



## Establish a Master of Extension Education (PCC 20042)

**PRESENTED BY** Valerie Orlando, Chair, Senate Programs, Curricula, and Courses Committee

**REVIEW DATES** SEC – November 18, 2020 | SENATE – December 8, 2020

**VOTING METHOD** In a single vote

**RELEVANT POLICY/DOCUMENT** N/A

**NECESSARY APPROVALS** Senate, President, University System of Maryland Board of Regents, and Maryland Higher Education Commission

### ISSUE

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The Department of Plant Science and Landscape Architecture (PSLA), within the College of Agriculture and Natural Resources (AGNR), proposes to establish a Master of Extension Education. The proposed program builds on the tradition of Extension programming offered to communities by land-grant institutions such as the University of Maryland (UMD), which offers Extension programming in a variety of areas including agriculture, youth development through 4-H, food and nutrition, health and wellness, home gardening, the environment, personal finance, and other topics. Extension education encompasses the broad process of using non-formal education skills to detect societal challenges, examine solution options, and develop action plans with individuals and communities toward a goal for improved quality of life. The focus on intertwined academics, applied research, and engagement with diverse communities provides a multidimensional problem solving learning environment for students. This program will allow individuals who need the academic credentials to seek employment or advancement in university Extension jobs to acquire this training from UMD rather than other universities. Graduates with Extension education training are prepared for dynamic careers in secondary and post-secondary education, non-profits, government, and leadership roles in enterprise.

In recent years, PSLA and AGNR have been engaged in revitalizing agricultural education on campus. During the efforts to re-establish the undergraduate agriculture education program, there was consistent feedback from stakeholders about the need for coursework directed toward Extension education as well as the development of an advanced degree for individuals in Extension education. As such, the coursework for the program reflects foundational knowledge and skills in combination with current educational research.

The program requires 30 credits, including 12 credits of core courses that reflect the essential elements of knowledge and skill development for Extension education:

- AGNR606 Program Planning and Evaluation in Agricultural Education (3 Credits)
- AGNR630 Teaching-Learning in Adult and Continuing Education (3 Credits)
- AGST605 Extension Research Methods with Applied Data Analysis (3 Credits)
- AGST640 Critically Examine Maryland Agriculture, Agricultural Industry and Agricultural Literacy (3 Credits)

Students will then work with a faculty advisor to identify and enroll in 12-18 credits of elective areas that may include biometrics, animal science, agricultural and resource economics, environmental science and technology, entomology, landscape architecture, nutrition and food science, and plant sciences. These elective courses already exist and are offered to students within those particular graduate programs. Students will choose either the 6-credit thesis option or a non-thesis option of 6 additional credits of electives and a scholarly paper.

This proposal was approved by the Senate Programs, Curricula, and Courses committee on November 6, 2020. The Graduate PCC committee reviewed and approved the proposal on October 30, 2020.

## **RECOMMENDATION(S)**

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The Senate Committee on Programs, Curricula, and Courses recommends that the Senate approve this new degree program.

## **COMMITTEE WORK**

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The committee considered this proposal at its meeting on November 6, 2020. Melissa Leiden Welsh, John Erwin, and Bill Phillips, from the Department of Plant Science and Landscape Architecture, and Joe Sullivan, from the College of Agriculture and Natural Resources, presented the proposal and answered questions from the committee. The proposal was approved by the committee.

## **ALTERNATIVES**

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The Senate could decline to approve this new degree program.

## **RISKS**

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If the Senate declines to approve this degree program, the university will lose an opportunity to build on its existing agricultural education activities and resources to address a current need in professional Extension training.

## **FINANCIAL IMPLICATIONS**

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No additional funding is sought for this program. Most of the courses for the program are already offered through other programs. The administrative infrastructure also exists within PLSA. Remaining resources will be provided by AGNR.

# 727: MASTER OF EXTENSION EDUCATION

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## In Workflow

1. D-PLSC PCC Chair (mcarroll@umd.edu)
2. D-PLSC Chair (jerwin@umd.edu)
3. AGNR Curriculum Manager (ecooper@umd.edu; tgallman@umd.edu)
4. AGNR PCC Chair (jsull@umd.edu; mcarroll@umd.edu)
5. AGNR Dean (jsull@umd.edu)
6. Academic Affairs Curriculum Manager (mcolson@umd.edu)
7. Graduate School Curriculum Manager (aambrosi@umd.edu)
8. Graduate PCC Chair (aambrosi@umd.edu)
9. Dean of the Graduate School (sfetter@umd.edu; aambrosi@umd.edu)
10. Senate PCC Chair (mcolson@umd.edu; vorlando@umd.edu)
11. University Senate Chair (mcolson@umd.edu)
12. President (mcolson@umd.edu)
13. Board of Regents (mcolson@umd.edu)
14. MHEC (mcolson@umd.edu)
15. Provost Office (mcolson@umd.edu)
16. Graduate Catalog Manager (aambrosi@umd.edu)

## Approval Path

1. Fri, 25 Sep 2020 19:46:26 GMT  
Mark Carroll (mcarroll): Approved for D-PLSC PCC Chair
2. Tue, 29 Sep 2020 18:37:58 GMT  
John Erwin (jerwin): Approved for D-PLSC Chair
3. Wed, 30 Sep 2020 13:28:57 GMT  
Tyra Monnity (tgallman): Approved for AGNR Curriculum Manager
4. Fri, 02 Oct 2020 19:17:46 GMT  
Mark Carroll (mcarroll): Approved for AGNR PCC Chair
5. Fri, 02 Oct 2020 19:19:01 GMT  
Joseph Sullivan (jsull): Approved for AGNR Dean
6. Wed, 21 Oct 2020 20:42:41 GMT  
Michael Colson (mcolson): Approved for Academic Affairs Curriculum Manager
7. Sun, 01 Nov 2020 14:40:45 GMT  
Angela Ambrosi (aambrosi): Approved for Graduate School Curriculum Manager
8. Sun, 01 Nov 2020 14:48:05 GMT  
Angela Ambrosi (aambrosi): Approved for Graduate PCC Chair
9. Mon, 02 Nov 2020 15:49:42 GMT  
Steve Fetter (sfetter): Approved for Dean of the Graduate School
10. Fri, 06 Nov 2020 15:25:28 GMT  
Valerie Orlando (vorlando): Approved for Senate PCC Chair

## New Program Proposal

Date Submitted: Fri, 25 Sep 2020 16:57:57 GMT

## Viewing: 727 : Master of Extension Education

Last edit: Wed, 04 Nov 2020 21:25:14 GMT

Changes proposed by: Melissa Welsh (drmwelsh)

### Program Name

Master of Extension Education

### Program Status

Proposed

### Effective Term

Fall 2021

**Catalog Year**

2021-2022

**Program Level**

Graduate Program

**Program Type**

Master's

**Delivery Method**

On Campus

**Departments****Department**

Plant Science &amp; Landscape Architecture

**Colleges****College**

Agriculture and Natural Resources

**Degree(s) Awarded****Degree Awarded**

Other

**If other, new degree award:**

Master of Extension Education

**Proposal Contact**

Melissa Leiden Welsh

**Proposal Summary**

This proposal seeks to establish a Master of Extension Education for the College of Agriculture and Natural Resources, administered by the faculty within the Department of Plant Science and Landscape Architecture. The College is seeking to revitalize a previously retired graduate degree in Extension Education in response to professional development needs within an advanced social science based degree and the demand for skilled educators in agricultural literacy in the region.

