THE UNIVERSITY OF NORTH CAROLINA
ACADEMIC DEGREE PRODUCTIVITY REVIEW

Chapter 407, Section 1 of Senate Bill 393, 1993 Session Laws (GPAC/UNC Review Plan) requires the following:

Section 1. The Board of Governors of the University of North Carolina shall review all academic degree programs and research and public service activities to identify those programs and activities that are of low productivity or low priority, or are unnecessarily redundant. The Board shall develop specific criteria for these reviews, and shall develop a process to review academic degree program productivity biennially. The Board's review shall emphasize identification of processes and resources to strengthen programs that are or can reasonably be made productive. With regard to those programs that are not and cannot be made productive, if any, the Board shall consider eliminating those programs in a manner that does not negatively impact upon the availability of educational opportunities for North Carolina citizens. In making its determination, the Board shall give consideration to the value of maintaining racial and geographic diversity and to assuring reasonable access for students who live off campus.

Reviews of academic programs were conducted in 1995, 1997, 1999, 2001, 2003, and 2005 applying criteria and guidelines developed by the Board of Governors' Committee on Educational Planning, Policies, and Programs. We are now restarting the long-range planning process and modifying it in accord with the results of the work of the UNC Tomorrow Commission. While the same criteria for productivity will be used as in previous studies, campuses should relate this review to their general reviews underway as part of the UNC Tomorrow initiative. These instructions are for the seventh biennial review.

I. Productivity Guidelines and Criteria

The Board of Governors has established productivity standards for the biennial review of academic program productivity by degree levels. Programs are to be reviewed if they meet these conditions:

- Bachelor's degree programs: the number of degrees awarded in the last two years is 19 or fewer—unless upper division enrollment in the most recent year exceeds 25, or degrees awarded in the most recent year exceed 10.

- Terminal master's degrees: the number of degrees awarded in the last two years is 15 or fewer—unless enrollment in the most recent year exceeds 22, or degrees awarded exceed 9. Ed.S. and CAS programs: the number of certificates awarded in the last two years is 15 or fewer—unless enrollment in the most recent year exceeds 9.
• Doctoral degree programs: the number of degrees awarded in the last two years is 5 or fewer—unless enrollment in the most recent year exceeds 18, or the number of degrees awarded in the most recent year exceeds 2.

• First professional degree programs (medicine, dentistry, veterinary medicine, pharmacy and law): The number of degrees awarded in the last two years is 30 or fewer—unless enrollment in the most recent year exceeds 30, or the number of degrees awarded in the most recent year exceeds 15.

All of the programs from your institution that do not meet these standards are listed in Enclosure #1C. There may be other academic degree programs not identified in the enclosures that you may want to review with respect to productivity, institutional priorities, and unnecessary duplication.

II. Degree Program CIP Data

This analysis uses the CIP classification system. The data in the attached list show upper division majors enrolled in the program (not the number of students enrolled in courses) and the number of degrees conferred. The analysis is based on the two most recent years. Please note that the count of majors is taken as of the institution’s fall census date, while the count of degrees conferred covers the year starting on July 1 and ending June 30. This analysis includes all upper division majors including double majors. A double major will be counted in each program in which the student is recorded as a major. The data for this review are drawn from institutional Student Data files on enrollees and graduates. The data include both on-campus and distance learning enrollments and graduates.

III. Programs Subject to UNC Productivity Review for 2008

The number of bachelors, masters, intermediate, first professional and doctoral programs not meeting the productivity standards for this biennial review totals 266 (compared to 315 in the 2005 review). At the undergraduate level, the Board of Governors recognizes the importance of a basic core of academic disciplines which each constituent institution (except the UNC School of the Arts) is expected to offer in the fine arts, humanities, mathematics, computer science, sciences and social sciences. Nevertheless, Chief Academic Officers are urged to give serious consideration to the implications of low enrollments and a small number of degrees conferred in these disciplines. Recently established programs that have not been in place long enough to attract sufficient enrollments and produce the expected numbers of graduates will not be subject to this productivity review.

Baccalaureate programs subject to review are those degree programs that have been authorized to enroll students for eight years and that do not meet the productivity standards.

Master’s and intermediate programs subject to review are terminal master’s degrees, Ed.S and CAS programs that have been authorized to enroll students for six or more years and do not meet the productivity standards.

At the first professional level (medicine, dentistry, veterinary medicine, pharmacy, and law), programs that have been authorized to enroll students for eight or more years will be identified if these programs fail to meet productivity standards.
Doctoral degree programs that have been authorized to enroll students for ten or more years are subject to review if they do not meet the productivity standards.

IV. The Review Process 2008

The guidelines and form for program review are included as Enclosure #1A and #1B. Campuses will be asked to submit reports based on the centrality of the program to the university’s mission, the quality of the program, faculty resources, facilities, equipment, demand for the program, duplication and critical mass. The results of these reviews are due December 15, 2008. All of the degree programs listed in Enclosure #1C as being subject to review are to be reviewed not only in terms of low enrollments and degree productivity, but also in terms of such factors as quality, costs, occupational demand, and the level of centrality to the institutional mission and with attention to why the programs have low enrollment.

This review requires campuses to make a recommendation about a given program, i.e., whether it can be strengthened, whether it should be continued, whether it should be merged with another program (Enclosure #1B), or whether it should be discontinued (Enclosure #3A.) The Vice President for Academic Planning, after consultation with the Chief Academic Officers and General Administration, will be responsible for making a recommendation to the President and the Planning Committee of the Board of Governors. If, for some reason, there is a difference of opinion about the future of a program, the campus may be asked to submit a status report on the program in the next biennial program review, or to seek an external review, or GA may solicit the advice of discipline experts to further advise the campus and General Administration.

V. Timetable for Completion of the Review

• Recommendations concerning the programs reviewed should be submitted to General Administration no later than December 15, 2008. A cover letter from the Chancellor or Chief Academic Officer should accompany the campus responses.

