June 20, 2014

MEMORANDUM

TO: Jayanth Banavar  
   Dean, College of Computer, Mathematical, and Natural Sciences

   Charles Caramello  
   Associate Provost and Dean, Graduate School

FROM: Elizabeth Beise  
   Associate Provost for Academic Planning and Programs

SUBJECT: Proposal to Establish a Master of Professional Studies in Applied Entomology with Related Post-Baccalaureate Certificates in Professional Studies (PCC log nos. 13047-13051)

On June 3, 2014, Chancellor Kirwan gave final approval to your proposal to offer a new iteration of the Master of Professional Studies with a focus in Applied Entomology. He also gave final approval for the following iterations of the Post-Baccalaureate Certificate in Professional Studies:

- Post-Baccalaureate Certificate in Professional Studies, focus on Beekeeping
- Post-Baccalaureate Certificate in Professional Studies, focus on Integrated Pest Management
- Post-Baccalaureate Certificate in Professional Studies, focus on Organic and Sustainable Agriculture
- Post-Baccalaureate Certificate in Professional Studies, focus on Urban Agriculture

These programs are effective Fall 2014. Please ensure that the programs are fully described in the Graduate Catalog and in all relevant descriptive materials, and that all advisors are informed.

MDC/
Enclosure

cc: Marilee Lindemann, Chair, Senate PCC Committee  
   Barbara Gill, Office of Student Financial Aid  
   Reka Montfort, University Senate  
   Erin Howard, Division of Information Technology  
   Pam Phillips, Institutional Research, Planning & Assessment
Anne Turkos, University Archives
Linda Yokoi, Office of the Registrar
Alex Chen, Graduate School
Paul Smith, College of Computer, Mathematical, and Natural Sciences
Leslie Pick, Department of Entomology
Dr. Wallace D. Loh
President
University of Maryland, College Park
1101 Main Administration Building
CAMPUS

Dear Wallace:

Thank you for forwarding the request of the University of Maryland, College Park, to offer a new iteration of the existing Master of Professional Studies program and four related iterations of the Post-Baccalaureate Certificate of Professional Studies:

- PBC in Professional Studies, focus on Beekeeping
- PBC in Professional Studies, focus on Integrated Pest Management
- PBC in Professional Studies, focus on Organic and Sustainable Agriculture
- PBC in Professional Studies, focus on Urban Agriculture

I am pleased to approve this recommendation. Please express my appreciation to departmental faculty for their careful work in making this decision.

Sincerely yours,

William E. Kirwan
Chancellor

cc: Joann Boughman, Sr. Vice Chancellor for Academic Affairs
Theresa Hollander, Assoc Vice Chancellor for Academic Affairs
Mary Ann Rankin, Senior Vice President and Provost
Charles Caramello, Assoc. Provost and Dean, Graduate School
Jayanth Banavar, Dean, College of Computer, Mathematical, and Natural Science
THE UNIVERSITY OF MARYLAND, COLLEGE PARK
PROGRAM/CURRICULUM PROPOSAL

- Please submit the signed form to: Office of the Associate Provost for Academic Planning & Programs, 1119 Main Administration Building.
- Please e-mail the rest of the proposal as an MSWord attachment to pcc-submission@umd.edu.

DATE SUBMITTED: ________________

PCC LOG NO. 13047-13051

COLLEGE/SCHOOL: College/School Unit Code—First 8 digits: 01203030
Unit Codes can be found at https://hypprod.umd.edu/Html_Reports/units.htm

DEPARTMENT/PROGRAM: Department/Program Unit code—Last 7 digits: 1360901

TYPE OF ACTION (choose one):
- Curriculum change (including information specializations)
- Renaming of program or formal Area of Concentration
- Addition/deletion of formal Area of Concentration
- Suspend/delete program

Italics indicate that the proposed program action must be presented to the full University Senate for consideration.

SUMMARY OF PROPOSED ACTION:
The Department of Entomology submits this proposal to create an online Professional Studies program in Entomology. The program assists professionals who wish to learn how to define key pests in management systems, how to sample and monitor pests and their impact on the environment, and how to develop effective intervention tactics including cultural, biological, and chemical control. The program will include:

- Master of Professional Studies in Applied Entomology (30 credits--five required courses (including a scholarly paper) and five courses selected from any of the four graduate certificate content areas (see below).
- Graduate Certificate in Professional Studies in Beekeeping (12 credits)
- Graduate Certificate in Professional Studies in Integrated Pest Management (IPM) (12 credits)
- Graduate Certificate in Professional Studies in Organic and Sustainable Agriculture (12 credits)
- Graduate Certificate in Professional Studies in Urban Agriculture (12 credits)

APPROVAL SIGNATURES: Please print name, sign, and date

1. Department Committee Chair: ________________ T. O'BRIEN 2/18/2014
2. Department Chair: ________________ L. PICK 2/18/2014
4. Dean: ________________ J___ 2/18/2014
5. Dean of the Graduate School (if required): ________________
6. Chair, Senate PCC: ________________ Manuel 4/14/14
7. Chair of University Senate (if required): ________________ J. Rennie 6/20/2014
8. Vice President of Academic Affairs & Provost: ________________
THE UNIVERSITY OF MARYLAND, COLLEGE PARK
PROGRAM/CURRICULUM PROPOSAL

- Please submit the signed form to: Office of the Associate Provost for Academic Planning & Programs, 1119 Main Administration Building.
- Please e-mail the rest of the proposal as an MSWord attachment to pcc-submission@umd.edu.

DATE SUBMITTED: ___________________________ PCC LOG NO. 13047

COLLEGE/SCHOOL: College/School Unit Code—First 8 digits: 01203030
Unit Codes can be found at https://hvpprod.umd.edu/HtmlReports/units.htm

DEPARTMENT/PROGRAM: Department/Program Unit code—Last 7 digits: 1360901

TYPE OF ACTION (choose one):
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- Renaming of program or formal Area of Concentration
- Addition/deletion of formal Area of Concentration
- Suspend/delete program

Italics indicate that the proposed program action must be presented to the full University Senate for consideration.

SUMMARY OF PROPOSED ACTION:
The Department of Entomology submits this proposal to create an online Master of Professional Studies program in Applied Entomology. The 30-credit master will teach students about the importance of insects and their role in various ecosystems. Students will learn about the physiological and ecological interactions between insects and pathogens and the various approaches for insect control. Students will develop skills and knowledge required for critical thinking for best practices to improve management strategies for agriculture and the control of insect vectors of human and plant disease, while promoting pollinator health. This program will integrate aspects of biochemistry, molecular biology and evolution theory with ecology using insects as a model. Students will complete a total of five required courses (including a scholarly paper) and five courses selected from any of the four graduate certificate content areas (see below).