(PCC Log Number 20042)

**Program and Catalog Information**

**Provide the catalog description of the proposed program. As part of the description, please indicate any areas of concentration or specializations that will be offered.**

The Master of Extension Education features a multi-disciplinary program with core courses focused on principles of Extension in needs assessment, program development, evaluation, and social science research methodology as well as a suite of supportive elective courses in a variety of Extension specialty areas. Graduates with Extension education experiences are prepared for dynamic careers in secondary and post-secondary education, non-profits, government, and leadership roles in enterprise.

**Catalog Program Requirements:**

Core Courses (12 credits)

Course	Title	Credits
AGNR606	Program Planning and Evaluation in Agricultural Education	3
AGNR630	Teaching-Learning in Adult and Continuing Education	3
AGST605	Course AGST605 Not Found (Extension Research Methods with Applied Data Analysis)	3
AGST640	Course AGST640 Not Found (Critically Examine Maryland Agriculture, Agricultural Industry and Agricultural Literacy)	3

**Elective Options (12-18 credits)**

Students will work with a faculty advisor to identify and enroll in a set of elective courses that align with their career focused learning outcomes. The following is a sample of courses. Students may seek permission from the program to enroll in courses not included on this list.

<b>Course</b>	<b>Title</b>	<b>Credits</b>
BIOM601	Biostatistics I	4
BIOM602	Biostatistics II	4
BIOM603	Biostatistics III	4
BIOM621	Applied Multivariate Statistics	3
ANSC417	Regulatory Issues in Animal Care and Management	3
ANSC436	Animal Health Policy and Communication	3
ANSC437	Animal Biotechnology	3
ANSC440	Zoonotic Diseases and Control	3
ANSC450	Animal Breeding Plans	3
ANSC455	Applied Animal Behavior	3
<b>Course</b>	<b>Title</b>	<b>Credits</b>
AREC405	Economics of Production	3
AREC422	Econometric Analysis in Agricultural and Environmental Economics	3
AREC426	Economic Methods and Food Consumption Policy	3
AREC427	Commodity Pricing and Markets	3
AREC430	Introduction to Agricultural and Resource Law	3
AREC433	Food and Agricultural Policy	3
AREC445	Agricultural Development, Population Growth and the Environment	3
AREC453	Natural Resources and Public Policy	3
AREC455	Economics of Land Use	3
<b>Course</b>	<b>Title</b>	<b>Credits</b>
ENST403	Invasive Species Ecology	3
ENST405	Energy and Environment	3
ENST411	Principles of Soil Fertility	3
ENST414	Soil Morphology, Genesis and Classification	4
ENST415	Renewable Energy	3
ENST417	Soil Physics and Hydrology	3
ENST421	Soil Chemistry	4
ENST422	Soil Microbial Ecology	3
ENST423	Soil-Water Pollution	3
ENST430	Wetland Soils	3
ENST432	Environmental Microbiology	3
ENST436	Emerging Environmental Threats	3
ENST441	Sustainable Agriculture	3
ENST450	Wetland Ecology	3
ENST452	Wetland Restoration	3
ENST460	Principles of Wildlife Management	3
ENST603	Advanced Invasive Species Ecology	3
ENST462	Field Techniques in Wildlife Management	3
ENST605	Energy and Environment	3
ENST611	Advanced Principles of Soil Fertility	3
ENST622	Advanced Soil Microbial Ecology	3
ENST630	Advanced Wetland Soils	3
<b>Course</b>	<b>Title</b>	<b>Credits</b>
ENTM609	Integrated Pest Management	1-4
ENTM735	Sustainability	3

Course	Title	Credits
LARC452	Green Infrastructure and Community Greening	3
LARC461	People and the Environment	3
LARC620	Graphic Tools for Landscape Representation	3
LARC663	Landscape and Garden History	3

Course	Title	Credits
NFSC425	International Nutrition	3
NFSC430	Food Microbiology	3
NFSC431	Food Quality Control	4
NFSC 435 FOOD SAFETY SYSTEM	Course NFSC 435 FOOD SAFETY SYSTEM Not Found	3
NFSC440	Advanced Human Nutrition	4
NFSC470	Community Nutrition	3
NFSC605	Food-Related Behavior of the Individual	3
NFSC620	Diet and Cancer Prevention	3
NFSC675	Nutritional Epidemiology	3
NFSC690	Nutrition and Aging	3
NFSC735	Food Toxicology	3
NFSC679	Selected Topics in Food Science	1-6

Course	Title	Credits
PLSC407	Advanced Crop Science	3
PLSC433	Technology of Fruit and Vegetable Production	4
PLSC452	Environmental Horticulture	3
PLSC453	Weed Science	3
PLSC461	Cultural Management of Nursery and Greenhouse Systems: Substrates	1
PLSC462	Cultural Management of Nursery and Greenhouse Systems; Irrigation	1
PLSC464	Cultural Management of Nursery and Greenhouse Systems: Nutrients	1
PLSC685	Advanced Plant Ecophysiology	3

#### **Research /Creative Product (variable 1-6 credits)**

Students will work with a faculty advisor to outline a thesis research project or professional creative research product (for example: new curricula/ program)

Course	Title	Credits
AGST799	Course AGST799 Not Found (Master's Thesis Research)	1-6

**Sample plan. Provide a term by term sample plan that shows how a hypothetical student would progress through the program to completion. It should be clear the length of time it will take for a typical student to graduate. For undergraduate programs, this should be the four-year plan.**

Sample plan is for a student interested in focusing on Food systems and Agriculture Extension career while employed in a full-time job.

#### **First Year**

Semester 1	Credits
NFSC690	3
NFSC440	4
	7

Total Credits 7

#### **First Year**

Semester 2	Credits
NFSC430	3
ENTM609	1-4
AGST640 (Critically Examine Maryland Agriculture, Agricultural Industry and Agricultural Literacy)	3

7-10

Total Credits 7-10

**Second Year**

First Semester	Credits
AGNR630	3
AGNR606 (Winter session)	2-3
AGST605 (Extension Research Methods with Applied Data Analysis)	3
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Total Credits	8-9

Total Credits 8-9

**Second Year**

Semester 2	Credits
AGST799 (Master's Thesis Research)	6
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Total Credits	6

Total Credits 6

Total of 30 credits- non thesis option

**List the intended student learning outcomes. In an attachment, provide the plan for assessing these outcomes.**

**Learning Outcomes**

Demonstrate the selection and application of educational theories to support observed practices in Extension Education.

