I. Motion to be Considered:

Recommend approval of the following changes to Academic Programs:
- New academic program – Bachelor of Science in Cybersecurity* - Attachment 1
- New academic program – Bachelor of Arts in Global Cultures and Languages* - Attachment 2
- New option to the Bachelor of Science in Biology: Pre-Physician Assistant – Attachment 3
- Deletion of program – Bachelor of Arts in Anthropology* - Attachment 4
- Deletion of program – Bachelor of Arts in French* - Attachment 4
- Deletion of program – Bachelor of Arts in German* - Attachment 4
- Deletion of program – Bachelor of Arts in Global Studies* - Attachment 4
- Deletion of program – Bachelor of Arts in Spanish* - Attachment 4
- Deletion of program – Design Drafting Certificate* - Attachment 5
- Deletion of program – Electronics Certificate* - Attachment 5
- Deletion of program – Graphic Technology Certificate* - Attachment 5
- Deletion of option in the Master of Public Administration: Community Wellness and Leisure Services – Attachment 6
- Deletion of minor in Geography* - Attachment 7
- Renaming of the Department of Foreign Languages and Anthropology to the Department of Global Cultures and Languages, effective Fall 2011 semester* - Attachment 8

*On the December 7, 2010 Academic Council meeting agenda for approval.

II. Background:

New Bachelor of Science in Cybersecurity

All facets of society have become dependent upon the internet for communications and electronic digital records for storage of personal, financial, health, and governmental records. Therefore, the security of these systems is critical, and the demand for cybersecurity

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Recommended By:

Student Government                              Chairperson
Faculty Senate                                   Dean
Administrative Council                           Academic Council
VP, Enroll. Man. & Stu. Suc.                     Provost [Signature]
VP, Finance & Admin.                             President [Signature]
VP, University Advancement

Board Action on: Postpone:
Motion By: Amend:
Second By: Disapprove:
Vote: Yeas: Approve:
Nays: Secretary:

professionals has never been greater. The U.S. Department of Labor, Bureau of Statistics, projects 20% growth of jobs in this field nationally, adding up to 135,500 jobs by 2018 and Missouri anticipates a 21% growth by 2018. Members of the Southeast Cybersecurity Advisory Committee, representing computer security and forensics interest for organizations in banking, health care, telecommunications, manufacturing, and law enforcement also report a regional need for cybersecurity professionals.

This proposed program utilizes existing foundation courses offered on campus (Telecommunications, Computer Science, and Mathematics) and adds six new capstone courses. One existing faculty FTE in the Department of Industrial and Engineering Technology will be dedicated to this program and the new courses. The department is presently conducting a nationwide search to fill this position. The department also has equipment funds for starting the program but will be soliciting grant funding for further development of the lab need for this program.

**New Bachelor of Arts in Global Cultures and Languages**

**Deletion of Bachelor of Arts in Anthropology**

**Deletion of Bachelor of Arts in French**

**Deletion of Bachelor of Arts in German**

**Deletion of Bachelor of Arts in Global Studies**

**Deletion of Bachelor of Arts in Spanish**

**Renaming of the Department of Foreign Languages and Anthropology to the Department of Global Cultures and Languages**

In response to low graduation rates for the Bachelor of Arts degrees in Anthropology, French, German, Global Studies, and Spanish, the Department of Foreign Languages and Anthropology developed and approved a new Bachelor of Arts in Global Cultures and Languages. This new BA incorporates the aforementioned BA’s into one major, with options in Anthropology, Foreign Language, and Global Studies. The deletions of the BA degrees in Anthropology, French, German, Global Studies, and Spanish, as well as the renaming of the Department, are contingent upon the approval of the new BA in Global Cultures and Languages. Existing courses and faculty will be utilized, with no additional costs anticipated. Based on this change, the Department also approved renaming the Department of Foreign Languages and Anthropology to the Department of Global Cultures and Languages, effective Fall 2011 semester.

**New option to the Bachelor of Science in Biology: Pre-Physician Assistant**

Approximately 75% of incoming freshmen in the Biology major declare a pre-professional option with the intent of pursuing an MD upon completion of the BS. However, on average, only 10% remain in the option by senior year. The remaining 65% either change their option within Biology or choose an alternative major. The prerequisite coursework required for admission to a Physician Assistant program is somewhat less rigorous than that required for medical school, and the GPA standards are also less stringent. A Pre-Physician Assistant option would provide a viable alternative path into the medical field for students who would be unlikely to complete the Biomedical Sciences option, thus improving retention within the major.

Students who complete this option and acquire certification as Physician Assistants will help to fill a critical need for trained medical professionals. According to US News and World
Board of Regents
Motion Consideration Form (Academic Program Changes)
December 8, 2010
Page 3 of 3

Report (December 2009), Physician Assistant is one of the fastest growing professions in the country, due to retirement of baby boomers, shortage of primary care physicians in rural areas, and the need to reduce healthcare costs.

The courses required for this option are already taught at Southeast Missouri State University. No courses are required to be added to the curriculum; therefore there is no increased cost.

**Deletion of program – Design Drafting Certificate**
**Deletion of program – Electronics Certificate**
**Deletion of program – Graphic Technology Certificate**

Due to low enrollments and lack of demand for each of the Certificate programs in Design Drafting, Electronics, and Graphic Technology, the Department of Industrial and Engineering Technology approved the deletion of these certificate programs.

**Deletion of option in the Master of Public Administration: Community Wellness and Leisure Services**

Due to low enrollments and lack of demand for the option in Community Wellness and Leisure Services, the Department of Health, Human Performance, and Recreation approved the deletion of the option from the Master of Public Administration. With this option deletion, there would be only one option listed under the MPA, the Public Administration option. While the Public Administration courses will be retained, the degree will now have no options.

**Deletion of minor in Geography**

Due to low enrollment and lack of demand for the minor in Geography, the Department of Foreign Languages and Anthropology approved the deletion of the minor.
1. New Program Proposal Form

**Form NP**

**NEW PROGRAM PROPOSAL FORM**

<table>
<thead>
<tr>
<th>Sponsoring Institution(s):</th>
<th>Southeast Missouri State University</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Title:</td>
<td>Cybersecurity</td>
</tr>
<tr>
<td>Degree/Certificate:</td>
<td>Bachelor of Science</td>
</tr>
<tr>
<td>Options:</td>
<td>None</td>
</tr>
<tr>
<td>Delivery Site(s):</td>
<td>Cape Girardeau, Missouri</td>
</tr>
<tr>
<td>CIP Classification (provide a CIP code):</td>
<td>11.1003</td>
</tr>
<tr>
<td>Implementation Date:</td>
<td>Fall 2011</td>
</tr>
<tr>
<td>Cooperative Partners:</td>
<td>None</td>
</tr>
<tr>
<td>Expected Date of First Graduation:</td>
<td>Spring 2014</td>
</tr>
</tbody>
</table>

**AUTHORIZATION**

<table>
<thead>
<tr>
<th>Dr. Ronald Rosati, Provost</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name/Title of Institutional Officer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr. Randall Shaw, Dean, School of Polytechnic Studies</td>
<td>573-651-5915</td>
<td></td>
</tr>
<tr>
<td>Person to Contact for More Information</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Telephone</td>
<td></td>
</tr>
</tbody>
</table>
2. Need:
   A. Student Demand:
      i. Estimated enrollment each year for the first five years for full-time and part-time students

<table>
<thead>
<tr>
<th>Year</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-Time</td>
<td>23</td>
<td>46</td>
<td>69</td>
<td>92</td>
<td>92</td>
</tr>
<tr>
<td>Part-Time</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>TOTAL*</td>
<td>25</td>
<td>50</td>
<td>75</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

2. In each case, an average of 12 credit hours per student is projected.

   ii. Will enrollment be capped in the future?
      Response: No.