• Review of institutional reviews and recommendations by General Administration are planned for January 2009.

• Presentation of General Administration's review and recommendations to the Board of Governors' Committee on Educational Planning, Policies, and Programs are planned for February 2009.

If there are questions about the process or about programs listed on Enclosure #1C, please contact Dr. Jim Sadler, Associate Vice President for Academic Planning.

Enclosure #1A: Guidelines for Program Enrollment/Graduation Productivity Review.
Enclosure #1B: Program Review and Recommendations Form.
Enclosure #1C: Report of Programs that Fall Below the Productivity Standards.
The University of North Carolina
Guidelines for Program Enrollment/Graduation Productivity Review

In reviewing the degree program and completing the form #1B accompanying these guidelines, please consider the following questions. A response to each question is not required, but you should include these considerations in your review wherever relevant.

1. Centrality to University's Mission
   • How important to the mission of the institution is this program?
   • Would the elimination of this program have any adverse effect on the mission of the institution?
   • What is the societal need for the program?
   • Can this program be combined with a similar or related program in the present department or in another department?

2. Quality of the Program
   • What is the quality of the program and what indicators are used to assess the quality?
   • Is the program accredited or has accreditation been sought?

3. Faculty Involved
   • How many faculty members are teaching in this program?
   • How many graduate assistants and part-time faculty usually teach in this program?
   • How many of the faculty have appropriate terminal degrees?
   • What is the average teaching load of the faculty in the department?
   • What is the percentage of reassigned faculty time per semester?
   • If this program should be discontinued, can the faculty members teaching in it be continued in this or a related area?

4. Facilities/Equipment
   • Is the available space (classroom laboratory, etc.) adequate and appropriate for the program?
   • Is the necessary equipment available and in working order?

5. Demand
   • For how many years has the program been in place? Is it serving the predicted number of students?
   • What are the job prospects for these graduates?
   • Are there courses in the program that are essential supporting courses for other programs?

6. Costs
   • How many different concentrations or options are available in the program? Could some of them be consolidated or eliminated to reduce course proliferation and costs?
   • What is program productivity as it is reflected in course enrollments?
   • Given a threshold of at least 10 students for undergraduate courses and at least 5 students for graduate courses, does the program have under-enrolled courses? How many?
   • What are the yearly costs for specialized equipment and library resources to support the program?
   • If the space, equipment and library holdings are not adequate, what would it cost to make them adequate?
   • Would the campus/department rather spend those dollars on other programs/activities?
7. Duplication
• Can this program's objectives be accomplished equally well through another program?
• Are courses in the program duplicated in other programs/departments?
• Has there been any effort to eliminate the duplication of these courses?
• Could enrollment be increased by sharing some courses with another institution through distance education (with your institution as a provider or a recipient)?
• Is there an online option that might be pursued by your campus or with another campus or are online programs or courses available from other campuses?
• Is this program distinctive in the UNC system? If yes, briefly indicate how.
• Is there a location (geographic/demographic/cultural) advantage to the program?

8. Critical Mass
• What would be the impact on the department if the program under review were eliminated? If it were delivered in part or entirely by another institution through distance education?
• Would the department still exist? For what purpose?
• What would be the impact on other departments or programs if the program under review were eliminated?

9. Recommendation about the Program
As a result of this review, your institution is asked to make recommendations that address these major questions:
• Should the program be continued as a separate degree program? If continuation is recommended, provide a sound and compelling reasons.
• If the recommendation is to continue the program, can it be made more productive? If so, how? What steps would be taken to strengthen the program and make it more productive? Should the program be consolidated or merged with other existing programs? If so, which ones?
• Should the program be discontinued? If so, on what timetable? If the program is discontinued, would there be any savings of funds or resources that could be reallocated to other programs and activities of greater productivity or higher priority?
• Could an online option for your campus, for a joint program with another or other campuses, or for using online courses or a degree program from another campus address your campuses needs in this program area?
The University of North Carolina
Program Review and Recommendations Form
(Complete this form for each program identified in Enclosure #1C)

Date:
Constituent University:
CIP Discipline Number:
Exact Title of the Program:
Exact Degree Abbreviation (e.g. B.S., B.A., M.A., M.S., Ph.D):

1. The accompanying guidelines list questions about centrality to mission, quality, faculty and physical resources, demand, costs, duplication, and consequences of deletion. After considering those issues, which of the following does the campus recommend?

____ Retain the program in its present configuration with low enrollments likely to continue.

____ Retain the program in its present configuration with specific steps to be taken to increase enrollments.

____ Restructure the program by combining it with one or more other campus programs.

____ Actively investigate collaboration with other UNC campuses in order to conserve program resources and increase course enrollments.

____ Discontinue the program while assuring graduation for any currently enrolled students.

2. As more programs, certificates, licensure programs, and courses become available online through the University of North Carolina Online would you be willing to consider online courses or programs from another campus to meet the needs in this program?

____ Would you be interested in exploring a joint online offering with one or more other campuses to meet the needs this program is currently addressing?

____ Would you be interested in utilizing an online degree program or courses from another campus to meet the needs this program is currently addressing?
3. Explain the above responses—either the rationale for leaving the program in its current configuration or specific steps proposed to increase enrollments or pursue other options.

4. Name/e-mail/phone of department contact person:
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Status Report on Recently Established Degree Programs

Institutions with programs authorized by the Board of Governors for establishment during the last four years should provide a status report on the progress being made in implementing each program. Enclosure #2A shows the inventory of programs that have been established at your institution during the last one-two years or three-four years. Use Enclosure #2B or Enclosure #2C to report on the status of these programs.
Status Report on Recently Established Programs

Inventory of Academic Programs Established 1-2 years ago (Authorized January 2006-December 2007) that require a status report (use form 2B).

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Inventory of Academic Programs Established 3-4 years ago (Authorized January 2004-December 2005) that require a status report (use Enclosure 2C).