I. Beekeeping
II. Integrated Pest Management (IPM)
III. Organic and Sustainable Agriculture
IV. Urban Agriculture

APPROVAL SIGNATURES: Please print name, sign, and date

1. Department Committee Chair: [Signature] 2/18/14
2. Department Chair: [Signature] 2/18/14
3. College/School PCC Chair: [Signature] 2/18/14
4. Dean: [Signature] 2/18/14
5. Dean of the Graduate School (if required): [Signature]
6. Chair, Senate PCC: [Signature]
7. Chair of University Senate (if required):

8. Vice President of Academic Affairs & Provost:
DATE SUBMITTED: ____________________________

PCC LOG NO. 13048

COLLEGE/SCHOOL: College/School Unit Code—First 8 digits: 01203030
Unit Codes can be found at https://hypprod.umd.edu/Html_Reports/units.htm

DEPARTMENT/PROGRAM: Department/Program Unit code—Last 7 digits: 1360901

TYPE OF ACTION (choose one):
- Curriculum change (including information specializations)
- Renaming of program or formal Area of Concentration
- Addition/deletion of formal Area of Concentration
- Suspend/delete program

Italics indicate that the proposed program action must be presented to the full University Senate for consideration.

SUMMARY OF PROPOSED ACTION:

The Department of Entomology submits this proposal to create an online Graduate Certificate in Professional Studies in Beekeeping. This 12-credit certificate will teach students about the anatomy and physiology as well as the ecology of the honeybee. Students will be taught how to construct and maintain a hive and best practices for maintaining a healthy colony.

APPROVAL SIGNATURES: Please print name, sign, and date

1. Department Committee Chair: [Signature] T. O'Brien 2/18/14
2. Department Chair: [Signature] L. Pick 2/18/14
3. College/School PCC Chair: [Signature] Paul J. Smith Daniel J. Smith 2/18/14
4. Dean: [Signature] 2/18/14
5. Dean of the Graduate School (if required): ____________________________
6. Chair, Senate PCC: ____________________________
7. Chair of University Senate (if required): ____________________________

Vice President of Academic Affairs & Provost: ____________________________
THE UNIVERSITY OF MARYLAND, COLLEGE PARK
PROGRAM/CURRICULUM PROPOSAL

- Please submit the signed form to: Office of the Associate Provost for Academic Planning & Programs, 1119 Main Administration Building.
- Please e-mail the rest of the proposal as an MSWord attachment to pcc-submission@umd.edu.

DATE SUBMITTED: ____________

PCC LOG NO. 13049

COLLEGE/SCHOOL: College/School Unit Code—First 8 digits: 01203030
Unit Codes can be found at https://hypprod.umd.edu/Html_Reports/units.htm

DEPARTMENT/PROGRAM: Department/Program Unit code—Last 7 digits: 1360901

TYPE OF ACTION (choose one):
- Curriculum change (including information specializations)
- Renaming of program or formal Area of Concentration
- Addition/deletion of formal Area of Concentration
- Suspend/delete program

Italics indicate that the proposed program action must be presented to the full University Senate for consideration.

SUMMARY OF PROPOSED ACTION:

The Department of Entomology submits this proposal to create an online Graduate Certificate in Professional Studies in Integrated Pest Management (IPM). This 12-credit certificate will teach students the techniques of integrated pest management for proper pest control management.

APPROVAL SIGNATURES: Please print name, sign, and date

1. Department Committee Chair: T. O'Brien 2/18/14
2. Department Chair: L. Pick 2/18/14
3. College/School PCC Chair: Paul J. Smith 2/18/14
4. Dean: Joseph P. A. 
5. Dean of the Graduate School (if required): 
6. Chair, Senate PCC: 
7. Chair of University Senate (if required): 
8. Vice President of Academic Affairs & Provost: 

Department of Entomology Master of Professional Studies and Graduate Certificates in Professional Studies, OES-administered, p. 5
The Department of Entomology submits this proposal to create an online Graduate Certificate in Professional Studies in Organic and Sustainable Agriculture. This 12-credits certificate will teach students about sustainability through examining both the ecosystem services provided by beneficial insects, as well as the management of injurious insects.
DATE SUBMITTED: ________________

PCC LOG NO. 13051

COLLEGE/SCHOOL: College/School Unit Code—First 8 digits: 01203030
Unit Codes can be found at https://hvpprod.umd.edu/Html Reports/units.htm

DEPARTMENT/PROGRAM: Department/Program Unit code—Last 7 digits: 1360901

TYPE OF ACTION (choose one):
- Curriculum change (including information specializations)
- Renaming of program or formal Area of Concentration
- Addition/deletion of formal Area of Concentration
- Suspend/delete program

Italics indicate that the proposed program action must be presented to the full University Senate for consideration.

SUMMARY OF PROPOSED ACTION:

The Department of Entomology submits this proposal to create an online Graduate Certificate in Professional Studies in Urban Agriculture. Urban agriculture can be defined shortly as the growing of plants and the raising of animals within and around cities. This 12-credit certificate will provide students with the skills required to maintain plants and beneficial insects in and around settings.

APPROVAL SIGNATURES: Please print name, sign, and date

1. Department Committee Chair: T. O'Brien 2/18/14
2. Department Chair: L. Pick 2/18/14
3. College/School PCC Chair: Paul J. Smith 2/18/14
4. Dean: R. J. Bueno
5. Dean of the Graduate School (if required):
6. Chair, Senate PCC:
7. Chair of University Senate (if required):
8. Vice President of Academic Affairs & Provost:
PROPOSAL FOR

NEW INSTRUCTIONAL PROGRAM

UNIVERSITY OF MARYLAND AT COLLEGE PARK, MARYLAND

Department of Entomology

Master of Professional Studies in Applied Entomology

and

Graduate Certificate in Professional Studies in Beekeeping

Graduate Certificate in Professional Studies in Integrated Pest Management (IPM)

Graduate Certificate in Professional Studies in Organic and Sustainable Agriculture

Graduate Certificate in Professional Studies in Urban Agriculture

PROPOSED INITIATION DATE: Fall 2014
I. OVERVIEW and RATIONALE

A. Briefly describe the nature of the proposed program and explain why the institution should offer it.

The Department of Entomology submits this proposal to create an online Professional Studies program in Entomology that offers a Master of Professional Studies degree and four Graduate Certificates in Professional Studies. The program aims to increase communication and cooperation between field and faculty staff and increase the teaching role of the Entomology Department within the university. Additionally, the program will help the University of Maryland continue to be a competitive university by addressing increasing demand for formal and informal online education and make real and measurable changes at the state, national, and international level through comprehensive, accessible, and credible education. Students enrolled in the academic ENTM masters or Ph.D. program on campus would not be permitted to have credits from this proposed program applied towards their degree.