Hone leadership and relationship building skills while designing needs assessments for research and outreach education

Organize and present research findings to add to the body of knowledge as well participating in Extension outreach

Make use of advanced knowledge and skills to identify and problem solve current issues facing urban and rural communities

Recognize opportunities to differentiate outreach efforts with diverse audiences

**New Program Information****Mission and Purpose**

**Describe the program and explain how it fits the institutional mission statement and planning priorities.**

The proposed Master of Extension Education embodies the historic founding principles of the Land Grant Agriculture and Natural Resources College within the University of Maryland. The focus on intertwined academics, applied research, and engagement with diverse communities provides a multidimensional problem solving learning environment for students. This program mirrors the University's mission and vision through the intent to expand an individual's knowledge while building life science and social science research skills coupled with enabling their teaching skills through outreach or more commonly known as non-formal facilitation. The interdisciplinary focus of this program has been designed to equip students with opportunities to examine, develop, and analyze educational projects in collaboration with their career focus such that authentic and impactful experiences prepare the students to communicate community-based research with various populations.

Extension education encompasses the broad process of using non-formal education skills to detect societal challenges, examine solution options, and develop action plans with individuals and communities toward a goal for improved quality of life. Maryland's diversity of people, land, and occupations provide an expansive opportunity for study across various dimensions of research and outreach education. Graduates with Extension education experiences are prepared for dynamic careers in secondary and post-secondary education, non-profits, government, and leadership roles in enterprise.

**Program Characteristics**

**What are the educational objectives of the program?**

In response to dynamic societal behavior change, the Master of Extension Education program reflects educational objectives in critical thinking, leadership, and relationship building. Students would engage in examining and demonstrating multiple modes of educational delivery methods. Courses would enhance students' selection and application of quantitative and qualitative data collection skills within authentic learning experiences. The program of study would prepare students for the process of conducting needs assessment with recognition of cultural, emotional, and social sensitivity among varying communities while encouraging rigorous scientific practices to develop practical solutions to identified problems. Please refer to the table with an outline of specific program objectives as they relate to student learning outcomes and assessments.

1. Examine educational psychology concepts as applied within the field of Extension education
2. Utilize critical thinking and communication skills to engage with stakeholders
3. Develop scientific literacy through independently assessing, interpreting, and summarizing scholarly works
4. Expand academic and technical knowledge through authentic and active learning experiences
5. Increase student's awareness of navigating programming with local, state, national and global systems

**Describe any selective admissions policy or special criteria for students interested in this program.**

Applicants would be required to meet the minimum admissions criteria as established by the University's Graduate school.

**Summarize the factors that were considered in developing the proposed curriculum (such as recommendations of advisory or other groups, articulated workforce needs, standards set by disciplinary associations or specialized-accrediting groups, etc.).**

In the mid-nineteen nineties the Agricultural and Extension Education programs at the University of Maryland were closed due to a variety of reasons. The outreach of the University continued with the Extension programming within the College of Agricultural and Natural Resources as is custom with Land Grant Universities. Individuals needing the academic credentials to seek employment within university Extension jobs would acquire their training at other universities or specialize in a content field and then utilize professional development options within early career work to understand Extension principles. During the efforts to re-establish the undergraduate Agriculture Education program there was consistent feedback from stakeholders about the need for coursework directed toward Extension education as well as development of an advanced degree for individuals seeking to advance their careers in addition to expanding their knowledge and skills. As such coursework within the proposal reflects the foundational knowledge and skills in combination with current educational research recommended to advance the field of study. An informal review of similar degrees and courses at land grant universities across the country provided additional support and direction for course development. Similarly, communications with peers conducting Extension education programs at other Land Grant colleges provided cues for program flow and concerns not yet reflected in published program evaluation research articles. The core courses in this proposal reflect the essential elements of knowledge and skill development for advancement in Extension jobs and related occupations. A total of 12 credits in the core courses is required. The suite of elective courses provides the opportunity for students to create their personalized dynamic degree for the wide range of specialty content areas now reflected in the Extension system. The total credits for elective courses may vary due to the students' option to complete a thesis or non-thesis project. The total minimum credits required in this graduate degree aligns with the UMD graduate total of 30.

**Select the academic calendar type for this program (calendar types with dates can be found on the Academic Calendar (<https://www.provost.umd.edu/calendar/>) page)**

Traditional Semester

**For Master's degree programs, describe the thesis requirement and/or the non-thesis requirement.**

**Thesis Option:**

For the thesis option, 6 credit hours must be in AGST 799, "Master's Thesis Research." The thesis should be completed towards the end of the student's coursework. The thesis must be approved by the Thesis Examining Committee, which consists of three members of the graduate faculty. The chair of the committee should be the student's thesis advisor.

**Non-Thesis Option:**

For the non-thesis option, a minimum of 6 credit hours must be from courses numbered 600 and above. Instead of a thesis, students should submit one professional article in publication ready format or present an individually created research based creative component (curricula, professional training design, learning media product, etc.) to the Non-Thesis Review Committee, which consists of three members of the graduate faculty. The chair of the committee should be the student's advisor.

**Identify specific actions and strategies that will be utilized to recruit and retain a diverse student body.**

It is of great importance to recruit and retain a diverse student population for this program is intending to prepare graduates to work with diverse populations across various ecological systems. The program would encourage students to join supportive student groups such as AGNR's MANRRS: Minorities in Agriculture Natural Resources and Related Sciences. MANRRS promotes academic and professional advancement by empowering minorities in agriculture, natural resources, and related sciences. The program leadership is aware of the changing demographics in agriculture and will work to mentor students with intentional supplemental programming.

## Relationship to Other Units or Institutions

**If a required or recommended course is offered by another department, discuss how the additional students will not unduly burden that department's faculty and resources. Discuss any other potential impacts on another department, such as academic content that may significantly overlap with existing programs. Use space below for any comments. Otherwise, attach supporting correspondence.**

The elective courses for the degree program will initially derive from options offered within the College of Agriculture and Natural Resources departments. Students may also seek out advanced courses in statistics and/or social science courses in the College of Education. Departments within the College of Agriculture and Natural Resources are in the process of designing new courses specific to the mission and purpose of the Master of Extension Education program.

**Accreditation and Licensure. Will the program need to be accredited? If so, indicate the accrediting agency. Also, indicate if students will expect to be licensed or certified in order to engage in or be successful in the program's target occupation.**

No accreditation or special licensure.

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

The program will also utilize the opportunity for students to fulfill elective options with courses approved through the D.C. Consortium Enrollment. Students would need to get prior approval by their advisor and the department chair for all requested courses for their plan of study. See the following page for details on the Consortium: <http://registrar.umd.edu/current/registration/consortium.html>



## Faculty and Organization

**Who will provide academic direction and oversight for the program? In an attachment, please indicate the faculty involved in the program. Include their titles, credentials, and courses they may teach for the program.**

The Department of Plant Science and Landscape Architecture will provide academic direction and oversight of the program as well as instructors for the 4 core courses. Faculty in the College of Agriculture and Natural Resources will provide instruction for a majority of elective courses in the program. See additional faculty and their roles in the appendix.