3. Market Demand:
   i. National, state, regional, or local assessment of labor need for citizens with these skills
      Response: Jim Gosler, Sandia Fellow, NSA Visiting Scientist, and the founding Director of the CIA’s Clandestine Information Technology Office, recently stated that “There are about 1,000 security people in the US who have the specialized security skills to operate effectively in cyberspace. We need 10,000 to 30,000.” The U.S. Department of Labor, Bureau of Statistics, projects a 20% growth of jobs in this field nationally adding up to 135,500 jobs by 2018 and Missouri anticipates a 21% growth by 2018. Also, a November 11, 2010 search of indeed.com for cybersecurity jobs in Missouri provided ads for 46 different positions (http://www.indeed.com/q-Cyber-Security-I-Missouri-jobs.html). About half of those jobs were either in the St. Louis area or within 50 miles of there. Members of the Southeast Cybersecurity Advisory Committee, representing computer security and forensics interests for organizations in banking, health care, telecommunications, manufacturing, and law enforcement also report a regional need for cybersecurity professionals.

4. Societal Need:
   i. General needs which are not directly related to employment
      Response: There is a definite need to “protect America’s computers and networks from assault” (Pittsburgh Tribune-Review, September 6, 2010). Howard A. Schmidt, national cybersecurity coordinator and special assistant to President Barack Obama stated in a video message on November 8, 2010 to the attendees of 2010 IEEE International Conference on Technologies for Homeland Security: “We rely on cyber networks to control and manage transportation, electricity and banking, just to name a few parts of our critical infrastructure. Cybersecurity risks pose some of the most serious economic and national security challenges of the 21st century. Going forward, economic prosperity and our way of life depends on strong cybersecurity built on the backbone of resilient cyber infrastructure.”
5. Methodology used to determine “B” and “C” above.
   

3. Duplication and Collaboration: If similar programs currently exist in Missouri, what makes the proposed program necessary and/or distinct from the others at public institutions, area vocational technical schools, and private career schools?
   
   **Response:** There is no duplication; similar programs do not currently exist in Missouri.

   Does delivery of the program involve a collaborative effort with any external institution or organization? **Response:** No. If yes, please complete Form CL.
6. Program Structure:

**Form PS**

**PROGRAM STRUCTURE**

A. Total credits required for graduation: 124 cr.

B. Residency requirements, if any: 30 cr. (General University Guidelines)

C. General education (total credits): 55 cr. (Univ. Studies req. w/2 five cr. Courses)

General education courses (specific courses OR distribution area and credits):

[See Appendix A for the names of all courses listed below.]

<table>
<thead>
<tr>
<th>Course</th>
<th>credits</th>
<th>Course</th>
<th>credits</th>
<th>Course</th>
<th>credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>UI100</td>
<td>3</td>
<td>Artistic Exp</td>
<td>3</td>
<td>Polit. Sys</td>
<td>3</td>
</tr>
<tr>
<td>EN100</td>
<td>3</td>
<td>Literary Exp</td>
<td>3</td>
<td>Major Civ.</td>
<td>3</td>
</tr>
<tr>
<td>MA135</td>
<td>5</td>
<td>Oral Exp</td>
<td>3</td>
<td>UI3xx</td>
<td>3</td>
</tr>
<tr>
<td>PH120</td>
<td>5</td>
<td>Written Exp</td>
<td>3</td>
<td>UI3xx</td>
<td>3</td>
</tr>
<tr>
<td>MN220</td>
<td>3</td>
<td>Behav. Sys.</td>
<td>3</td>
<td>UI410</td>
<td>3 cr.</td>
</tr>
<tr>
<td>SW207</td>
<td>3</td>
<td>Living Sys.</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

D. Major requirements (total credits): 69 cr.

<table>
<thead>
<tr>
<th>Course</th>
<th>credits</th>
<th>Course</th>
<th>credits</th>
<th>Course</th>
<th>credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA223</td>
<td>3</td>
<td>TN425</td>
<td>3</td>
<td>MA464</td>
<td>3</td>
</tr>
<tr>
<td>IM102</td>
<td>3</td>
<td>TN565</td>
<td>3</td>
<td>CY2xx</td>
<td>3 cr.</td>
</tr>
<tr>
<td>TN255</td>
<td>3 cr.</td>
<td>CS155</td>
<td>4</td>
<td>CY3xx</td>
<td>3 cr.</td>
</tr>
<tr>
<td>ET245</td>
<td>3</td>
<td>CS265</td>
<td>4</td>
<td>CY3xx</td>
<td>3 cr.</td>
</tr>
<tr>
<td>TN254</td>
<td>3</td>
<td>CS300</td>
<td>4</td>
<td>CY4xx</td>
<td>3 cr.</td>
</tr>
<tr>
<td>TN275</td>
<td>3 cr.</td>
<td>CS440</td>
<td>3 cr.</td>
<td>CY4xx</td>
<td>3 cr.</td>
</tr>
<tr>
<td>TN375</td>
<td>3 cr.</td>
<td>IS245**</td>
<td>3 cr.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TN395</td>
<td>3 cr.</td>
<td>TN435</td>
<td>3 cr.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* - It is proposed that there be a new subject code CY (for Cybersecurity) with five new courses, as outlined in Appendix B.
** - This is a proposed new course in web development (see Appendix C).

E. Free elective credits
(sum of C, D, & E should equal A): 0 cr.

F. Requirements for thesis, internship or other capstone experience:
(UI410) 3 cr.

G. Any unique features such as interdepartmental cooperation:
Department of Computer Science (18 cr.)
Department of Mathematics (6 cr)
7. Financial Projections (for public institutions only): Additional narrative may be added as needed. If more than one institution is providing support, please complete a separate form for each institution.

**Form FP**

**FINANCIAL PROJECTIONS**

1. **Expenditures:**
   
   **A. One time:**
   
   8. New/renovated space
      
      (2)* Equipment
      * Library
      * Consultants
      * Other

   **Total one time expenditures (A):** $50,000

   **B. Recurring:**
   
   (1)* Faculty
      * Staff (Grad. Asst.)
      * Benefits
      (2)* Equipment
      (3)* Library
      * Other

   **Total recurring expenditures (B):**

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>$37,500</td>
<td>$57,938</td>
<td>$79,578</td>
<td>$81,955</td>
<td>$84,413</td>
</tr>
<tr>
<td>$14,800</td>
<td>$15,400</td>
<td>$16,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$11,358</td>
<td>$17,401</td>
<td>$23,705</td>
<td>$24,219</td>
<td>$24,750</td>
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<tr>
<td>$20,000</td>
<td>$20,000</td>
<td>$20,000</td>
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<td>$20,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$68,858</td>
<td>$95,339</td>
<td>$138,083</td>
<td>$141,574</td>
<td>$145,163</td>
</tr>
</tbody>
</table>

   **TOTAL EXPENDITURES**

<table>
<thead>
<tr>
<th>(A + B):</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$118,858</td>
<td>$95,339</td>
<td>$138,083</td>
<td>$141,574</td>
<td>$145,163</td>
</tr>
</tbody>
</table>

2. **Revenues:**

   A. State Aid – CBHF*
   B. State Aid – DESE*
   C. Tuition/Fees
   D. Institutional Resources
   E. Other

   **TOTAL REVENUES:**

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>$62,550</td>
<td>$131,400</td>
<td>$207,000</td>
<td>$289,200</td>
<td>$303,600</td>
</tr>
</tbody>
</table>

(1) Previously approved FTE (presently advertising). First year will be assigned 50% to the program, 75% the second year, and 100% starting the third year.

(2) From existing IET equipment budget or grants. Will request 50/50 matching funds from DESE annual equipment grants.

(3) Computer Science and Industrial and Engineering Technology will each allocate funds from existing library allocations for the purchase of additional materials library materials needed.
9. Program Characteristics and Performance Goals: For collaborative programs, responsibility for program evaluation and assessment rests with the institution(s) granting the degree(s).

