1. Call to Order

2. Approval of the December 9, 2021 Minutes (Action)

3. Special Order: Presidential Briefing

4. Report of the Chair

5. PCC Proposal to Establish a Post-Baccalaureate Certificate in Science, Technology, and Innovation Policy (Senate Document #21-22-28) (Action)

6. PCC Proposal to Rename the Post-Baccalaureate Certificate in Public Management to Public Leadership and Management (Senate Document #21-22-29) (Action)

7. Special Order
   Dr. Chetan Joshi, Director, Counseling Center
   Thomas Ruggieri, Coordinator, Faculty Staff Assistance Program
   Exploring the Mental Health Needs of Students, Staff, and Faculty During Covid-19

8. Special Order
   Axel Persaud, Assistant Vice President, Division of Information Technology
   Current and Future 5G/6G Campus Initiatives

9. New Business

10. Adjournment

CALL TO ORDER

Senate Chair Williams called the meeting to order at 3:15 p.m.

Chair Williams noted that the Senate had a full agenda of business to complete. She asked if there were any objections to limiting speakers to 2 minutes each on each motion or agenda item without the ability to speak again on an item until all others have had the ability to do so the Senate could complete its business. Williams stated that this would ensure that all those who wish to speak have an opportunity to do so. She noted that if there are no objections, a timer would be displayed on the screen to help speakers manage their time. Hearing no objections, the two-minute timer was put in place for the remainder of the meeting.

Williams provided brief instructions on meeting procedures and using the TurningPoint platform for voting.

APPROVAL OF THE NOVEMBER 10, 2021 MINUTES (ACTION)

Chair Williams stated that a revised version of the minutes had been distributed following the submission of corrections to the PACT Presentation by Dean Adriene Lim. Williams asked if there were any additional corrections to the minutes as corrected. Hearing none; the minutes were approved as corrected.

REPORT OF THE CHAIR

Senate Executive Committee (SEC) Update
Chair Williams stated that the SEC had met on November 22, 2021 and approved the agenda for the Senate meeting. She noted that the SEC had considered the Plan of Organization Review Committee (PORC) Slate and an additional proposal.

Chair Williams stated that PORC would be responsible for conducting a review of the University's Plan of Organization for Shared Governance and that they would begin their work in the spring 2022 semester. Williams noted that the additional proposal considered by the SEC was associated with a Review of IT Governance on Campus. Williams stated that since PORC is mandated to review all University councils during the Plan of Organization review, the SEC agreed that it would be most efficient to ask PORC to consider the proposal as an example related to constituency-based feedback. Williams noted that a general element in PORC's charge would ask the body to review all of the councils in the context of incorporating constituency-based feedback into the process of developing administrative policies, standards, or guidelines that do not go through the Senate. The SEC voted to send the proposal to PORC along with its charge, once it is convened.

Additional Senate Meeting
Chair Williams stated that, following discussions of the Senate Leadership with President Pines, and Provost Rice, the Senate Executive Committee had approved the scheduling of a Special Senate Meeting in January 2022 before the start of the spring 2022 semester. Williams noted that the meeting would be held virtually through Zoom on Friday, January 21, 2022, from 2:00 p.m. - 3:30 p.m.

A verbatim recording of the meeting is on file in the Senate Office.

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She stated that the meeting would be entirely focused on the Provost's presentation of the draft Strategic Plan and feedback from the Senate on the draft Plan.

Chair Williams encouraged Senator attendance at and participation during the Special Senate Meeting and during the remaining meetings scheduled throughout spring 2022. Williams noted the importance of strong attendance during future meetings, stating that many committees would be making recommendations that would be brought to the Senate for a vote during spring 2022.

<u>Procedures</u>
Chair Williams provided an overview of Senate meeting procedures related to participation, providing information for the record, audio recording, introduction of non-Senators, and the 2-minute speaker limit.

NOMINATIONS COMMITTEE SLATE 2021-2022 (SENATE DOCUMENT #21-22-26) (ACTION)

Senate Chair Williams invited Rochelle Newman, Chair-Elect and Chair of the Committee on Committees, to present the Nominations Committee Slate.

Newman presented the slate and provided background information.

Chair Williams opened the floor to discussion of the slate.

Senators did not discuss the slate but voted to approve the slate with **111 in favor, 2 opposed, and 10 abstentions. The motion to approve the slate passed.**

2021 PLAN OF ORGANIZATION REVIEW COMMITTEE SLATE (SENATE DOCUMENT #21-22-27) (ACTION)

Senate Chair Williams invited Rochelle Newman, Chair-Elect and Chair of the Committee on Committees, to present the Plan of Organization Review Committee Slate.

Newman presented the slate and provided background information.

Chair Williams opened the floor to discussion of the slate.

Senators did not discuss the slate but voted to approve the slate with **121 in favor, 2 opposed, and 10 abstentions. The motion to approve the slate passed.**

PCC PROPOSAL TO RENAME THE MASTERS OF ARTS IN "WOMEN'S STUDIES" TO "WOMEN, GENDER, AND SEXUALITY STUDIES" (SENATE DOCUMENT #21-22-23) (ACTION)

Senate Chair Williams invited Valerie Orlando, Chair of the Programs, Curricula, and Courses (PCC) Committee, to present the Proposals to Rename the Master of Arts in "Women's Studies" to "Women, Gender, and Sexuality Studies" (Senate Document #21-22-23), the PCC Proposal to Rename Ph.D. in "Women's Studies" to "Women, Gender, and Sexuality Studies" (Senate Document #21-22-24), and the PCC Proposal to Rename the Post-Baccalaureate Certificate in "Women's Studies" to "Women, Gender, and Sexuality Studies" (Senate Document #21-22-25). Chair Willaims stated that the proposals would be presented and discussed together before being voted on separately.

Orlando presented the proposals and provided background information.

Chair Williams opened the floor for discussion of the proposals, noting the two minute speaker time limit; hearing none, she called for a vote on the PCC Proposal to Rename the Master of Arts in "Women's Studies" to "Women, Gender, and Sexuality Studies) (Senate Document #21-22-23). The result was 114 in favor, 2 opposed, and 8 abstentions. **The motion to approve the proposal passed.**

PCC PROPOSAL TO RENAME PH.D. IN "WOMEN'S STUDIES" TO "WOMEN, GENDER, AND SEXUALITY STUDIES" (SENATE DOCUMENT #21-22-24) (ACTION)

Chair Williams called for a vote on the PCC Proposal to Rename the Ph.D. in "Women's Studies" to "Women, Gender, and Sexuality Studies" (Senate Document #21-22-24). The result was 122 in favor, 3 opposed, and 8 abstentions. **The motion to approve the proposal passed.**

PROPOSAL TO RENAME THE POST-BACCALAUREATE CERTIFICATE IN "WOMEN'S STUDIES" TO "WOMEN, GENDER, AND SEXUALITY STUDIES" (SENATE DOCUMENT #21-22-25) (ACTION)

Chair Williams called for a vote on the PCC Proposal to Rename the Post-Baccalaureate Certificate in "Women's Studies" to "Women, Gender, and Sexuality Studies" (Senate Document #21-22-25). The result was 121 in favor, 2 opposed, and 7 abstentions. **The motion to approve the proposal passed.**

PROPOSAL FOR THE ESTABLISHMENT OF A UNIVERSITY PRIVACY POLICY (SENATE DOCUMENT #20-21-15) (ACTION)

Chair Williams invited Derek Richardson, Chair of the Information Technology (IT) Council to present the proposal.

Richardson presented the proposal on behalf of the IT Council and provided background information.

Chair Williams noted that amendments to the policy had been submitted in advance of the meeting, so the Senate would consider those before opening the floor to discussion of the IT Council's recommendations.

Williams invited Senator Reed, faculty, College of Behavioral and Social Sciences (BSOS) to present the first amendment.

Senator Reed made a motion to amend the language in Section VI. in order to clarify the process that potential privacy violations would take to determine responsibility. The language of the amendment is noted in **pink**:

> **A.** **Suspected violations of this Policy will undergo a standard University review in accordance with relevant University policies to determine responsibility.**
>
> **A̶B.** **University employees or students who are found responsible for violating this Policy and/or the associated Privacy Standards and Guidelines may be subject to disciplinary action in accordance with relevant University policies. Furthermore, certain violations may result in civil penalties and/or criminal prosecution.**

B̶C.   **Unit Heads who are found responsible for knowingly or intentionally violating this Policy and/or the associated Privacy Standards and Guidelines, where such violations lead to, or are responsible for, a reportable security incident or other penalties imposed by government regulators or agencies, may obligate the responsible unit to cover a portion or all of the University remediation costs and/or externally imposed penalties associated with the violation.**

The motion was seconded.

Chair Williams asked Senator Reed to provide the rationale for the amendment.

Senator Reed stated that the amendment was intended to remove responsibility related to investigation and adjudication of policy violations away from the Division of Information Technology (DIT) and to instead refer the violations to existing University structures.

Chair Williams asked Richardson if he would like to respond to the amendment.

Richardson stated that the IT Council would not be opposed to the amendment because it was in line with the intent of the policy.

Chair Williams opened the floor to discussion of the amendment; hearing none she called for a vote on the amendment. The result was 124 in favor, 1 opposed, and 8 abstentions. **The motion to amend the policy passed.**

Chair Williams invited Chair-Elect, Rochelle Newman, to present the second amendment.

Chair-Elect Newman made a motion to amend the language in Section V. to clarify the role of DIT in the implementation of the policy. The language of the amendment is noted in **pink**:

A.   This Policy, the associated Privacy Standards and Guidelines, and the implementation of those instruments are overseen by the University's Chief Data Privacy Officer (umd-privacy@umd.edu).