**Indicate who will provide the administrative coordination for the program**

The Department of Plant Science and Landscape Architecture will provide administrative coordination of the program with leadership provided by a selected faculty director, an academic advisor and an administrative assistant.

## Resource Needs and Sources

**Each new program is required to have a library assessment prepared by the University Libraries in order to determine any new library resources that may be required. This assessment must be done by the University Libraries. Add as an attachment.**

Library Collection Assessment

On behalf of the University of Maryland Libraries:

Stephanie Ritchie, Agriculture and Natural Resources Librarian  
Maggie Saponaro, Director of Collection Development Strategies  
Daniel Mack, Associate Dean, Collection Strategies & Services

We are providing this assessment in response to a proposal by the Agricultural and Extension Education Program in the Department of Plant Science and Landscape Architecture in the College of Agriculture and Natural Resources to create a Master of Extension Education degree. The Agricultural and Extension Education Program asked that we at the University of Maryland Libraries assess our collection resources to determine how well the Libraries support the curriculum of this proposed program.

Serial Publications

Since this is proposed as a hybrid online/interdepartmental program with the four core courses being delivered online, it is likely that course assignments will rely heavily upon online journals. The University of Maryland Libraries currently subscribe to many scholarly journals—almost all in online format—that focus on education and agriculture.

The Libraries subscribe to many of the top ranked journals that are listed in the Education, Scientific Disciplines and Education and Educational Research categories in the Science/Social Sciences Edition of Journal Citation Reports\*. Some of the journals in these categories are focused on education in medical and other technical specialties, or very generally cover education, thus are not listed. Additionally, some the titles included are professional or trade publications. A sample of these journals include the following, all of which are available online:

- Journal of Agricultural Education
- North American Colleges and Teachers of Agriculture (NACTA) Journal
- Advances in Physiology Education
- Anatomical Sciences Education
- CBE Life Sciences Education
- Environmental Education Research
- IEEE Transactions on Education
- International Journal of Science Education
- Journal of Experimental Education
- Journal of Nutrition Education and Behavior
- Journal of Research in Science Teaching
- Journal of Science Education & Technology
- Journal of Science Teacher Education
- Journal of STEM Teacher Education
- Journal of Teacher Education
- Journal of Teacher Education for Sustainability
- Journal of Environmental Education
- Research in Science Education
- Science Education
- Teaching and Teacher Education
- Agricultural Education Magazine

Articles in journals that we do not own will likely be available through Interlibrary Loan/Document Delivery.

\*Note: Journal Citation Reports is a tool for evaluating scholarly journals. It computes these evaluations from the relative number of citations compiled in the Science Citation Index and Social Sciences Citation Index database tools.

Databases

The Libraries' Database Finder (<http://www.lib.umd.edu/dbfinder>) resource offers online access to databases that provide indexing and access to scholarly journal articles and other information sources. Many of these databases cover subject areas that would be relevant to this proposed program. Databases that would be useful in the field of agricultural education are ERIC, Web of Science, AGRICOLA, and Education Source. Some

of the other subject databases that would be relevant to this curriculum are listed in Database Finder under the Education subject (<https://www.lib.umd.edu/dbfinder/list/facet/Subject/Education>) and Agriculture subject (<https://www.lib.umd.edu/dbfinder/list/facet/Subject/Agriculture>). In some cases, these databases offer full text copies of the relevant journal articles or facilitate links to electronic content from the Libraries. In those instances in which the content is available only in print format, the Libraries can make copies available to faculty and students through either the Libraries' Interlibrary Loan service (See Interlibrary Loan Services below).

#### Monographs

The Libraries regularly acquire scholarly monographs in education, agriculture and allied subject disciplines. Monographs not already part of the collection can usually be added upon request.

Even though most library research for this course/program likely will rely upon online journal articles, students may wish to supplement this research with monographs. Fortunately, more and more monographs are available as e-books. Even in instances when the books are only available in print, students will be able to request specific chapters for online delivery through the Interlibrary Loan program (See Interlibrary Loan Services below). A search of the University of Maryland Libraries' WorldCat UMD catalog was conducted, using a variety of relevant subject terms. This investigation yielded sizable lists of citations of books that we own. A further search revealed that the Libraries' membership in the Big Ten Academic Alliance (BTAA) dramatically increases these holdings and citations. As with our own materials, students can request that chapters be copied from these BTAA books if the books are not available electronically. A list sample result numbers and subject terms searched is included below.

(Subject: Educat\*) AND (Subject: Science OR Subject: Agricultur\*) = 4,913 UMD | 15,222 BTAA

Subject: Science AND Subject: "Study and teaching" = 3,841 UMD | 12,582 BTAA

Subject: Agricultur\* AND Subject: "Study and teaching" = 204 UMD | 1,754 BTAA

Subject: Agricultural education = 373 UMD | 3,373 BTAA

Subject: Agricultural extension work = 223 UMD | 2,134 BTAA

Subject: "Science Education" = 78 UMD | 266 BTAA

Subject: Agriculture, Vocational guidance = 49 UMD | 415 BTAA

\* The asterisk symbol indicates that the search results should include all suffixes/variations of a word.

#### Government Documents

The University of Maryland Libraries are part of the Federal Depository Library Program (FDLP), meaning this library is a Congressionally designated depository for U.S. Government documents. Our government documents collection contains legislative hearings, Congressional reports, federal regulations, census records, statistical reports, court decisions, agency publications, and more.

The U.S. Department of Agriculture and advisory organizations publish guidance on agricultural extension and education activities. Congressional hearings and legislation often cover agricultural educations, especially in Farm Bill texts. Additionally, publications and data from the U.S. Department of Education are also included in the government documents collection.

#### Interlibrary Loan Services

Interlibrary Loan services (<https://www.lib.umd.edu/access/ill>) provide online delivery of bibliographic materials that otherwise would not be available online. As a result, students engaged in online courses may find these services to be helpful. Interlibrary Loan services are available free of charge.

The article/chapter request service scans and delivers journal articles and book chapters within three business days of the request--provided that the items are available in print on the UM Libraries' shelves or in microform. In the event that the requested article or chapter is not available on campus, the request will be automatically forwarded to the Interlibrary Loan service (ILL). Interlibrary Loan is a service that enables borrowers to obtain online articles and book chapters from materials not held in the University System of Maryland.

#### Additional Materials and Resources

In addition to serials, monographs and databases available through the University Libraries, students in the proposed program will have access to a wide range of media, datasets, software, and technology. Media in a variety of formats that can be utilized both on-site and via ELMS course media is available at McKeldin Library. GIS Datasets are available through the GIS Data Repository (<https://www.lib.umd.edu/gis/data-and-resources>) while statistical consulting and additional research support is available through the Research Commons (<http://www.lib.umd.edu/rc>) and technology support and services are available through the Terrapin Learning Commons (<http://www.lib.umd.edu/tlc>).

