, components, relationships and supporting diagrams. Lab fee required. Prerequisites: COSC 351 and MATH 201

8. PREREQUISITES
COSC 351 and Math 201

9. COURSE PURPOSE (how the course is to be used in the curriculum; e.g., required for the major, elective, etc.)
Required course for Applied Information Technology (AIT) Program majors in the Applications and Web Development track and a general elective for all other Science, Information Arts and Technologies (SIAT) majors.

10. GENERAL EDUCATION AREA (if applicable; e.g., social sciences, humanities, mathematics, etc.)
Not Applicable

11. COURSE TYPE/COMPONENT (clinical, continuance, discussion, field studies, independent study, laboratory, lecture, practicum, research, seminar, supervision, thesis research, tutorial or workshop; this must match PeopleSoft 9.0 coding, so check with your dean's office if you are unsure of the correct entry)
Lecture

Summer 2010
12. FACULTY QUALIFIED TO TEACH COURSE

Mohammed Ketel, Bridget Blodgett, and Cecelia Wright Brown

13. CONTENT OUTLINE

1) Object-Oriented concepts and terminology
2) Introduction to modeling, software development process
3) Diagrams, scenarios, forms and UML
4) Architectural analysis
5) Design/models, elements and mechanisms
6) Distribution and implementation
7) Software development processes
8) Frameworks and tools

14. LEARNING GOALS

1) Demonstrate concepts and principles of object orientation and object oriented analysis and design
2) Utilize Syntax, Semantics and Pragmatics of the UML
3) Demonstrate how requirements can be described and modeled
4) Analyze, specify and design structural and behavioral aspects of a system
5) Articulate and present how implementation and deployment details of a system can be modeled
6) Apply best practices based on Architecture and Design patterns
7) Employ the Unified Process to demonstrate how UML can be used in a process

15. ASSESSMENT STRATEGIES

Through laboratory assignments, exams, drills, team and individual projects.

16. SUGGESTED TEXT(S) and MATERIALS (e.g. textbooks, equipment, software, etc., that students must purchase)

1) Object-Oriented Analysis and Design with Applications (3rd Edition)
   By: Grady Booch, Robert A. Maksimchuk, Michael W. Engel, Bobbi J. Young, Jim Conallen, Kelli A. Houston
   ISBN: 978-0201895513
   Copyright: 2007, Publisher: Pearson Education

2) Software Engineering (9th Edition)
   By: Ian Sommerville, ISBN: 978-0137035151
   Copyright: 2010, Publisher: Addison-Wesley

17. SPECIAL GRADING OPTIONS (if applicable)

N/A

18. SUGGESTED CLASS SIZE

N/A

19. LAB FEES (if applicable)

Laboratory fee required. ($45 per course)
Laboratory fees cover additional instructional costs incurred in the operation of computer laboratories necessary for teaching these courses and for students' preparation of classwork, including maintenance and routine upgrades to software and hardware, as well as the renewal of yearly software licenses.

Summer 2010