B.   The Division of Information Technology (DIT) is responsible for supporting Units with the implementation of this Policy by providing effective tools, appropriate resources, and training aimed at minimizing potential costs and workload burdens imposed on Units.

B̶C.   **Standards and Guidelines**

1.   This Policy is supplemented by Privacy Standards and Guidelines that are developed in coordination with appropriate stakeholders and the University IT Council and maintained by the Chief Data Privacy Officer. These Standards and Guidelines address the operationalization of the privacy Principles identified in Section IV.A, including but not limited to access to specified data types, vendor engagement, incident response, and the exceptions process.

2. The Vice President for Information Technology & Chief Information Officer (VPIT & CIO) or designee may issue, amend, or rescind such Privacy Standards and Guidelines as required to comply with legal obligations and University policy, or to meet the needs of the University Community.

~~C~~D. Exceptions

　　1.　　Where a legitimate need has been demonstrated, such as a novel use of an existing data set for health and safety purposes, the VPIT & CIO or designee, in X-15.00(A) page 5 consultation with appropriate stakeholders, may grant exceptions to this Policy and its Standards and Guidelines.

　　2.　　When considering requests for exceptions, the VPIT & CIO or designee, in consultation with appropriate University stakeholders, will evaluate the documented purpose for the exception and the privacy risks to the individuals affected.

　　3.　　Subject to the University's legal obligations or circumstances that necessitate immediate access, the University may provide advance notification to an individual prior to the use of the individual's PII pursuant to an exception request. In certain instances, individuals may be unavailable to receive such advance notification, or such notification may not be reasonably practicable. In such cases use may occur without notification, consistent with applicable law.

The motion was seconded.

Chair Williams asked Chair-Elect Newman to provide the rationale for the amendment.

Newman stated that the amendment was intended to clarify the role of DIT in the implementation of the policy.

Chair Williams asked Richardson if he would like to respond to the amendment.

Richardson stated that while the idea that DIT would provide training tools and support to units to aid in the successful implementation of the policy was aligned with the intent of the policy, the amendment, as written, could lead to a situation in which privacy rights are overwritten for the sake of expediency. He noted that because the amendment, as written, does not account for the balance between respecting the privacy rights of data subjects while considering costs and burdens, the IT Council could not support the amendment.

Chair Williams opened the floor to discussion of the amendment.

Senator Smith, faculty, School of Public Health asked what the IT Council would need to see to be satisfied with the amendment.

Chair Williams recognized Joseph Gridley, Chief Data Privacy Officer, to respond to the question.

Gridley stated that the addition of language stating that training should be aimed at complying with the principles and expectations of the policy while considering minimizing potential costs would address the concerns expressed by Richardson.

Chair-Elect Newman agreed to revise her amendment to incorporate the language suggested by Gridley as follows in brown:

　　B.　　The Division of Information Technology (DIT) is responsible for supporting Units with the implementation of this Policy by providing effective tools, appropriate resources, and training ~~aimed at~~ in order to meet the guidelines and standards of the Privacy Policy while minimizing potential costs and workload burdens imposed on Units.

Chair Williams opened the floor to discussion of the amendment to the amendment; hearing none Williams asked if there was any objection to accepting the amendment to the amendment; hearing none she called for a vote on the amendment. The result was 125 in favor, 0 opposed, and 8 abstentions. **The motion to approve the amendment passed.**

Chair Williams invited Senator Goodman, faculty, College of Computer, Mathematical, and Natural Sciences to present the third amendment.

Senator Goodman made a motion to remove language in Section V. that would allow the Vice President for Information Technology & Chief Information Officer (VPIT & CIO) to clarify or issue, amend, or rescind Privacy Standards and Guidelines to meet the needs of the University Community, as follows in ~~pink~~:

> **B.   Standards and Guidelines**
>
> **1.   This Policy is supplemented by Privacy Standards and Guidelines that are developed in coordination with appropriate stakeholders and the University IT Council and maintained by the Chief Data Privacy Officer. These Standards and Guidelines address the operationalization of the privacy Principles identified in Section IV.A, including but not limited to access to specified data types, vendor engagement, incident response, and the exceptions process.**
>
> **2.   The Vice President for Information Technology & Chief Information Officer (VPIT & CIO) or designee may issue, amend, or rescind such Privacy Standards and Guidelines as required to comply with legal obligations and University policy,~~ or to meet the needs of the University Community~~.**

The motion was seconded.

Chair Williams asked Senator Goodman to provide the rationale for the amendment.

Senator Goodman stated that the intent of the amendment was not to prevent the issuing or amending of Privacy Standards and Guidelines but to require consultation with stakeholders prior to changes to the policy.

Chair Williams asked Richardson if he would like to respond to the amendment.

Richardson stated that the intent of the policy was to allow the unit head most closely involved with the implementation of the policy to initiate the creation or updating of standards that addressed the operational needs of the University. Richardson provided an example of a scenario in which the University would need to set an institution-wide standard that sets the criteria used to anonymize a data set. He noted that this change would be driven by the need to meet the needs of the University Community and that the removal of the language proposed in the amendment would remove the ability to issue such a standard. Richardson stated that for that reason, the IT Council could not support the amendment.

Chair Williams opened the floor to discussion of the amendment.

Chair Williams recognized Joseph Gridley, Chief Data Privacy Officer.

Gridley stated that once the VPIT & CIO identify a change that needs to be made to the policy, the change would still need to be coordinated and approved through the IT Council and other stakeholders, as stated in Section 1 of the Standards and Guidelines.

Hearing no further discussion, Chair Williams called for a vote on the amendment. The result was 82 in favor, 24 opposed, and 21 abstentions. **The motion to approve the amendment passed.**

Chair Williams invited Senator Huard, faculty, CMNS, to present the fourth amendment.

Senator Huard made a motion to amend the language in Section II to clarify the term "full name." The language of the amendment is noted in pink:

A.   "Personally Identifiable Information" means information that is created, received, processed, stored, or transmitted by or on behalf of the University that, alone or in combination with other information, enables the identification of an individual. PII includes but is not limited to a person's:

1. **Full name, including legal name or preferred name;**
2. **Social Security Number;**
3. **Driver's License or other State Identification Number;**
4. **Passport Number;**
5. **Biometric information including physiological, biological, or behavioral characteristics, including an individual's DNA, that can be used alone or in combination with other identifying data to establish an individual's identity;**
6. **Geolocation Data;**
7. **Internet or network activity, including browsing history, search history, and information regarding an identifiable individual's interaction with an internet website, application, or advertisement;**
8. **Financial account number, credit card number, or debit card number that, in combination with any required security code, access code, or password, would permit access to an individual's account; and**
9. **Identifiable health information, including disability status, related to the past, present, or future physical or mental health or condition of an individual.**

The motion was seconded.

Chair Williams asked Senator Huard to provide the rationale for the amendment.

Senator Huard stated that although the term "full name" comes from privacy law, the University uses the terms "legal name" and "preferred name" as well. Huard noted that the change would support recent Senate work on preferred names and gender markers, and would also align with the equity principle of the Privacy Policy.

Chair Williams asked Richardson if he would like to respond to the amendment.

Richardson stated that due to the increasing knowledge regarding the impact naming can have on individuals, especially those from minority groups and disadvantaged populations, and due to the complexity of the issue, it may be more appropriate to include the consideration in a standard that can be more easily amended. Richardson noted that the IT Council does not support nor oppose the amendment.

Chair Williams opened the floor to discussion of the amendment; hearing none, she called for a vote on the amendment. The result was 96 in favor, 16 opposed, and 17 abstentions. **The motion to approve the amendment passed.**

Chair Williams opened the floor to discussion of the Proposal for the Establishment of a University Privacy Policy, as amended.

Senator Brosnan, faculty, CMNS expressed concern regarding the requirements related to student coursework. He noted that the requirement for faculty to delete coursework was complicated and stated the need for faculty to have a more simple process.

Gridley stated that the records retention requirements stated in the policy were already in existence, noting that the Privacy Policy referred to the requirements as a matter of clarification.

Senator Blanton, faculty, A. James Clark School of Engineering (ENGR) asked why there was a higher level of culpability in the policy for department heads as compared to standard employees. He noted that department heads would have to be found to be knowingly in violation of the policy to be found culpable.

Gridley stated that a department or unit head would still be subject to any penalties that any other individual would be subjected to. Gridley also noted that the language that was being referred to meant that in the event of a security breach or regulatory fine, some costs could be recovered from the unit if the unit head was found to be knowingly and intentionally operating their unit in violation of the policy.

Senator Blanton suggested the addition of language to clarify that unit heads would be subject to the same penalties as other standard employees.

Chair Williams asked Parliamentarian Falvey to comment on the language in the policy.

Falvey noted that the policy as written does reflect that unit heads would be subject to the same penalties as standard employees.

Hearing no further discussion, Chair Williams called for a vote on the Proposal for the Establishment of a University Privacy Policy (Senate Document #20-21-15), as amended. The result was 99 in favor, 13 opposed, and 16 abstentions. **The motion to approve the proposal as amended passed.**

SPECIAL ORDER

Jack Blanchard, Associate Provost for Enterprise Resource Planning
Elevate Project Update

Senate Chair Williams invited Jack Blanchard, Associate Provost for Enterprise Resource Planning to provide his presentation.

Blanchard provided an overview of the Elevate Project including the problem that the Elevate Project was trying to solve, how the Elevate Project would serve as a solution, progress on the updates, how work was being accomplished, and the individuals involved in the update.

