**Ogden College of Science and Engineering**

**Office of the Dean**

**745-4449**

**REPORT TO THE UNIVERSITY CURRICULUM COMMITTEE**

Date: March 15, 2012

The Ogden College of Science and Engineering submits the following action items for consideration:

1. New Business

|  |  |
| --- | --- |
| **Type of item** | **Description of Item & Contact Information** |
| Action | **Revise Course Credit Hours**  CHEM 120, College Chemistry I  Hemali Rathnayake, [hemali.rathnayake@wku.edu](mailto:hemali.rathnayake@wku.edu), x56238 |
| Action | **Revise Course Credit Hours**  CHEM 121, College Chemistry I Lab  Hemali Rathnayake, [hemali.rathnayake@wku.edu](mailto:hemali.rathnayake@wku.edu), x56238 |
| Action | **Revise a Program**  Ref. #575, Technology Management  Contact: Greg Arbuckle, [greg.arbuckle@wku.edu](mailto:greg.arbuckle@wku.edu), x56592 |
| Action | **Create a New Certificate Program**  CNSS 4011, Information Assurance Certificate (memo attached)  Contact: Rong Yang, [rong.yang@wku.edu](mailto:rong.yang@wku.edu), x52940  James Gary, [james.gary@wku.edu](mailto:james.gary@wku.edu), x56373 |

Proposal Date: February 10, 2012

**Ogden College of Science & Engineering**

**Department of Chemistry**

**Proposal to Revise Course Credit Hours**

**(Action Item)**

Contact Person: Hemali Rathnayake, Hemali.rathnayake@wku.edu, 270-745-6238

**1. Identification of course:**

* 1. Current course prefix (subject area) and number: CHEM 120
  2. Course title: College Chemistry I
  3. Credit hours: 4 hrs

**2. Proposed course credit hours: 3**

**3. Rationale for the revision of course credit hours:**

The current 4/1 credit hour format for CHEM 120/121 is not working well for content and scheduling reasons. The additional hour in the CHEM 121 laboratory will allow more time for pre-laboratory lectures and avoid the rush to complete laboratory experiments.  We plan to utilize existing technology to standardize key material in CHEM 121 recitations to prevent any inconsistencies in coverage within CHEM 121, since most students do not have the same instructor for both CHEM 120 and 121.  The switch to the 3/2-credit format also will make it possible to schedule CHEM 120 using only one lecture block. The current four-credit format overlaps two class periods.

**4. Proposed term for implementation: Spring 2013**

**5. Dates of prior committee approvals:**

Chemistry Department: February 10 2012

OCSE Curriculum Committee: March 1, 2012

Professional Education Council March 14, 2012

General Education Committee \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Undergraduate Curriculum Committee \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

University Senate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Attachment: Course Inventory Form**

Proposal Date: February 10, 2012

**Ogden College of Science and Engineering**

**Department of Chemistry**

**Proposal to Revise Course Credit Hours**

**(Action Item)**

Contact Person: Hemali Rathnayake, Hemali.rathnayake@wku.edu, 270-745-6238

**1. Identification of course:**

* 1. Current course prefix (subject area) and number: CHEM 121
  2. Course title: College Chemistry I Lab
  3. Credit hours: 1

**2. Proposed course credit hours: 2 hrs**

**3. Rationale for the revision of course credit hours:**

The current 4/1 credit hour format for CHEM 120/121 is not working well for content and scheduling reasons. The additional hour in the CHEM 121 laboratory will allow more time for pre-laboratory lectures and avoid the rush to complete laboratory experiments.  We plan to utilize existing technology to standardize key material in CHEM 121 recitations to prevent any inconsistencies in coverage within CHEM 121, since most students do not have the same instructor for both CHEM 120 and 121.  The switch to the 3/2-credit format also will make it possible to schedule CHEM 120 using only one lecture block. The current four-credit format overlaps two class periods.