The 30-credit Master of Professional Studies in Entomology (MPS-Ent) will teach students about the importance of insects and their role in various ecosystems. Students will learn about the physiological and ecological interactions between insects and pathogens and the various approaches for insect control. Students will develop skills and knowledge required for critical thinking for best practices to improve management strategies for agriculture and the control of insect vectors of human and plant disease, while promoting pollinator health. This program will integrate aspects of biochemistry, molecular biology and evolution theory with ecology using insects as a model.

The MPS-Ent will have a total of five required courses (including a scholarly paper) and five courses selected from any of the four graduate certificate content areas (see below).

I. Beekeeping
This 12-credit certificate will teach students about the anatomy and physiology as well as the ecology of the honeybee. Students will be taught how to construct and maintain a hive and best practices for maintaining a healthy colony.

II. Integrated Pest Management (IPM)
This 12-credit certificate will teach students the techniques of integrated pest management for proper pest control management. Integrated Pest Management (IPM) is an effective and environmentally conscientious approach to pest management. Students will learn about the life cycles of insects and their interaction with the environment to determine the most effective pest control methods while taking in consideration the effects of treatments to local ecosystems.

III. Organic and Sustainable Agriculture
This 12-credits certificate will teach students about sustainability through examining both the ecosystem services provided by beneficial insects, as well as the management of injurious insects. Ecological functions of insects in the natural and anthropogenic landscape will be illustrated and discussed. In addition, case histories and discussions will focus on themes of sustainability in successful IPM programs, as well as specific practices that lead to sustainable agriculture. The program will conclude with the development of a list of sustainable practices for conserving and managing insects in the landscape. The certificate will teach students about pest management options that do not require the use of synthetic chemical pesticides and focus on organic alternative.

IV. Urban Agriculture
Urban agriculture can be defined shortly as the growing of plants and the raising of animals within and around cities. This 12-credits certificate will provide students with the skills required to maintain plants and beneficial insects in and around settings. Students will learn about the urban ecosystem and urban policies and plans.

B. How big is the program expected to be (please provide enrollment projections for 5 years)? From what other programs serving current students, or from what new populations of potential students, onsite or offsite, are you expecting to draw?

<table>
<thead>
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<th>Year</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
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II. Curriculum
A. Provide a full catalog description of the proposed program, including educational objectives and any areas of concentration.

This online degree program assists professionals who wish to learn how to define key pests in management systems, how to sample and monitor pests and their impact on the environment, and how to develop effective intervention tactics including cultural, biological, and chemical control. Students will learn how to develop and implement IPM or organic sustainable programs while promoting pollinator health. Students will learn the fundamentals of biology and learn how to integrate specific control tactics to develop comprehensive management strategies. The program’s goal is to prepare urban pest managers to develop successful management approaches for commercial, institutional, and residential buildings.

Master of Professional Studies in Applied Entomology (30 credit Hours)

Required:
ENTM710 Insect Biodiversity, Physiology and Ecology
ENTM715 Insect Diseases and Pathology
ENTM720 Native, Invasive, and Exotic Species
ENTM760 Insects in the 21st Century
ENTM780 Capstone Course (Scholarly paper)

Electives: Students select 5 courses to complete the program. These courses also fulfill requirements for one of four graduate certificate programs.

ENTM725 IPM Practices
ENTM730 Plant Diagnostics
ENTM735 Sustainability
ENTM740 Organic Practices
ENTM745 Bee Biology and Beekeeping
ENTM746 Commercial Beekeeping
ENTM747 Pollinator Health
ENTM748 The history and culture of bees and beekeepers
ENTM750 Urban Pests
ENTM755 Designing an Urban Garden
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**Graduate Certificate in Professional Studies in Beekeeping (12 credit hours)**
Required:
ENTM745 Bee Biology and Beekeeping
ENTM746 Commercial Beekeeping
ENTM747 Pollinator Health
ENTM748 The history and culture of bees and beekeepers

**Graduate Certificate in Professional Studies in Integrated Pest Management (IPM) (12 credit hours)**
Required:
ENTM710 Insect Biodiversity, Physiology and Ecology
ENTM725 IPM Practices
ENTM735 Sustainability
ENTM747 Pollinator Health

**Graduate Certificate in Professional Studies in Organic and Sustainable Agriculture (12 credit hours)**
Required:
ENTM710 Insect Biodiversity, Physiology and Ecology
ENTM735 Sustainability
ENTM730 Plant Diagnostics
ENTM740 Organic Practices

**Graduate Certificate in Professional Studies in Urban Agriculture (12 credit hours)**
Required:
ENTM710 Insect Biodiversity, Physiology and Ecology
ENTM750 Urban Pests
ENTM755 Designing an Urban Garden
ENTM740 Organic Practices or ENTM730 Plant Diagnostics

B. List the courses (number, title, semester credit hours) that would constitute the requirements and other components of the proposed program. Provide a catalog description for any courses that will be newly developed or substantially modified for the program.

The program/course outline by initial cohort for the MPS in ENT and Certificates is as follows:

<table>
<thead>
<tr>
<th>Term</th>
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<th>IPM</th>
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Course offerings will increase in subsequent years based on continued enrollment and future cohort starting dates.

Program Rollout:
The Department of Entomology will roll out the MPS and first three certificates (Integrated Pest Management [IPM], Organic and Sustainable Agriculture, Urban Agriculture) in the fall of 2014 and the fourth certificate (Beekeeping) in the spring of 2015.

The following courses require VPAC approval:

ENTM710 Insect Biodiversity, Physiology and Ecology (3 credits)
A survey course discussing the various families of insects, discuss thing their anatomy and physiology, and their role in ecological systems. Students will examine the ecological and evolutionary perspectives on interactions between plants and vetebrate and invertebrate animals. Further, it explores the applied consequences of animal-plant interactions to agroecology and conservation biology. These goals are achieved by reviewing the theoretical underpinnings of animal-plant interactions, and exposing students to research literature on animal-plant interactions.