The subject specialist librarians for agriculture and education, Stephanie Ritchie (Agriculture and Natural Resources Librarian) and Tahirah Akbar-Williams (Education and African American Studies Librarian) also serve as an important resource to programs such as the one proposed. Through departmental partnerships, subject specialists actively develop innovative services and materials that support the University's evolving academic programs and changing research interests. Subject specialists provide one-on-one research assistance online, in-person, or via the phone. They also provide information literacy instruction and can provide answers to questions regarding publishing, copyright and preserving digital works.

#### Other Research Collections

Because of the University's unique physical location near Washington D.C., Baltimore and Annapolis, University of Maryland students and faculty have access to some of the finest libraries, archives and research centers in the country vitally important for researchers in agriculture and science education. These include the Library of Congress, the Smithsonian, and the National Agricultural Library to name just few.

#### Conclusion

With our substantial journals holdings and index databases, as well as additional support services and resources, the University of Maryland Libraries have resources to support teaching and learning in agricultural education. These materials are supplemented by a strong monograph collection. Additionally, the Libraries Scan & Deliver and Interlibrary Loan services make materials that otherwise would not be available online, accessible to remote users in online courses. As a result, our assessment is that the University of Maryland Libraries are able to meet the curricular and research needs of the proposed Master of Extension Education.

#### **Discuss the adequacy of physical facilities, infrastructure and instructional equipment.**

In summer of 2019, the classroom 2137 in the Plant Sciences Building was renovated for distance learning capability. The room currently has capacity for 24 students with computers arranged in 6 pods with 4 computers at each pod. No additional facility supplies are being requested at this time.

**Discuss the instructional resources (faculty, staff, and teaching assistants) that will be needed to cover new courses or needed additional sections of existing courses to be taught. Indicate the source of resources for covering these costs.**

At this time, CoVID restrictions prohibit new hires funded on state dollars. However it is important to acknowledge, the College has had a long standing multi-year commitment to the establishment of the new MEE program. That commitment includes the hiring of an additional faculty member as soon as possible.

A current faculty member in Plant Science and Landscape Architecture and an additional new hire to the College of Agricultural and Natural Resources would facilitate the 4 core courses. These courses are being designed to be offered online. By offering these core courses during not only Fall & Spring semesters, but also during the winter or summer sessions, the department anticipates additional revenue. Respondents to the survey indicated a desire to participate in online and many preferred a winter or summer session of study.

**Discuss the administrative and advising resources that will be needed for the program. Indicate the source of resources for covering these costs.**

A current faculty member and administrative assistant with responsibilities for Agricultural and Extension Education in the Plant Science and Landscape Architecture Department are funded through the College of Agricultural and Natural Resources.

**Use the Maryland Higher Education Commission (MHEC) commission financial tables to describe the program's financial plan for the next five years. See help bubble for financial table template. Use space below for any additional comments on program funding.**

See attachment from PSLA business office.

## **Implications for the State (Additional Information Required by MHEC and the Board of Regents)**

**Explain how there is a compelling regional or statewide need for the program. Argument for need may be based on the need for the advancement of knowledge and/or societal needs, including the need for "expanding educational opportunities and choices for minority and educationally disadvantaged students at institutions of higher education." Also, explain how need is consistent with the Maryland State Plan for Postsecondary Education (<https://mhec.state.md.us/About/Documents/2017.2021%20Maryland%20State%20Plan%20for%20Higher%20Education.pdf>).**

The proposed program is essential to meet the needs of professionals within the University Extension programing, non-profit organizations, community agricultural outreach, technical institutes, and agricultural education for on-going professional development, which in turn supports the growing local and state agricultural community and broader agricultural industry of the mid-Atlantic region. Respondents (n=154) to a survey of current Extension professional and agricultural education stakeholders within the state of Maryland revealed an immediate interest of 55 individuals in achieving a graduate degree in Extension Education. Additionally, those not interested in obtaining a degree at this time expressed interest in completing courses for professional development. As such, the initial students for the program would be off-site Extension professionals or those seeking entry level positions within Extension. Additional students would be recruited through preexisting relationships with various stakeholders in the state, nationally and internationally. The College of Agriculture and Natural Resources has developing international programs with several of these groups expressing great interest in obtaining educational certificates and degrees in agriculture.

**Present data and analysis projecting market demand and the availability of openings in a job market to be served by the new program. Possible sources of information include industry or disciplinary studies on job market, the USBLS Occupational Outlook Handbook (<https://www.bls.gov/ooh/>), or Maryland state Occupational and Industry Projections (<http://www.dlr.state.md.us/lmi/iandoproj/>) over the next five years. Also, provide information on the existing supply of graduates in similar programs in the state (use MHEC's Office of Research and Policy Analysis webpage (<http://mhec.maryland.gov/publications/Pages/research/>) for Annual Reports on Enrollment by Program) and discuss how future demand for graduates will exceed the existing supply. As part of this analysis, indicate the anticipated number of students your program will graduate per year at steady state.**

Extension specialists work in a variety of life, physical, and social science fields. The U.S. Bureau of Labor Statistics reports a projected 7% growth in these fields from 2018-2028. The increasing demand for expertise in the sciences is growing faster than the average for all occupations. Many land grant colleges' degrees in Extension are aligned with agricultural education programs. It is common for an agricultural education teacher to acquire a masters in Extension education. The annual National Agricultural Education Supply and Demand reports reflect the number of openings and the pool of graduates to fill those vacancies. While the overall job outlook by the U.S. Bureau of Labor Statistics for Career and Technical Education teachers is estimated to hold steady with a potential one percent drop in projected employment by 2028, the 2018 National Agricultural Education Supply & Demand Study reported a shortfall of licensed or alternatively licensed agricultural teachers nationwide. The report stated 247 new positions and 140 new programs were added in the 2017-18 school year. In regards to Extension field based positions in Maryland, the Agriculture and Food Systems Program has filled five positions in the last two years and two more positions are expected to be filled this year. Two positions will not be filed at this time due to Covid-19. Over the next five years, there will be a significant number of retirements from the UME Agriculture and Food Systems Program (~25%).

**Identify similar programs in the state. Discuss any differences between the proposed program and existing programs. Explain how your program will not result in an unreasonable duplication of an existing program (you can base this argument on program differences or market demand for graduates). The MHEC website can be used to find academic programs operating in the state: [http://mhec.maryland.gov/institutions\\_training/pages/HEPrograms.aspx](http://mhec.maryland.gov/institutions_training/pages/HEPrograms.aspx)**

This program is a revitalization of a historic program at the University of Maryland and this type of degree program is typically offered only at Land-grant institutions. There is not a graduate degree focused on Extension Education currently offered at another site in Maryland.