**4. Proposed term for implementation: Spring 2013**

**5. Dates of prior committee approvals:**

Chemistry Department: February 10 2012

OCSE Curriculum Committee: March 1, 2012

Professional Education Council March 14, 2012

General Education Committee \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Undergraduate Curriculum Committee \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

University Senate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Attachment: Course Inventory Form**

Proposal Date: 2-10-12

**Ogden College of Sciences and Engineering**

**Department of Architectural and Manufacturing Sciences**

**Proposal to Revise a Program**

**(Action Item)**

Contact Person: Greg Arbuckle, [greg.arbuckle@wku.edu](mailto:greg.arbuckle@wku.edu) 270.745.6592

**1. Identification of program:**

* 1. Reference number: 575
  2. Current program title: Technology Management
  3. Credit hours: 63

**2. Identification of the proposed program changes:**

* + Change the description of the technical course requirement.

**3. Detailed program description:**

|  |  |
| --- | --- |
| Technology Management Major: (OLD)63 hrs Technical Course Transfer: 24 hrs **Technical courses transferred from a technical**  **school, college or university. \***  **(Courses will be listed individually and will be included in students GPA)** Technology Management Requirements: 39 hrs AMS 271 Industrial Statistics (3)  AMS 310 Work Design/Ergonomics (3)  AMS 356 Systems Design & Operations (3)  AMS 394 Lean Manufacturing (3)  AMS 371 Quality Assurance (3)  AMS 390 Project Planning and Control (3)  AMS 430 Tech Mgmt/Supervision/Team Bldg (3)  AMS 490 Senior Research (3)  ENG 307 Technical Writing (3)  Advisor Approved Upper Division Electives 12 hrs  \* Or other advisor approved courses. | Technology Management Major: (NEW)63 hrs Technical Courses: 24 hrs **Students should work with their advisor to select 24 hours of relevant coursework to satisfy the technical course requirement in their major.**  **(Courses will be listed individually and will be included in student’s GPA)** Technology Management Requirements: 39 hrs AMS 271 Industrial Statistics (3)  AMS 310 Work Design/Ergonomics (3)  AMS 356 Systems Design & Operations (3)  AMS 394 Lean Manufacturing (3)  AMS 371 Quality Assurance (3)  AMS 390 Project Planning and Control (3)  AMS 430 Tech Mgmt/Supervision/Team Bldg (3)  AMS 490 Senior Research (3)  ENG 307 Technical Writing (3)  Advisor Approved Upper Division Electives 12 hrs |

**4. Rationale for the proposed program change:**

Technology Management at WKU has been a 2 + 2 program designed specifically for students who currently hold a certificate or associates degree from a technical school, two-year college or four-year institution. This proposed change in the curriculum will allow students to enter the Technology Management program as freshmen or after earning an associate’s degree from WKU or elsewhere.

**5. Effective catalog year:**

Fall 2012

**6. Dates of prior committee approvals:**

Architectural and Manufacturing SciencesDepartment 17 Feb. 2012

Ogden College Curriculum Committee March 1, 2012\_\_\_\_\_

University Curriculum Committee \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

University Senate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Memo on Creating 4011 Certificate Program**

Recently WKU received a certificate from the National Security Agency (NSA) and the Committee on National Security Systems (CNSS). This certificate is one-step in WKU’s effort to become a Center of Academic Excellence (CAE). Dr. Rong Yang is currently leading our effort and has been very successful in matching WKU’s nascent Information Security/Assurance program with the stringent requirements of the NSA/CNSS CAE program.

The purpose of the NSA/CNSS CAE program is to promote higher education and research into information security (INFOSEC) and information assurance (IA). Students attending a CAE-designated school are eligible for scholarships and grants from the NSA and the Department of Homeland Security. The CAE program has essentially three levels: a 2-year college program (CAE2Y), a four-year college program (CAE/IAE), and a graduate program (CAE-R). The purpose of this differentiation is to ensure the maximum possible distribution of educational opportunities for IA/INFOSEC professionals. The CAE/IAE program, wherein WKU was awarded its certificate, is only available to four-year universities.

There seems to be some confusion whether this violates the CPE rules on certificates whereby only KCTCS schools can issue certificates. We must remember that there is a special program for 2-year colleges (CAE2Y) under which KCTCS members could participate. Furthermore the certificate issued by WKU will allow our students to participate in grants and scholarships from NSA and DHS. It is not a professional certificate but merely indicating that the student has completed a certain amount of IA/INFOSEC coursework.