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STATUS REPORT ON RECENTLY ESTABLISHED (1-2 YEARS) DEGREE PROGRAMS
(Authorized January 2006-December 2007)

THE UNIVERSITY OF NORTH CAROLINA

Date: ______________________

Constituent University: ____________________________________________

Degree Program Title: ______________________________________________

Degree Program CIP Number: __________ Level: B____ M____ I____ Prof._____ D____

Specify Type of Degree (e.g. B.S., B.A., M.A., M.S., Ed.D., Ph.D.): __________

Date Established: ______________________

If the program has not yet been established, please indicate why not?

Headcount Enrollment, as projected in Request for Authorization to Establish, and Actual
Headcount Enrollment (upper division program majors, juniors and seniors only, for baccalaureate
programs):

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Degrees Conferred Each Year to Date: _____ _____

Resources: Describe any issues regarding resources that have been allocated to this program,
the adequacy of these resources, and plans to remedy any deficiencies.

Curriculum: Has the curriculum been developed as indicated in the request to establish
proposal? Are any modifications planned?

Other Information: Please provide any additional information that describes the progress made in
development of this new program.

Program contact person/e-mail/phone: ____________________________________________
Enclosure #2C

STATUS REPORT ON RECENTLY ESTABLISHED (3-4 YEARS) DEGREE PROGRAMS
(Authorized January 2004-December 2005)
THE UNIVERSITY OF NORTH CAROLINA

Date: ________________

Constituent Institution: ____________________________________________

Degree Program Title: _____________________________________________

Degree Program CIP Number: ___________ Level: B_____ M_____ I_____ Prof. _____ D_____ Specify Type of Degree (e.g. B.S., B.A., M.A., M.S., Ed.D., Ph.D.): ___________

Date Established: ________________________________________________

If the program has not yet been established, please explain why not?

Headcount Enrollment, as projected in Request for Authorization to Establish, and Actual Headcount Enrollment (upper division program majors, juniors and seniors only, for baccalaureate programs):

<table>
<thead>
<tr>
<th>Year (19___)</th>
<th>Projected/Actual</th>
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<td>1st Year</td>
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<td>2nd Year</td>
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<tr>
<td>3rd Year</td>
<td></td>
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<tr>
<td>4th Year</td>
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Degrees Conferred Each Year to Date: ________ ________ ________ ________

Resources: Describe any issues regarding resources that have been allocated to this program, the adequacy of these resources, and plans to remedy any deficiencies.

Curriculum: Has the curriculum been developed as indicated in the request to establish proposal? Are any modifications planned?

Other Information: Please provide any additional information that describes the progress made in development of this new program.

Program contact person/e-mail/phone: ________________________________
Summary Form for Discontinuation of Programs

Request to discontinue degree programs, whether identified as a result of the academic degree program review process or through other institutional procedures should include a schedule for the proposed discontinuations. See Enclosure #3A.
REQUEST FOR AUTHORIZATION TO DISCONTINUE DEGREE PROGRAMS

DATE: ______________________

CONSTITUENT UNIVERSITY: ________________________________________

Instructions:

For all programs proposed for discontinuation simply list them below and indicate the proposed effective date.

<table>
<thead>
<tr>
<th>CIP#</th>
<th>LEVEL</th>
<th>PROGRAM OR TRACK TITLE</th>
<th>EFFECTIVE DATE</th>
<th>REASON FOR DISCONTINUATION</th>
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<tbody>
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CHANCELLOR (OR CHIEF ACADEMIC OFFICER) ______________________________
### LOW PRODUCTIVITY GUIDELINES AND CRITERIA

As defined in Dr. Alan Mabe's February 8, 2005, Memorandum on the Long-Range Planning Process for 2006-2011, Enclosure #1: UNC Academic Degree Program Review (2005)

<table>
<thead>
<tr>
<th>Program Level</th>
<th>Low Productivity if Number of Degrees/Certificates Awarded in Last 2 Years Was...</th>
<th><strong>Unless</strong> One of the Following Occurred in Most Recent Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor's</td>
<td>19 or Fewer</td>
<td>Enrollment* Exceeded, Degrees Awarded Exceeded</td>
</tr>
<tr>
<td>Terminal Master's</td>
<td>15 or Fewer</td>
<td>25 (*Upper Division), 10</td>
</tr>
<tr>
<td>EdS and CAS</td>
<td>15 or Fewer</td>
<td>22, 9</td>
</tr>
<tr>
<td>Doctoral</td>
<td>5 or Fewer</td>
<td>18, 2</td>
</tr>
<tr>
<td>1st Prof (Medicine, Dentistry, Veterinary Medicine, Law, or Pharmacy)</td>
<td>30 or Fewer</td>
<td>30, 15</td>
</tr>
</tbody>
</table>

*Note: Enrollment* refers to enrollment in the most recent year.*
December 11, 2008

Dr. Alan Mabe
Vice President for Academic Planning
910 Raleigh Road
Chapel Hill, NC 27515

Dear Dr. Mabe:

We are pleased to submit the Productivity Study of Academic Degree Programs and Status Reports on Recently Established Programs at East Carolina University. Each program has undergone a thorough review process by the unit faculty, and in consultation with the Academic Council and the Deans, we have come to a consensus as to the action to be taken on each academic degree program reviewed.

Based on your December 3, 2008, e-mail, acknowledging that the BA in philosophy should not have been included on the low productivity report, a response from that program is not included in this report. Of the remaining twenty-six programs listed as low productivity programs, the following has been determined.

- Four programs will be discontinued in twelve to eighteen months – as soon as all students in the programs have graduated and the discontinuation requests have been made through the appropriate campus groups.
- Of the remaining twenty-two programs,
  - one will restructure by combining with another campus program;
  - fifteen will be retained in the present configuration, but will implement steps to increase enrollment; and
  - six programs are requesting to be retained in the present configuration with low enrollment likely.