ENTM715 Insect Diseases and Pathology (3 credits)
The course will integrate aspects of biochemistry, molecular biology and evolution theory with ecology using pathogens of insects as a model. In this course, students will learn about the various biotic (living) and abiotic (nonliving) factors that can contribute to plant problems, and how to evaluate evidence and distinguish between
These factors to arrive at an accurate diagnosis. The course will explore the direction and goals of innovation in microbial biocontrol as well as the effect of social criticism and considerations of environmental impact on attempts to introduce engineered microorganisms. Students will develop an understanding of the coevolutionary games pathogens and their hosts play. To help achieve this objective common themes and important differences in human, plant and insect diseases will be identified; review the physiological and ecological interactions between insects and pathogens and the application of pathogens for biocontrol and develop skills and knowledge required for critical thinking on the potential of using transgenics to improve management strategies for agriculture and the control of insect vectors of human disease. The first step to managing pest and disease problems in plants is an accurate diagnosis.

ENTM720 Native, Invasive, and Exotic Species (3 credits)
This course will examine introduced species impact, how invasive and exotic species spread, their impact of native species and methods of invasive species control.

ENTM725 IPM Practices (3 credits)
Students will be introduced to the techniques of integrated pest management for proper pest control management. Description – Integrated Pest Management (IPM) has been the most successful management paradigm for agriculture, forestry, and urban pest management for more than five decades. Students will learn the fundamental elements of IPM programs including recognition and monitoring of key pests, formation of decision-making guidelines, intervention tactics, and fundamentals of assessment.

ENTM730 Plant Diagnostics (3 credits)
The first step to managing pest and disease problems in plants is an accurate diagnosis. In this course, students will learn about the various biotic (living) and abiotic (nonliving) factors that can contribute to plant problems, and how to evaluate evidence and distinguish between these factors to arrive at an accurate diagnosis.

ENTM735 Sustainability (3 credits)
Application of the concept of sustainability to both ecosystem services provided by beneficial insects, as well as the management of injurious insects. Ecological functions of insects in the natural and anthropogenic landscape will be illustrated and discussed. In addition, case histories and discussions will focus on themes of sustainability in successful IPM programs, as well as specific practices that lead to sustainable agriculture. The course will conclude with the development of a list of sustainable practices for conserving and managing insects in the landscape.

ENTM740 Organic Practices (3 credits)
Students learn about alternative to chemical pesticides, and what being certified organic entails and how these practices relate to ecological principles. This course will discuss various natural processes that occur in the farm setting to determine the best practices to maintain biodiversity and successful crop production.

ENTM745 Bee Biology and Beekeeping (3 credits)
Students will be introduced to the anatomy and physiology of the honey bee colony with emphasis on how to use this information to best manage honey bee colonies.

ENTM746 Commercial Beekeeping (3 credits)
Students will be introduced to the anatomy and physiology of the honey bee colony with emphasis on how to use this information to best manage honey bee colonies.

ENTM747 Pollinator Health (3 credits)
Students will be given an overview of the importance of insect pollinators and threats to their populations. Emphasis will be placed on managed pollinators, particularly but not exclusively honey bees, where disease mitigation plans will be highlighted.
ENTM748 The history and culture of bees and beekeepers (3 credits)
This course will look at the history of beekeeping in culture and literature. A comparison of past and present beekeeping practices in different regions of the world will be highlighted.

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More than 75% of the people living in the United States reside in urban areas. Urbanites have unique insect problems that threaten their health and well-being. This course will focus on the ecology and management of the most important groups of urban insect pests including disease agents and vectors such as mosquitoes and bed bugs, venomous arthropods such as wasps and spiders, structural pests such as termites and carpenter ants, filth pests such as cockroaches and flies, stored product pests such as grain moths and beetles, and home invaders such as ants, stink bugs, and lady beetles.

ENTM755 Designing an Urban Garden (3 credits)
Students will learn about challenges and current best practices for designing a sustainable garden in a city setting. The unique ecology and challenges of such a garden will be examined.

ENTM760 Insects in the 21st Century (3 credits)
This course will explore the influence and impact of major technological advances in genetics, molecular genetics and biotechnology on the study of insects. Topics will include the use of insects as models for studying human biology and diseases; the use of genetics and genetic technologies to augment existing strategies for managing pest insects and well as the invention of novel management approaches; the use of genetics and genetic technologies in the fields of insect conservation, ecology and evolution.

ENTM780 Capstone Course (Scholarly paper) (3 credits)

C. Describe any selective admissions policy of special criteria for students selecting this field of study.

Applicants must meet the following minimum admission criteria as established by the Graduate School:

- Applicants must have earned a four-year baccalaureate degree from a regionally accredited U.S. institution, or an equivalent degree from a non-U.S. institution.
- Applicants must have earned a 3.0 GPA (on a 4.0 scale) in all prior undergraduate and graduate coursework.
- Applicants must provide an official copy of a transcript for all of their post-secondary work.

International students must fulfill all requirements relating to international academic credentials, evidence of English proficiency, financial certification, and visa documentation. These requirements are found at the Graduate School’s Web site: http://www.gradschool.umd.edu/prospective_students/international_admissions.html.

III. STUDENT LEARNING OUTCOMES AND ASSESSMENT
The purpose of this assessment plan is to set clear guidelines, identify articulated outcomes, and ensure avenues for continuous improvement for each Master of Professional Studies program managed by the Program Oversight Committee and housed in the Graduate School. It is our mission to provide programs that meet UMD’s institutional goals and objectives for educational activities.

Learning Outcomes:
Students will learn how to define key pests in management systems, learn how to sample and monitor pests and their injury, how to construct damage and action thresholds, how to develop and assess the efficacy of intervention tactics including cultural, biological, and chemical control, and how to evaluate programmatic impacts. The goal will
be to provide students with information that will enable them to develop and implement IPM programs for any crop or resource management scenario. Students will learn the fundamentals of biology of each guild of insect pest, how to recognize them and their damage and monitor their activity. Students will learn how to integrate specific control tactics including building design, mechanical control, exclusion, habitat alteration, thermal control, traps and baits, biological control, and insecticidal control to develop comprehensive management strategies. Our goal is to prepare urban pest managers to develop successful management approaches for commercial, institutional, and residential buildings.

**Assessment Methods:**
Each course will require students to perform reading and will focus on problem based learning through using case studies. Students will be required to read current peer reviewed literature and discuss various approaches to current issues in entomology. Students will be graded based on their ability to utilize readings and other online resources to develop strategies to deal with real world issues.