We would be happy to work with KCTCS members to obtain a CAE2Y certification. Both NSA and CNSS would look favorably on this effort since there is currently **NO** CAE in Kentucky. Tennessee currently has 3 CAEs: the University of Memphis, the University of Tennessee at Chattanooga, and the Fountainhead College of Technology which demonstrates that states can have CAEs at all three levels. In Texas, there are multiple CAEs including our Sunbelt rival, the University of North Texas. KCTCS currently offers an “Information Security Certificate” which covers very fundamental material on INFOSEC/IA but could be enhanced to cover the material required by NSA and CNSS.

In order to prevent confusion, we have renamed the certificate program to “CNSS 4011 Certificate”. We hope that this explanation and the name change will mitigate any fears that we are usurping KCTCS prerogatives.

Proposal Date: 9/8/11

**Ogden College of Science and Engineering**

**Department of Mathematics and Computer Science**

**Proposal to Create a New Certificate Program**

**(Action Item)**

Contact Person: Rong Yang, [rong.yang@wku.edu, 745-2940](mailto:rong.yang@wku.edu,%20745-2940)

James Gary, [james.gary@wku.edu](mailto:james.gary@wku.edu), 745-6373

**1. Identification of program:**

* 1. Program title:

CNSS 4011 Certificate

* 1. Required hours in program:

6 hours

* 1. Special information:

The Information Assurance Courseware Evaluation (IACE) Program has evaluated WKU’s CS 157 and CS 257 courses and verified that they meet all of the requirements of the Committee on National Security Systems (CNSS) National Training Standard for Information Systems Security (INFOSEC) Professionals, NSTISSI No. 4011.

As a result, WKU is entitled to issue a 4011 information assurance certificate to any student who successfully completes that sequence of two courses with a grade of C or better in each course.

* 1. Catalog description:

CNSS 4011 Certificate requires a minimum of 6 semester hours. It is designed for students wishing to gain knowledge in the information assurance area. The student pursuing the certificate must complete the following course sequence with a grade of C or better in each course:

CS 157, Information Security I, (3 hours)

CS 257, Information Security II, (3 hours)

**2. Objectives of the proposed certificate program:**

The purpose of offering this certificate is to provide students with nationally recognized documentary evidence of their information assurance training.

**3. Rationale:**

* 1. Reason for developing the proposed certificate program:

Satisfying the 4011 standard is the first step in the process of obtaining a CAE (Center of Academic Excellence in Information Assurance) designation for Western Kentucky University.

* 1. Relationship of the proposed certificate program to other programs now offered by the department:

None

* 1. Relationship of the proposed certificate program to certificate programs offered in other departments:

None

* 1. Projected enrollment in the proposed certificate program:

20 to 30 students annually based upon the enrollment of CS 157 and CS 257.

* 1. Similar certificate programs offered elsewhere in Kentucky and in other states (including programs at benchmark institutions):

Many universities that have satisfied the 4011 standard offer their students a certificate for completing the required coursework. Examples include: Florida State University, New Jersey City University, the National Defense University, Villanova University, Indiana University of Pennsylvania, and the University of Maryland University College. To the best of our knowledge, no university in Kentucky is currently offering a 4011 certificate.

* 1. Relationship of the proposed certificate program to the university mission and objectives:

The training provided in the courses leading up to 4011 certification certainly provides tools for students at WKU to be both productive and socially responsible members of the global society as stated in the mission statement.

**4. Curriculum:**

CS 157, Information Security I, (3 hours)

CS 257, Information Security II, (3 hours)

Both of these courses have already been approved and are being offered on a regular schedule.

**5. Budget implications:**

Existing faculty will continue to teach the courses in the program.

**6. Proposed term for implementation:** Fall 2012

**7. Dates of prior committee approvals:**

Math and CSDepartment/Division: \_\_\_\_Sept. 22, 2011\_\_\_

OCSE Curriculum Committee \_\_\_\_Oct. 13, 2011\_\_\_

Undergraduate Curriculum Committee \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

University Senate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_