Please note also that there are concerns about the data used to categorize the BS in geology as a low productivity program. Included in this report is additional information to substantiate the belief that the program should not have been categorized as low producing.

We are reporting on the status of sixteen recently established degree programs. As a result of the success of the recently established BS in sports studies, we anticipate requesting discontinuation of the BA in exercise and sports studies within the next twelve to eighteen months – after we have ensured that all currently enrolled students have graduated or changed majors and the request has completed the campus process for requesting a discontinuation. We have included that program on the request for authorization to discontinue programs list.
Thank you for giving us the opportunity to report on these programs. We look forward to discussing our report with you.

Sincerely,

Steve Ballard
Chancellor

Marilyn Sheerer
Provost and Senior Vice Chancellor for Academic and Student Affairs
The University of North Carolina
BS in Applied Physics Program Review and Recommendations Form

Date: November 25, 2008

Constituent University: East Carolina University
CIP Discipline Number: 40.0801
Exact Title of the Program: Physics, Applied
Exact Degree Abbreviation: BS

1. The accompanying guidelines list questions about centrality to mission, quality, faculty and physical resources, demand, costs, duplication, and consequences of deletion. After considering those issues, which of the following does the campus recommend?

____ Retain the program in its present configuration with low enrollments (in specific upper division courses only) likely to continue.

___ Retain the program in its present configuration with specific steps to be taken to increase enrollments.

___ Restructure the program by combining it with one or more other campus programs.

___ Actively investigate collaboration with other UNC campuses in order to conserve program resources and increase course enrollments.

___ Discontinue the program while assuring graduation for any currently enrolled students.

2. As more programs, certificates, licensure programs, and courses become available online through the University of North Carolina Online would you be willing to consider online courses or programs from another campus to meet the needs in this program?

___ Would you be interested in exploring a joint online offering with one or more other campuses to meet the needs this program is currently addressing?

___ Would you be interested in utilizing an online degree program or courses from another campus to meet the needs this program is currently addressing?

3. Explain the above responses—either the rationale for leaving the program in its current configuration or specific steps proposed to increase enrollments or pursue other options.

An increase in enrollment is expected as the newly established engineering programs will begin to draw students interested in basic science in addition to those interested in applied areas.

4. Name/e-mail/phone of department contact person: John Sutherland, Chair. Department of Physics, Howell N209. East Carolina University.
BS in Applied Physics Enrollment/Graduation Productivity Review

1. Centrality to University’s Mission

- How important to the mission of the institution is this program?

The Department of Physics contributes in many ways to East Carolina University’s Strategic Directions. In particular, under the strategic direction, ECU students will be prepared to compete in the global economy, the department offers a rigorous education in the—truly global—field of physics and helps provide all students with a strong foundation in the liberal arts, so necessary, for the developing career opportunities in the new century.

Physics is central to natural science, engineering, and premedical education and to the delivery of courses that satisfy the liberal arts foundation requirements in natural sciences.

In addition to providing numerous undergraduate course SCH (~4600 for Fall 2008), the physics department has robust graduate programs that are consistently producing PhD and MS degrees. Our orientation towards biomedical (PhD) and medical (MS) physics supports the health science agenda of ECU – ECU will save lives, cure diseases, and positively transform the quality of health care for the region and state.

- Would the elimination of this program have any adverse effect on the mission of the institution?

Elimination of physics would significantly affect ECU’s mission as indicated in the answers to the previous question and distinguish ECU as less than a comprehensive university.

- What is the societal need for the program?

The knowledge of physics is central to the technological base of our global economy and to many of our current societal challenges such as global warming. Our graduates at both the undergraduate and graduate levels contribute to the health needs and economic prosperity of eastern NC, as does the engineering program at ECU that we support.

- Can this program be combined with a similar or related program in the present department or in another department?

No. Due to the maturity and complexity of the field of physics, it is highly unlikely that another department or program could successfully deliver creditable physics education.

2. Quality of the Program

- What is the quality of the program and what indicators are used to assess the quality?

The physics department provides a quality program for undergraduate physics majors, for students from a whole range of undergraduate departments that include physics as part of their undergraduate requirements, and for students throughout the University who elect physics courses to satisfy foundation science requirements. The department has a number of means of assessment. The most significant of these is the performance of our graduates on a nationally-normed test—the Major Field Test, ETS-Princeton.

- Is the program accredited or has accreditation been sought?

There is no accreditation body for undergraduate physics. In conjunction with radiation oncology, we have sought and received accreditation for the graduate medical physics program.
3. Faculty Involved
   • How many faculty members are teaching in this program?
     Twenty-one FTEs
   • How many graduate assistants and part-time faculty usually teach in this program?
     Four part-time faculty and fifteen graduate assistants.
   • How many of the faculty have appropriate terminal degrees?
     All
   • What is the average teaching load of the faculty in the department?
     Two courses per semester.
   • What is the percentage of reassigned faculty time per semester?
     50 percent
   • If this program should be discontinued, can the faculty members teaching in it be continued in this or a related area?
     No

4. Facilities/Equipment
   • Is the available space (classroom laboratory, etc.) adequate and appropriate for the program?
     With the rapidly increasing enrollment at ECU, our available space is stretched to the limit. Funding for a new building is currently being sought by the administration.
   • Is the necessary equipment available and in working order?
     Yes, for undergraduate instruction.

5. Demand
   • For how many years has the program been in place? Is it serving the predicted number of students?
     Forty-three years.
     The number of students historically served as physics majors has always been small and fluctuating. It may have declined somewhat recently due in significant part to the development of engineering programs at ECU. But total number of students from other disciplines served has increased for exactly the same reason.
   • What are the job prospects for these graduates?
     Excellent.
• Are there courses in the program that are essential supporting courses for other programs?

Yes. Indeed, most of our courses taught primarily serve other disciplines.

6. Costs

• How many different concentrations or options are available in the program? Could some of them be consolidated or eliminated to reduce course proliferation and costs?