**IV. FACULTY AND ORGANIZATION**

A. **Who will provide academic direction and oversight for the program?**

Graduate School Representative
Charles Caramello, Dean of the Graduate School

Graduate Director
Tammatha O’Brien, Ph.D., College of Computer, Mathematical, and Natural Sciences
Department of Entomology

Office of Extended Studies Administrative Support and Oversight
Terrie Hruzd, Director of Programs

B. **If the program is not to be housed and administered within a single academic unit, provide details of its administrative structure.**

The Master of Professional Studies in Entomology will be housed in the Graduate School, which will be responsible for its oversight. The Program Oversight Committee, or designates, will administer the program. A faculty member from the college will serve as the Graduate Director and will provide academic leadership. The Office of Extended Studies will provide coordination.

**Administrative Coordination**
The Office of Extended Studies will provide program development support (including budget development and projections), program management that includes scheduling, marketing research, planning and management, financial management (including faculty contracting and faculty pay processing), and student services management (including support for admissions, registration, payment, financial aid, and other campus services).

**V. OFF-CAMPUS PROGRAMS (if necessary)**

A. **If at Shady Grove—indicate how students will access student services.**

Not applicable

B. **If on-line—describe the concerns in “Principles and Guidelines for Online Programs” are to be addressed.**
1. *Program Initiation and Choice: The proposal should initiate with an academic unit, and must have the approval of the appropriate Dean (or Deans). It must develop naturally from the institution’s strengths and be consistent with its strategic goals. The proposal should have a clear and well-thought-out financial plan, providing net revenue to the institution over time, and should include a thorough analysis of the potential market.*

The program was developed by the Department of Entomology in the College of Computer, Mathematical, and Natural Sciences whose mission is to combine the best in basic and applied biology to meet the public need for research, outreach, and instruction regarding entomology and related subjects, particularly as these bear on pest management and on stewardship of the environment. By offering this program, the Department of Entomology aims to increase communication and cooperation between field and faculty staff and increase the teaching role of the Entomology Department within the university. Additionally, the program will help the University of Maryland continue to be a competitive university by addressing increasing demand for formal and informal online education and make real and measurable changes at the state, national, and international level through comprehensive, accessible, and credible education. The Office of Extended Studies and the Department of Entomology conducted a marketing research plan in late fall 2013 to identify target audiences and comparable competitors with distance learning program. There is great opportunity for these online programs. According to the Entomological Society of America’s Web site, [http://www.entsoc.org/resources/education/online-courses](http://www.entsoc.org/resources/education/online-courses), currently no online programs exist that address the subject matter within these proposed programs. And, as is described in the Bureau of Labor Statistics, U.S. Department of State, Industry Association Support, Occupational Outlook Handbook, individuals with degrees in Entomology enjoy a wide variety of career opportunities, including private industry (seed, agrochemical, food, crop consultants, urban pest control), Federal and state (military, federal research laboratories, state departments of agriculture, state departments of natural resources, departments of health, extension services, regulatory agencies) and non-governmental organizations (zoos, botanical gardens).

2. *Program Development, Control, and Implementation by Faculty: Although professional help may be used in adapting it to the online medium, the academic content of the curriculum must be developed by institutional faculty. The instructional strategy proposed must be appropriate for this content. UMCP faculty must have overall control of the program, and should provide the bulk of the instruction. Appropriate resources, including technical support personnel, must be made available for course development and also for faculty support during the offering of these courses. The business plan for the proposal must spell out the arrangements whereby this will be accomplished.*

Tammy O’Brien will work with the faculty to convert exiting material they use to teach classes and meet with stakeholder for presentations, seminar and short courses into material that is able to be presented in an online format using PowerPoint, readings, peer-reviewed journals with current research. The program will use a similar template syllabus for grading and expectation for all courses, with modifications made as needed for a specific course.

3. *Access to Academic Resources and Student Services: The proposal must indicate how students will have access to needed resources, such as library materials, other information sources, laboratory facilities, and others as appropriate. The arrangements in place for interaction with instructors, for advising, and for help with technical problems must be described. It must be shown how student services such as admissions, enrollment, financial aid, bursar services, career advisement, bookstore, and similar services available to on-campus students will be provided.*

As officially admitted students to the University of Maryland, students in this program will have access to all University resources that are accessible in the online environment. Students in online programs are assessed an online student services mandatory fee which supports access to these University resources. Extended Studies provides the management of all student services.
4. **Intellectual Property Rights:** The proposal must clearly delineate ownership and usage rights for materials that may be developed for courses in the program.

Intellectual property rights for this online degree, for both the program and online courses, will be addressed in a separate contract executed by the University of Maryland and the developer. Please see Article VIII On-Line Studies and Technology-Mediated (Enhanced) Courses in the UNIVERSITY OF MARYLAND POLICY ON INTELLECTUAL PROPERTY (Policy IV-3.20(A) (Approved by the President on March 13, 2003 and by the Chancellor on July 18, 2005) On-line at [http://www.president.umd.edu/policies/iv320a.html](http://www.president.umd.edu/policies/iv320a.html).

5. **Full Disclosure, Standards, and Evaluation:** All published materials describing the program must carefully lay out the instructional methods to be used, the skills and background required for success, and the arrangements in place for access to instructors, to technical help, to academic resources, and to student services. There should be a means available whereby potential students can evaluate their readiness for the special demands of the program. Academic admission standards must be clearly described, and must be consistent with those for the on-campus program. Outcome expectations must also be consistent. The proposal must set out a continuing process of evaluation that will determine if these requirements are being met.

The Oversight Committee will ensure that all printed and digital materials provide exhaustive information about the program. The Web site, administered through the Office of Extended Studies, will provide complete and transparent policies and procedures regarding admission requirements (in full compliance of the Graduate School), including registration, financials, technical assistance, digital access to university resources, academic and university policies, and all issues relating to the successful completion of the program. Potential students will be given the opportunity to complete a self-assessment ensuring that they possess the skill sets and mental models for online learning as well as the technical resources for program accessibility. The Department of Entomology provides both incoming and admitted students with all advising assistance.

**VI. OTHER ISSUES**

A. Describe any cooperative arrangements with other institutions or organizations that will be important for the success of this program.

None

B. Will the program require or seek accreditation? Is it intended to provide certification or licensure for its graduates? Are there academic or administrative constraints as a consequence?

No

**VII. COMMITMENT TO DIVERSITY**

The University of Maryland is an equal opportunity institution with respect to both education and employment. The University does not discriminate on the basis of race, color, national origin, sex, age, or handicap in admission or access to, or treatment or employment in, its programs and activities as required by federal (Title VI, Title IX, Section 504) and state laws and regulations.