Blanchard stated that the University's Enterprise Resource Programs (ERP), which is what allows the University to complete functions such as the acquisition of budget information, financial transactions, time record entry, recruitment, course registration, and transcript acquisition, was obsolete and

unable to meet the needs of a complex flagship research university. He noted that the systems used by students rely on software that is 30 years old.

Blanchard stated the goals of the Elevate Program and noted that the University would be updating its ERP systems with Workday, a cloud-based software service. Blanchard noted that the software was in use at a number of institutions and would integrate all systems that students, faculty, and staff need during their day-to-day operations, solving issues around data sharing and data accuracy.

Blanchard stated that Workday has regular updates that occur twice annually, noting that over 1100 enhancements had been made to the student Workday system during the previous year's two updates. Blanchard noted the ease of information sharing, opportunities to share data in real-time, multilingual support, and simplified training as further benefits of the software.

Blanchard noted the institutions and companies that the University was partnering with to facilitate the change. Blanchard stated that a core team of staff had been created to work on the update and that advisory groups, 34 project implementation teams, and outreach through town halls, functional overviews, newsletters, websites, and other communications were being utilized to ensure a functional transition.

Blanchard stated that Workday would be implemented in three stages, with the Finance and Human Capital Management portion being implemented in July 2023, the Adaptive Planning portion being implemented in January 2024, and the Student portion being implemented in Fall 2026. Blanchard noted the stages of development for each portion, stated the deliverables for each stage and highlighted the functional design and customer customization sessions deliverables associated with the architect and configure & prototype stages.

Blanchard noted the roles of the executive sponsors, members of the executive steering committee, Elevate core team, advisory groups, and project implementation teams. Blanchard encouraged Senators to stay up to date on developments related to Project Elevate by visiting the website, subscribing to the newsletter, submitting a question, or requesting a presentation.

Chair Williams thanked Blanchard for his presentation and opened the floor to discussion.

Senators asked if the UAchieve student course audit software would be integrated with Workday, why the University of Maryland, Baltimore (UMB) was not one of the named partners transitioning to Workday, and if a shadow system would be run during the testing phase of the implementation. A Senator also stated that the steering committee had good people with a wealth of experience but that it was missing representation from people who have current experience in academic departments and Colleges which may cause unintended consequences.

Blanchard stated that each existing system would be reviewed in order to determine which systems would be integrated with Workday and which systems would be retired. He noted that UMAD had different needs and created its own implementation based on those needs. Blanchard stated that testing would occur in a series over a long period of time to avoid issues when the system is fully implemented. He noted that the advisory groups that had been convened in April 2021 were made up of representatives from a variety of colleges and that they had been engaged in over 1500 hours of meetings to develop future state process designs. Blanchard noted the process underway to ensure that a diverse group of users would continue to be engaged in the development process, including customer confirmation sessions with more than 300 staff members, and identification from Colleges and Divisions regarding the preferred membership of their project implementation teams.

Chair Williams thanked Blanchard for his presentation.

SPECIAL ORDER

Ross Salawitch, Chair, Educational Affairs Committee
General Education Diversity Update

Chair Williams invited Ross Salawitch, Chair of the Educational Affairs Committee to provide his presentation on the General Education Diversity Requirements Update.

Salawitch provided an overview of the events that had led to the Senate's Educational Affairs Committee (EAC) being charged with reviewing revisions to the University's General Education diversity requirement proposed by the Diversity Education Task Force. Salawitch stated that after the on-campus murder of 2nd Lt. Richard Collins III, an African American Bowie State University student by a white University of Maryland (UMD) student, the Provost formed the Diversity Education Task Force (DETF) to make recommendations to the curriculum to foster a more inclusive and respectful campus community.

Salawitch provided a brief overview of the work done by the DETF, the initial charge given to the EAC in December 2020, and the amended charge given to the EAC in November 2021. He noted that the EAC had also received a proposal recommending revisions to the proposed learning outcomes to acknowledge membership in a multilingual society.

Salawitch provided an overview of the preliminary recommendations from the EAC and directed Senators to their meeting materials for further information. Salawitch noted that the wording of the recommendations was preliminary and urged Senators to focus on the principles behind the learning outcomes rather than current specific wording. He stated that the EAC would continue its work by considering the principles and strategies to guide the implementation of its recommendations.

Salawitch stated that the purpose of presenting the committee's progress towards recommendations during this meeting was to gather feedback and suggestions from Senators prior to the establishment of final recommendations. He noted that feedback could also be submitted online and noted the timeline for completion of the committee's work.

Chair Williams thanked Salawitch for his presentation and opened the floor to discussion.

A Senator and member of the EAC provided more information about the conversations that committee members had had regarding centering race and racism in education about diversity.

Chair Williams recognized Chair-Elect Newman who made a motion to extend the meeting by 10 minutes, until 5:10 p.m. The motion was seconded. Chair Williams called for a vote on the motion to extend and noted that it required a ⅔ vote in favor. The result was 80 in favor and 31 opposed. **The motion to extend the meeting until 5:10 p.m. passed.**

Several Senators and speakers voiced support for the revisions to the General Education Diversity Requirements.

Senators and speakers discussed the appropriateness of centering race in general education requirements, the importance of the study of language as a way in which to understand global diversity, the benefits of anti-racist education, UMD's history of marginalization as a predominantly

white institution, the value that students, alumni, and other campus community members have gained from learning about race and racism, the importance of carefully selecting the courses that would fulfill the general education requirements in order to ensure that students understand structures of racism, the importance of UMD emphasizing critical race structural competency and literacy, the need for practice-based courses, both from the point of view of students and employers, the need to collect campus data regarding relevant issues, the need to focus on the past and other cultures around the world in addition to the present and racism in America and the idea of adding a third course to the general education diversity requirements to ensure that students can gain a global and historical context.

Senators and speakers asked how the committee plans to ensure that language study is included in the revised general education diversity requirements, if there were any scientific studies showing the efficacy of teaching about race and racism, what practices other higher education institutions were engaged in regarding the teaching of race and racism, how education about caste systems and hierarchies could be included in the general education requirements, and what data was available regarding the dropout rates of students of color across majors and bias incidents taking place on campus.

Senator Pease, undergraduate student, College of Behavioral & Social Sciences made a motion to extend the meeting until 5:30 p.m. The motion was seconded. Chair Williams called for a vote on the motion to extend and noted that it required a ⅔ vote in favor. The result was 58 in favor and 17 opposed. **The motion to extend the meeting until 5:30 p.m. passed.**

Chair Williams asked that responses to questions and comments be limited during the discussion in order to allow for time for as many people to share their input as possible.

Salawitch stated that the concerns regarding creating a hierarchy of different kinds of oppression by centering race had been thoroughly considered. Salawitch noted that UMD would be among the first institutions to engage in teaching race and racism in this way. He stated that the EAC had been mindful of the practical implications of the expansion of the practice courses and would be working during the implementation phase to ensure that instructors of those courses were well qualified to teach the subject matter.

Doug Roberts, Member of the Educational Affairs Committee & Associate Dean for General Education stated that the inclusion of courses in general education programs is dependent on the learning outcomes of the course. He noted that the learning outcomes for the diversity general education requirements had not been finalized yet. Roberts stated that members of the School of Languages, Literatures, and Cultures (SLLC) were welcome to be present in discussions regarding the implementation and finalization of learning outcomes to determine how languages courses do or do not align with the updated general education diversity requirements.

Dean Cohen, Office of Undergraduate Studies, stated that research examining graduation rates of students from different races, ethnicities, and genders across campus had been conducted by the DETF, and that the associated reports are available on the institutional research website. He noted that climate surveys across several years had also been analyzed and that the reports associated with the data showed that students of color have very different experiences than white students at UMD.

Senate Chair Williams directed Senators to the Zoom meeting chat for a link where they could submit further feedback regarding the topic.

NEW BUSINESS

There was no new business.

ADJOURNMENT

The meeting was adjourned at 5:31 p.m.

Establish a Post-Baccalaureate Certificate in Science, Technology, and Innovation Policy (PCC 21056)

PRESENTED BY	Valérie Orlando, Chair, Senate Programs, Curricula, and Courses Committee
REVIEW DATES	SEC – January 25, 2022	SENATE – February 9, 2022
VOTING METHOD	In a single vote
RELEVANT POLICY/DOCUMENT	
NECESSARY APPROVALS	Senate, President, University System of Maryland Chancellor, and Maryland Higher Education Commission

ISSUE

The Maryland School of Public Policy (the School) proposes to establish a Post-Baccalaureate Certificate in Science, Technology, and Innovation Policy. The proposed certificate will provide the knowledge and skills necessary to understand, analyze, and implement policies related to science, technology, and innovation, including regulatory aspects related to new technologies and approaches for creating and commercializing new technologies and innovations. Advances in science and technology are essential for new industries and jobs, for maintaining national defense, for ensuring energy security, for expanding food supplies, and for improving healthcare. Science, technology, and innovation (STI) policy therefore figures centrally in the minds of decision-makers, from the highest levels of national governments to the corridors of city halls. The certificate is aimed towards students with STEM backgrounds who wish to acquire a deeper understanding and appreciation of the social and political processes that shape science and technology, and to students in public policy related majors who recognize that many issues are reliant on – and shaped – by science and technological advances.