There are three undergraduate degree programs. The BS is the traditional and vital program because it prepares students for graduate study in physics. The BA and BSAP programs require fewer of the same courses for added student flexibility. Therefore, their elimination would not reduce costs and be a disadvantage to one-third to one-half of our graduates.

• What is program productivity as it is reflected in course enrollments?

• Given a threshold of at least 10 students for undergraduate courses and at least 5 students for graduate courses, does the program have under-enrolled courses? How many?

All undergraduate lecture courses (eighteen sections for fall 2008) at 1000 and 2000 level far exceed this threshold. Four 4000-level courses fall below this threshold.

• What are the yearly costs for specialized equipment and library resources to support the program?

We invest $8000 per year in new equipment and significant staff time in maintaining existing equipment. Library costs are $10,600 for books.

• If the space, equipment and library holdings are not adequate, what would it cost to make them adequate?

Our primary need is space and the administration is seeking funding for a new building.

• Would the campus/department rather spend those dollars on other programs/activities?

No.

7. Duplication

• Can this program's objectives be accomplished equally well through another program?

No.

• Are courses in the program duplicated in other programs/departments?

Some courses overlap with mathematics and radiation oncology and are already jointly listed.

• Has there been any effort to eliminate the duplication of these courses?

Yes, by joint listing and in case of mathematics, alternate teaching by math and physics faculty.

• Could enrollment be increased by sharing some courses with another institution through distance education (with your institution as a provider or a recipient)?

Online education has not proven effective in delivering high quality physics courses.
• Is there an online option that might be pursued by your campus or with another campus or are online programs or courses available from other campuses?

While we are constantly seeking such possibilities, none are creditable at this time.

• Is this program distinctive in the UNC system? If yes, briefly indicate how.

Yes, emphasis on biological and biomedical physics.

• Is there a location (geographic/demographic/cultural) advantage to the program?

Physics is, quite literally, universal. However, we are unique in having the only physics PhD program in eastern NC and the only accredited medical physics program in the state.

8. Critical Mass

• What would be the impact on the department if the program under review were eliminated? If it were delivered in part or entirely by another institution through distance education?

We would be in the strange position of having a robust program at the introductory level and the graduate level with nothing in between. In addition, some of our graduate students have to take remedial upper division undergraduate courses, and these would be unavailable.

• Would the department still exist? For what purpose?

See above.

• What would be the impact on other departments or programs if the program under review were eliminated?

There would be numerous negative impacts on biology, chemistry, engineering and mathematics, the key STEM areas that the United States and the state of NC are trying to promote.

9. Recommendation about the Program

As a result of this review, your institution is asked to make recommendations that address these major questions:

• Should the program be continued as a separate degree program? If continuation is recommended, provide a sound and compelling reasons.

The undergraduate programs in physics should be continued because of their centrality to the strategic directions of ECU, their importance to other degree programs, their relative efficiency of offering in light of the department’s handling of a large service load, the academic flexibility to students, the benefit to on-going research activities with undergraduate research assistance, and to the vitality of a successful department and university.

• If the recommendation is to continue the program, can it be made more productive? If so, how?

Perhaps. According to the latest data from the American Institute of Physics, there are about 8000 physics seniors in the US and 760 institutions granting the bachelors degree in physics. Thus, the average is only ten or eleven degrees per year. ECU was near that level before engineering was initiated on this campus. It is also expected that the new engineering programs will eventually draw students interested in basic science in addition to those interested in applied areas.
• Should the program be discontinued? If so, on what timetable? If the program is discontinued, would there be any savings of funds or resources that could be reallocated to other programs and activities of greater productivity or higher priority?
No

• Could an online option for your campus, for a joint program with another or other campuses, or for using online courses or a degree program from another campus address your campuses needs in this program area?
No
The University of North Carolina  
MM in Music Therapy Program Review and Recommendations Form  

Constituent University: East Carolina University  
CIP Discipline Number: 51.2305  
Exact Title of the Program: Music Therapy  
Exact Degree Abbreviation: MM  

Date: November 19, 2008  

Sample Submission  

1. The accompanying guidelines list questions about centrality to mission, quality, faculty and physical resources, demand, costs, duplication, and consequences of deletion. After considering those issues, which of the following does the campus recommend?  

___ Retain the program in its present configuration with low enrollments likely to continue.  

___ Retain the program in its present configuration with specific steps to be taken to increase enrollments.  

___ Restructure the program by combining it with one or more other campus programs.  

___ Actively investigate collaboration with other UNC campuses in order to conserve program resources and increase course enrollments.  

X Discontinue the program while assuring graduation for any currently enrolled students.  

2. As more programs, certificates, licensure programs, and courses become available online through the University of North Carolina Online would you be willing to consider online courses or programs from another campus to meet the needs in this program?  

___ Would you be interested in exploring a joint online offering with one or more other campuses to meet the needs this program is currently addressing?  

___ Would you be interested in utilizing an online degree program or courses from another campus to meet the needs this program is currently addressing?  

3. Explain the above responses—either the rationale for leaving the program in its current configuration or specific steps proposed to increase enrollments or pursue other options.  

The School of Music recommends discontinuing the master of music in music therapy degree while assuring graduation for any currently enrolled students. This can probably be accomplished within the next twelve to eighteen months, as the current student should finish by fall 2009. However, we plan to retain and reconfigure the master of music in music education with a therapy option (option B), by restructuring the on-line master of music in music education to include a music therapy component. Historically this (option B of the master of music in music education) was the only music therapy graduate degree offered by the School of Music until the onset of the on-line master of music in music education. By restructuring this combined configuration we also open the possibility of delivering a portion of the music therapy degree online.  