Form PG
PROGRAM CHARACTERISTICS AND PERFORMANCE GOALS

Institution Name: ____________________________ Southeast Missouri State University
Program Name: ______________________________ Bachelor of Science in Cybersecurity
Date: ______________________________ Fall 2011

(Although all of the following guidelines may not be applicable to the proposed program, please carefully consider the elements in each area and respond as completely as possible in the format below. Quantification of performance goals should be included wherever possible.)

Student Preparation
- Any special admissions procedures or student qualifications required for this program which exceed regular university admissions, standards, e.g., ACT score, completion of core curriculum, portfolio, personal interview, etc. Please note if no special preparation will be required.
  Response: No special preparation will be required.

  Characteristics of a specific population to be served, if applicable
  Response: Individuals seeking formal education and training to pursue careers in cybersecurity.

Faculty Characteristics
- Any special requirements (degree status, training, etc.) for assignment of teaching for this degree/certificate.
  Response: There are faculty members in Industrial and Engineering Technology (IET), Computer Science, and Mathematics that have experience related to cybersecurity. Also, IET is also presently searching for a full time faculty position in cybersecurity. Most of the new Cyxxx courses will be taught by this faculty member. Faculty teaching courses from Industrial and Engineering Technology, Computer Science, and Mathematics all have appropriate degrees and training in their respective areas of expertise in order to teach their respective supporting courses for this program.

- Estimated percentage of credit hours that will be assigned to full-time faculty. Please use the term “full-time faculty” (and not FTE) in your descriptions here.
  Response: It is anticipated that a majority of the courses in the major, i.e. more than 90% will be taught by full time University faculty.

- Expectations for professional activities, special student contact, teaching/learning innovation.
  Response: As expected of all faculty members at Southeast, faculty teaching in the proposed program will have expectation for professional development activities to keep them current in their respective fields of expertise.

Enrollment Projections
- Student FTE majoring in program by the end of five years:
  Response: FTE=100.0

- Percent of full-time and part-time enrollment by the end of five years:
  Response: Full Time=92%; Part Time=8%.
Student and Program Outcomes

- Number of graduates per annum at three and five years after implementation:
  \[\text{Response: 3 Yr}=5; \ 5 \text{ Yr}=20\]

- Special skills specific to the program:
  \[\text{Response: The program objectives of the Cybersecurity program is that upon graduation students will be able to:}\]
  1. Understand and be able to apply informational assurance fundamentals.
  2. Understand and be able to apply computer forensics fundamentals.
  3. Assess, implement, maintain, and manage security needs of computer networks and telecommunication systems.
  4. Demonstrate proficiency in secure programming.
  5. Do one of:
     a. Enter the workforce as an entry-level cybersecurity professional.
     b. Be accepted into a graduate program related to cybersecurity.
  6. Understand the need for lifelong learning in their cybersecurity careers.
  7. Exhibit ethical and legal responsibilities of a cybersecurity professional.
  8. Demonstrate the ability to communicate effectively.
  9. Demonstrate critical thinking skills.
     [The last two are university-wide objectives.]

- Proportion of students who will achieve licensing, certification, or registration:
  \[\text{Response: N/A}\]

- Performance on national and/or local assessments, e.g., percent of students scoring above the 50\textsuperscript{th} percentile on normed tests; percent of students achieving minimal cut-scores on criterion-referenced tests. Include expected results on assessments of general education and on exit assessments in a particular discipline as well as the name of any nationally recognized assessments used.
  \[\text{Response: N/A}\]

- Placement rates in related fields, in other fields, unemployed:
  \[\text{Response: Related Field}=90\% \text{ and Other Fields}=10\%\]

- Transfer rates, continuous study
  \[\text{Response: N/A}\]

Program Accreditation

- Institutional plans for accreditation, if applicable, including accrediting agency and timeline. If there are no plans to seek specialized accreditation, please provide reasons.
  \[\text{Response: There is not yet an accrediting body for cybersecurity degree programs. However, the National Security Agency (NSA) and the Department of Homeland Security (DHS) jointly sponsor the National Centers of Academic Excellence in Information Assurance Education (CAE/IAE) program. The goal of this program is to reduce vulnerability in our national information infrastructure by promoting higher education and research in information assurance (IA) and producing a growing number of professionals with IA expertise in various disciplines. Designation as a CAE/IAE is valid for five academic years, after which the school must successfully reapply in order to retain its CAE designation. Since an institution's focus on information assurance must have been in effect for at least two years prior to applying for recognition as a CAE/IAE center. Thus, the plan is for Southeast to make such an application in the fall of 2013.}\]

Alumni and Employer Survey

- Expected satisfaction rates for alumni, including timing and method of surveys
  \[\text{Response: Surveys will be conducted of graduates within six months of graduation from the fall and spring terms requesting their input, among other things, on their satisfaction with the}\]
quality of the program. This will be followed up by an every three year follow-up of these graduates to assess the effectiveness of the program in preparing them for their careers.

- Expected satisfaction rates for employers, including timing and method of surveys.
  Response: Surveys will be conducted of employers of graduates every three years requesting their input on quality of the program and its graduates. The Southeast Cybersecurity Advisory Committee, that meets twice per year, will also provide input during the meetings.

7. Accreditation: If accreditation is not a goal for this program, provide a brief rationale for your decision. If the institution is seeking program accreditation, provide any additional information that supports your program.
   Response: There is not yet an accrediting body for cybersecurity degree programs. However, the National Security Agency (NSA) and the Department of Homeland Security (DHS) jointly sponsor the National Centers of Academic Excellence in Information Assurance Education (CAE/IAE) program. The goal of this program is to reduce vulnerability in our national information infrastructure by promoting higher education and research in information assurance (IA) and producing a growing number of professionals with IA expertise in various disciplines. Designation as a CAE/IAE is valid for five academic years, after which the school must successfully reapply in order to retain its CAE designation.

   Since an institution's focus on information assurance must have been in effect for at least two years prior to applying for recognition as a CAE/IAE center. Thus, the plan is for Southeast to make such an application in the fall of 2013.

8. Institutional Characteristics: Please describe succinctly why your institution is particularly well equipped or well suited to support the proposed program.
   Response: The Department of Industrial and Engineering Technology is well suited to provide the Bachelor of Science in Cybersecurity degree because of the excellent faculty and facilities associated with the department, as well as faculty and facilities in the collaborating departments. In addition to this, almost all courses associated with the proposed program (except for six new additional courses) are currently available and being offered at the university.

10. Any Other Relevant Information: Response: None
Appendix A

Program Requirements with Course Names
Dept of Industrial & Engineering Technology  
Program Proposal for  
BS DEGREE IN CYBERSECURITY  

**University Studies (55 Credit Hours)**  
UI100 First Year Seminar 3  
Artistic Expression 3  
Literary Expression 3  
Oral Expression 3  
EN 100 English Composition 3  
Written Expression 3  
Behavioral Systems 3  
Living Systems 3  
Political Systems 3  
Development of a Major Civilization 3  
MA135 Pre Calculus (Logical Systems) 5  
Economic Systems (MN220) 3  
Social Systems (SW207) 3  
Physical Systems (PH120) 5  
UI3xx 3  
UI3xx 3  
UI410 IET Senior Capstone 3  

**Major Courses (69 Credit Hours)**  
CS155 Computer Science I 4  
CS265 Computer Science II 4  
CS300 Computer Science III 4  
CS440 Database 3  
CY2xx Introduction to Cybersecurity (NEW PROPOSED) 3  
CY3xx Information Security and Assurance (NEW PROPOSED) 3  
CY3xx Information Security in System Administration (NEW PROPOSED) 3  
CY4xx Web Application Security (NEW PROPOSED) 3  
CY4xx Computer Forensics (NEW PROPOSED) 3  
ET245 Logic Circuits 3  
IM102 Technical Communications 3  
IS245 Web Development & Security (NEW PROPOSED) 3  
MA223 Elementary Probability & Statistics 3  
MA464 Mathematical Cryptography 3  
TN254 Network Communications 3  
TN255 Microcomputer Maintenance & Troubleshooting 3  
TN275 Network Fundamentals 3  
TN375 Network Routing Protocols and Concepts 3  
TN395 Server Maintenance & Troubleshooting 3  
TN425 Wireless Communications & Mobile Data Networks 3  
TN435 Network Security 3  
TN565 Network Management 3  

**TOTAL** 124
Appendix B

New Cybersecurity Core Courses
New Cybersecurity Core Courses
November 17, 2010

On pages 3-7 are outlines for five proposed new courses:
  CY 2xx Introduction to Cybersecurity
  CY 3xx Information Security and Assurance
  CY 3xx Information Security in System Administration
  CY 4xx Web Application Security
  CY 4xx Computer Forensics

[Note: The registrar has said that the CY prefix has not been used to date and can be used here.]