**Discuss the possible impact on Historically Black Institutions (HBIs) in the state. Will the program affect any existing programs at Maryland HBIs? Will the program impact the uniqueness or identity of a Maryland HBI?**

We do not anticipate any negative impacts on HBI's in the state of Maryland. We anticipate the positive results of preparing Extension educators that may seek employment at the University of Maryland Eastern Shore.

## **Supporting Documents**

### **Attachments**

Program objectives with linked assessments MoEE proposal.docx  
Supporting letter for MS Extension Education-September 22, 2020.pdf  
IPAN Letter of Support (1).pdf  
Program oversight MoEE Faculty info.docx  
AGNR 606 AGST 606 Program Planning and Evaluation in Agricultural Education.docx  
AGST 640 Critically Examine Maryland Agriculture, Ag Industry and Ag Literacy.docx  
AGST 605 Extension Research Methods with Applied Data Analysis.docx  
AGNR 630 AGST 630 Teaching- Learning in Adult and Continuing Education.docx  
MHEC-Budget-template-GRAD-2020-PSLA Final.xlsx

Key: 727

<b>Program Objectives</b>	<b>Student Learning Outcomes Aligned to Program Objectives</b>	<b>Methods of Assessment</b>
Examine educational psychology concepts as applied within the field of Extension education	Demonstrate the selection and application of educational theories to support observed practices in Extension Education.	Student formative presentations and summative artifacts completed within coursework
Utilize critical thinking and communication skills to engage with stakeholders	Hone leadership and relationship building skills while designing needs assessments for research and outreach education	Student constructed community needs assessment plans coupled with expanded professional networks.
Develop scientific literacy through independently assessing, interpreting, and summarizing scholarly works	Organize and present research findings to add to the body of knowledge as well participating in Extension outreach.	Student constructed publications, media and outreach presentations.
Expand academic and technical knowledge through authentic and active learning experiences	Make use of advanced knowledge and skills to identify and problem solve current issues facing urban and rural communities	Student formative presentations and summative artifacts completed within coursework
Increase student's awareness of navigating programming with local, state, national and global systems	Recognize opportunities to differentiate outreach efforts with diverse audiences	Student conduct, presentations, and artifacts reflect inclusive facilitation strategies



# UNIVERSITY OF MARYLAND

COLLEGE OF AGRICULTURE AND NATURAL RESOURCES  
DEPARTMENT OF NUTRITION AND FOOD SCIENCE

0112 Skinner Building  
College Park, Maryland 20742-7640  
301.405.1014 TEL 301.314.3313 FAX

September 22, 2020

Dr. Melissa Leiden Welsh  
Assistant Clinical Professor of Agricultural Education  
Department of Plant Science & Landscape Architecture  
University of Maryland  
Plant Science Bldg.  
4291 Fieldhouse Drive, Room 2130  
College Park, MD 20742

Dear Dr. Welsh,

I am writing this letter to express our support of the establishment of the Master of Extension Education program in the College of Agriculture and Natural Resources. I am glad that faculty members from my department have engaged in the program discussions and have provided a list of suggested nutrition and food science courses as potential elective course options for new extension graduate students. This new program in Extension Education will provide opportunities for faculty collaboration and teamwork between the departments of PSLA and NFSC.

Sincerely,

Cheng-I Wei, Ph. D.  
Professor and Interim Chair



1118 Symons Hall  
College Park, Maryland 20742-5551  
301.405.8779 TEL  
Email: [aleger@umd.edu](mailto:aleger@umd.edu)

COLLEGE OF AGRICULTURE AND NATURAL RESOURCES  
*Office of International Programs*

September 23, 2020

Dr. Melissa Leiden Welsh  
Assistant Clinical Professor of Agricultural Education  
Department of Plant Science & Landscape Architecture  
University of Maryland  
Plant Science Bldg.  
4291 Fieldhouse Drive, Room 2130  
College Park, MD 20742

Dear Dr. Welsh,

I am writing this letter to express my department's support of the establishment of the Master of Extension Education program in the College of Agriculture and Natural Resources. My office is committed to supporting this program in developing coursework that could be used in an extension curriculum. Such an endeavor will benefit students, our college and the community served by graduates of this program.

Sincerely,

*Ann J. Leger*

Ann J. Leger  
Coordinator, Office of International Programs

## **AGNR 606 (AGST 606) Program Planning and Evaluation in Agricultural Education**

3 credit –online ELMS (Asynchronous delivery)

### Course Description:

Analysis of community agricultural and extension education needs, selection and organization of course content, criteria and procedures for deploying and evaluating programs. Critical analysis of diversity, equity and inclusion in the planning process.

### Course Objectives:

1. Explore program planning theory, principles and models in Extension and outreach education settings.
2. Examine the process to establish program goals and with stakeholder input.
3. Distinguish elements of logic models and conceptual frameworks in planning and analysis
4. Building awareness of cultural and social influences in program planning and evaluation
5. Interpret results of evaluation methods in a variety of online and on site settings

### Learning Outcomes:

1. Distinguish, exhibit and reflect the use of various communication strategies with groups
2. Construct and evaluate a logic model for an outreach program
3. Facilitate the development, deployment and evaluation of an outreach program
4. Recognize implications of diversity, equity and inclusion throughout program planning stages

### Potential Texts:

National Research Council. 2009. *Transforming Agricultural Education for a Changing World*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/12602>.

Finkel, R., Sharp, B., & Sweeney, M. (Eds.). (2018). *Accessibility, inclusion, and diversity in critical event studies*. Taylor & Francis. ISBN: 9781351142243



## **AGST 640 Critically Examine Maryland Agriculture, Agricultural Industry and Agricultural Literacy**

3 credit –online ELMS (Asynchronous delivery)

### Course Description:

Examine the mission and history of the Land Grant System as well as appraising the current work conducted through the University of Maryland Extension to extend research to citizens. Often referred to as America in miniature, Maryland boasts diverse people, agricultural practices, cultures, and ecosystems which students will examine to perceive the decision making processes within and across ecological systems. An enriching field practicum with an agricultural agency is required.

### Course Objectives:

1. Discover agricultural & Extension education resources within local, county and regional governmental offices, non-profits and agricultural related industry.
2. Examine & evaluate the role of agricultural and extension societies in the progression of grassroots educational efforts throughout the history of the United States.
3. Discuss the development and decision making impact of advisory boards in the progression of local agricultural education for workforce readiness.
4. Compare and contrast resource or support agencies in agriculture and in regards to the diverse population in Maryland as a case study.
5. Examine the legacy of the Land-Grant mission according to the strategic plans outlined within a selected land grant college.

### Learning Outcomes:

1. Develop critical reasoning and research skills to evaluate agricultural & Extension education programs.
2. Navigate various technology tools to examine and evaluate advances in agriculture.
3. Demonstrate agricultural literacy and social justice with various audiences.

### Potential texts:

Institute of Medicine and National Research Council. 2015. *A Framework for Assessing Effects of the Food System*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/18846>.