While it is expected that enrollments will remain relatively low for the foreseeable future—nationally (according to NASM statistics), graduate music therapy programs average twelve-to-fifteen students with two-to-four graduates per year per program—we feel it will be important to retain a master of music in music education with an emphasis in music therapy since it appears that more and more state legislatures are investigating the possibility of requiring a
master's degree for music therapy licensure. If this were to happen, it is expected that demand will increase significantly and we would like to be in a position to capitalize on that demand immediately.

Currently ECU has the oldest music therapy program in the state. The other major program in a state supported institution is in the western part of NC at Appalachian State University. The other significant programs in the region include University of Maryland to our north and University of Georgia to the south. We have two tenured faculty members in the department; one is the immediate past president of the American Music Therapy Association. Until enrollment in this program increases, these faculty members can also be assigned duties in the areas of music education or foundations curriculum thus minimizing the impact of an under enrolled program on faculty resources.

4. Name/e-mail/phone of department contact person: J. Christopher Buddo, Director buddoj@ecu.edu 252-328-1267
MM in Music Therapy Program Enrollment/Graduation Productivity Review

1. Centrality to University's Mission

- How important to the mission of the institution is this program?

The music therapy program has long been an important aspect of the School of Music. For many years it was one of the pioneering programs in the country. Because of its relation to health and healthcare, we seek ways to connect this program with what is going on in medicine and allied health.

- Would the elimination of this program have any adverse effect on the mission of the institution?

We believe that it would certainly diminish the scope of the offerings in the School of Music, but it would also mean the loss of an opportunity to connect with and enhance our medical offerings, which is why we are proposing to change the configuration to align it with our MM in music education.

- What is the societal need for the program?

The use of licensed music therapists continues to expand both in numbers being employed and the settings in which they are employed. With our growing aging population, in particular, we foresee only an increase in the demand for licensed therapists in senior care facilities. While NY is currently the only state that requires a master's degree of its licensed practitioners, we are concerned that others will soon follow. Having no way to fill that need would put us at a distinct disadvantage.

- Can this program be combined with a similar or related program in the present department or in another department?

In our view, yes. It may prove challenging, but we feel we can fold the offerings into our on-line master of music in music education degree.

2. Quality of the Program

- What is the quality of the program and what indicators are used to assess the quality?

Student placement has long been the indicator used to assess the quality of the program and our graduates have been placed as interns and licensed practitioners in facilities around the country. In addition, one faculty member is serving as immediate past president for the American Music Therapy Association.

- Is the program accredited or has accreditation been sought?

Yes, by the National Association of Schools of Music

3. Faculty Involved

- How many faculty members are teaching in this program?

Two.

- How many graduate assistants and part-time faculty usually teach in this program?

- How many of the faculty have appropriate terminal degrees?

Both

- What is the average teaching load of the faculty in the department?
We strive for four-four, but the current undersubscribed situation has us under that ideal.

- What is the percentage of reassigned faculty time per semester?

One faculty member has release time as department chair for the music education/therapy department (25 percent), and the same faculty member has a small release for her work at the hospital.

- If this program should be discontinued, can the faculty members teaching in it be continued in this or a related area?

Only to a minor extent. The therapy training is somewhat narrowly defined. Both could teach in the service course offerings (music appreciation), and one faculty member has music education credentials, but it would be difficult to find many other related possibilities.

4. Facilities/Equipment

- Is the available space (classroom laboratory, etc.) adequate and appropriate for the program?

Yes, the classroom space and computer labs used in this major are used across the curriculum and additional space or equipment is not required to serve these majors.

- Is the necessary equipment available and in working order?

Yes.

5. Demand

- For how many years has the program been in place? Is it serving the predicted number of students?

Since 1972. No, we are not currently serving the predicted number of students. For this reason, and in anticipation of more states moving to the master’s-degree-required format, we are seeking to discontinue the program in its current form and fold the requirements into one of the concentrations in our master of music in music education degree.

- What are the job prospects for these graduates?

The job prospects for our graduates remain very promising. We have significant success in placement and it is expected that demand in the field will continue to build.

- Are there courses in the program that are essential supporting courses for other programs?

No

6. Costs

- How many different concentrations or options are available in the program? Could some of them be consolidated or eliminated to reduce course proliferation and costs?

- What is program productivity as it is reflected in course enrollments?

Course enrollments are significantly undersubscribed.

- Given a threshold of at least ten students for undergraduate courses and at least five students for graduate courses, does the program have under-enrolled courses? Yes How many?
• What are the yearly costs for specialized equipment and library resources to support the program?

There is no specialized equipment that is not used by other majors.

• If the space, equipment and library holdings are not adequate, what would it cost to make them adequate?

Space, equipment, and library holding are all adequate to support this program.

• Would the campus/department rather spend those dollars on other programs/activities?

7. Duplication

• Can this program’s objectives be accomplished equally well through another program?

No

• Are courses in the program duplicated in other programs/departments?

No

• Has there been any effort to eliminate the duplication of these courses?

• Could enrollment be increased by sharing some courses with another institution through distance education (with your institution as a provider or a recipient)?

• Is there an online option that might be pursued by your campus or with another campus or are online programs or courses available from other campuses?

We have begun to explore this option. If we are able to fold this into the MM in music education, significant portions of this degree will be delivered in an on-line format.

• Is this program distinctive in the UNC system? If yes, briefly indicate how.

This program has the distinction of being the oldest program in the region, however, Appalachian State now has a music therapy program as well.

• Is there a location (geographic/demographic/cultural) advantage to the program?

Yes, we are the only publicly supported program in the eastern part of the US between Maryland and Georgia (and we understand that Georgia has just discontinued its MM in therapy).

8. Critical Mass

• What would be the impact on the department if the program under review were eliminated? If it were delivered in part or entirely by another institution through distance education?
• Would the department still exist? For what purpose?

If we eliminated the undergraduate and graduate programs in music therapy, that particular aspect of the department would not continue to exist, as it does not serve the needs of the other majors.

• What would be the impact on other departments or programs if the program under review were eliminated?

