3-8-2004

Education: MS 7-12 Science

The College at Brockport, College Senate

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Resolution # 15
2003-2004
FACULTY SENATE

TO: Dr. Paul Yu, College President
FROM: The Faculty Senate Meeting on: March 8, 2004
RE: I. Formal Resolution (Act of Determination)
II. Recommendation (Urging the Welfare of)
III. Other, For Your Information (Notice, Request, Report, etc.)

SUBJ: Education: MS 7-12 Science

Signed: ____________________________ Date: 3/8/04
(Rev Kenneth O'Brien, 2002-2004 Faculty Senate President)

TO: The Faculty Senate
FROM: Dr. Paul Yu, College President

REF: I. Decision and Action Taken on Formal Resolution (circle)
   a. Accepted. Effective Date: ___/___/___
   b. Deferred for discussion with the Faculty Senate on ___/___/___
   c. Unacceptable for the reasons contained in the attached explanation

II. III. Response to Recommendation or Other/FYI
   a. Received and acknowledged
   b. Comment:

DISTRIBUTED TO: President's Staff
                 Dean's Counsel
                 Registrar

Distribution Date: 3/2/04
Signed: ____________________________ Date: 3/5/04
(Dr. Paul Yu, President, SUNY College at Brockport)
FACULTY SENATE OFFICE
RESOLUTION PROPOSAL COVER PAGE

DEADLINE FOR SUBMISSIONS: MARCH 1 - Proposals received after March 1 may not be reviewed until next semester.

Submit all proposals to the Faculty Senate President electronically or on a disk with a hard copy. Please provide cover page information requested.
facprez@brockport.edu, fsenate@brockport.edu
Faculty Senate Office, 426 Allen Building

1. PROPOSAL TITLE:
   Please be somewhat descriptive, for example, Graduate Probation/Dismissal Proposal rather than Graduate Proposal.

   33-Hour Master of Science Degree in Education: 7-12 Adolescence Science Education

2. BRIEF DESCRIPTION OF PROPOSAL:
   The revised 33-Hour program is intended to make it possible for secondary science teachers in grades 7-12 to complete the requirements for the professional certificate.

3. SUBMISSION & REVISION DATES:
   PLEASE DATE ALL UPDATED DOCUMENTS and resubmit to the Senate Office electronically prior to Senate review and vote at fsenate@brockport.edu.

<table>
<thead>
<tr>
<th>First Submission</th>
<th>Updated on</th>
<th>Updated on</th>
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<tbody>
<tr>
<td>January 16, 2004</td>
<td>3/1/04</td>
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4. SUBMITTED BY: (contact person)

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Phone</th>
<th>Email</th>
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</thead>
<tbody>
<tr>
<td>Dr. Scott D.Robinson</td>
<td>Education and Human Development</td>
<td>X5547</td>
<td><a href="mailto:srobinso@brockport.edu">srobinso@brockport.edu</a></td>
</tr>
</tbody>
</table>

5. COMMITTEES TO COPY: (Senate office use only)

<table>
<thead>
<tr>
<th>Committee</th>
<th>Forwarded To</th>
<th>Date</th>
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<tbody>
<tr>
<td>_ Budget</td>
<td>Committee Chair</td>
<td>1/28/04</td>
</tr>
<tr>
<td>_ College Environment</td>
<td>Executive Committee</td>
<td>3/8/04</td>
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<tr>
<td>_ Enrollment Policies</td>
<td>Senate Floor</td>
<td>3/22/04 - Announcement</td>
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<td>_ General Education</td>
<td>College President</td>
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<td><em>x</em> Graduate Curriculum</td>
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<td>_ Personnel Policies</td>
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<td>_ Student Policies</td>
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<td>_ Undergraduate Curriculum</td>
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*(ROUTING NUMBER WILL BE A CHRONOLOGICAL NUMBER SEQUENCE FOLLOWED BY COMMITTEE INITIALS)*
Current Program: M.S. in Education Secondary Science grades 7-12
Revised Program: M.S. in Education Adolescence Science grades 5-12

Description in Graduate Catalog—Previously Registered Program
This program leads to permanent Science (Biology, Earth Science, Chemistry, or Physics) 7-12 certification. The Plan of Study must include at least four courses in each of two areas: liberal arts (relevant science discipline) and professional science education. To meet the requirements for permanent certification, students are required to take courses in the following areas: Understanding Education Research, Issues in Science Education, Project/Thesis Seminar for Science Education.

