Curriculum Change Form
(Present only one proposed curriculum change per form)
(Complete only the section(s) applicable.)

Part I

<table>
<thead>
<tr>
<th>(Check one)</th>
<th>Department Name</th>
<th>Biological Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Course (Parts II, IV)</td>
<td>College</td>
<td>College of Arts and Sciences</td>
</tr>
<tr>
<td>Course Revision (Parts II, IV)</td>
<td>*Course Prefix &amp; Number</td>
<td></td>
</tr>
<tr>
<td>Course Dropped (Part II)</td>
<td>*Course Title (30 characters)</td>
<td></td>
</tr>
<tr>
<td>New Program (Part III)</td>
<td>*Program Title</td>
<td></td>
</tr>
<tr>
<td>Program Revision (Part III)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program Suspended (Part III)</td>
<td>*Provide only the information relevant to the proposal.</td>
<td></td>
</tr>
</tbody>
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Proposal Approved by:

<table>
<thead>
<tr>
<th>Departmental Committee</th>
<th>Date</th>
<th>Graduate Council*</th>
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<tbody>
<tr>
<td></td>
<td>11/24/03</td>
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<table>
<thead>
<tr>
<th>College Curriculum Committee</th>
<th>Date</th>
<th>Council on Academic Affairs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>11/24/03</td>
<td>Approved X, Disapproved ___</td>
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</table>

<table>
<thead>
<tr>
<th>General Education Committee*</th>
<th>Date</th>
<th>Faculty Senate**</th>
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<tbody>
<tr>
<td></td>
<td>NA</td>
<td>Board of Regents**</td>
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<table>
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<tr>
<th>Teacher Education Committee*</th>
<th>Date</th>
<th>Council on Postsecondary Edu.***</th>
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<tbody>
<tr>
<td></td>
<td>NA</td>
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</table>

*If Applicable (Type NA if not applicable.)
**Approval needed for new, revised, or suspended programs
***Approval/Posting needed for new degree program or certificate program

Completion of A, B, and C is required: (Please be specific, but concise.)

A. 1. **Specific action requested:** (Example: To increase the number of credit hours for ABC 100 from 1 to 2.)

Add an option in Bioinformatics to the M.S. degree in Biology (The option would be cross-listed with the M.S. in Applied Computing)

A. 2. **Effective date:** (Example: Fall 2001)

Fall 2004

A. 3. **Effective date of suspended programs for currently enrolled students:** (if applicable)

B. **The justification for this action:**

The field of Bioinformatics is an emerging area of study and research that crosses the disciplines of both Biology and Computer Science. EKU has an opportunity to move to the fore in this area with the cooperation of the Department of Computer Engineering and Computer Science at the University of Louisville. M.S. students at EKU will spend the first 26 hours of their studies at EKU learning the basic biology and computer science disciplines that will be required of someone entering the field of Bioinformatics. The last semester of their studies would take place at the University of Louisville. U of L has agreed to accept our students as visiting students for the last 12 hours of their M.S. program. While at the University of Louisville, students will have the opportunity to gain real-world experience in Bioinformatics by working on research projects at U of L and taking a formal class in Bioinformatics (CECS 660). U of L has recently added Bioinformatics as a specialty area in their Ph.D. program and is in need of masters-level students to aid both faculty and Ph.D. students on research projects. The institution of a M.S. option in Bioinformatics at EKU allows our students to gain the basic background needed to pursue either employment or further graduate studies following graduation.

C. **The projected cost (or savings) of this proposal is as follows:**

**Personnel Impact:**

**Operating Expenses Impact:**
Part II. Recording Data for New, Revised, or Dropped Course
(For a new required course, complete a separate request for the appropriate program revisions.)

1. For a new course, provide the catalog text.
2. For a revised course, provide (a) the current catalog text and (b) the proposed text, reflecting the exact changes being proposed.
3. For a dropped course, provide the current catalog text.

<table>
<thead>
<tr>
<th>Current Catalog Text</th>
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<table>
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<tr>
<th>New or Revised* Catalog Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>(*Use strikeout for deletions and underline for additions. Also include Crs. Prefix, No., and description, limited to 35 words.)</td>
</tr>
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</table>

Part III. Recording Data for New, Revised, or Suspended Program

1. For a new program, provide the catalog description as being proposed.
2. For a revised program, provide (a) the current program requirements and (b) the revised program, reflecting the exact changes being proposed.
3. For a suspended program, provide the current program requirements as shown in catalog. List any options and/or minors affected by the program’s suspension.

<table>
<thead>
<tr>
<th>Current Program Requirements as Shown in Catalog</th>
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</table>
M.S. Biology

Biology Core ........................................... 6 hours
BIO 710 or STA 700, BIO 801, 890.
Electives ............................................. 18 hours
Thesis .................................................. 6 hours
BIO 891 (credit will not be given for
BIO 880 or BIO 881 in this option)
Non-thesis ............................................. 12 hours
BIO 880 (credit will not be given for
BIO 891 in this option) ....................... 3 hours
Nine additional elective hours of
graduate course work ......................... 9 hours
Total Curriculum Requirements ........... 36 hours

*Program must consist of at least 21 hours of biology.

Applied Ecology Option

Biology Core ........................................... 6 hours
BIO 710 or STA 700, BIO 801, 890.
Thesis .................................................. 6 hours
BIO 891
Applied Ecology ..................................... 11 hours
BIO 848, 849, 850; One course from
BIO 714, 718, 721, 722, 724, 725, 742,
753, 754, 756, 757, 758, 761, 802, 806,
816, 845, 846, GEO 755, 756
Electives ............................................. 7 hours
Total Curriculum Requirements ........... 30 hours

New or Revised* Program
("Use strikeout for deletions and underline for additions.")
M.S. Biology

Biology Core .................................................. 6 hours
   BIO 710 or STA 700, BIO 801, 890.
Electives .................................................. 18 hours
   BIO 891 (credit will not be given for
   BIO 880 or BIO 881 in this option)
Thesis .................................................. 6 hours
   BIO 891 (credit will not be given for
   BIO 891 in this option) ....................... 3 hours
   Nine additional elective hours of
   graduate course work ....................... 9 hours
Total Curriculum Requirements ................. 30-36 hours

*Program must consist of at least 21 hours of biology.

Applied Ecology Option

Biology Core .................................................. 6 hours
   BIO 710 or STA 700, BIO 801, 890.
Thesis .................................................. 6 hours
   BIO 891
Applied Ecology ........................................ 11 hours
   BIO 848, 849, 850; One course from
   BIO 714, 718, 721, 722, 724, 725, 742,
   753, 754, 756, 757, 758, 761, 802, 806,
   816, 845, 846, GEO 755, 756
Electives .................................................. 7 hours
Total Curriculum Requirements ................. 30 hours

Bioinformatics Option

Biology Core .................................................. 6 hours
   BIO 710 or STA 700, BIO 801, 890.
Bioinformatics* ......................................... 28 hours
   BIO 711, CSC 730, 735, 740 or 745, 831.
   At the University of Louisville: CECS 660.
   9 hours of applied research at the University
   of Louisville or the University of Kentucky
Electives .................................................. 4 hours
   Approved BIO or CSC courses at
   800 level.
Total Curriculum Requirements ................. 38 hours

*Courses equivalent to BIO 121, 315, 348, CSC
   190, 191, 195 may be required as prerequisites