MEMORANDUM

TO:       Donna Wiseman
          Dean, College of Education

FROM:     Phyllis Peres
          Associate Provost for Academic Planning and Programs

SUBJECT:  Proposal to establish an integrated B.S. in Agricultural Science and Technology and M.Ed. in Curriculum and Instruction program (PCC log no. 07081)

In its meeting on May 16, the Senate Committee on Programs, Curricula and Courses approved your proposal to establish an integrated B.S. in Agricultural Science and Technology and M.Ed. in Curriculum and Instruction program. A copy of the approved proposal is attached.

The change is effective Fall, 2008. The College should ensure that the change is fully described in the Undergraduate and Graduate Catalogs and in all relevant descriptive materials, and that all advisors are informed.

CWR/

Enclosure

cc:       Carmen Balthrop, Chair, Senate PCC Committee
          Sarah Bauder, Office of Student Financial Aid
          Reka Monfort, University Senate
          Barbara Hope, Data Administration
          Denise Nadasen, Institutional Research & Planning
          Anne Turkos, Archives
          Linda Yokoi, Office of the Registrar
          Scott Wolfert, Undergraduate Studies
          Mary Ann Ottinger, Graduate School
          Katiy Angeletti, College of Education
          David Cooper, College of Education
          Leon Slaughter, College of Agriculture and Natural Resources
THE UNIVERSITY OF MARYLAND, COLLEGE PARK
PROGRAM/CURRICULUM PROPOSAL

DIRECTIONS:
- Provide one form with original approval signatures in lines 1-4 for each proposed action. Keep this form to one page in length.
- Early consultation with the Office of the Associate Provost for Academic Planning & Programs is strongly recommended if there are questions or concerns, particularly with new programs.
- Please submit the signed form to Claudia Rector, Office of the Associate Provost for Academic Planning and Programs, 1119 Main Administration Building, Campus.
- Please email the rest of the proposal as an MSWord attachment to pcc-submissions@umd.edu.

DATE SUBMITTED March 11, 2008

COLLEGE/SCHOOL College of Education

DEPARTMENT/PROGRAM EDCI

PROPOSED ACTION (A separate form for each) ADD _____ DELETE _____ CHANGE _X_

DESCRIPTION (Provide a succinct account of the proposed action. Details should be provided in an attachment. Provide old and new sample programs for curriculum changes.)

Add a track in Agricultural Sciences and Technology to the existing Five year Integrated Program. This would lead to a Bachelor's Degree in Agricultural Sciences and Technology and Master's in Curriculum and Instruction.

JUSTIFICATION/REASONS/RESOURCES (Briefly explain the reason for the proposed action. Identify the source of new resources that may be required. Details should be provided in an attachment.)

The need for agriculture teachers in Maryland is growing (see attached proposal for details). As enrollment is projected to be small existing agriculture, science, and education courses will accommodate these students.

APPROVAL SIGNATURES - Please print name, sign, and date

1. Department Committee Chair Linda R. Valli
   Linda Valli: March 13, 2008

2. Department Chair
   [Signature]
   3/13/08

3. College/School PCC Chair
   [Signature]
   9/8/08

4. Dean
   [Signature]
   9/18/08

5. Dean of the Graduate School (if required)
   Chair, Senate PCC
   [Signature]
   5/15/08

7. Chair of Senate
   [Signature]
   6/12/08

8. Vice President for Academic Affairs & Provost
   [Signature]
   6/12/08
Proposals for Agriculture / Science Education
Teacher Preparation Programs

Introduction

The need for agriculture teachers in Maryland is growing. According to the President of the Board of Directors of the Maryland Agricultural Education Foundation, “One-third of the State’s agriculture teachers are eligible to retire. Another third of the teachers have fewer than five years teaching experience, a period when many young teachers drop out of education. Having an Agriculture Education program at UM will increase the interest of potential educators within Maryland, help to retain our home-grown talent and fill a growing need for Agriculture teachers.”

Based on these considerations, the College of Agriculture and Natural Resources has worked with the College of Education to develop a program to prepare students for teaching careers. To this end, we propose that the Agricultural Sciences and Technology major be combined with a major in science education. Two options are proposed:

1. Four-Year Double Major in Agricultural Sciences and Technology and Secondary Education-Science, and
2. Five Year-Integrated Program, with a Bachelor’s Degree in Agricultural Sciences and Technology and Master’s in Curriculum and Instruction.