This twelve-credit program will be offered on campus and through online delivery. The program will have the following requirements:
- PLCY688J Concepts of Technology Change and Innovation (3 Credits)
- PLCY689L Influence of Science on Policy and Policy on Science (3 Credits)
- PLCY699B Modernizing the Energy System (3 Credits) or PLCY688C Cyberspace: Legal and Policy Implications (3 Credits)
- Relevant Elective Course (3 Credits)

Students who complete the program will gain quantitative skills for analyzing empirical data related to science and technology change and analytical skills for designing and evaluating STI policies and programs. Students will learn to use STI policy documents and processes, including Congressional hearings, statutes, federal budgets, court decisions, National Research Council reports, and studies from advocacy groups. Students will also develop their communication skills by writing policy memos, preparing Congressional testimony, and making presentations.

The School currently offers a Master of Public Management as well as other graduate certificate programs. Each of the courses required for the proposed program has been offered before. Tuition revenue will be used to cover administrative costs and the cost of the new courses for the program.

This proposal was approved by the Graduate School Programs, Curricula, and Courses committee on November 29, 2021, and the Senate Programs, Curricula, and Courses committee on December 3, 2021.

RECOMMENDATION

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

COMMITTEE WORK

The committee considered this proposal at its meeting on December 3, 2021. Anand Patwardhan and Tom Kennedy from the Maryland School of Public Policy presented the proposal and answered questions from the committee. The proposal was approved by the committee.

ALTERNATIVES

The Senate could decline to approve this new certificate program.

RISKS

If the Senate declines to approve this certificate program, the university will lose an opportunity to establish a certificate program that will train students in a needed area of policy expertise by using courses that have already been developed and offered by the School.

FINANCIAL IMPLICATIONS

Because this program is self-supported, there are no significant financial implications for this proposal.

823: SCIENCE, TECHNOLOGY, AND INNOVATION POLICY

In Workflow

1. PLCY PCC Chair (nharris@umd.edu; pgjoyce@umd.edu; eduke1@umd.edu)
2. PLCY Dean (pgjoyce@umd.edu; rorr1@umd.edu)
3. Academic Affairs Curriculum Manager (mcolson@umd.edu)
4. Graduate School Curriculum Manager (aambrosi@umd.edu)
5. Graduate PCC Chair (aambrosi@umd.edu)
6. Dean of the Graduate School (sfetter@umd.edu; aambrosi@umd.edu)
7. Senate PCC Chair (mcolson@umd.edu; vorlando@umd.edu)
8. University Senate Chair (mcolson@umd.edu)
9. President (mcolson@umd.edu)
10. Chancellor (mcolson@umd.edu)
11. MHEC (mcolson@umd.edu)
12. Provost Office (mcolson@umd.edu)
13. Graduate Catalog Manager (aambrosi@umd.edu)

Approval Path

1. Fri, 12 Nov 2021 16:09:37 GMT
   Elizabeth Duke (eduke1): Approved for PLCY PCC Chair
2. Fri, 12 Nov 2021 16:26:41 GMT
   Robert Orr (rorr1): Approved for PLCY Dean
3. Tue, 16 Nov 2021 21:55:57 GMT
   Michael Colson (mcolson): Approved for Academic Affairs Curriculum Manager
4. Fri, 17 Dec 2021 13:24:00 GMT
   Angela Ambrosi (aambrosi): Approved for Graduate School Curriculum Manager
5. Fri, 17 Dec 2021 13:24:25 GMT
   Angela Ambrosi (aambrosi): Approved for Graduate PCC Chair
6. Sat, 18 Dec 2021 19:28:35 GMT
   Steve Fetter (sfetter): Approved for Dean of the Graduate School
7. Mon, 20 Dec 2021 14:44:35 GMT
   Valerie Orlando (vorlando): Approved for Senate PCC Chair

New Program Proposal

Date Submitted: Fri, 12 Nov 2021 14:18:51 GMT

Viewing: 823 : Science, Technology, and Innovation Policy
Last edit: Thu, 02 Dec 2021 18:43:58 GMT

Changes proposed by: Thomas Kennedy (tkennedy)

Program Name

Science, Technology, and Innovation Policy

Program Status

Proposed

Effective Term

Fall 2022

Catalog Year

2022-2023

Program Level

Graduate Program

Program Type

Post-Baccalaureate Certificate

Delivery Method

On Campus

Departments

Department
Public Policy

Colleges

College
Public Policy

Degree(s) Awarded

Degree Awarded
Certificate, Post-Baccalaureate

Proposal Contact

Tom Kennedy, Nina Harris, Phil Joyce

Proposal Summary

The School of Public Policy proposes to create a new graduate certificate program in Science, Technology and Innovation Policy. The certificate program will be a four-course (twelve credit) program of study. The program is expected to attract a diverse student body – including mid-career professionals from public and government agencies at the national and state level, multinational organizations, and relevant private sector and civil society organizations; as well as students currently in the MPP and MPM programs at the School of Public Policy and graduate students in STEM programs at UMD. The curriculum will provide the knowledge and skills necessary to understand, analyze and implement policies related to science, technology and innovation, including regulatory aspects related to new technologies and approaches for creating and commercializing new technologies and innovations. This program will work in and across a range of science and technology domains such as information & communication technology and energy & environmental technology.

(PCC Log Number 21056)

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 Graduate Certificate in Science, Technology and Innovation Policy is a four-course (twelve credit) program of study designed for mid-career professionals from public agencies, multinational organizations and relevant private and civil society organizations; as well as graduate students at UMD. The curriculum provides the knowledge and skills necessary to understand, analyze and implement policies related to science, technology and innovation, including regulatory aspects related to new technologies and approaches for creating and commercializing new technologies and innovations. This program works in and across a range of science and technology domains such as information & communication technology and energy & environmental technology.

Catalog Program Requirements:

Course	Title	Credits
Core Requirements		
PLCY688	Topics in Public Policy (PLCY688J Concepts of Technology Change and Innovation)	3
PLCY689	Public Policy Topics (PLCY689L Influence of Science on Policy and Policy on Science)	3
One of the following technology domain courses:		3
PLCY699	Selected Topics Public Policy (PLCY699B Modernizing the Energy System)	
PLCY688	Topics in Public Policy (PLCY688C Cyberspace: Legal and Policy Implications)	
Elective		**3**
Any relevant course approved by the program advisor.		
Total Credits		**12**

*****The information below is for proposal purposes and will not appear in the Academic Catalog*****

The proposed Graduate Certificate will consist of four, three-credit courses (12 graduate academic credits). To earn their certificate, students would:

Complete the following two three–credit courses:

1. PLCY 688J: Concepts of Technology Change and Innovation
2. PLCY 689L: Influence of Science on Policy and Policy on Science

Recognizing that in practice, science, technology and innovation policy often addresses the needs and challenges in specific technology domains, students will be expected to identify and select a particular technology domain in which to develop and apply skills and concepts – and select the third required course from the selected domain. Initially, we expect that students would choose between the following domain options:

A) Information & communication technology (ICT), including cybersecurity and cyberpolicy
B) Energy technologies, particularly clean and sustainable energy technologies

Accordingly, students will need to choose one three-credit course from the following:

1. PLCY 699B: Modernizing the Energy System
2. PLCY 688C: Cyberspace: Legal and Policy Implications

Other science and technology domains may be added in future -- such as health-care technologies, biotechnology, and security technologies. When domains and courses are added at PLCY they may be added to this certificate; courses from other departments are not to be included.

The fourth course will be an open elective three-credit course that students may choose from the following list:

PLCY 798K: Integrated Modeling for Policy

PLCY 780C: Science, Technology, and International Security

PLCY XXX: Modeling Strategic Cybersecurity Risk in Critical Infrastructure

PLCY 689K: Decision Analysis

ENME 701: Sustainable Energy Conversion and the Environment

ENES 663: Strategies for Managing Innovation

ENCE 673: Urban transportation

ENPM 624: Renewable energy applications

BISI 708X: Advanced Topics in Biological Sciences: Scholarly Communication and Public Engagement

Other relevant electives that may be developed and approved by faculty that will enhance the certificate program.

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.

The STI Certificate will be offered in a traditional semester format. Students will have the option to study full-time or part-time. Full-time students will mostly take two courses per Fall and Spring term and part-time students will mostly take one course per Fall and Spring term. The certificate may be offered in non-traditional format if desired by a partner organization.

Full-Time Track

Fall (Year 1)

PLCY 688J: Concepts of Technology Change and Innovation

PLCY 689L: Influence of Science on Policy and Policy on Science

Spring (Year 1)

PLCY 699B: Modernizing the Energy System

PLCY 798K: Integrated Modeling for Policy

Part-Time Track

Fall (Year 1)

PLCY 688J: Concepts of Technology Change and Innovation

Spring (Year 1)

PLCY 689L: Influence of Science on Policy and Policy on Science

Fall (Year 2)

PLCY 699B: Modernizing the Energy System

Spring (Year 2)

PLCY 798K: Integrated Modeling for Policy

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

Learning Outcomes
Learning Outcome 1: Students will understand the principles and practices of science, technology and innovation policy
Learning Outcome 2: Students will be able to understand the design and implementation of policies targeting science, technology and innovation outcomes in specific science & technology domains – and how these outcomes can advance broader policy goals
Learning Outcome 3: Students will gain practical skills related to analysis, effective communication and transdisciplinary and interdisciplinary approaches towards complex problems
The plan for assessing these outcomes is included as Attachment B.

New Program Information

Mission and Purpose

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

Science and technology have been recognized as key enablers for economic growth and sustainable development and its security remains an enduring challenge. The ability to foster, stimulate, and secure an innovation-based economy is accepted as an important determinant of national competitiveness and strength and for achieving social and developmental goals. Advances in science and technology are essential for new industries and jobs; for maintaining national defense; for ensuring energy security; for expanding food supplies; and for improving healthcare. Science, technology and innovation (STI) policy therefore figures centrally in the minds of decision-makers, from the highest levels of national governments to the corridors of city halls. STI policy deals with the promotion of science and the development and commercialization of technology – often through entrepreneurship and new venture creation. At the same time, STI policy also addresses the actual and potential side effects of advanced technologies – effects on health, the environment, privacy, and many other aspects of our lives. Science and technology policy is focused on taking advantage of the enormous benefits to society while minimizing the costs.