Page 2 has a table mapping these courses to the Cybersecurity program objectives.

Among the steps involved in developing those courses and the rest of the proposed Cybersecurity curriculum:
  • Research into existing undergraduate computer security programs;
  • Phone conversations and email exchanges with several of the “Top 10” universities in preparing cybersecurity professionals, from a list provided by President Dobbins;
  • A visit to several organizations (FBI, DEA, DHS and SANS Institute) in Washington, D.C. on October 18-20; and
  • A meeting with Southeast’s new Cybersecurity Advisory Board on October 22.

Specific References:
  • The following SANS (SysAdmin, Audit, Network, Security) Institute course descriptions (http://www.sans.org/security-training/courses.php):
    ○ SEC301 Intro to Information Security
    ○ SEC401 SANS Security Essentials Bootcamp Style
    ○ SEC408 Computer Forensic Essentials
    ○ SEC508 Computer Forensics, Investigation, and Response
    ○ SEC542 Web Application Penetration Testing and Ethical Hacking
    ○ DEV422 Defending Web Applications Security Essentials
    ○ DEV532 Essential Secure Coding in ASP.NET
    ○ LEG523 Legal Issues in Information Technology and Information Security
  • Computer Security: Art and Science by Matt Bishop (Pearson Education, 2003, 10th prntg.)
  • Telecon with University of Missouri-Columbia cybersecurity faculty – October 1, 2010
  • Discussions with various organizations in Washington, DC area – October 18-20, 2010
  • Rough draft of notes from Cybersecurity Advisory Board meeting – October 22, 2010

Committee on National Security Systems (CNSS) standards covered:
  • NSTISSI 4011 National Training Standard for Information Systems Security (INFOSEC) Professionals
  • NSTISSI 4013 National Information Assurance Training Standard for Systems Administrators (SA)

[Meets NSA Center of Academic Excellence in Information Security Education requirements]
Program Objectives

The program objectives of the Cybersecurity program is that upon graduation students will be able to:

1. Understand and be able to apply informational assurance fundamentals.
2. Understand and be able to apply computer forensics fundamentals.
3. Assess, implement, maintain, and manage security needs of computer networks and telecommunication systems.
4. Demonstrate proficiency in secure programming.
5. Do one of:
   c. Enter the workforce as an entry-level cybersecurity professional.
   d. Be accepted into a graduate program related to cybersecurity.
6. Understand the need for lifelong learning in their cybersecurity careers.
7. Exhibit the ethical and legal responsibilities of a cybersecurity professional.
8. Demonstrate the ability to communicate effectively.
9. Demonstrate critical thinking skills.

[The last two are university-wide objectives.]

Map of Cybersecurity Core Courses to Program Objectives

<table>
<thead>
<tr>
<th>Courses</th>
<th>Cybersecurity Program Objective # →</th>
<th>1</th>
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CY 2xx Introduction to Cybersecurity

Prerequisite: TN 275 (Network Fundamentals)

Credit Hours: 3

Proposed Introduction Date: Fall 2012

Course Description:
Broad introduction to the field of cybersecurity. Information assurance terminology, issues, policies and secure system design. Computer forensics investigation, collection and analysis of data, and methodology.

Course Objectives: At end of this course, a student should be able to:
1. Understand basic information assurance terminology.
2. Implement computer security policies.
3. Demonstrate how secure computer systems are designed.
4. Identify basic computer forensic terminology.
5. Utilize the basic methodology of a computer forensic investigator.
6. Perform some basic forensic investigation using up-to-date software tools.

Contents:
- Information Assurance (about 10 weeks)
  - Basic components (confidentiality, integrity, availability)
  - Threats (disclosure, deception, disruption, usurpation)
  - Human issues (organizational, people)
  - Access control
  - Security policies
  - Design of secure systems

- Computer Forensics (about 5 weeks)
  - Fraud, insider threats, industrial espionage, phishing
  - The computer forensic investigator
  - Collecting and analyzing data from computer systems
  - Fundamental steps of the in-depth computer forensic methodology
  - Windows Digital Forensics (Windows XP through Windows 7 and Server 2008)
  - Computer forensic tools
Prerequisites: CY 2xx (Introduction to Cybersecurity) and
CS 300 (Computer Science III) and
TN 435 (Network Security)

Credit Hours: 3

Proposed Introduction Date: Spring 2013

Course Description:

Course Objectives: At end of this course, a student should be able to:

1. Apply the fundamentals of intrusion detection and prevention.
2. Identify business and operational issues in information assurance.
3. Demonstrate how secure systems are built, including the software engineering issues involved.

Contents:
- Review of CY 2xx information assurance material
- Intrusion Detection and Prevention
  - Host-based
  - Network-based
- Honeypots
- Methods of attacks
- Business and Operational issues
  - E-commerce
  - Risk management
  - Cost-benefit analysis
  - Supply chain management
- Operations security
- Assurance and trust
- Building secure systems
  - Review of software engineering fundamentals from CS 300 (lifecycle, development models)
CY 3xx Information Security in System Administration

Prerequisites: CY 3xx (Information Security and Assurance) and MA 464 (Cryptography)

Credit Hours: 3

Proposed Introduction Date: Fall 2013

Course Description:
Securing information through cryptographic and other means of access control. Security in administration of both Windows- and Linux-based systems. Legal and policy issues.

Course Objectives: At end of this course, a student should be able to:

11. Implement security access control mechanisms.
12. Identify the security issues involved in Windows family of operating systems.
13. Identify the security issues involved in the Linux operating system.
14. Understand the fundamentals of information technology security law and policy.

Contents:

- Security access control
  - Cryptographic (e.g. SSL)
  - Non-cryptographic (e.g. steganographic)
- Windows system security
  - Overview of the Windows family
  - The security infrastructure
  - Permissions and user rights
  - Security policies and templates
  - Service packs, patches, and backups
  - Securing network services
  - Auditing and automation
- Linux system security
  - Overview (command line, virtual machines)
  - OS security
  - Security tools
  - Maintenance, monitoring and auditing
- Fundamentals of IT security law and policy
CY 4xx Web Application Security

**Prerequisites:** CY 2xx (Introduction to Cybersecurity) and IS 245 (Web Development and Security – to be proposed by computer science)

**Credit Hours:** 3

**Proposed Introduction Date:** Spring 2014

**Course Description:**

**Course Objectives:** At end of this course, a student should be able to:

1. Develop and implement information assurance mitigation strategies throughout the web application development cycle.
2. Understand fundamental language-independent security strategies.
3. Implement security strategies in the .NET environment.
4. Implement, manage and protect Web applications.
5. Understand the basic principles of the Open Web Application Security Project.
6. Correctly perform penetration testing on a Web application.

**Contents:**

- Mitigation strategies (infrastructure, architecture, and coding perspectives)
- Programming language-independent security strategies
- Secure coding in .NET
- Implementing, managing or protecting Web applications
- Open Web Application Security Project (OWASP)
  - OWASP Top 10 Project
- Penetration testing
- Web 2.0 technologies (AJAX and web services)
CY 4xx Computer Forensics

Prerequisites: CY 2xx (Introduction to Cybersecurity) and
cy 3xx (Information Security in System Administration)

Credit Hours: 3

Proposed Introduction Date: Spring 2014

Course Description:
Implementation of computer forensic methodology. File system analysis in Windows. Response
techniques, evidence acquisition, timeline analysis, extraction and recovery of files and data.
Dealing with as-yet-unknown malware.