Both of these tracks will lead to teacher certification in Agriculture Education (grades 7-12). This proposal addresses (2), the five year integrated program.1

FIVE YEAR-INTEGRATED PROGRAM, WITH A BACHELOR’S DEGREE IN AGRICULTURAL SCIENCES AND TECHNOLOGY AND MASTER’S IN CURRICULUM AND INSTRUCTION

The five-year integrated program consists of:

- 60-61 credits in Science/Agriculture-Related Courses
- 12 credits in Education
- 24 CORE General Education (excludes Adv Studies & double-counted courses for major)
- 23-24 credits of electives
- 120 Total Credits at Bachelor’s Level
- 30 credit Master’s Program in Curriculum & Instruction

Specific details are provided below. The attached Appendix includes a sample 5 year plan for the proposed program.
I. 60-61 Credits in Science/Agriculture-Related Courses: Pre-Professional / Subject Area Courses

ANSC 101/103: *Principles of Animal Science and Lab* (2/1)  
ANSC 240: *Dairy Cattle Management* or ANSC 220 *Livestock Management* (3)  
ANSC 340: *Health Management of Animal Populations* or AREC Restricted Elective (3)  
ANSC Restricted Elective (3)  
ANSC/PLSC/LARC Restricted Elective (3)  
*Total Credits: 15 credits*

AREC 250: *Elements of Agricultural and Resource Economics* (3)  
*Total Credits: 3 credits*

BSCI 105: *Principles of Biology I* (4)  
BSCI 106: *Principles of Biology II* (4)  
Enteromology Requirement (3)  
*Total Credits: 11 credits*

CHEM 131/132: *Chemistry I and General Chemistry I Lab* (3/1)  
CHEM 104: *Fundamentals of Organic and Biochemistry* (4)  
*Total Credits: 8 credits*

ENBE 200: *Fundamentals of Agricultural Mechanics* (3)  
*Total Credits: 3 credits*

ENST 200: *Fundamentals of Soil Science* (4)  
*Total Credits: 4 credits*

PLSC 101: *Introductory Crop Science* (4)  
PLSC 420: *Plant Pathology* or AREC Restricted Elective (4/3)  
PLSC 460: *Application of Knowledge in Plant Sciences* (3)  
PLSC 453: *Weed Science* (3)  
PLSC Restricted Elective (3)  
*Total Credits: 16-17 credits*

II. 12 Credits in Education (completed at the bachelor’s level)

1) *Pre-Professional Education Courses* (9 credits)

EDCI 488L/697 – *Embracing Diversity in Classroom Communities* (3)  
EDHD 413 - *Adolescent Development* (3)  
EDCI 463/661 - *Reading in the Secondary School* (3)
2) Professional Education Requirements  (3 credits)

EDCI 411 – Knowledge, Reasoning, and Learning in Science (3)
OR EDCI 680 – Teaching and Learning in Secondary Schools (3)

III. 24 CORE Liberal Arts and Studies Requirements

CORE General Education (24 credits)
(46 credits – less Advanced Studies and 16 credits double-count for CORE Diversity, SB & Math/Science categories = 24 credits)

1) Fundamental Studies
- ENGL 101 or equivalent (3 credits)
- Math 113 Fundamental Studies (3 credits)
- ENGL 391 or 393 (3 credits)

2) Distributive Studies
- Literature, Arts, and Humanities (9 credits)
- Mathematics and Sciences (10 credits)
  (double-counted with major requirements)
- Social and Behavioral Sciences (9 credits)
  (includes AREC 250 SB double-count)

3) Advanced Studies
   Not Applicable (not required for double majors)

4) Diversity Requirement
   3 credits  (to be double-counted with CORE Distributive Studies)

IV. Elective Credits: approximately 23-24 credits

V. Master’s Portion of Five-Year Integrated Program (30 credits)

Fall:
EDCI 788V: Content Area Methods II: Science – (3)
EDCI 763: Reading, Cognition, & Instruction – Reading in the Content Areas (3)
EDCI 611: Studying Student Learning in Diverse Settings – (3)
EDCI 688: Internship Practicum – (2/3 time placement) (3)

Spring:
EDCI 670: Trends in School Curriculum, Science (3)
EDCI 696: Conducting Research on Teaching – (3)
EDCI 689: Internship (2/3 time placement) (6)

Summer:
EDCI 784 – Teaching, Professional Development and Social Change (3)
EDCI 689: Internship (3)

NOTE: Students apply for admission to the Integrated Master’s Program in Curriculum and Instruction during the Junior year of the five-year program. Detailed information regarding the admission process is available in the Department of Curriculum and Instruction.
## Appendix: Agricultural Sciences and Technology and Secondary Education: Science Education 5 Year Integrated Program Sample 5-Year Plan