Program Characteristics

What are the educational objectives of the program?

The graduate certificate aims at developing a deep understanding of key concepts related to STI policy; including policies for science and science for policy; providing a range of perspectives on political, institutional, social and market factors affecting science and technology, and equipping students with essential skills for analysis and communication.
The certificate is aimed towards both students with STEM backgrounds who wish to acquire a deeper understanding and appreciation of the social and political processes that shape science & technology, and to students in public policy related majors who recognize that many issues are reliant on – and shaped – by science and technological advances. Governing the interplay between these issues and society is an enduring challenge for policy makers who are often woefully unprepared for the complex technical, normative, economic, and political outcomes these issues generate. The STI certificate aims to integrate science, technology, and policy concepts to provide a solid foundation for students interested in this domain.

Specific policy-relevant learning outcomes include:

- Quantitative skills for analyzing empirical data related to technology and technology change
- Analytical skills for designing and evaluating STI policies and programs, including
innovation support mechanisms, and regulatory approaches aimed at addressing the social, environmental and other spillovers of new technologies
- Exposure to the main types of STI policy documents and processes, including Congressional hearings, statutes, federal budgets, court decisions, National Research Council reports, and studies from advocacy groups.
- Communication skills in writing policy memos, preparing Congressional testimony, and
making presentations.

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

Admission policies will be those of the Graduate School of the University of Maryland. Students will be expected to have some prior exposure to quantitative methods, particularly basic statistics and data analysis. There will be no other special criteria for students interested in the program.The admission criteria of the Graduate School include:

- Applicants should have earned a four-year baccalaureate degree or equivalent from an accredited institution.
- Applicants should have a minimum cumulative 3.0GPA (on a 4.0 scale). Official transcripts of a post-secondary degree and a resume are required along with the application.
- International applicants must meet all requirements for international admission, which have specific standards for academic credentials, language proficiency, financial support, visa requirements, etc. Refer to http://gradschool.umd.edu/admissions/international-admissions for process and requirements.

As required by the Graduate School, all application materials are to be submitted electronically:

- Graduate Application
- College or University Transcripts
- Statement of Purpose

- Letters of Recommendation
- Program Supporting Documents
- Non-refundable Application Fee

Completed applications will be reviewed by a School admissions committee. The recommendations of the committee will be submitted to the Dean of the Graduate School who will make the final admission decision.

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.).

The program has been developed through an intensive consultative process involving the
School's faculty. The School faculty includes tenured, tenure-track, and professional track
faculty, characterized by a combination of extensive research credentials combined with practical experience at the highest leadership levels in government such that the School is consistently ranked among the best nationally. The proposed program is well aligned with the mission and activities of research centers within the School such as the Center for Global Sustainability (CGS) and the new Center for Governance of Technology and Systems (GoTech). In addition, program development has had the benefit of inputs from the School's Office of Executive Programs that has extensive experience with addressing the needs of career professionals at the national, state and local levels and private organizations.

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

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

The STI Certificate will seek to recruit and retain a diverse student body in largely the same manner that the School of Public Policy currently utilizes for its existing graduate degree and certificate programs. Specific strategies and actions are included as Attachment E.

Relationship to Other Units or Institutions

If a required or recommended course is o#ered 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.

No required course is o#ered by another department and there is anticipated to be no significant overlap in academic content with any existing programs.

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.

The program is not subject to accreditation. The STI Certificate will, however, meet the same standards and adhere to the same principles as the other certificate programs run by the Graduate School and the School of Public Policy. Students will not be expected to be licensed or certified in order to engage in or be successful in the program's targeted occupations.

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

Cooperative agreements with other institutions or organizations will not be necessary for the
success of this program. Such agreements, however, may be struck in order to grow the size of the program over time. For example, a partnership with a U.S. federal government agency may be struck to serve as a pipeline for admissable employees of the agency to enroll in the certificate.

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.

Academic direction and oversight will be provided by Professor Anand Patwardhan and Dr. Charles Harry who will serve as Co-Program Directors. An Advisory committee will be established for providing further strategic and operational advice and support to the program. This committee will consist of members of the School's tenure track and professional track faculty including Prof Rosina Bierbaum and Dr Leon Clarke, Director of Executive Programs Thomas Kennedy and faculty colleagues from other units on campus working in relevant areas, such as Prof Ellen Williams and Prof Karen Lips.

Attachment C lists involved faculty, with credentials and courses they may teach.

Indicate who will provide the administrative coordination for the program

The program will be administered and managed by the Office of Executive Programs (OEP) at the School of Public Policy. The program will also form an STI Certificate Advisory Committee (as described above) that will provide guidance on the running of the program as well as strategic advice regarding future opportunities for the program

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.

The library assessment is attached.

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

The use of physical facilities, infrastructure and instructional equipment for the STI Certifcte will be the same as for the School's other certificate and degree programs; no new space or equipment will be needed (although a contingency amount for equipment has been provided for in the program budget).

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.

The program will utilize a cadre of both full-time MSPP faculty and lecturers and adjunct lecturers for the classes. In most cases, faculty utilized will have taught within the School's traditional degree and/or executive programs. Tuition revenue will be used to cover all instructional needs and all other program expenses (including salaries, benefits, program materials). All students will pay all associated mandatory fees and the graduate application fee. If a cohort were to run an unplanned loss, we would cover it with net revenues from our many other successful entrepreneurial programs. This self-support program will have no impact on the School's traditional programs.

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

The SPP Associate Dean and the STI Co-Program Directors, along with the leadership of the School's OEP, will play the major management roles for the program. The School's OEP has may years of experience supporting the School's MPS in Public Administration, Executive Master of Public Management, Graduate Certificate programs, and noncredit trainings. Advising will be supervised by the MSPP Associate Dean and the STI Co-Program Directors. Tuition revenue will cover the cost of these 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.

The financial plan is attached. We anticipate the program will draw 20 students into the program annually. The program, however, breaks even financially at 9 students.

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).**

Innovation has been recognized as a key element of Maryland's growth strategy, as reflected in support for new ventures, academia - industry partnerships, and early-stage innovation funding. The proposed program will help advance the innovation agenda by creating the capacity within the policy community to design and manage policies and mechanisms to support technology and innovation. It will effectively complement the deep STEM capabilities in Maryland institutions (including UMCP) with an understanding of social, economic and political issues and processes relevant both for technology regulation and technology promotion.

Is the proposed Post-Baccalaureate Certificate derived entirely from the core requirements of an existing master's degree program?

No

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.dllr.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.**

According to the USBLS Occupational Outlook Handbook, there are over 1 million jobs in the field, with jobs in the management analysis area growing faster than average (at 14%) and in the health services field growing much faster than average (at 32%). Acording to the Maryland Occupational and Indiustry Projectsions there are over 30,000 jobs,with the same 14% and 32% growth rates cited above. There do not appear to be graduates of similar programs in the state currently. At steady state, this program will graduate 20 students per year. Please see attachment for additional detail.

Identify similar programs in the state. Discuss any di#erences 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 di#erences 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

There are no comparable programs at State of Maryland System institutions.

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?

There are no existing similar programs at Maryland HBIs and there should be no impact on HBIs in the state.

Supporting Documents

Attachments

Science, Technology and Innovation Policy Budget.xls
Market Research Science and Tech.xlsx
Market Employment Projections Science and Tech.xlsx
Library Assessment.docx
STI Certificate Appendix A-D 11-12.docx

Key: 823

School of Public Policy					
Science, Technology and Innovation Policy, PS-GC, Fall 2022					
[This program is self-support. Instructors may not teach on-load and administrators must be paid through revenue generated by the program]					
Estimated Tuition Revenue	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
A. Total # of students per year	9	10	11	12	13
B. Total Courses per year	4	4	4	4	4
C. Graduate Tuition Per Course; Assumes 5% increase	$3,500	$3,675	$3,859	$4,052	$4,254
Total Estimated Tuition Revenue	**$126,000**	**$147,000**	**$169,785**	**$194,481**	**$221,222**
Estimated Instructional Expenses	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
A. Instructor Salaries and Benefits Total	**$46,548**	**$47,479**	**$48,429**	**$49,397**	**$50,385**
1. Subtotal: 4-course salaries (assumes 2% annual increase)	$36,000	$36,720	$37,454	$38,203	$38,968
a. Average instrcutor salary per course	9,000	9,180	9,364	9,551	9,742
b. Total # of courses taught per year	4	4	4	4	4
2. Benefits: 29.3%	$10,548	$10,759	$10,974	$11,194	$11,417
B. Grader Salaires and Benefits	**$14,916**	**$15,214**	**$15,519**	**$15,829**	**$16,146**
1. Subtotal: Salary (assumes 2% annual increase)	$12,000	$12,240	$12,485	$12,734	$12,989
a. Average grader stipened per course	3,000	3,060	3,121	3,184	3,247
b. Total # of courses	4	4	4	4	4
2. Benefits: 24.3%	$2,916	$2,974	$3,034	$3,094	$3,156
Total Instructional Expenses	**$61,464**	**$62,693**	**$63,947**	**$65,226**	**$66,531**