Course Objectives: At end of this course, a student should be able to:

1. Understand how to perform in-depth file system analysis.
2. Implement file system analysis on a Windows operating system.
3. Understand how computer forensics should be performed when responding to an incident.
4. Acquire memory and other types of computer evidence.
5. Recover files and data previously inaccessible.
6. Perform a timeline analysis on a file system.
7. Locate previously-unknown malware on a computer system.

Contents:
- Review of CY 2xx computer forensics material
- In-depth file system analysis
- Windows NTFS, FAT, exFAT dissection
- Computer forensics for incident responders
- Memory acquisition
- Live response techniques
- Complex evidence acquisition
- File system timeline analysis
- Low level extraction/recovery of data and files
- Indicators of compromise, hash sets, and fuzzy hashing
- Intermediate registry analysis
- Shadow volume/restore point examinations
- Super timeline analysis
- Finding unknown malware using memory, artifact, and file system analysis
Appendix C

IS 245 Course Syllabus

Approved by Department of Computer Science faculty, November 11, 2010
Approved by College of Science and Mathematics College Council, November 17, 2010
I. Catalog Description and Credit Hours of Course:
Advanced web page programming used to develop professional, secure web pages. Browser/server interaction, directory management, evaluation of web site impact on communication, understanding, and accessibility, web site security. (3)

II. Prerequisite(s): IS130 or CS155 or CS177 with a minimum grade of ‘C’ or permission of the instructor.

III. Purposes or Objectives of the Course:
Upon the successful completion of this course, the student will be able to:
A. Develop web pages that follow World Wide Web Consortium (W3C) recommendations using HTML/XHTML, CSS, and Javascript code.
B. Understand browser/server interaction and directory management.
C. Evaluate web site impact on communication, understanding, and accessibility.
D. Develop secure web sites.

IV. Expectations of Students:
A. Students are expected to successfully complete all assignments and pass all quizzes and tests.

V. Course Content or Outline (Indicate number of class hours per unit or section):
A. Introduction to Web Development 1 hour
B. Browser/Server Interaction 1 hour
C. Website Directory Management 2 hours
D. Editing, Testing and Validating Web Pages 1 hour
E. Evaluating Website Impact on Communication, Understanding and Accessibility 2 hours
F. Programming Web Page Content Using HTML/XHTML 10 hours
G. Programming Web Page Format and Layout Using CSS 9 hours
H. Programming Web Page Enhancements Using JavaScript 9 hours
I. Building Secure Web Pages 10 hours
Total 45 hours

VI. Textbook(s) and/or Other Required Materials or Equipment:

VII. Basis for Student Evaluation:
A. Assignments 60%
B. Tests 20%
C. Quizzes 10%
D. Final 10%
1. New Program Proposal Form

Form NP
NEW PROGRAM PROPOSAL FORM

Sponsoring Institution(s):  Southeast Missouri State University

Program Title:  Global Cultures and Languages

Degree/Certificate:  Bachelor of Arts

Options:  Anthropology
Foreign Language with French, German and Spanish Tracks
Global Studies with Chinese, Francophone, Germanic Hispanic and Japanese Tracks

Delivery Site(s):  Southeast Missouri State University Campus, Cape Girardeau, MO

CIP Classification (provide a CIP code):  30.2001

Implementation Date:  Fall 2011

Cooperative Partners:  International Exchange Universities

Expected Date of First Graduation:  Spring 2015

AUTHORIZATION

Dr. Ronald Rosati, Provost
Name/Title of Institutional Officer  Signature  Date

Dr. Frank Barrios, Dean, College of Liberal Arts  573-651-2154
Person to Contact for More Information  Telephone
2. Need:
   A. Student Demand:
      i. Estimated enrollment each year for the first five years for full-time and part-time students

      **Form SE**
      **STUDENT ENROLLMENT PROJECTIONS**

      | Year | 1  | 2  | 3  | 4  | 5  |
      |------|----|----|----|----|----|
      | Full-Time | 40 | 80 | 120| 160| 165|
      | Part-Time  | 7  | 14 | 21 | 28 | 30 |
      | TOTAL      | 47 | 94 | 141| 188| 195|

      ii. Will enrollment be capped in the future?
          No.

   B. Market Demand:
      i. National, state, regional, or local assessment of labor need for citizens with these skills

      *According to a 2005 report entitled “Global Competence and National Needs”, published by the Abraham Lincoln Study Abroad Fellowship Program Commission’s November 2005 report entitled “Global Competence and National Needs”, international skills are vital for economic progress: “Our economic, military, and diplomatic challenges are global in nature. Modern technologies, communications, and transportation systems have remade manufacturing and distribution on a global scale. American corporations understand the importance of these issues. Increasingly, business leaders recognize that they must be able to draw on people with global skills if their corporations are to succeed in a world in which one American job in six is tied to international trade.” (pp. vii-viii)*

      *It is widely agreed that success in today’s global economy requires workers who are educated in global issues, if the United States is to remain competitive in the face of global competition. This major provides students the choice to study languages and cultures, sometimes in conjunction with another field and to take needed skills and attitudes into the marketplace. It offers an expanded range of opportunities for study abroad. This major is a creative adjustment of resources, combining languages and cultural study, which will help the state of Missouri thrive in changing times.*

   C. Societal Need:
      i. General needs which are not directly related to employment
         *This report also states that “Today, the problems of a global society confront us, placing new demands and pressures on the United States and its historic partnership with higher education. Part of the response to these pressures must include democratizing study abroad. Greater engagement of American undergraduates with the world around them is vital to the nation’s well-being. It is in the national interest of the United States to send at least one million undergraduates abroad annually to study other lands, languages, and cultures.” (p. vii).*

   D. Methodology used to determine “B” and “C” above.
E. Duplication and Collaboration: If similar programs currently exist in Missouri, what makes the proposed program necessary and/or distinct from the others at public institutions, area vocational technical schools, and private career schools? More than ever before, businesses and government agencies need people who possess the ability to speak, listen, and make a difference for the better on a global scale. Southeast's new unified major will (1) provide students with the building blocks for a better cultural understanding; (2) provide students a full spectrum of language offerings that will not only teach them to speak, understand, read, and write the language, but also force them to think in the language and use the foreign language in everything they do; and (3) prepare students to become innovative professionals that can lead in multilingual or cross-cultural environments.

The study abroad component of the unified major will allow students to study, work, or research in an educational setting outside the United States; students are encouraged to spend longer periods abroad and, thus, achieve greater language and cultural competency.

Does delivery of the program involve a collaborative effort with any external institution or organization? If yes, please complete Form CL.

Yes.
Form CL
COLLABORATIVE PROGRAMS

Sponsoring Institutions: Missouri State University, University of Central Missouri, Missouri Western State University

Degree Program: N/A

Length of agreement (open-ended or limited): Open-Ended; MOA Signed October 2010

1. Which institution(s) will have degree-granting authority? N/A

2. Which institution(s) will have the authority for faculty hiring, course assignment, evaluation, and reappointment decisions? N/A

3. What agreements exist to ensure that faculty from all participating institutions will be involved in decisions about the curriculum, admissions standards, exit requirements? N/A

4. Which institution(s) will be responsible for academic and student-support services, e.g., registration, advising, library, academic assistance, financial aid, etc.? N/A

5. What agreements exist to ensure that the academic calendars of the participating institutions have been aligned as needed? Special efforts will be made to accommodate the differences in the academic calendars between to collaborating institutions.