Through its actions and statements of policy the University of Maryland has demonstrated a commitment to diversity by creating programs of study which explore the experiences, perspectives, and contributions of a wide variety of cultures, groups, and individuals; and as sought to create a campus environment which encourages tolerance and respect for individuals regardless of differences in age, race, ethnicity, sex, religion, disability, sexual orientation, class, political affiliation, and national origin.
VIII. REQUIRED PHYSICAL RESOURCES
A. Additional library and other information resources required to support the proposed program. You must include a formal evaluation by Library staff.

See attached.

B. Additional facilities, facility modifications, and equipment that will be required. This is to include faculty and staff office space, laboratories, special classrooms, computers, etc.

None

C. Impact, if any, on the use of existing facilities and equipment. Examples are laboratories, computer labs, specially equipped classrooms, and access to computer servers.

This program does not require additional resources.

IX. RESOURCES NEEDS AND SOURCES
A. List new courses to be taught and needed additional sections of existing courses. Describe the anticipated advising and administrative loads. Indicate the personnel resources (faculty, staff, and teaching assistants) that will be needed to cover all these responsibilities.

The following courses will need to be approved by VPAC:

ENTM710 Insect Biodiversity, Physiology and Ecology (3 credits)
A survey course discussing the various families of insects, discuss thing their anatomy and physiology, and their role in ecological systems. Students will examine the ecological and evolutionary perspectives on interactions between plants and vertebrate and invertebrate animals. Further, it explores the applied consequences of animal-plant interactions to agroecology and conservation biology. These goals are achieved by reviewing the theoretical underpinnings of animal-plant interactions, and exposing students to research literature on animal-plant interactions.

ENTM715 Insect Diseases and Pathology (3 credits)
The course will integrate aspects of biochemistry, molecular biology and evolution theory with ecology using pathogens of insects as a model. In this course, students will learn about the various biotic (living) and abiotic (nonliving) factors that can contribute to plant problems, and how to evaluate evidence and distinguish between these factors to arrive at an accurate diagnosis. The course will explore the direction and goals of innovation in microbial biocontrol as well as the effect of social criticism and considerations of environmental impact on attempts to introduce engineered microorganisms. Students will develop an understanding of the coevolutionary games pathogens and their hosts play. To help achieve this objective common themes and important differences in human, plant and insect diseases will be identified; review the physiological and ecological interactions between insects and pathogens and the application of pathogens for biocontrol and develop skills and knowledge required for critical thinking on the potential of using transgenics to improve management strategies for agriculture and the control of insect vectors of human disease. The first step to managing pest and disease problems in plants is an accurate diagnosis.

ENTM720 Native, Invasive, and Exotic Species (3 credits)
This course will examine introduced species impact, how invasive and exotic species spread, their impact of native species and methods of invasive species control.

ENTM725 IPM Practices (3 credits)
Students will be introduced to the techniques of integrated pest management for proper pest control management. Description – Integrated Pest Management (IPM) has been the most successful management paradigm for agriculture, forestry, and urban pest management for more than five decades. Students will learn the fundamental elements of IPM programs including recognition and monitoring of key pests, formation of decision-making guidelines, intervention tactics, and fundamentals of assessment.

**ENTM730 Plant Diagnostics (3 credits)**
The first step to managing pest and disease problems in plants is an accurate diagnosis. In this course, students will learn about the various biotic (living) and abiotic (nonliving) factors that can contribute to plant problems, and how to evaluate evidence and distinguish between these factors to arrive at an accurate diagnosis.

**ENTM735 Sustainability (3 credits)**
Application of the concept of sustainability to both ecosystem services provided by beneficial insects, as well as the management of injurious insects. Ecological functions of insects in the natural and anthropogenic landscape will be illustrated and discussed. In addition, case histories and discussions will focus on themes of sustainability in successful IPM programs, as well as specific practices that lead to sustainable agriculture. The course will conclude with the development of a list of sustainable practices for conserving and managing insects in the landscape.

**ENTM740 Organic Practices (3 credits)**
Students learn about alternative to chemical pesticides, and what being certified organic entails and how these practices relate to ecological principles. This course will discuss various natural processes that occur in the farm setting to determine the best practices to maintain biodiversity and successful crop production.

**ENTM745 Bee Biology and Beekeeping (3 credits)**
Students will be introduced to the anatomy and physiology of the honey bee colony with emphasis on how to use this information to best manage honey bee colonies.

**ENTM746 Commercial Beekeeping (3 credits)**
Students will be introduced to the anatomy and physiology of the honey bee colony with emphasis on how to use this information to best manage honey bee colonies.

**ENTM747 Pollinator Health (3 credits)**
Students will be given an overview of the importance of insect pollinators and threats to their populations. Emphasis will be placed on managed pollinators, particularly but not exclusively honey bees, where disease mitigation plans will be highlighted.

**ENTM748 The History and Culture of Bees and Beekeepers (3 credits)**
This course will look at the history of beekeeping in culture and literature. A comparison of past and present beekeeping practices in different regions of the world will be highlighted.

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**ENTM780 Capstone Course (Scholarly paper) (3 credits)**

The Department of Entomology will hire for the following position(s) to ensure that this self-support program has no impact on advising and administrative resources for the unit’s traditional programs: Director (2); Graduate Assistants (1); or Lecturers (based on course need). Tuition revenue will be used to support all salaries and benefits.

It is proposed that tuition be charged at a fixed rate for the program’s first year (anticipated 8) of $579.00 per credit with an estimated increase of 5% per year. All students will pay all associated student mandatory fees and the graduate application fee.

**B. List new faculty, staff, and teaching assistants needed for the responsibilities in A, and indicate the source of the resources for hiring them.**

Faculty selection and appointments are made by the Entomology department. All faculty must be full or adjunct members of the Graduate Faculty and approved by the Dean of the Graduate School to teach. Instructors in this self-support program may not teach on-load. University of Maryland faculty who in teach in the program will be compensated using overloads. The faculty may include research faculty, retired faculty, and professionals in the field.

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**C. Some of these teaching, advising, and administrative duties may be covered by existing faculty and staff. Describe your expectations for this, and indicate how the current duties of these individuals will be covered, and the source of any needed resources.**

Approval of all faculty overloads for teaching and advising will be in accordance with University of Maryland policy and procedures. The Oversight Committee is responsible for the overall administrative management of the program.