Description for Reregistered Program
This program leads to professional (and, under certain conditions, permanent) certification in Science (Biology, Earth Science, Chemistry, or Physics) 7-12 or 7-12 with 5-6 extension. The Plan of Study must include at least four courses in each of two areas: liberal arts (relevant science discipline) and professional science education. To meet the requirements for professional certification, students are required to take courses in the following areas: Understanding Education Research, Issues in Science Education, Project/Thesis Seminar for Science Education.

<table>
<thead>
<tr>
<th>Previously Registered Program: Liberal Arts</th>
<th>Reregistered Program: Liberal Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earth Science Dept., Biology Dept., Physics Dept., Education Dept. or other department with approval of advisor (12-18)</td>
<td>Earth Science Dept., Biology Dept., Chemistry Dept., Physics Dept., Education Dept. or other department with approval of advisor (12-18)</td>
</tr>
</tbody>
</table>

Choices are given in either program. In the revised (Reregistered) program, choices are more specific based on discussions between Education and Science Department faculty about courses that combine pedagogy and content.

<table>
<thead>
<tr>
<th>Professional Education (12-18)</th>
<th>Professional Education (12-18)</th>
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<tbody>
<tr>
<td>EDI 685 Statistics and Research Design Prepares graduate students for interpreting and applying basic statistical tests, including correlation, regression, chi-square and t-ratio. Studies these statistical procedures in the context of various research designs. 3 Cr.</td>
<td>EDI 685 Statistics and Research Design Students will learn about qualitative and quantitative methods of doing research in education and will examine action research that pertains to their own teaching and their action research interests. As a component of each course, students will do an action research project related to their discipline. Students will formulate their own action research question for possible use with their project/thesis and develop a literature review for the question, including an evaluation of the research they are reading. 3 Cr.</td>
</tr>
<tr>
<td>EDI 617 Advanced Methods in Teaching Secondary School Science Explores the methods, materials and techniques for the teaching of secondary school science. Includes topics such as the psychological aspects of teaching and learning, systematic classroom management and effective instruction. 3 Cr.</td>
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</tr>
<tr>
<td>EDI 623 Reading Research in Secondary Science Education Prerequisite: EDI 617 or equivalent. Examines current research and experimentation in secondary science education. Analyzes methods procedures, implications, and applications for the teaching of science in the secondary school. 3 Cr.</td>
<td>EDI 623 Reading Research in Secondary Science Education Prerequisite: EDI 617 or equivalent. Examines innovative instructional, curricular, and assessment practices. Applies research-based science education instructional methods or curricular topics through an action research project within a study group. Candidates submit proposals for research projects. 3 Cr.</td>
</tr>
<tr>
<td>EDI 793 Seminar in Secondary Science Education-</td>
<td>EDI 793 Project/Thesis Seminar for Science Education</td>
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</tbody>
</table>
| **Project/Thesis** | Designed to be a culminating experience. Expects creative, innovative, and extensive individual work at the highest level of proficiency. Offers three options for meeting the requirements of this course: a Curriculum Project, an Analytical Review of Professional Literature, or a Professional Teaching Portfolio. 3 Cr. | **Prerequisite:** EDI 623 and 18 additional hours of graduate credits
Final professional education course for adolescence science education students. Explores an area of individual interest in-depth and requires the preparation of a selected topic related to the teaching and learning of science. 3 Cr. |
| EDI Breadth courses | EDI Breadth Courses |
| Plus 3 credits maximum electives | Plus 3 credits maximum electives |
| **Total 33 credits** | **Total 33 credits** |
January 22, 2004

President
Faculty Senate
SUNY College at Brockport

Dear Mr. President:

We are required by The State Department of Education to submit revised 33-hour Master of Science Degree programs for professional certification in the following areas:

   Childhood Education
       Childhood Education with Bilingual Extension (30-Hour Master’s Degree Program)
   Adolescence Education, including English Education, Mathematics Education, Science Education, and Social Studies Education.