6. In addition to the information provided by each participating institution regarding Financial Projections (Form FP), please address the following items:

   A. How will tuition rates be determined if they differ among the institutions? N/A

   B. Has a formal agreement been developed regarding cost-sharing policies? If yes, please include it as part of the proposal. If no, please summarize the current understanding between all parties and the plans for developing a formal agreement. See attached. Memorandum of Agreement signed October 25, 2010.

   C. What arrangements, if any, have been made for exchange of money between participating institutions? N/A

7. What commitments have been made by all participants to evaluate the program systematically? N/A

8. If one institution wishes to discontinue the program, what agreements exist for terminating the offering? See attached.
2. Program Structure:

Form PS
PROGRAM STRUCTURE

A. Total credits required for graduation: 120

B. Residency requirements, if any: 30 credits

C. General education (total credits): 51 credits (University Studies Program)

General education courses (specific courses OR distribution area and credits): These are the courses required in the University Studies Program.

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D. Major requirements
Anthropology Option (total credits): 48

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Another For Lang/GG150

Foreign Language Option, French Track (total credits): 42

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Another For Lang/GG150

CJ526/
MA223/
P271/

Approved
Electives
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Foreign Language Option, German
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Major requirements
Global Studies Option, Chinese
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Major requirements
Global Studies Option, Francophone Track (total credits):

AN181 ___ 3 cr. FRxxxx ___ 9 cr. GG150 ___ 3 cr.
GH130/ EH103 ___ 3 cr. PS104 ___ 3 cr.

Study Abroad/Int'l Internship ___ 3 cr. FR220 ___ 3 cr. FR306 ___ 3 cr.
Approved Electives ___ 6

UI362 ___ 3

Major requirements
Global Studies Option, Germanic Track (total credits):

AN181 ___ 3 cr. GNxxxx ___ 9 cr. GG150 ___ 3 cr.
GH130/ EH103 ___ 3 cr. PS104 ___ 3 cr.

Study Abroad/Int'l Internship ___ 3 cr. GN220 ___ 3 cr. GN320 ___ 3 cr.
Approved Electives ___ 6

EH516 ___ 3

Major requirements
Global Studies Option, Hispanic Track (total credits):

AN181 ___ 3 cr. CNxxxx ___ 9 cr. GG150 ___ 3 cr.
GH130/ EH103 ___ 3 cr. PS104 ___ 3 cr.

Study Abroad/Int'l Internship ___ 3 cr. SN220 ___ 3 cr. SN300/ SN306 ___ 3 cr.
Approved Electives ___ 6

WH520/ WH524 ___ 3

Major requirements
Global Studies Option, Japanese Track (total credits):

AN181 ___ 3 cr. JNxxx ___ 9 cr. GG150 ___ 3 cr.
GH130/ EH103 ___ 3 cr. PS104 ___ 3 cr.

Study Abroad in Japan (min 6 cr. Upper level) ___ 9 cr. Approved Electives ___ 6

E. Free elective credits 21 Anthropology
(sum of C, D, & E should equal A): 27 Foreign Language
27 Global Studies

F. Requirements for thesis, internship or other capstone experience:

G. Any unique features such as interdepartmental cooperation:

N/A

This new program provides opportunities to develop or sharpen skills through course offerings in a wide variety of departments throughout the university, ranging from political science to English and from history to business.
3. Financial Projections (for public institutions only): Additional narrative may be added as needed. If more than one institution is providing support, please complete a separate form for each institution.

Form FP
FINANCIAL PROJECTIONS

1. Expenditures:
   A. One time:
      * New/renovated space
      * Equipment
      * Library
      * Consultants
      * Other
   
      Total one time expenditures (A):

   B. Recurring:
      * Faculty
      * Staff
      * Benefits
      * Equipment
      * Library
      * Other
   
      Total recurring expenditures (B):

   TOTAL EXPENDITURES (A + B):

2. Revenues:
   A. State Aid – CBHE*
   B. State Aid – DESE*
   C. Tuition/Fees
   D. Institutional Resources
   E. Other

   TOTAL REVENUES:

Please provide a brief description of the nature of the state aid. Is “new” money requested or is “old” money going to be used? What is the nature of the “old” money?

This is a combined major unifying existing majors into one CIP code. No additional resources are necessary, since the program uses currently available instructional support, staff, equipment and space. In addition, current international agreements with institutions overseas provide the resources for study abroad and international internships. The program makes use of existing courses, faculty, staff, equipment and space.
4. Program Characteristics and Performance Goals: For collaborative programs, responsibility for program evaluation and assessment rests with the institution(s) granting the degree(s).

**Form PG**

**PROGRAM CHARACTERISTICS AND PERFORMANCE GOALS**

<table>
<thead>
<tr>
<th>Institution Name:</th>
<th>Southeast Missouri State University</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Name:</td>
<td>Global Cultures and Languages</td>
</tr>
<tr>
<td>Date:</td>
<td></td>
</tr>
</tbody>
</table>

(Although all of the following guidelines may not be applicable to the proposed program, please carefully consider the elements in each area and respond as completely as possible in the format below. Quantification of performance goals should be included wherever possible.)

**Student Preparation**
- Any special admissions procedures or student qualifications required for this program which exceed regular university admissions, standards, e.g., ACT score, completion of core curriculum, portfolio, personal interview, etc. Please note if no special preparation will be required.  
  *No special preparation required.*
- Characteristics of a specific population to be served, if applicable.  
  *Not applicable*

**Faculty Characteristics**
- Any special requirements (degree status, training, etc.) for assignment of teaching for this degree/certificate  
  *PhD or Masters in discipline.*
- Estimated percentage of credit hours that will be assigned to full-time faculty. Please use the term “full-time faculty” (and not FTE) in your descriptions here.  
  *90% of courses taught by full-time faculty.*
- Expectations for professional activities, special student contact, teaching/learning innovation  
  *Expected to direct study abroad; supervise interns; supervise independent study; research and publish.*

**Enrollment Projections**
- Student FTE majoring in program by the end of five years  
  *180*
- Percent of full-time and part-time enrollment by the end of five years  
  *85% full-time, 15% part-time*

**Student and Program Outcomes**
- Number of graduates per annum at three and five years after implementation  
  *30 @ 3 years, 40 @ five years.*
- Special skills specific to the program  
  *Proficiency in reading, writing, understanding and speaking. Cultural literacy.*
- Proportion of students who will achieve licensing, certification, or registration.  
  *N/A*
- Performance on national and/or local assessments, e.g., percent of students scoring above the 50th percentile on normed tests; percent of students achieving minimal cut-scores on criterion-
referenced tests. Include expected results on assessments of general education and on exit assessments in a particular discipline as well as the name of any nationally recognized assessments used.

*Foreign language students will be fluent in spoken and written foreign language. Students in Anthropology will have a solid understanding of their profession, with special reference in linguistic anthropology. All students will have a solid research background.*

- Placement rates in related fields, in other fields, unemployed
  50% Related Field; 30% Other Field; 15% Graduate School; 5% Unemployed

- Transfer rates, continuous study
  5% Transfer; 15% Continuous Study

**Program Accreditation**

- Institutional plans for accreditation, if applicable, including accrediting agency and timeline.
  If there are no plans to seek specialized accreditation, please provide reasons.
  *No plans; there are no accrediting agencies.*

**Alumni and Employer Survey**

- Expected satisfaction rates for alumni, including timing and method of surveys
  *Alumni surveys will be utilized.*

- Expected satisfaction rates for employers, including timing and method of surveys
  *Student and employer surveys will be utilized to ensure improvements in the program.*

7. Accreditation: If accreditation is not a goal for this program, provide a brief rationale for your decision. If the institution is seeking program accreditation, provide any additional information that supports your program.
   *There are no accrediting agencies.*

8. Institutional Characteristics: Please describe succinctly why your institution is particularly well equipped or well suited to support the proposed program.
   *The use of existing department programs maximizes efficiency of instruction. The University supports implementation of internationalization across campus, and resources for courses are readily available. The University's establishment of agreements with institutions overseas supports the proposed program.*