**D. Identify the source to pay for the required physical resources identified in Section VIII. above.**

Tuition revenue will be used to cover the program expenses (see separate budget page).

**E. List any other required resources and the anticipated source for them.**

See above.

**F. Complete the additional proposal and financial tables as required by MHEC.**
See attached pdf.

**New Courses requiring VPAC Approval**

**ENTM710 Insect Biodiversity, Physiology and Ecology (3 credits)**
A survey course discussing the various families of insects, discuss thing their anatomy and physiology, and their role in ecological systems. Students will examine the ecological and evolutionary perspectives on interactions between plants and vertebrate and invertebrate animals. Further, it explores the applied consequences of animal-plant interactions to agroecology and conservation biology. These goals are achieved by reviewing the theoretical underpinnings of animal-plant interactions, and exposing students to research literature on animal-plant interactions.

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**ENTM746 Commercial Beekeeping (3 credits)**
This course will overview the various components of the commercial beekeeping industry including migratory pollinators, queen rearing operations and honey producers.

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**ENTM780 Capstone Course (Scholarly paper) (3 credits)**
### Master of Professional Studies in Applied Entomology

[This program is self-support. Instructors may not teach on-load.]

<table>
<thead>
<tr>
<th>Estimated Program Revenue &amp; Support</th>
<th>Planning</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
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</thead>
<tbody>
<tr>
<td>I. Total Tuition Revenue</td>
<td></td>
<td>$115,392</td>
<td>$181,742</td>
<td>$230,586</td>
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<td>$381,331</td>
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<td>A. Total Professional Students (annually)</td>
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<td>8</td>
<td>18</td>
<td>22</td>
<td>27</td>
<td>33</td>
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<tr>
<td>1. Cohort Enrollment 1st Year of matriculation</td>
<td></td>
<td>8</td>
<td>10</td>
<td>12</td>
<td>15</td>
<td>18</td>
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<tr>
<td>2. Cohort Enrollment 2nd Year of matriculation</td>
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<td>10</td>
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<td>B. Total Credits (annually)</td>
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<tr>
<td>1. Cohort Enrollment 1st Year of matriculation</td>
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<td>24</td>
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<td>2. Cohort Enrollment 2nd Year of matriculation</td>
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<td>C. Per credit rate; Assumes 5% increase</td>
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<td>$601</td>
<td>$631</td>
<td>$663</td>
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### II. Student Fee: Online Mandatory Fee

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<th></th>
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<th>$744</th>
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<td>A. Rate per year (4 Terms); assumes 3% increase</td>
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<td>96</td>
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<td>B. Ttl number of students (per year)</td>
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<td>18</td>
<td>22</td>
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### III. Student Fee: Graduate School Application Fee

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<th></th>
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<td>A. Fee (one-time)</td>
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<td>B. Total students in new incoming cohort</td>
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### IV. Development Support (Courses & Marketing)

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<tr>
<th></th>
<th></th>
<th>$86,000</th>
<th>$116,736</th>
<th>$184,217</th>
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<td>A. Extended Studies Support</td>
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<td>B. Dean Support</td>
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**Total Estimated Program Revenue & Support**

$86,000 $116,736 $184,217 $233,656 $304,425 $386,135

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### Estimated Expenses

<table>
<thead>
<tr>
<th>Estimated Expenses</th>
<th>Planning</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
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<td>1. Total Faculty Salaries</td>
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<td>a. Total instructors per year</td>
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<td>9</td>
<td>8</td>
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</tr>
<tr>
<td>(1). # of paid Instructors for Year 1 of student matriculation</td>
<td></td>
<td>7</td>
<td>7</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>(2). # of paid Instructors for Year 2 of student matriculation</td>
<td></td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>b. Instructor salary; assumes a 3% annual increase</td>
<td></td>
<td>7,000</td>
<td>7,210</td>
<td>7,426</td>
<td>7,649</td>
<td>7,879</td>
</tr>
<tr>
<td>2. Total FICA (8%)</td>
<td></td>
<td>3,920</td>
<td>4,038</td>
<td>3,565</td>
<td>3,672</td>
<td>3,782</td>
</tr>
<tr>
<td>B. Academic Administration</td>
<td></td>
<td>$19,950</td>
<td>$46,550</td>
<td>$99,750</td>
<td>$133,798</td>
<td>$137,812</td>
</tr>
<tr>
<td>1. Total Salary (assumes 3% increase)</td>
<td></td>
<td>15,000</td>
<td>35,000</td>
<td>75,000</td>
<td>100,600</td>
<td>103,618</td>
</tr>
<tr>
<td>a. 1/2 time Coordinator (will teach 1 course)</td>
<td></td>
<td>20,000</td>
<td>20,600</td>
<td>21,218</td>
<td>21,828</td>
<td>22,438</td>
</tr>
<tr>
<td>b. Director (full-time appointment with academic unit; will teach 1 course)</td>
<td></td>
<td>15,000</td>
<td>35,000</td>
<td>55,000</td>
<td>80,000</td>
<td>82,400</td>
</tr>
<tr>
<td>2. Total FICA (33%)</td>
<td></td>
<td>4,950</td>
<td>11,550</td>
<td>24,750</td>
<td>33,198</td>
<td>34,194</td>
</tr>
<tr>
<td>II. Marketing</td>
<td></td>
<td>$33,000</td>
<td>$20,000</td>
<td>$20,000</td>
<td>$20,000</td>
<td>$20,000</td>
</tr>
<tr>
<td>A. Development--Marketing Research</td>
<td></td>
<td>6,500</td>
<td>6,500</td>
<td>6,500</td>
<td>6,500</td>
<td>6,500</td>
</tr>
<tr>
<td>B. Development--Tactical Plan</td>
<td></td>
<td>6,500</td>
<td>6,500</td>
<td>6,500</td>
<td>6,500</td>
<td>6,500</td>
</tr>
<tr>
<td>C. Development--Implementation of tactical plan</td>
<td></td>
<td>20,000</td>
<td>20,000</td>
<td>20,000</td>
<td>20,000</td>
<td>20,000</td>
</tr>
</tbody>
</table>
### Estimated Expenses