	Year 1	Year 2	Year 3	Year 4	Year 5
Total Estimated Tuition Revenue	$126,000	$147,000	$169,785	$194,481	$221,222
Total Instructional Expenses	$61,464	$62,693	$63,947	$65,226	$66,531
Total OES Administrative Fee (10% Tuition Revenue)	$12,600	$14,700	$16,979	$19,448	$22,122
Total Graduate School Administrative Fee	$1,080	$1,200	$1,320	$1,440	$1,560
1. Fee assessed per each semester	$60	$60	$60	$60	$60
2. Total # of semesters per year	2	2	2	2	2
3. Total number of students per year	9	10	11	12	13
Total Distributable Revenue	**$50,856**	**$68,407**	**$87,539**	**$108,367**	**$131,009**

Other Program Expenses to Be Covered by Net Revenue Distribution					
Categories of Other Program Expenses (estimated)	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Academic Administration Totals	**$40,620**	**$41,432**	**$42,261**	**$43,106**	**$43,968**
1. Total Academic Admin Salary (assumes 2% increase)	30,000	30,600	31,212	31,836	32,473
a. Academic Director	30,000	30,600	31,212	31,836	32,473
2. Benefits: Total (35.4%)	10,620	10,832	11,049	11,270	11,495
Materials & Supplies	**$0**	**$0**	**$0**	**$0**	**$0**
1. Cost per course (estimated)	$0	$0	$0	$0	$0
2. Total number of courses	0	0	0	0	0
3. Total number of students	0	0	0	0	0
Marketing & Website	**$0**	**$0**	**$0**	**$0**	**$0**
1. Marketing	0	0	0	0	0
2. Website	0	0	0	0	0

Equipment	$1,200	$0	$0	$1,200	$0
1. Laptops / Monitors	1,000	0	0	1,000	0
2. Printers	200	0	0	200	0
3. Other Devices	0	0	0	0	0
Other Operational Expenses	**$4,000**	**$4,000**	**$4,000**	**$4,000**	**$4,000**
1. Travel (for recruitment)	3,000	3,000	3,000	3,000	3,000
2. Graduation-related	500	500	500	500	500
3. Other	500	500	500	500	500
Courses: Development & Design	**$0**	**$0**	**$0**	**$0**	**$0**
1. New Course: Per course instructor stipend	0	0	0	0	0
2. Ttl # of new courses	0	0	0		0
Total Other Estimated Program Expenses	**$45,820**	**$45,432**	**$46,261**	**$48,306**	**$47,968**

Net Revenue & Non-Instructional Expenses	Year 1	Year 2	Year 3	Year 4	Year 5
Net Revenue for Distribution	$50,856	$68,407	$87,539	$108,367	$131,009
Other Program Expenses	$45,820	$45,432	$46,261	$48,306	$47,968
Profit	**$5,036**	**$22,974**	**$41,278**	**$60,061**	**$83,041**

OES In-House Market Research: Other Institution Comparison							
Program Name = Science, Technology, and Innovation Policy, GC							
Institution	Website	Delivery Method	Degree Name & Type (MPS, MA, MS, MPH, etc.)	# of Credits	Tuition (course or credit)		Target Population	Prior Education/ Pre-Requisites
					Resident	Non-Resident		
Big Ten Institutions								
University of Minnesota Twin Cities	https://www.hhh.umn.edu/masters-programs/graduate-minors-and-dual-degrees	F2F	Science, Technology, and Environmental Policy, Graduate Minor	12 credits	$1,487/credit	$2,301/credit	Designed for currently enrolled graduate students. The graduate minor in Science, Technology, and Environmental Policy (STEP) provides students with the skills and knowledge to study public issues arising at the intersection of science, technology, environment, and society that shape economic development, environmental sustainability, human health, and wellbeing. Students choose from the following focus areas: energy and environmental policy; water policy; climate change policy; emerging technologies and society; urban infrastructure systems; or urban agriculture and food systems policy.	Must be a currently enrolled graduate student. Specific coursework is chosen in consultation with the student's minor advisor or director of graduate studies for the associated degree program.
Rutgers University New Brunswick	https://mbs.rutgers.edu/certificate-science-and-technology-management	F2F	Science and Technology Management, GC	19 credits	$1,051/credit	$1,780/credit	Provides business and business-oriented courses intended to supplement training in a science, mathematics, or engineering degree. Students currently enrolled in graduate programs in science, mathematics, and engineering are eligible to apply for the certificate and will be awarded the certificate upon completion of the 19 credits. Students who already possess a graduate degree in science, mathematics, or engineering may also apply independently for the certificate program. Individuals who have worked in industry for at least five years are eligible to apply for the certificate program as part-time students.	Bachelor's degree from a regionally accredited college or university with minimum 3.0 undergraduate GPA
University of Wisconsin–Madison	https://business.wisc.edu/graduate/certificates/strategic-innovation/	F2F	Strategic Innovation: Organizations, Technology, and Society, GC	12 credits	$1,642/credit	$3,120/credit	The certificate is available to all UW–Madison graduate-degree-seeking students (excluding University Special students). Students gain knowledge and skills, equipping them to anticipate major societal shifts affecting the value of innovation, including technological evolution; choose among different innovative projects; understand product development processes within established organizations; and anticipate the social consequences of organizational innovation.	Must be a currently enrolled graduate student.
State of Maryland System Institutions: Overseen by MHEC (http://mhec.maryland.gov/publications/Pages/research/index.aspx)								
No Comparable Programs								
Colleges & Universities in the Washington DC - Baltimore MD area								
George Washington University	https://business.gwu.edu/academics/programs/certificate/graduate-certificate-management-technology-innovation	F2F	Management of Technology and Innovation, GC	12 credits	$1,825/credit		Focuses on organizational management and innovation/entrepreneurship processes. Students will explore broad technology strategies not only to maximize business applications, but also to launch and build new ventures.	Current GWSB Graduate Students: All current students in good academic standing (cumulative GPA of 3.0 or higher) enrolled in a graduate degree program within the GW School of Business (GWSB) are eligible to be considered for admission to a graduate certificate program after one full semester of completed coursework. Non- GWSB Students: Applicants must hold a bachelor's degree from a regionally accredited college or university. Courses completed as a non-degree student are not eligible for application towards the certificate requirements.
Virginia Tech	https://liberalarts.vt.edu/academics/graduate-programs/graduate-certificates/science-and-technology-studies-graduate-certificate.html	Blended	Science and Technology, GC	12 credits	$783/credit	$1,578/credit	The STS graduate certificate offers the opportunity to learn and develop competency in various aspects of the relations between science, technology, and society. It is intended to serve both current graduate students in other programs at Virginia Tech and non-degree-seeking students interested in career advancement.	Bachelor's degree from a regionally accredited college or university with minimum 3.0 undergraduate GPA
Other Major Institutions Offering Similar Programs								
Arizona State University	https://sfis.asu.edu/degree-programs/grad-cert/rises/	F2F	Responsible Innovation in Science, Engineering, and Society, GC	15 credits	$837/credit	$1,308/credit	The certificate program in responsible innovation in science, engineering and society is designed for scientists, engineers, research managers, technology officers, public administrators and policy officials who seek to advance science and technology to improve societal outcomes and to develop creative solutions to the fundamental global challenges of the 21st century.	Bachelor's degree from a regionally accredited college or university with minimum 3.0 undergraduate GPA

OES In-House Market Research: Projected Enrollment Information

Program Name = Science, Technology, and Innovation Policy, GC

Occupation	# of Jobs in the Field	Where Professionals are Employed	Professional Salary Information	Projected Job Growth
Information from U.S. Bureau of Labor Statistics' Occupational Outlook Handbook				
Management Analysts	907,600	Professional, scientific, and technical services- 31% Government- 17% Self-Employed workers- 16% Finance and Insurance- 13% Management of companies and enterprises- 5%	$87,660/year	14% (Faster than average)
Medical and Health Services Managers	139,600	Hospitals; state, local, and private-33% Offices of physicians-12% Nursing and residential care facilities-10% Government-9% Outpatient care centers-7%	$104,280/year	32% (Much faster than average)
Information from State of Maryland's Occupational and Industry Projections				
Management Analysts	19,790	Professional, scientific, and technical services- 31% Government- 17% Self-Employed workers- 16% Finance and Insurance- 13% Management of companies and enterprises- 5%	$102,850	14% (Faster than average)
Medical and Health Services Managers	10,450	Hospitals; state, local, and private-33% Offices of physicians-12% Nursing and residential care facilities-10% Government-9% Outpatient care centers-7%	$132,000	32% (Much faster than average)

DATE: November 4, 2021

TO: Thomas Kennedy, Director, Executive & Cohort Programs
             Nina Harris, Associate Dean, Academic Programs and Student Services; Clinical
             Professor
             Philip Joyce, Professor and Senior Associate Dean

FROM: On behalf of the University of Maryland Libraries:

             Judy Markowitz, Librarian for Government and Politics, Public Policy, Women, Gender,
              and Sexuality Studies

             Maggie Saponaro, Director of Collection Development Strategies

             Daniel Mack, Associate Dean, Collection Strategies & Services

RE: Library Collection Assessment

We are providing this assessment in response to a proposal by The School of Public Policy to create an
on-campus/online Post-Baccalaureate Certificate in Science, Technology and Innovation Policy. The
School of Public Policy 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 both an on-campus/online course, 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 publish articles in the areas of Science, Technology and Innovation.

Because of the many aspects of the proposed program that are listed in the program description, the
categories in the Social Sciences Edition of *Journal Citation Reports** used to assess our subscriptions
are many. The Libraries subscribe to many of the top ranked journals that are listed in the following
categories:

Political Science; Multidisciplinary Sciences; Engineering, Environmental, Green and Sustainable
Science & Technology; Communication

Those categories are being used for this assessment since they were noted in the program description:
("This program will work in and across a range of science and technology domains such as information
& communication technology and energy & environmental technology.").