Reynolds, K., & Cohen, N. (2016). *Beyond the kale: Urban agriculture and social justice activism in New York City* (Vol. 28). University of Georgia Press. ISBN:9780820349503

Journal of Extension Education

North American Colleges and Teachers of Agriculture (NACTA) Journal

## **AGST 605 Extension Research Methods with Applied Data Analysis**

3 credit –online ELMS (Asynchronous delivery)

### Course Description:

Examine foundational qualitative and quantitative research methods in real-world social and behavioral settings for extension and outreach educators. This course enables you to distinguish, select and apply research methods to conduct social science research in a non-formal education setting. A variety of data analysis approaches will be examined across Extension and outreach education applications.

### Course Objectives:

1. Examine the conceptual, philosophical, and ethical issues in social and educational research.
2. Identify, describe and distinguish components of a research study using professional conduct and ethics.
3. Examine and execute quantitative data analysis using various statistical tools (ex. SPSS)
4. Examine and interpret qualitative data analysis using various research approaches (ex. NVIVO)
5. Explore various sampling techniques and their implications for generalizability in a study
6. Examine study instrumentation development with attention to establishing validity and reliability of the instruments.
7. Recognize and identify potential threats to internal and external validity of research designs.

### Learning Outcomes:

1. Identify, formulate and detail a research problem for an extension audience.
2. Critique and develop a theoretical framework using a thorough literature review.
3. Develop or select a study instrument to assess the needs of a sample with an outreach project.
4. Conduct various data analysis in alignment with thesis option or creative component project.
5. Demonstrate ethical and professional conduct throughout the development of a scientific outreach presentation.

### Texts:

Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research, 5th Ed. (2015) Creswell, John W.

National Academies of Sciences, Engineering, and Medicine. 2019. *Improving Data Collection and Measurement of Complex Farms*. Washington, DC: The National Academies Press.  
<https://doi.org/10.17226/25260>.

## **AGNR 630 (AGST 630) Teaching-Learning in Adult and Continuing Education**

3 credit –online ELMS (Asynchronous delivery)

### Course Description:

Critically analyze the teaching/learning process in adult continuing education with a focus on instructional techniques and methodologies appropriate for adults. Students examine the curriculum development process while evaluating issues and priorities in adult continuing education.

### Course Objectives:

1. Identify principles of adult learning through self-reflection, performance evaluation and environmental needs assessment.
2. Compare and contrast motivational theories in non-formal adult education.
3. Explore a variety of techniques to design and facilitate learning experiences for adult and mixed aged audiences.
4. Compare and contrast the construction of adult learning experiences in online environments versus contextual site based.
5. Recognize and apply adult education standards/frameworks for diverse adult learner abilities.

### Learning Outcomes:

1. Demonstrate learning theory application through current literature analysis
2. Formulate assessments to determine proficiency levels of learning with adults
3. Construct online learning experiences to facilitate asynchronous learning of clients
4. Create curriculum specific to adult performance standards across multiple disciplines

### Texts:

National Research Council. 2000. *How People Learn: Brain, Mind, Experience, and School: Expanded Edition*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/9853>.

National Academies of Sciences, Engineering, and Medicine. 2018. *How People Learn II: Learners, Contexts, and Cultures*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/24783>.

The Plant Sciences and Landscape Architecture Department includes a variety of educators and researchers with responsibilities in classrooms, at research stations and at county Extension offices across the state of Maryland. Collectively the following faculty provides academic oversight for all programs in PSLA.

2 Affiliate Associates

5 Affiliate Principal Agents

4 Affiliate Professor

1 Affiliate Senior Agent

2 Agent Associates PTK

5 Assistant Professors TT

9 Associate Professors TT

3 Assistant Clinical Professors PTK

6 Faculty Assistants PTK

8 Faculty Lectures PTK

10 Professors TT

The following individuals have been involved in program/proposal development and noted individuals will serve on the admission review committee.

	Rank and Full/PT	Department	Academic degrees	Program role
Melissa Leiden Welsh	Assistant Clinical Professor for Agricultural Education (PT-9 month)	PSLA	Ph.D. Youth Development & Agricultural Education, Purdue University M.Ed. Youth & Family Education, The Pennsylvania State University B.S. Family and Consumer Sciences, Indiana University of Pennsylvania (Honors)	Admissions committee Program Co-Director/ student mentor
TBD	Assistant Professor for Agricultural Education (TT)	PSLA	TBD	Program Co-Director/ student mentor
Joe Sullivan	Professor and Associate Dean for Academic Programs	PSLA AGNR	B.A. Biology, Erskine College M.S. Biology Western Carolina University Ph.D. Plant Physiology, Clemson University	Program Advisory & potential student mentor
Bill Phillips	Assistant Clinical Professor	PSLA	B.S. in Ornamental Horticulture from the University of Maryland M.S. in Agronomy/Weed Science from the University of Maryland Ph.D. in Weed/Crop Ecophysiology from the University of Maryland	Admissions committee Program Advisory & potential student mentor
John Erwin	Professor	PSLA	B.S. Ornamental Horticulture Delaware Valley College of Science and Agriculture M.S. Horticulture Michigan State University PhD. Horticulture Michigan State University	Program advisory- Supportive role Potential student mentor, educational consultant
Dora Diana Cortez	Academic Advisor	PSLA	MBA. University of Maryland Global Campus (previously University College) M.S. Management, Interdisciplinary Studies University of Maryland Global Campus Graduate Certificate of Foundations in Human Resource Management Graduate Certificate of Leadership and Management	Program clerical supportive role policy & procedures Academic programs advisor