The proposals that we are submitting to the Faculty Senate contain minor revisions and, basically, are the same programs that currently exist, with three exceptions: a new course in English Education, a new course in Childhood Education, and a new course in Bilingual (Spanish). All other courses are exactly the same.

Please find in the packet of proposals the following:

1. Completed Faculty Senate Proposal Covers for each of the above-mentioned programs.
2. Side-by-Side Comparisons of old and new programs.
3. Rationale for the changes.
4. Evidence of demand for the new focus or emphasis.
5. Potential clientele.
6. Description of new courses.
7. Staffing issues.
8. Academic Administration commentary.
9. Resources and facilities needed to initiate the programs.
10. Competition from other Rochester area colleges.

Sincerely,

William R. Veenis, Jr.
Interim Chairperson
Additional Information and Explanations

Faculty Senate Proposal Cover Letter

Included in proposal packet.

Side-by-Side Comparisons of the Old and New Programs

Included in proposal packet.

Rationale for Changes

The only changes to the programs are the three courses, EDI 678 Issues in English Education, EDI 600 Understanding Educational Research, and EDI 6XX Bilingual Methods of Teaching Content Areas. Two of these courses were added so that the English Education and Childhood programs could, like the other MS Education programs, have courses that are pre-requisites for EDI 791 and EDI 703, the culminating project/thesis courses. A 50-hour practicum experience will now be required for students in the Bilingual (Spanish) program.

Evidence of Demand for the New Emphasis or Focus

Graduate students find it difficult to complete the project or thesis in a timely manner. Part of their problem is that they haven’t given much thought to the subject of their project or thesis until the day that they register for the course. The pre-requisite course is intended to have them start thinking about and doing some preliminary research on a topic of interest.

Potential Clientele

These would be the same as they have always been: Teachers who must complete the master’s degree as one requirement for professional certification.

Description of New Courses

EDI 678 Issues in English Education: Examines contemporary instructional, curricular, and assessment issues. Combines theory and practice in a manner designed to lead students toward formulating their culminating master’s projects or theses. 3 Credits.

EDI 600 Understanding Educational Research

Students will learn about qualitative and quantitative methods of doing research in education and will examine action research Students will learn about qualitative and quantitative research in education through examination of action research that pertains to their own teaching and their action research interests. As a component of each course, students will do an action research project related to their discipline. Students will formulate their own action research question for possible use with their project/thesis and develop a literature review for the question, including an evaluation of the research they are reading. 3 Cr.

EDI 6XX Bilingual Methods of Teaching Content Areas

Must include a 50-hour practicum experience. Suggested that students rotate through classrooms teaching lessons in the 4 primary content areas of Childhood Education. Optional practicum is now required. Course
will be developed.

Staffing Issues

Full-time and part-time faculty, as they have always been, will staff the courses. The pre-requisite and culminating courses will be staffed with full-time faculty. There will be no additional staffing needed.

Academic Administration Commentary

    Letter of Review/Comment from the Chair – Included in the proposal packet.
    Letter of Review/Comment from the Dean of the School of Professions – Included in the proposal packet.

Letters of Support from Cooperating Departments

Because the revisions to the proposed programs are considered minor, no letters of support have been requested. Students would still have to satisfactorily complete 12-15 credits in their major or relevant liberal arts discipline.

Competition from other Rochester Area Colleges

Many more graduate students apply to Brockport’s MS Certification Programs than are always accepted. We traditionally matriculate between forty and fifty graduate students for each of the two registration periods every year. There is no evidence that anything would change.