### Year 1

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Fall Cr</th>
<th>Spring Cr</th>
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<tbody>
<tr>
<td>CHEM 131/132</td>
<td>Chemistry I and General Chemistry I Lab</td>
<td>3/1</td>
<td>CHEM 104 Fundamentals of Organic and Biochemistry</td>
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<tr>
<td>PLSC 101</td>
<td>Introductory Crop Science</td>
<td>4</td>
<td>CORE (HA)</td>
</tr>
<tr>
<td>MATH 113</td>
<td>College Algebra and Applications</td>
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<td>Elective</td>
</tr>
<tr>
<td>ANSC 101/103</td>
<td>Principles of Animal Science and Lab</td>
<td>2/1</td>
<td>BSCI 106 Principles of Biology II</td>
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<td></td>
<td></td>
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<td>ENGL 101 Intro. to Writing-CORE</td>
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### Year 2

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<tr>
<td>BSCI 105</td>
<td>Principles of Biology I</td>
<td>4</td>
<td>AREC 250 (SB) Elements of Agricultural &amp; Resource Economics</td>
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<tr>
<td>ENBE 200</td>
<td>Fundamentals of Agricultural Mechanics</td>
<td>3</td>
<td>NRSC 200 Fundamentals of Soil Science</td>
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<td>ANSC 240</td>
<td>Dairy Cattle Management</td>
<td>3</td>
<td>PLSC Restricted Elective(^b)</td>
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<td>CORE (HO)</td>
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<td>CORE SB</td>
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<td>ENTOMOL(^c)</td>
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*Can be replaced by ANSC 220 and taken in the fall of year 4.  
*Restricted Electives are restricted to classes with the designated prefix.  
*The entomology requirement can be met by taking BSCI 120 (Insects), BSCI 337 (Biology of Insects), or BSCI 497 (Insect Pests of Ornamentals and Turf)
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<th>Year3</th>
<th>Fall</th>
<th>Cr</th>
<th>Spring</th>
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<td>PLSC 420* Plant Pathology or AREC Restricted Elective</td>
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<td>ANSC 340* Health Management of Animal Populations or AREC Restricted Elective</td>
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<td>CORE (HL)</td>
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<tr>
<td>ENGL 391/393 Advanced Comp/Technical Writing CORE</td>
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<td>PLSC 460 (Adv. CORE) Application of Knowledge in Plant Sciences</td>
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<td>ANSC/PLSC/LARC Restricted Elective</td>
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<td>Elective</td>
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<td>13/14</td>
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<th>Cr</th>
<th>Spring</th>
<th>Cr</th>
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<td>PLSC 453 Weed Science</td>
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<td>EDCI 488L/697 Diversity</td>
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<tr>
<td>EDCI 411/680 Knowledge, Reasoning, and Learning in Science</td>
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<td>Electives</td>
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<tr>
<td>EDHD 413 Adolescent Development</td>
<td>3</td>
<td>EDCI 463/661 Reading in the Secondary School</td>
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<tr>
<td>ANSC Restricted Elective</td>
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<tr>
<td>Elective</td>
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<td>15</td>
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(Assumes CORE Diversity is double-counted with other CORE Distributive Studies Requirement)

**Master’s Portion of Five-Year Integrated Program (30 credits)**

**Fall:**
- EDCI 788V: Content Area Methods II: Science – (3)
- EDCI 763: Reading, Cognition, & Instruction – Reading in the Content Areas (3)
- EDCI 611: Studying Student Learning in Diverse Settings – (3)
- EDCI 688: Internship Practicum – (2/3 time placement) (3)

**Spring:**
- EDCI 670: Trends in School Curriculum, Science (3)
- EDCI 696: Conducting Research on Teaching – (3)
- EDCI 689: Internship (2/3 time placement) (6)

**Summer:**
- EDCI 784: Teaching, Professional Development and Social Change (3)
- EDCI 689: Internship (3)
March 6, 2008

Dr. Donna Wiseman, Interim Dean
College of Education
University of Maryland
3119 Benjamin Building
College Park, MD 20745

Dear Dr. Wiseman:

The Board of Directors of the Maryland Agricultural Teachers Association is pleased to support the proposed Agricultural Teacher Education Program at the University of Maryland, College Park. We are very pleased and excited about the opportunities this program presents to our current and future teachers of agricultural education in Maryland.

