June 11, 2008

MEMORANDUM

TO: Donna Wiseman  
Dean, College of Education

FROM: Phyllis Peres  
Associate Provost for Academic Planning and Programs

SUBJECT: Proposal to establish an articulated double major in Secondary Education with the B.S. in Agricultural Science and Technology (PCC log no. 07080)

In its meeting on May 16, the Senate Committee on Programs, Curricula and Courses approved your proposal to establish an articulated double major in Secondary Education with the B.S. in Agricultural Science and Technology. 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 Catalog 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 Montfort, University Senate  
Barbara Hope, Data Administration  
Denise Nadasen, Institutional Research & Planning  
Anne Turkos, Archives  
Linda Yokoi, Office of the Registrar  
Scott Wolpert, Undergraduate Studies  
Kathy 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 Reeder, 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.

DATESubmitted 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 to the existing undergraduate dual major program in Secondary Education, specifically in science education. The Agricultural Sciences and Technology/Secondary Education dual major option would be added to the existing dual-major options in Secondary Education and Biology, Physics, Geology and Chemistry.

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
3. College/School PCC Chair
4. Dean
5. Dean of the Graduate School (if required)
6. Chair, Senate PCC
7. Chair of Senate
8. Vice President for Academic Affairs & Provost
COLLEGE OF AGRICULTURE AND NATURAL RESOURCES
&
COLLEGE OF EDUCATION
DEPARTMENT OF CURRICULUM & INSTRUCTION

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 (1), the four-year double Major in Agricultural Sciences and Technology and Secondary Education-Science.¹

FOUR-YEAR DOUBLE MAJOR IN AGRICULTURAL SCIENCES AND TECHNOLOGY AND SECONDARY EDUCATION-SCIENCE

The double major program in Agricultural Sciences and Technology and Secondary Education-Science consists of:

- **60-61 credits in Science/Agriculture-Related Courses**
- **35 credits in Education**
- **21 CORE General Education** *(excludes Adv Studies & double-counted courses for major)*
- **3-4 Elective Credits**
- **120 Total Credits**

Specific details are provided below. The attached Appendix includes a sample 4 year plan for the proposed degree program.

¹ The proposed track in TESOL will adhere to the Middle States Student Learning Outcomes Assessment Plans that have already been established for the science education double major undergraduate program in Curriculum and Instruction.
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)
Entomology 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. 35 Credits in Education

1) Pre-Professional Education Courses (12 credits)

EDPS 210 – Historical & Philosophical Perspectives on Education (3)
EDHD 413 - Adolescent Development (3)
EDHD 426 - Cognition and Motivation in Reading: Reading in Content Areas I (3)
EDCI 463 - Reading in the Secondary School (3)
2) **Professional Education Requirements** (23 credits)

a) PROFESSIONAL COURSES:

   EDCI 411 – *Knowledge, Reasoning, and Learning in Science* (3)
   EDCI 375 – *Field Experience in Science Education* (1)

b) STUDENT TEACHING SEMESTER:

   EDCI 488J – *Focus Group in Science Education* (2)
   EDCI 471 - *Student Teaching in Secondary Schools: Science* (12)
   EDCI 474 – *Inclusion, Diversity, and Professionalism* (2)

III. 21 CORE Liberal Arts and Studies Requirements

CORE General Education (21 credits)

(46 credits – less Advanced Studies and 19 credits double-count for CORE Diversity, HO, SB, & Math/Science categories = 21 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)
     *(includes EDPS 210 HO double-count)*
   - 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 Credit: approximately 3-4 credits
## Appendix: Agricultural Sciences and Technology and Secondary Education: Science Education Double Major Sample 4-Year Plan

<table>
<thead>
<tr>
<th>Year</th>
<th>Fall</th>
<th>Cr</th>
<th>Spring</th>
<th>Cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CHEM 131/132 Chemistry I and General Chemistry I Lab</td>
<td>3/1</td>
<td>CHEM 104 Fundamentals of Organic and Biochemistry</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>PLSC 101 Introductory Crop Science</td>
<td>4</td>
<td>CORE (HA)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>MATH 113 - CORE College Algebra and Applications</td>
<td>3</td>
<td>CORE (HL)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>ANSC 101/103 Principles of Animal Science and Lab</td>
<td>2/1</td>
<td>BSCI 106 Principles of Biology II</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>ENGL 101 Intro. to Writing-CORE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>14</td>
<td></td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>BSCI 105 Principles of Biology I</td>
<td>4</td>
<td>AREC 250 (SB) Elements of Agricultural &amp; Resource Economics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>ENBE 200 Fundamentals of Agricultural Mechanics</td>
<td>3</td>
<td>ENST 200 Fundamentals of Soil Science</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>ANSC 240 Dairy Cattle Management</td>
<td>3</td>
<td>PLSC Restricted Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>EDPS 210 (HO) Historical and Philosophical Perspectives on Education</td>
<td>3</td>
<td>CORE SB</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>CORE SH</td>
<td>3</td>
<td>Entomology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td></td>
<td>16</td>
<td></td>
</tr>
</tbody>
</table>

*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)
<table>
<thead>
<tr>
<th>Year 3</th>
<th>Fall</th>
<th>Cr</th>
<th>Spring</th>
<th>Cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective</td>
<td>3/4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PLSC 420&lt;sup&gt;d&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Pathology</td>
<td>4/3</td>
<td></td>
<td>EDHD 413</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
<td>Adolescent Development</td>
<td>3</td>
</tr>
<tr>
<td>AREC Restricted Elective&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
<td></td>
<td>ANSC 340&lt;sup&gt;d&lt;/sup&gt;</td>
<td>3</td>
</tr>
<tr>
<td>EDCI 411 Knowledge, Reasoning, and Learning in Science</td>
<td>3</td>
<td></td>
<td>ANSC Restricted Elective&lt;sup&gt;b&lt;/sup&gt;</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 391/393 Advanced Composition/Technical Writing CORE</td>
<td>3</td>
<td></td>
<td>EDCI 463 Reading in the Secondary School</td>
<td>3</td>
</tr>
<tr>
<td>EDHD 426 Cognition and Motivation in Reading: Reading in Content Areas I</td>
<td>3</td>
<td></td>
<td>PLSC 460 (Adv. CORE) Application of Knowledge in Plant Sciences</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 4</th>
<th>Fall</th>
<th>Cr</th>
<th>Spring</th>
<th>Cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLSC 453 Weed Science</td>
<td>3</td>
<td></td>
<td>EDCI 488J Focus Group in Science Education</td>
<td>2</td>
</tr>
<tr>
<td>ANSC Restricted Elective&lt;sup&gt;b&lt;/sup&gt;</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDCI 375 Field Experience in Science Education</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

16 12

<sup>a</sup>This requirement can be met by taking PLSC 420 or ANSC 340.

<sup>b</sup>Assumes CORE Diversity is double-counted with other CORE Distributive Studies Requirement.
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 know that we are supportive - contact me when you are ready to pursue full MSDE approval, which - as I've said before - we can do with you and finalize with official approval letters. 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
410-767-0390
vpilato@msde.state.md.us
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
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,

Jay Davis, President
Maryland Agricultural Teachers Association

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