9. **Recommendation about the Program**

As a result of this review, your institution is asked to make recommendations that address these major questions:

• Should the program be continued as a separate degree program? If continuation is recommended, provide a sound and compelling reasons.

  Please see 1B3. Our recommendation is to discontinue the program as it exists, but fold it in with the MM in music education. We are convinced that the demand for this program will increase significantly if/when more states adopt New York’s policy of demanding an MM for licensure.

• If the recommendation is to continue the program, can it be made more productive? If so, how?

  What steps would be taken to strengthen the program and make it more productive? Should the program be consolidated or merged with other existing programs? If so, which ones?

• Should the program be discontinued? If so, on what timetable? If the program is discontinued, would there be any savings of funds or resources that could be reallocated to other programs and activities of greater productivity or higher priority?

• Could an online option for your campus, for a joint program with another or other campuses, or for using online courses or a degree program from another campus address your campuses needs in this program area?
The University of North Carolina
PhD in Anatomy and Cell Biology Program Review and Recommendations Form

Date: November 25, 2008

Constituent University: East Carolina University, Brody School of Medicine

CIP Discipline Number: 26.0401

Exact Title of the Program: Anatomy and Cell Biology

Exact Degree Abbreviation: PhD

1. The accompanying guidelines list questions about centrality to mission, quality, faculty and physical resources, demand, costs, duplication, and consequences of deletion. After considering those issues, which of the following does the campus recommend?

   X Retain the program in its present configuration with low enrollments likely to continue.
   ____ Retain the program in its present configuration with specific steps to be taken to increase enrollments.
   ____ Restructure the program by combining it with one or more other campus programs.
   ____ Actively investigate collaboration with other UNC campuses in order to conserve program resources and increase course enrollments.
   ____ Discontinue the program while assuring graduation for any currently enrolled students.

2. As more programs, certificates, licensure programs, and courses become available online through the University of North Carolina Online would you be willing to consider online courses or programs from another campus to meet the needs in this program?

   no____ Would you be interested in exploring a joint online offering with one or more other campuses to meet the needs this program is currently addressing?

   no____ Would you be interested in utilizing an online degree program or courses from another campus to meet the needs this program is currently addressing?

3. Explain the above responses—either the rationale for leaving the program in its current configuration or specific steps proposed to increase enrollments or pursue other options.

4. Name/e-mail/phone of department contact person: Cheryl B. Knudson, PhD, Professor and Chair, Anatomy and Cell Biology, knudsonc@ecu.edu 252-744-2851
PhD in Anatomy and Cell Biology Program Enrollment/Graduation Productivity Review

1. Centrality to the University’s Mission

The PhD programs originally offered by the Brody School of Medicine (BSOM) were approved by the Board of Governors of the University of North Carolina in April, 1979 with the expectation that eight students would be enrolled in each program at any given time. Thus, it was intended that these programs remain relatively small and highly selective, maintaining favorable student/faculty ratios to foster scholarship, critical analysis, creative activity, and research. The inaugural programs offered graduate studies in anatomy and cell biology, biochemistry, microbiology and immunology, pharmacology, and physiology. The PhD programs were originally established in order to attract and retain top-notch basic science professors for the education of medical students at the BSOM. This purpose still holds true today and is even more important with the expansion of the medical class and addition of other allied health programs.

In addition, the Liaison Committee on Medical Education (LCME) recommended the establishment of the PhD programs. The need for these programs continues today to meet the LCME’s requirement for scholarly activity on the part of the faculty, and to enable the recruitment of excellent faculty necessary to provide up-to-date instruction to the medical students.

The East Carolina University School of Medicine has a three-fold mission: to increase the supply of primary care physicians to serve the state, to improve health status of citizens in eastern North Carolina, and to enhance the access of minority and disadvantaged students to a medical education.

Thus, one of the main missions of the BSOM is the training of family practice physicians with an emphasis on training students from disadvantaged and rural backgrounds. The Department of Anatomy and Cell Biology plays a critical role in this mission in that it is responsible for four major courses in the 1st year of medical school, that is, gross anatomy, embryology, histology, and neuroanatomy and providing special attention to the needs of our learners. Our PhD students are able to take these courses, and then serve as teaching assistants in these courses in order to prepare them uniquely for their future. It is clear that the PhD program is necessary to provide these student teachers, and necessary for the recruitment of excellent faculty to deliver these medical courses. In the recent years, three students of color have received the PhD in anatomy and cell biology from our department, and currently one of our PhD students identifies herself as a Hispanic North Carolinian. Our recent PhD graduates continue to be involved in research and teaching, several in North Carolina.

In addition to the critical teaching responsibilities, faculty in the Department of Anatomy and Cell Biology are awarded tenure based to a large extent on their ability to conduct extramurally funded research programs. The success of these research programs depends on the existence of a vital graduate program. In addition, the extramural funds that these research programs generate enhance the budget of the BSOM, contribute to the lively intellectual atmosphere in the Department of Anatomy and Cell Biology, and raise the national reputation of the BSOM.

2. Quality of the Program

Our department provides a mentored program of discovery for our students, including understanding anatomical structures using cadaver dissection for gross anatomy and neuroanatomy and a variety of histological preparations for microanatomy/histology. We have a strong communication component in our PhD training program. The final critical quality element is our mentored program for scientific research and discovery which is essential for training PhD students in the biomedical sciences.