<table>
<thead>
<tr>
<th>Planning</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>III. Development–Courses</strong></td>
<td><strong>$53,000</strong></td>
<td><strong>$6,000</strong></td>
<td><strong>$6,000</strong></td>
<td><strong>$6,000</strong></td>
<td><strong>$6,000</strong></td>
</tr>
<tr>
<td>A1. Development of New Courses: Faculty Time</td>
<td>2,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A2. Ttl # of new courses</td>
<td></td>
<td>14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Fee to format courses into online format</td>
<td>25,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Ongoing course maintenance / updates</td>
<td>6,000</td>
<td>6,000</td>
<td>6,000</td>
<td>6,000</td>
<td>6,000</td>
</tr>
<tr>
<td><strong>SUBTOTAL: DIRECT PROGRAM EXPENSES</strong></td>
<td><strong>86,000</strong></td>
<td><strong>98,870</strong></td>
<td><strong>127,058</strong></td>
<td><strong>173,872</strong></td>
<td><strong>209,364</strong></td>
</tr>
<tr>
<td>IV. Student Fees (100% returned to campus)</td>
<td>$1,344</td>
<td>$2,474</td>
<td>$3,071</td>
<td>$3,869</td>
<td>$4,804</td>
</tr>
<tr>
<td>A. Campus Mandatory Fee</td>
<td>744</td>
<td>1,724</td>
<td>2,171</td>
<td>2,744</td>
<td>3,454</td>
</tr>
<tr>
<td>B. Graduate School Application Fee</td>
<td>600</td>
<td>750</td>
<td>900</td>
<td>1,125</td>
<td>1,350</td>
</tr>
<tr>
<td>V. OES Administrative Fee</td>
<td>$11,539</td>
<td>$36,348</td>
<td>$46,117</td>
<td>$44,823</td>
<td>$38,133</td>
</tr>
<tr>
<td>A. 10% of tuition revenue for OES administrative costs</td>
<td>11,539</td>
<td>18,174</td>
<td>23,059</td>
<td>30,056</td>
<td>38,133</td>
</tr>
<tr>
<td>B. 10% to tuition revenue to repay OES development support</td>
<td>18,174</td>
<td>23,059</td>
<td>14,768</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VI. Graduate School Administrative Fee</td>
<td>1,920</td>
<td>4,320</td>
<td>5,280</td>
<td>6,480</td>
<td>7,920</td>
</tr>
<tr>
<td>a. Fee assessed per each academic semester/term</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>b. Total number of semesters/terms per year</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>c. Total # of Professional Students</td>
<td>8</td>
<td>18</td>
<td>22</td>
<td>27</td>
<td>33</td>
</tr>
<tr>
<td><strong>Total Estimated Expenses</strong></td>
<td><strong>$86,000</strong></td>
<td><strong>$113,673</strong></td>
<td><strong>$170,200</strong></td>
<td><strong>$228,340</strong></td>
<td><strong>$264,536</strong></td>
</tr>
<tr>
<td><strong>Total Estimated Program Revenue &amp; Support</strong></td>
<td><strong>$86,000</strong></td>
<td><strong>$116,736</strong></td>
<td><strong>$184,217</strong></td>
<td><strong>$233,656</strong></td>
<td><strong>$304,425</strong></td>
</tr>
<tr>
<td><strong>Net</strong></td>
<td><strong>$0</strong></td>
<td><strong>$3,063</strong></td>
<td><strong>$14,016</strong></td>
<td><strong>$5,316</strong></td>
<td><strong>$39,889</strong></td>
</tr>
<tr>
<td><strong>Net</strong></td>
<td><strong>$0</strong></td>
<td><strong>$3,063</strong></td>
<td><strong>$14,016</strong></td>
<td><strong>$5,316</strong></td>
<td><strong>$39,889</strong></td>
</tr>
</tbody>
</table>

- **#’ of terms per year**: 4
- **#’ of courses per term**: 2
- **#’ of courses per year**: 8
- **#’ of instructors per year**: 8

To complete the 30-credit; 10 course program:
- Students take 8 courses (24 credits) 1st year: 24
- Students take 2 courses (6 credits) 2nd year: 6
From the Dean of AGNR

From: Cheng-I Wei <wei@umd.edu>
Subject: Re: PCC Document
Date: February 20, 2014 at 9:46:36 PM EST
To: Tammatha O'Brien <tammatha@umd.edu>
Cc: Michael D Colson <mcolson@umd.edu>, Elizabeth Jane Beise <beise@umd.edu>, "Hilary L. Sazama" <hfein@umd.edu>, Terrie Hruzd <hruzd@umd.edu>, Leslie Pick <lpick@umd.edu>, Daniel E Kugler <dkugler@umd.edu>, "Jayanth R. Banavar" <banavar@umd.edu>, "Leon H. Slaughter" <lslaugh@umd.edu>, Stephen E Wright <sewright@umd.edu>, "Loretta P. Carstens" <lcarsten@umd.edu>

Dear Dr. O'Brien:

Thanks for letting me know of the progress.

Cheng-I Wei

On Feb 19, 2014, at 10:40 AM, "Tammatha O'Brien" <tammatha@umd.edu> wrote:

Hi All,

Attached is the updated PCC document. I am excited about getting this program started and having both CMNS and AGNR work together. We have already received emails from students interested in enrolling and we haven't even begun to advertise.

Thank you to Dan Kugler, Dean Wei and Dean Banavar for your support in this program.

Tammatha O'Brien, Ph.D.
College of Computer, Mathematical, and Natural Sciences
Department of Entomology ☎️

Office:
3118 Plant Sciences Building
301.405.1305
301.314.9290 Fax

Mailing address:
Hi Mike,

I apologize for the lack of clarity. The new iteration of the Master of Professional Studies: Applied Entomology has been approved by Chancellor Kirwan.

Should you require any additional information, please do not hesitate to contact me.

Regards,
Teri

Theresa W. Hollander  
Associate Vice Chancellor for Academic Affairs  
University System of Maryland  
3300 Metzerott Road  
Adelphi, MD 20783  
Office: (301) 445-1909  
Fax: (301) 445-1914

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From: Michael D Colson [mcolson@umd.edu]  
Sent: Tuesday, June 03, 2014 4:23 PM  
To: Teri Hollander  
Subject: FW: Scanned from a Xerox multifunction device

Hi Teri,

This letter doesn't actually reference the new Master of Professional Studies iteration by name (Applied Entomology). Could you either send me a revised letter or just reply to this email to confirm that the new Master of Professional Studies iteration refers to Applied Entomology? I would just add that email to my file and keep it there in case anyone ever asks about it.

Thanks,
Mike

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Mike Colson  
Senior Coordinator for Academic Programs  
Office of the Associate Provost for Academic Planning and Programs  
1122 Main Administration Building  
University of Maryland  
College Park, MD 20742  
Phone: 301-405-5626; Fax: 301-405-8195