9. Any Other Relevant Information:

   *One of the universities priorities is to globalize the campus across disciplines by encouraging the students to expose themselves to study abroad and other cultures.*
Form PC
PROGRAM CHANGE FORM

1. Submitted by: Southeast Missouri State University

   Name of Institution (Campus or off-campus residential center in the case of multi-campus institutions)

2. Type of Program Change (Check those that apply):

   ___ Title change only
   ___ Combination program created out of closely allied existing programs
   ___ Option(s) added to existing program(s)
   ___ Addition of certificate program developed from approved existing parent degree
   ___ Addition of free-standing single-semester certificate program
   ___ Delete program(s)
   ___ Delete option(s)
   ___ Program placed on “Inactive Status” list

10. Indicate Program Change or Addition of Options:

<table>
<thead>
<tr>
<th>Before the Proposed Change</th>
<th>After the Proposed Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title of Old Program or Certificate Option</td>
<td>Degree</td>
</tr>
<tr>
<td>Biology Options:</td>
<td>B.S.</td>
</tr>
<tr>
<td>- Biology, General</td>
<td></td>
</tr>
<tr>
<td>- Biomedical Sciences</td>
<td></td>
</tr>
<tr>
<td>- Marine Biology</td>
<td></td>
</tr>
<tr>
<td>- Microbiology, Cellular, Molecular, Biotechnology</td>
<td></td>
</tr>
<tr>
<td>- Organismal, Ecological, Evolutionary</td>
<td></td>
</tr>
<tr>
<td>- Wildlife &amp; Conservation</td>
<td></td>
</tr>
</tbody>
</table>

4. Attach a copy of the “before and after” curriculum, as applicable, and a rationale for the proposed change.

11. Intended date of program change, additional options, or “Inactive Status”:

   August 2011

Month/Year

AUTHORIZATION

Dr. Ronald Rosati, Provost

Name/Title of Institutional Officer Signature Date

William R. Eddleman, Chair, Department of Biology 573-651-2171

Person to Contact for More Information Telephone Number
B.S. in Biology
Option: Pre-Physician Assistant
120 hour Degree
47 hour Major
No minor required

University Studies (not prescribed by option) 39

Core Courses (prerequisites) 24

- BI 151 Biological Reasoning* (prereq EN 099; EN 100 qualified) 3
- BI 152 Intro to Scientific Investigation (BI 151 pre- or co-) 1
- BI 153 Intro to Organismal Biology (BI 152 & CH 185 pre- or co-) 4
- BI 154 Genetics and Cell Biology (BI 153) 4
- BI 489 Analysis of Biological Issues (30 hours of biology) 2
- Experiential Learning 2
  
  Choose from: 471-473, 551/553, 589-591
- CH 185/085/005 General Chemistry ** 5
- MA 134 College Algebra*** 3

Option Courses: 11

- BI 381 Molecular Genetics 3
- BS 113/013 Anatomy & Physiology I 4
- BS 114/014 Anatomy & Physiology II 4

Biology Electives 12

- Any BI, BO, BT, ZO courses, or BS 240 with
  at least 8 credits 300 level and above

Non-Biology Requirements 30

- PY 271 Research Design and Analysis I OR MA 155 Statistical Reasoning 3
- OR MA 223 Elementary Probability & Statistics 3
- CH 186 Foundations of Inorganic Chemistry 3
- CH 187 Inorganic and Qualitative Analysis Lab 2
- CH 341 Foundations of Organic Chemistry 3
- PY 101 or PY 102 Introductory Psychology **** 3
- PY 220 Psychological Development Across the Life Span**** 3
- PH 120/020 Introductory Physics I 5
- PH 121/021 Introductory Physics II 5
- HL 113 Medical Terminology 3

General Electives 4

Non-credit requirements:

  Career Linkages (CL 001, 002, 003, 004)
  Writing Proficiency Exam (WP 003)
  Measure of Academic Proficiency in Progress-MAPP (MX 001, 002)

12. BI 151 counts as 3 credits in US Perspective on Living Systems
** CH 185/085/005 counts as 3 credits in US Perspectives on Physics Systems
*** MA 134 counts as 3 credits in US Perspectives on Logical Systems
****PY 101 or PY 220 counts as 3 credits in US Perspectives on Behavioral Systems
Rationale for offering a Pre-Physician Assistant option under the B.S. in Biology
Approximately 75% of in-coming freshmen in the Biology major declare a pre-
professional option with the intent of pursuing an MD upon completion of the BS.
However, on average, only 10% remain in the option by senior year. The remaining 65%
either change their option within Biology or choose an alternative major. The
prerequisite coursework required for admission to a Physician Assistant program is
somewhat less rigorous than that required for medical school, and the GPA standards are
also less stringent. A pre-Physician Assistant option would thus provide a viable
alternative path into the medical field for students who would be unlikely to complete the
Biomedical Sciences option, thus improving retention within the major.

Students who complete this option and acquire certification as Physician Assistants will
help to fill a critical need for trained medical professionals. According to US News and
World Report (December 2009), Physician Assistant is one of the fastest growing
professions in the country, due to retirement of baby boomers, shortage of primary care
physicians in rural areas, and the need to reduce healthcare costs.

The courses required for this option are already taught at Southeast Missouri State
University. No courses are required to be added to the curriculum, therefore there
is no increased cost.
Department of Psychology  
January 28, 2009

Dr. William R. Eddleman  
Chair, Department of Biology  
MS6200

Dear Bill:

This morning I met with Dr. Diane Wood about a proposed new program in your department that would prepare students for further training as Physician Assistants. The program would likely require two courses from the Department of Psychology, PY271 Research Design and Analysis, and PY220 Psychological Development Across the Lifespan. Both of these are courses for which we provide multiple sections every semester. We could accommodate the projected numbers of additional students for either or both of these classes. The proposed program could be beneficial to students in the area, and we would be happy to be a small part of it.

Regards,

Leslee K. Pollina
Chair, Department of Psychology
September 8, 2010

Dr. Ronald Rosati  
Provost  
Southeast Missouri State University  
Cape Girardeau, MO 63701

Dear Dr. Rosati:

I am writing to express my support for the proposed curricular option in Pre-Physician’s Assistant. I was made aware that the proposed curriculum would require a course in Medical Terminology. The Department of Health, Human Performance and Recreation offers a course in Medical Terminology, and will be happy to support the Pre-Physician’s Assistant curriculum through the offering of this course to meet student needs.

Sincerely,

Dr. Joe Pujol  
Professor and Chair  
Department of Health, Human Performance and Recreation  
Southeast Missouri State University
Form PC
PROGRAM CHANGE FORM

1. Submitted by: Southeast Missouri State University

2. Type of Program Change (Check those that apply):
   - Title change only
   - Combination program created out of closely allied existing programs
   - Option(s) added to existing program(s)
   - Addition of certificate program developed from approved existing parent degree
   - Addition of free-standing single-semester certificate program
   - Delete program(s)
   - Delete option(s)
   - Program placed on “Inactive Status” list

13. Indicate Program Change or Addition of Options:

<table>
<thead>
<tr>
<th>Before the Proposed Change</th>
<th>After the Proposed Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Title of Old Program or Certificate Option</strong></td>
<td><strong>Degree</strong></td>
</tr>
<tr>
<td>Anthropology</td>
<td>BA</td>
</tr>
<tr>
<td>French</td>
<td>BA</td>
</tr>
<tr>
<td>German</td>
<td>BA</td>
</tr>
<tr>
<td>Global Studies Options:</td>
<td></td>
</tr>
<tr>
<td>Chinese</td>
<td></td>
</tr>
<tr>
<td>Francophone</td>
<td></td>
</tr>
<tr>
<td>Germanic</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
</tr>
<tr>
<td>Japanese</td>
<td></td>
</tr>
<tr>
<td>Spanish</td>
<td>BA</td>
</tr>
</tbody>
</table>

4. Attach a copy of the “before and after” curriculum, as applicable, and a rationale for the proposed change. – See New Program forms for “Global Cultures and Languages” program.