There is an inextricable link between the PhD program in the Department of Anatomy and Cell Biology and the ability to recruit top-notch professors who can conduct extramurally funded research programs and provide 21st century education to our medical and graduate students. Our recruiting experience has taught us that the availability of talented graduate students is an essential prerequisite to attract talented new professors. Therefore, the quality of our future faculty is dependent upon our ability to maintain a vital PhD program in the Department of Anatomy and Cell Biology. The progress of developing East Carolina University into a research university is quite dependent on the activities of the faculty in the Brody School
of Medicine, their collaboration within the BSOM, within the university and nationally/internationally. Perhaps the best indicator of the quality of our PhD program is the number of peer-reviewed journal articles and the amount of extramural funding, both of which show upward trends. The Department of Anatomy and Cell Biology has experienced an increase in peer-reviewed publications annually from 12 to 18 to 22 in 2005, 2006 and 2007 respectively. In addition since 2005, ~$1.8 million in NIH funding, $75,000 from the NCBC, ~$178,000 in Foundation Funding and additional competitive funding from ECU has been received as direct costs to faculty members in the Department of Anatomy and Cell Biology to support our research projects. Two new NIH grants awarded in 2008 have total annual direct costs of $296,521.

3. Faculty Involved

There are twelve tenured faculty involved in the training of the anatomy and cell biology PhD students. These faculty also participate in teaching medical students and in research training of PhD students from other programs. All of these faculty are highly qualified with the PhD or equivalent degree plus multiple years of postdoctoral experience. The faculty have competitive resumes with numerous research publications and most of the senior faculty have a strong record of extramural grant support. The faculty are committed to a strong doctoral program and most would leave the institution if the PhD program is eliminated.

4. Facilities/Equipment

The department houses the research programs of its faculty in the Brody Building along with support from Comparative Medicine and the Shared Facilities Program. There is currently adequate space for the PhD program and we could accommodate an expansion of the program in the future as long as additional laboratory space is provided. We also have the major equipment items in working condition needed to support the student research. Equipment is maintained and replaced in a timely manner using primarily grant funds and departmental discretionary funds obtained from the facilities and administrative costs generated by research grants.

5. Demand

The Department of Anatomy and Cell Biology PhD program has been in place since 1979. The anatomical sciences are foundational courses not only for medical and dental students but also for physician assistants, physical therapy, occupational therapy, nursing, and other allied health professions. Even licensed personal trainers who help people at various health clubs are required to have gross anatomy training in order to pass the licensing exam. These areas of allied health are growing rapidly while at the same time the number of trained anatomists nationwide is decreasing, as documented on the website of the American Association of Anatomists. The future PhD anatomy professors who will train these students in our medical schools, dental schools, state and private universities, and community colleges need a specialized education as provided by our PhD program in the Department of Anatomy and Cell Biology at the BSOM. The program offers the Molecular Cell Biology course (ANAT7410) that is essentially a required course for several other PhD programs in the school. This course is offered annually and has high enrollment.

6. Costs

There are no extra yearly costs for specialized equipment or other resources dedicated to the program. The majority of programmatic costs would be incurred during the course of performing the research whether students were present or not.
7. Duplication

The objectives of the anatomy and cell biology PhD program could not be accomplished through other programs as it has a unique niche and provides unduplicated courses within The Brody School of Medicine. The Department of Anatomy and Cell Biology plays a critical role in the BSOM mission in that it is responsible for four major courses in the first year of medical school, that is, gross anatomy, embryology, histology, and neuroanatomy and providing special attention to the needs of our learners. Our PhD students are able to take these courses, and then serve as teaching assistants in these courses in order to prepare them uniquely for their future. The anatomy and cell biology PhD program also offers the molecular cell biology course (ANAT7410) that is essentially a required course for several other PhD programs in the school.

8. Critical Mass

The faculty of the Department of Anatomy and Cell Biology have a commitment and pride in our graduate program. A faculty member’s research programs and funding from extramural sources are dependent on a quality graduate program and the graduate students that are recruited. If the anatomy and cell biology PhD program were eliminated, the likelihood that many of the most productive faculty members would leave The Brody School of Medicine for other institutions that have a quality graduate program. This would hurt the institution by loss of grant dollars and the recruitment costs of replacing these faculty members. In addition, multiple collaborations exist within the department that could be harmed with the departure of the existing faculty.

If the Department of Anatomy and Cell Biology lost faculty due to the elimination of the PhD program, other departments within the Brody School of Medicine would be adversely affected. Department of Anatomy and Cell Biology faculty carry out multiple collaborations with other basic science and clinical departments. In addition, faculty are involved in the training of students from other departments. These collaborations and this training would be lost with the departure of faculty from the department.

9. Recommendation about the Program

We recommend that the program be continued with some emphasis put toward growth. The vice chancellor for research and graduate studies is presently urging all PhD programs to actively seek extramural support for additional graduate student stipends so that these PhD programs may grow beyond the target originally envisioned for ECU by the Board of Governors. We understand the financial reality that growth of our PhD program will be derived from extramural funds. The Department of Anatomy and Cell Biology is presently experiencing a surge of growth under the leadership of our new Chair and with the addition of several recently funded NIH grants. Given the current external funding environment we anticipate maintaining our student enrollment at the range of a mean of eight until there is an increase in the size of the faculty (based on the establishment of the new dental school and the anticipated increase in the size of the medical school class.) However, we are optimistic that the department will take full advantage of the opportunity it enjoys for substantial growth over the next few years, based on the strong combination of excellent teaching and rigorous and expanding research programs offered by the Department of Anatomy and Cell Biology. It is the opinion of the faculty that the PhD program in Anatomy and Cell Biology has fulfilled its original mission. In addition, the Department of Anatomy and Cell Biology must remain competitive in recruiting new research faculty as positions become available within the department. Success in this endeavor will demand that we vigorously work to maintain an active PhD program and aggressively recruit outstanding graduate students. In addition, the Anatomy and Cell Biology Graduate Committee is vigilant in exploring new avenues to improve our PhD program. Exploratory discussions on
combining this program with the other BSOM doctoral programs into a single program are currently underway. In addition, we are presently investigating changes in our graduate guidelines that would establish two-tracks in our graduate training. The first track will offer training that emphasizes the classical anatomical sciences for students seeking teaching positions. The second track will offer training that focuses on modern molecular biological research techniques for students seeking research positions. This flexibility in our curriculum will ensure the future success of our graduates in reaching their diverse career goals.