Categories:

Multidisciplinary Sciences – top 5
Nature
Science
Proceedings of the National Academy of Sciences
Nano Today
Journal of the Royal Society Interface

Engineering, Environmental – top 5
Applied Catalysis B: Environmental
Chemical Engineering Journal
Water Research
Journal of Hazardous Materials
Resources, Conservation & Recycling

Green and Sustainable Science & Technology – top 5
Renewable & Sustainable Energy Reviews
Green Chemistry
Journal of Cleaner Production
ChemSusChem
Green Energy & Environment

Communication – top 5
Communication Monographs
New Media and Society
Digital Journalism
Communication Methods and Measures
Political Communication

Additional core journals covering Science, Technology and Innovation
Annals of the New York Academy of Sciences
Cybersecurity
Cybersecurity Policy Report
Big Data and Society – Open Access
Economics of Innovation and New Technology
Environmental Technology & Innovation – Open Access
IBM Journal of Research and Development
IEEE Technology and Society Magazine
Journal of Cybersecurity – Open Access
Journal of Mixed Methods Research
Journal of Responsible Innovation
Public Understanding of Science
Research Policy
Science and Public Policy
Science Communication
Science, Technology, & Human Values
Scientific American

Scientometrics
Sustainability Science
Technology and Innovation

*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 would be useful for Science, Technology and Innovation.

> ACM Digital Library
> ASCE Library
> BioOne
> Building Green
> Communication and Mass Media Complete
> Congressional Publications
> EconLit
> Energywire
> Environment & Energy Daily
> Greenwire
> IEEE Xplore
> IEEE Wiley eBooks
> Materials Science & Engineering Database
> Military and Government Collection
> NTIS Database (National Technical Information Service)
> PAIS
> ScienceDirect
> SocINDEX
> Springer eBooks (2005-2011)
> Web of Science Core Collection
> ICPSR

The following general/multidisciplinary databases are also good sources of articles relevant to this topic: *Academic Search Ultimate, MasterFILE Premier, JSTOR,* and *ProjectMUSE* .

In many-and likely in most--cases, these databases offer full text copies of the relevant journal articles. In those instances, in which the journal articles are not available or available only in print format, the Libraries can make copies available through the Libraries' Interlibrary Loan service (https://www.lib.umd.edu/access/ill-article-request). (Note: see below.)

Monographs

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

 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 (https://www.lib.umd.edu/access/ill-article-request). (Note: see 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 in print and ebook and published in the last 10 years:

Innovation = 4684
Technological Innovations = 4183 (can add many key words such as: engineering, management, economic aspects, environmental, communication…)
Technology Social Aspects = 2302
Technology and Civilization = 105
Technology and Engineering = 4107
Computer Networks Security Measures = 837
Cybersecurity = 710
Computer and Technology = 127
Environmental Policy = 1102

Keywords to use as opposed to subject headings:
"science and technology"
"science policy"
"science innovation"

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.

Please note that one limitation of these services that might create some challenges for the online student is that the Libraries are not allowed to make online copies of entire books. The only way that a student can get access to a print copy of an entire book is to physically come to the Libraries and check out that book.

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, remote users who take 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 journals, monographs and databases available through the University Libraries, students in the proposed program will have access to 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 (http://www.lib.umd.edu/gis/dataset).

Statistical consulting, workshops and additional research support is available through the Research Commons (http://www.lib.umd.edu/rc).

Technology support and services are available through the Terrapin Learning Commons (http://www.lib.umd.edu/tlc).

Research Data Services (Data Archiving, Data Management Plans, Managing Data, Open Data) lib-research-data@umd.edu

The subject specialist librarian for Public Policy, Judy Markowitz, judym@umd.edu also serves as an important resource to programs such as the one proposed. Subject librarians for STEM, Communication, Economics, Environmental Sciences, and Sociology can be called upon to help as needed. 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 Science, Technology and Innovation Policy. These include the Library of Congress and the National Archives.

Conclusion

With our journals holdings, monographs and databases, as well as additional support services and resources, at this point in time, our assessment is that the University of Maryland Libraries are able to meet the curricular and research needs of the proposed Post-Baccalaureate Certificate in Science, Technology and Innovation Policy.
Every year we are faced with resource inflation costs and a finite budget allocation. The Libraries cannot

guarantee that we will continue to have access to these resources in the near future.

Although journal articles, books and book chapters can be requested and received via Interlibrary Loan (ILL), access to databases cannot be fulfilled this way.

Appendix A

Course Catalog Information

These two courses in the certificate program would be required:

PLCY 688J: Concepts of Technology Change and Innovation

The course provides a thorough understanding of technology and innovation and the characteristics, determinants and drivers of technological change. The course introduces key analytical constructs such as technology and product life cycles and learning curves, and the range of institutional, market and social factors that affect the diffusion and adoption of technologies, including the concepts of national innovation systems, and innovation support mechanisms.

PLCY 689L: Influence of Science on Policy and Policy on Science

This course explores how scientific and technical information gets used (or not used) in the formation of public policy, and how public policy influences science and technology development. Students will come away from this course with a fundamental understanding of the institutional landscape of S&T policy, the instruments of S&T policy implementation, and the processes of S&T policy decision-making. This institutional landscape encompasses government, business, academic institutions, and NGOs.

The third required course would be chosen from the following two courses:

PLCY 699B: Modernizing the Energy System

This course will explore science, technology and innovation policy issues in the context of clean energy technologies and a decarbonized energy system. Key technologies such as renewable energy technologies, intelligent end-use systems and smart grids will be assessed and the course will build an understanding of the dynamics of their development and deployment. Aspects such as innovation support mechanisms, technology cooperation and collaboration and early stage technology finance will be explored.

PLCY 688C: Cyberspace: Legal and Policy Implications

This course explores the key issues facing policy makers attempting to manage the problem of cybersecurity from its technical foundations to the domestic and international policy considerations surrounding governance, response, and critical infrastructure risk management. Students will be expose to the integrated technical structures that support modern society and the persistent governance challenges tied to securing critical data and core infrastructures.

The fourth elective course would be chosen from among the courses indicated below (or other new courses that may be approved):

PLCY 780C: Science, Technology, and International Security

Examines the roles of science and technology (S&T) in the development of conventional (e.g., missiles, bombs) and unconventional (e.g., nuclear, chemical, and biological) weapons and their associated threats to U.S. and international security. Will introduce new ways of thinking about security-technology policy interaction, drawing on political science, security studies, and S&T studies.

PLCY 798K: Integrated Modeling for Policy

Focuses on exploring options for adaptation and building resilience to the possible impacts of climate change through an interwoven understanding of the physical, biological, social, cultural, economic and institutional constraints of water resources issues and consideration of climate-related risks in the management and decision-making process

PLCY ZZZ: Modeling Strategic Cybersecurity Risk in Critical Infrastructure

Governance of technology is often difficult for policy makers to holistically address due in part to the inability to assess the consequences of cascading failure in complex and interdependent systems. This course explores methods for modelling interconnected infrastructure and processes to quantify strategic risk and exposes students to advanced methods including graph theory, Markov Chains, agent modelling and monte carlo simulation as tools to assess static and dynamic risk.

PLCY689K: Decision Analysis

The purpose of this course is to expose students to concepts of risk and uncertainty, and the way in which they are addressed and used in public policy. Within the overall context of regulatory decision-making, quantitative methods to assess risk will be introduced and the process of risk-based decision-making will be elaborated. By the end of the course, students will understand the concepts of risk and risk-informed regulation, and the strengths and limitations of quantitative methods.

BISI 708X: Advanced Topics in Biological Sciences – Scholarly Communication and Public Engagement

This course is designed to provide practical knowledge on understanding fundamental aspects of science communication, science policy, and public engagement with science. This course will also provide insights on skill and techniques for engaging in these areas, and networking opportunities for students planning a career in science. The course will build the capacity of students to more effectively interact with the public, the media, and policymakers through a range of mechanisms.

ENES 663: Strategies for Managing Innovation

This course emphasizes how innovative leaders can use strategic management of innovation and technology to enhance firm performance. It helps students to understand the process of technological change; the ways that firms come up with innovations; the strategies that firms use to benefit from innovation; and the process of formulating technology strategy. It provides frameworks for analyzing key aspects of these industries and teaches students how to apply these frameworks.

ENCE 673: Urban Transportation

The contemporary methodology of urban transportation planning. The urban transportation planning process, interdependence between the urban transportation system and the activity system, urban travel demand models, evaluation of urban transportation alternatives and their implementation.

Appendix B

Learning Assessment Plan

The learning outcomes of the program include:

Learning Outcome 1: Students will understand the principles and practices of science, technology and innovation policy.

Learning Outcome 2: Students will be able to understand the design and implementation of policies targeting science, technology and innovation outcomes in specific science & technology domains – and how these outcomes can advance broader policy goals.

Learning Outcome 3: Students will gain practical skills related to analysis, effective communication and transdisciplinary and interdisciplinary approaches towards complex problems.

Assessment: Formal program review will be carried out according to the University of Maryland's policies including conduct of course evaluations relative to the learning objectives of the program. The evaluations will indicate students' satisfaction with instructor effectiveness and the value of the course. Graduates will be asked to participate in an exit interview to assess the program for its value and relevance and for the effectiveness of its instructors. A follow-up survey will be conducted one year after graduation in light of graduates' current professional activities. Also, the School will seek to measure learning outcomes "directly", that is directly testing how well, not just whether the students have actually learned each of the planned learning outcomes. We will do this by pulling course assignments that directly relate to each outcome and having them scored separately from the course relative to the learning outcomes.