			B.S. Urban Planning (major), Individual Studies program; U.S. Latino Studies (minor) University of Maryland, College Park	
Lauren Argabrite	Administrative Assistant for Agricultural Education	PSLA	N/A	Program clerical supportive role
Christopher Walsh	Professor Emeritus	PSLA	Ph.D. Pomology, Cornell University M.S. Pomology Cornell University B.A. Chemistry Middlebury College	Program Advisory & potential student mentor
John Lea-Cox	Professor	PSLA	Ph.D., University of Florida, Plant Physiology M.Sc., University of Natal, South Africa, Horticulture B.Sc. (Honors), University of Natal, South Africa, Horticulture	Admissions Committee Program Advisory & potential student mentor
Diana Cochran	Assistant Clinical Professor	PSLA	Ph.D Agricultural Science, Mississippi State University M.S., Horticulture, Auburn University B.S. Horticulture, Auburn University	Admissions Committee Program Advisory & potential student mentor
Nicole Fiorellino	Assistant Professor and Extension Specialist	PSLA	Ph.D. - Environmental Science and Technology, University of Maryland M.S. - Animal and Avian Science, University of Maryland, College Park B.S. - Animal Science & Biological Science (double major), Rutgers University	Program Advisory – Supportive role Potential student mentor
Mengjun Hu	Assistant Professor	PSLA	Ph.D. Plant Pathology; Huazhong Agricultural University (2013) B.S. Plant Protection; China Agricultural University (2008)	Admissions Committee Program Advisory – Supportive role Potential student mentor
Darren Jarboe	Principal Agent & Assistant Director, Agriculture & Food Systems	AGNR Extension	Ph.D. Industrial and Agricultural Technology, Iowa State University M.S. Business Administration, Iowa State University B.S. Agronomy & Agricultural Business (double major), Iowa State University	Program Advisory- Supportive role
Virginia Brown	Previous UMD Senior Agent	AGNR Extension	DrPH- Community Health Education, University of North Carolina-Greensboro Doctoral Minor- Educational Research Methods, University of North Carolina-Greensboro MA- Applied Sociology, University of Maryland, Baltimore County BA- Sociology, University of Maryland, Baltimore County	Program Advisory- Supportive role Participated in planning meetings- departed UMD June 2020
Rohan Tikekar	Associate Professor	NFSC	Ph.D. Food Science M.S. Food Science B.S. Food Technology and Engineering	Program Advisory – Dept. Supportive role
Lisa McCoy	Senior Agent	AGNR Extension	M.S. Community Health Education B.S. Human Nutrition and Foods	Program Advisory – Supportive role
Angela Ferelli	Agent Associate in Food Safety	PSLA	PhD- Plant science with a focus in produce safety, University of Maryland BS Biochemistry & Food Science (double major), University of Delaware	Program Advisory – Supportive role
Carol Allen	Agent Associate	PSLA	MS Plant Science, UMD BS Plant Science, Horticulture and Crop Production, UMD Produce Safety Alliance Trainer ISA Certified Arborist, Maryland State Pesticide Public Agency Certificate, & Chesapeake Bay Landscape Professional	Program Advisory – Supportive role
Mira Mehta	Director, Expanded Food and Nutrition Education Program (EFNEP)	NFSC	Ph.D. in International Nutrition with minor in Demography and Developmental Sociology. Cornell University, Ithaca, N.Y. M.S. in International Nutrition. Cornell University, Ithaca, N.Y.	Program Advisory- Supportive role Potential student mentor

			B.Sc. in Human Nutrition and Science. M.S.University Baroda, India.	
Ann Leger	Coordinator, Office of International Programs	AGNR	N/A	Program Advisory- program collaborations & promotion
William W. Bowerman	Professor	ENST	BA Biology Western Michigan University, MA Biology Northern Michigan University, PhD Fisheries & Wildlife - Environmental Toxicology Michigan State University	Program advisory- Supportive role- student mentor, educational consultant

**TABLE 1: RESOURCES**

Resources Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Reallocated Funds	\$50,000	\$30,000	\$30,000	\$30,000	\$30,000
2. Tuition/Fee Revenue (c+g below)	\$146,823	\$337,945	\$348,083	\$358,526	\$369,282
a. #FT Students	5	10	10	10	10
b. Annual Tuition/Fee Rate	\$21,325	\$21,964	\$22,623	\$23,302	\$24,001
c. Annual FT Revenue (a x b)	\$106,623	\$219,643	\$226,233	\$233,020	\$240,010
d. # PT Students	5	10	10	10	10
e. Credit Hour Rate	\$820.40	\$845.01	\$870.36	\$896.47	\$923.37
f. Annual Credit Hours	14	14	14	14	14
g. Total Part Time Revenue (d x e x f)	\$40,200	\$118,302	\$121,851	\$125,506	\$129,271
3. Grants, Contracts, & Other External Sources	\$0	\$0	\$0	\$0	\$0
4. Other Sources	\$0	\$0	\$0	\$0	\$0
<b>TOTAL (Add 1 - 4)</b>	<b>\$196,823</b>	<b>\$367,945</b>	<b>\$378,083</b>	<b>\$388,526</b>	<b>\$399,282</b>

**Undergraduate**

(FY2021)

resident tuition

non-resident tuition

diff'l addition (BMGT, ENGR, CS)

**Full time**

**annual**

**Part Time**

**per credit hour**

**inflation**

**Full time**

**% in-state**

**Part time**

\$ 8,824.00	\$ 367.00	1.03	0.80	0.90
\$ 34,936.00	\$ 1,456.00		0.20	0.10
\$ 2,856.00	\$ 118.00			

**Graduate**

(FY2021)

resident

non-resident

Change rows 7 and 12, depending on whether this is a graduate or undergraduate program.

**annual**

**per credit hour**

\$ 19,179.00	\$ 731.00
\$ 40,635.00	\$ 1,625.00

PSLA notes

**TABLE 2: EXPENDITURES**

Expenditure Categories	Year 1	Year 2	Year 3	Year 4	Year 5	
1. Faculty (b+c below)	\$103,415	\$213,036	\$219,427	\$226,010	\$232,790	salary estimates
a. #FTE	1.0	2.0	2.0	2.0	2.0	\$79,981 Faculty Y1-Welsh; Y2-5 prof X (TT, 9 month)
b. Total Salary	\$79,981	\$164,761	\$169,704	\$174,795	\$180,039	
c. Total Benefits	\$23,434	\$48,275	\$49,723	\$51,215	\$52,751	
2. Admin. Staff (b+c below)	\$30,464	\$31,378	\$32,319	\$33,288	\$34,287	
a. #FTE	0.5	0.5	0.5	0.5	0.5	\$44,998 Admin Staff Lauren Argabrite
b. Total Salary	\$22,499	\$23,174	\$23,869	\$24,585	\$25,323	100% annual salary \$44,998
c. Total Benefits	\$7,965	\$8,204	\$8,450	\$8,703	\$8,964	
3. Total Support Staff (b+c below)	\$0	\$0	\$0	\$0	\$0	
a. #FTE	0.5	0.5	0.5	0.5	0.5	Support Staff none
b. Total Salary	\$0	\$0	\$0	\$0	\$0	
c. Total Benefits	\$0	\$0	\$0	\$0	\$0	
4. Graduate Assistants (b+c)						
a. #FTE	0.0	0.0	0.0	0.0	0.0	GA stipend none
b. Stipend	\$0	\$0	\$0	\$0	\$0	
c. Tuition Remission						
5. Equipment						
6. Library						
7. New or Renovated Space	\$0	\$0	\$0	\$0	\$0	
8. Other Expenses: Operational Expenses	\$60,000	\$120,000	\$120,000	\$120,000	\$120,000	
<b>TOTAL (Add 1 - 8)</b>	<b>\$193,879</b>	<b>\$364,413</b>	<b>\$371,746</b>	<b>\$379,298</b>	<b>\$387,077</b>	
resources - expenditures	\$2,944	\$3,532	\$6,338	\$9,228	\$12,205	net \$34,245

These budget estimates are resources and expenditures to the University overall, and not to the program or unit. Do not include revenue-sharing agreements between units, between unit and college, or with the university (e.g., for entrepreneurial programs) as an expenditure.

faculty	0.29 FY21 fringe
benefit for staff	0.35
inflation	1.03