14. Intended date of program change, additional options, or “Inactive Status”:
   August/2011

Month/Year

AUTHORIZATION
Dr. Ronald Rosati, Provost

<table>
<thead>
<tr>
<th>Name/Title of Institutional Officer</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Frank Barrios, Dean, College of Liberal Arts</td>
<td>573-651-2154</td>
<td></td>
</tr>
</tbody>
</table>

Person to Contact for More Information: Telephone Number
Attachment 5

Form PC
PROGRAM CHANGE FORM

1. Submitted by: __Southeast Missouri State University__

2. Type of Program Change (Check those that apply):

- Title change only
- Combination program created out of closely allied existing programs
- Option(s) added to existing program(s)
- Addition of certificate program developed from approved existing parent degree
- Addition of free-standing single-semester certificate program
- X Delete program(s)
- Delete option(s)
- Program placed on “Inactive Status” list

15. Indicate Program Change or Addition of Options:

<table>
<thead>
<tr>
<th>Before the Proposed Change</th>
<th>After the Proposed Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title of Old Program or Certificate Option</td>
<td>Degree</td>
</tr>
<tr>
<td>Design Drafting Electronics Graphic Technology</td>
<td>Certificate, 2 Yr</td>
</tr>
<tr>
<td>Certificate, 2 Yr</td>
<td>15.0303</td>
</tr>
<tr>
<td>Certificate, 2 Yr</td>
<td>50.0409</td>
</tr>
<tr>
<td>Title of New Program or Certificate Option</td>
<td>Degree</td>
</tr>
<tr>
<td></td>
<td>N/A</td>
</tr>
</tbody>
</table>

4. Attach a copy of the “before and after” curriculum, as applicable, and a rationale for the proposed change.

16. Intended date of program change, additional options, or “Inactive Status”:

- __January 2011__
- Month/Year

AUTHORIZATION

Dr. Ronald Rosati, Provost
Name/Title of Institutional Officer
Signature
Date

Dr. Randall Shaw, Dean, School of Polytechnic Studies
Person to Contact for More Information
Telephone Number

Rationale for Deleting Certificates
We propose deleting the Design Drafting Certificate, Electronics Certificate, and Graphic Technology Certificate due to lack of demand for program. Less than 5 students were enrolled in each over the last five years.
Form PC
PROGRAM CHANGE FORM

1. Submitted by: Southeast Missouri State University

2. Type of Program Change (Check those that apply):
   
   ____ Title change only
   ____ Combination program created out of closely allied existing programs
   ____ Option(s) added to existing program(s)
   ____ Addition of certificate program developed from approved existing parent degree
   ____ Addition of free-standing single-semester certificate program
   ____ Delete program(s)
   ____ Delete option(s)
   ____ Program placed on “Inactive Status” list

17. Indicate Program Change or Addition of Options:

<table>
<thead>
<tr>
<th>Before the Proposed Change</th>
<th>After the Proposed Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Title of Old Program or Certificate Option</strong></td>
<td><strong>Degree</strong></td>
</tr>
<tr>
<td>Master of Public Administration Options:</td>
<td></td>
</tr>
<tr>
<td>- Public Administration</td>
<td></td>
</tr>
<tr>
<td>- Community Wellness and Leisure Services</td>
<td>MPA</td>
</tr>
</tbody>
</table>

4. Attach a copy of the “before and after” curriculum, as applicable, and a rationale for the proposed change.

18. Intended date of program change, additional options, or “Inactive Status”:

   August 2011

   Month/Year

AUTHORIZATION

Dr. Ronald Rosati, Provost

Name/Title of Institutional Officer | Signature | Date

Dr. Loretta Prater, Dean, College of Health & Human Services | 573-651-2178

Person to Contact for More Information | Telephone Number
CURRENT
MASTER OF PUBLIC ADMINISTRATION

Core Course Requirement – 21 hours
PS 602 Fundamentals of Public Administration
PS 603 Public Personnel Administration
PS 605 Organizational Theory and Behavior
PS 615 Governmental Budgeting Process
PS 618 Public Policy Analysis
PS 645 Research Methods
PS 655 Federalism

Public Administration Option – 12 hours
Select from:
AC 548 Not-for-Profit Accounting
EC 525 Public Policy Economics
PS 625 Administrative Law
PS 689 Independent Study in Political Science
PS 691 Topics in Political Science
PY 571 Behavioral Statistics
PY 650 Organizations as Open Systems
SC 560 Organizational Communication Capstone
PS 697 Internship in Political Science
Or
Thesis

COMMUNITY WELLNESS AND LEISURE SERVICES
Option – 12 hours
HL 671 Implementation and Organization of Fitness Programs for Health and Diseased Populations
Or
HL 672 Health Promotion Programs
RC 630 Program Delivery in Leisure Services
RC 680 Recreation in Community Development

Three Credit Hour Elective
Capstone
RC 699 Internship
Or
Thesis

RATIONALE
The Community Wellness and Leisure Services option has had a very low enrollment since its inception. Less than one-quarter of the students in the Master of Public Administration are enrolled in the Community Wellness and Leisure Services option, thus the elimination of this option will not threaten the viability of the degree program itself. Since 2005 the tenth week fall semester enrollment report generated by the Office of Institutional Research has shown the following enrollments:


Given the current economic climate it is not prudent to continue to try to service such a small number of students. It is not possible to offer courses for such a small group of students to complete the option. It is the opinion of the Department of Health, Human Performance and Recreation that our resources are better used in undergraduate programs with larger enrollments.

Since the Community Wellness and Leisure Services option is being eliminated, this leaves only one option remaining in the degree. Thus, the Public Administration program will be the only part of the MPA. While the Public Administration courses will be retained, the degree will now have no options.
Form PC

PROGRAM CHANGE FORM

1. Submitted by: Southeast Missouri State University

2. Type of Program Change (Check those that apply):
   
   _____ Title change only
   _____ Combination program created out of closely allied existing programs
   _____ Option(s) added to existing program(s)
   _____ Addition of certificate program developed from approved existing parent degree
   _____ Addition of free-standing single-semester certificate program
   _______ Delete program(s)
   _____ Delete option(s)
   _____ Program placed on "Inactive Status" list

3. Indicate Program Change or Addition of Options:

<table>
<thead>
<tr>
<th>Before the Proposed Change</th>
<th>After the Proposed Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title of Old Program or Certificate Option</td>
<td>Degree</td>
</tr>
<tr>
<td>Geography Minor</td>
<td>45.0701</td>
</tr>
</tbody>
</table>

4. Attach a copy of the "before and after" curriculum, as applicable, and a rationale for the proposed change.

5. Intended date of program change, additional options, or "Inactive Status":

   ___________ 2011
   August/        Month/Year

AUTHORIZATION

Dr. Ronald Rosati, Provost

Name/Title of Institutional Officer    Signature    Date

Dr. Frank Barrios, Dean, College of Liberal Arts

Person to Contact for More Information Telephone Number

Rationale for Deleting Geography Minor

We propose deleting the Geography minor due to lack of enrollment and demand for program. Only one student is currently enrolled.
The College of Liberal Arts is in the process of proposing a new Bachelor of Arts program in Global Cultures and Languages, while eliminating the Bachelors of Arts in Anthropology, French, German, Global Studies, and Spanish. The new BA will be a combination of these eliminated programs.

These changes are a result of analysis through the state mandated program review process of low completer programs.

As a result of the proposed elimination of the programs, and the proposed new program, the Department of Foreign Languages and Anthropology passed by a majority vote a proposal to rename their department the “Department of Global Cultures and Languages”, and the College of Liberal Arts College Council passed a motion supporting the proposal to change the name of the “Department of Foreign Languages and Anthropology” to the “Department of Global Cultures and Languages”.