The need for teachers trained and certified in agricultural education in our state and nationwide continues to grow. Of the approximately seventy agricultural teachers in Maryland, currently one third are eligible to retire, while another third have five or less years of teaching experience. An average of seven new teachers have been hired in Maryland each of the last five years. In order to fill these vacancies, approximately sixty students are needed in the "pipeline," since annually about one half of the graduates are employed in other areas of agriculture. National reports indicate agricultural education graduates are in high demand by other agricultural professions as well. Furthermore, there is a national and state initiative to increase the number of quality high school agricultural education programs and teachers by forty percent by 2015. Thus, the need for even more teachers than stated above is a real possibility. This growth is requested and supported by the National Council on Agricultural Education and agricultural businesses nationwide. Employees with all levels of education in agriculture are in high demand.

Currently, eight to ten Maryland high school graduates are annually completing agricultural teacher education programs in universities outside of Maryland. Unfortunately they seldom return to teach in Maryland because the demand for teachers is also high in the state where they received their degree. It is our belief that having an agricultural education teacher preparation program at UMCP will increase the interest of students to consider teaching, help retain high school graduates for postsecondary education in Maryland, and assist in preparing local talent to fill a continuing and growing need for agricultural teachers in Maryland.

We, as a Board and as members of the profession, are very excited and pleased with the collaborative efforts between the College of Education and the College of Agriculture and Natural Resources to create this new initiative. We believe agricultural education in Maryland has a bright future as a result of your efforts. Please feel free to contact me, if we can be of assistance as you finalize and implement this program. Once again, thank you for your leadership and support towards this educational initiative.

Sincerely,

[Signature]

Jay Davis, President
Maryland Agricultural Teachers Association

Cc:
Dr. Wei, Dr. Slaughter, Dr. Angeletti, Dr. Glenn, David Miller and George Mayo
January 9, 2008

Dr. Donna L. Wiseman
Professor and Interim Dean
College of Education
3119 Benjamin Building
University of Maryland
College Park, MD 20742-1121

Dear Dr. Wiseman:

I am writing to express my support for the creation of a dual secondary education major option in agricultural education that will involve contributions from the College of Education and the College of Agriculture and Natural Resources.

As previously discussed, students will begin their studies in either the department of Agricultural and Resource Economics or the Department of Plant Science and Landscape Architecture. Students will choose academic content majors in either Agricultural Science and Technology or Business Management. It is my understanding that any degree-seeking student wishing to pursue a secondary education major must meet the admission requirements of the College of Education.

I look forward to a smooth and successful approval process which will give students the opportunity to pursue careers in agricultural education and help the state meet its need for secondary education teachers with subject area expertise in science.

Sincerely,

Cheng-i Wei, Ph.D.
Dean and Director

CW/le
cc: Leon Slaughter
February 18, 2008

Donna Wiseman, Interim Dean
College of Education
University of Maryland
3119 Benjamin Building
College Park, Maryland 20745

Dear Dr. Wiseman

SUBJECT: Agriculture Education Program

The Board of Directors of the Maryland Agricultural Education Foundation, Inc. is pleased to offer its support for the Agriculture Teacher Education Program as proposed at the University of Maryland College Park.

There is a growing need for agriculture teachers in Maryland. Currently, one third of the State’s agriculture teachers are eligible to retire. Another third of the teachers have fewer than five years teaching experience, a period when many young teachers drop out of education.

There are many students from our state majoring in Ag Education at colleges and universities surrounding Maryland. Most of these students do not return to their home state to teach following graduation. Having an Ag Education program at UMCP will increase the interest of potential educators within Maryland, help to retain our home-grown talent and fill a growing need for Ag teachers.

We are very excited about your collaboration with the College of Agriculture and Natural Resources to prepare students for teaching agriculture in Maryland. Please contact us if we can be helpful in moving this program forward. Thank you for your participation commitment.

Sincerely,

C. John Sullivan, III
President

Cc: Dr. Wei, Dr. Slaughter, Dr. Angeletti, Dr. Glenn, David Miller, George Mayo
Hi Steve,

Thanks for the use of your office last week. It was good to see you!

As my promised follow-up, MSDE is pleased that the College of Education is preparing new programs for people who want to become teachers of Chinese and Agriculture. As you take the internal and external approval steps, please let us know if you have any questions or need support. We are pleased to partner with you on this exciting new program.

I have tracked the College's interest in these areas and recently reviewed the draft plan you have for Chinese. Interestingly, MSDE has just adopted ACFTL Chinese language assessments for certification, the Oral Proficiency Interview and the Written Proficiency Test. Also, we have had staff attending meetings about adding Agriculture. As I mentioned in your office, these new program areas will need to meet standards of their fields as well as requirements of the Redesign of Teacher Education.

Jennie

Virginia H. Pilato, Ph.D.
Director of Certification and Accreditation
Maryland State Department of Education
200 W. Baltimore Street
Baltimore, Maryland 21201
410-767-0350
vphilato@msde.state.md.us