Appendix C

Faculty and Courses

The program will utilize SPP's nationally renowned, resident practitioner scholars as well as adjunct practitioners who are preeminent in the field. Permanent faculty member may teach these courses either as part of their regular teaching load or on an overload basis, depending on whether the students are in traditional classes or part of an entrepreneurial cohort. Given the broad scope of STI policy, some of the elective course options are drawn from non-SPP departments and colleges in UMD. All faculty will be members of the Graduate Faculty and approved by the Dean of the Graduate School to teach.

SPP faculty who will likely teach courses in the certificate program include:

- Anand Patwardhan, Professor, School of Public Policy
- Charles Harry, Assoc Research Professor; Director, GoTech; Senior Research Associate, CISSM
- Rosina Bierbaum, Research Professor; Roy F. Westin Chair in Natural Economics
- Jim Gates, Physics
- Kavita Surana, Assistant Research Professor, School of Public Policy
- Leon Clarke, Research Professor, School of Public Policy
- Ryna Cui, Assistant Research Professor, School of Public Policy
- Ellen Williams, Physics
- John Costello, School of Public Policy
- Karen Lips, Biological Sciences
- Thomas Mierzwa, Engineering Science

Course	Faculty
PLCY 688J: Concepts of Technology Change and Innovation	Anand Patwardhan
PLCY 689L: Influence of Science on Policy and Policy on Science	Rosina Bierbaum Jim Gates
PLCY 699B: Modernizing the Energy System	Kavita Surana Ellen Williams
PLCY 688C: Cyberspace: Legal and Policy Implications	Charles Harry John Costello
PLCY 798K: Integrated Modeling for Policy	Ryna Cui Leon Clarke
PLCY ZZZ: Modeling Strategic Cybersecurity Risk in Critical Infrastructure	Charles Harry
PLCY689K: Decision Analysis	Anand Patwardhan
ENCE 673 Urban Transportation	Kaveh Sadabadi
BISI 708X Scholarly Communication and Public Engagement	Karen Lips
ENES 663 Strategies for Managing Innovation	Thomas Mierzwa

Appendix D

Actions and Strategies to Recruit and Retain a Diverse Student Body

The Certificate in Science, Technology and Innovation Policy is proposed to be offered on-campus and online. Both versions of the proposed Certificate will seek to recruit and retain a diverse student body in largely the same manner that the School of Public Policy (SPP) currently utilizes for its existing graduate degree and certificate programs. Below is an overview of the School diversity recruiting plan and specific actions to be taken.

Overview

1. SPP will show a commitment to diversity and inclusion in curriculum, faculty, and programming and use these activities in promotional materials.

2. SPP will recruit from diverse groups and networks.

3. SPP will encourage diverse current students and alumni to refer friends and colleagues.

Recruitment Actions

1. Utilize UMD and SPP organizational relationships for program and application invitations. These include the McNair Post-Baccalaureate Achievement program; network and recruitment events of The Public Policy and International Affairs Program (PPIA), a not-for-profit that has been supporting efforts to increase diversity in public service for 39 years; the Association of Professional Schools of International Affairs (APSIA) Diversity Initiatives, and The Network of Schools of Public Policy, Affairs, and Administration (NASPAA) Diversity Initiatives.

2. Dedicated Historically Black Colleges and Universities (HBCU) informational events that include application fee waivers for attendees and outreach to faculty at minority serving institutions.

3. Leverage diverse current students, alumni, faculty and staff by keeping them apprised of student recruiting events and asking that they share announcements with their networks. These include general events as well as events targeting specific underrepresented populations.

Retention

Both the online and on-campus versions of the proposed Certificate in Science, Technology and Innovation Policy will be managed in the same manner as the School's entrepreneurial degree programs – the Master of Professional Studies in Public Administration and the Executive Master of Public Management – that draw domestic and international students. These programs are 'high touch' programs, with customer service provision that allows staff to individually interact with students to forestall any problems that may hinder completion. In this way, retention is thus high for the professional programs overall (over 90%) and equally high for traditionally under represented student populations.

individually interact with students to forestall any problems that may hinder completion. In this way, retention is thus high for the professional programs overall (over 90%) and equally high for traditionally under represented student populations.

Rename the Post-Baccalaureate Certificate in Public Management to Public Leadership and Management (PCC 21058)

PRESENTED BY	Valérie Orlando, Chair, Senate Programs, Curricula, and Courses Committee
REVIEW DATES	SEC – January 25, 2022	SENATE – February 9, 2022
VOTING METHOD	In a single vote
RELEVANT POLICY/DOCUMENT	
NECESSARY APPROVALS	Senate, President, University System of Maryland Chancellor, and Maryland Higher Education Commission

ISSUE

The Maryland School of Public Policy (the School) recently reactivated the Post-Baccalaureate Certificate program in Public Management after several years of being inactive. The School would now like to change the program title to Public Leadership and Management. This new title reflects the practical realities of modern governance. Governing in the public interest continues to be accomplished through traditional hierarchic bureaucracies, but must also be pursued through cross sector collaboration in network organizations and within a diverse and demographically shifting environment. The School recognizes a growing demand for both enhanced management and leadership skills to address changing governance demands. The program's curriculum reflects these instructional imperatives, and the School believes that the program title should also reflect the importance of leadership and its prevalence in the curriculum.

The proposal was approved by the Graduate School PCC committee on November 29, 2021, and the Senate Programs, Curricula, and Courses committee on December 3, 2021.

RECOMMENDATION

The Senate Committee on Programs, Curricula, and Courses recommends that the Senate approve this name change.

COMMITTEE WORK

The committee considered this proposal at its meeting on December 3, 2021. Betty Duke, Nina Harris, and Tom Kennedy from the Maryland School of Public Policy presented the proposal and answered questions from the committee. The proposal was approved by the committee.

ALTERNATIVES

The Senate could decline to approve this new program title.

RISKS

If the Senate declines to approve this program title change, the current program will not adequately describe the program content.

FINANCIAL IMPLICATIONS

There are no significant financial implications for program title changes.

616: PUBLIC LEADERSHIP AND MANAGEMENT (Z004)

In Workflow

1. University Senate Chair (mcolson@umd.edu)
2. President (mcolson@umd.edu)
3. Chancellor (mcolson@umd.edu)
4. MHEC (mcolson@umd.edu)
5. Provost Office (mcolson@umd.edu)
6. Graduate Catalog Manager (aambrosi@umd.edu)

History

1. Sep 16, 2019 by Angela Ambrosi (aambrosi)
2. Oct 18, 2019 by William Bryan (wbryan)
3. Dec 12, 2021 by Michael Colson (mcolson)

Date Submitted: Tue, 21 Dec 2021 19:30:50 GMT

Viewing: 616 : Public Leadership and Management (Z004)
Last approved: Sun, 12 Dec 2021 22:51:45 GMT
Last edit: Tue, 21 Dec 2021 19:38:17 GMT

Changes proposed by: Michael Colson (mcolson)

Proposed Action

Rename Program

Program Name

Public Leadership and Management (Z004)

Program Status

Active

Effective Term

Fall 2022

Catalog Year

2022-2023

Program Level

Graduate Program

Program Type

Post-Baccalaureate Certificate

Delivery Method

On Campus

Departments

Department
Public Policy

Colleges

College
Public Policy

Program/Major Code

Z004

MHEC Inventory Program

Public Management

CIP Code

440501 - Public Policy Analysis, General.

HEGIS

229909

Degree(s) Awarded

Degree Awarded
Certificate, Post-Baccalaureate

Proposal Contact

Tom Kennedy, Nina Harris, Phil Joyce

Proposal Summary

The School of Public Policy recently reactivated this certificate program and would now like to change the name from Public Management to Public Leadership and Management.

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.

This certificate program is a four-course (twelve credit) graduate certificate program that is designed to provide skills, knowledge and experience to enable students to analyze and address complex governance challenges. The certificate will equip student to formulate innovative strategies, to negotiate the complexities of hierarchic bureaucracies and cross sector networks across local, national and global settings.

Catalog Program Requirements:

Course	Title	Credits
Core Requirements		
PLCY689	Public Policy Topics (PLCY689X Performance Management)	3
PLCY698	Selected Topics in Public Affairs (PLCY698T Networks: Leading and Managing Across Sectors)	3
One of the following courses:		3
PLCY670	Public Budgeting & Financial Management	
PLCY688	Topics in Public Policy (PLCY688F State, Local and Nonprofit Financial Management)	
PLCY717	Federal Budgeting: Policy and Process	
PLCY781	International Economic Policy	
Elective		**3**
	Any management and leadership course approved by the School of Public Policy. Any course from above may be used if not already used for a core requirement.	
Total Credits		**12**

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.

The PLM Certificate will be offered in a traditional semester format. Students will have the option to study full-time or part-time. Full-time students will mostly take two courses per Fall and Spring term and part-time students will mostly take one course per Fall and Spring term. The certificate may be offered in non-traditional format if desired by a partner organization.

Full-Time Track

Fall (Year 1)

PLCY 689X Performance Management

PLCY 698T Networks: Leading and Managing Across Sectors

Spring (Year 1)

PLCY 688F State, Local and Non-profit Financial Management

PLCY 692 Leadership Principles and Practices

Part-Time Track

Fall (Year 1)

PLCY 689X Performance Management

Spring (Year 1)

PLCY 698T Networks: Leading and Managing Across Sectors

Fall (Year 2)

PLCY 688F State, Local and Non-profit Financial Management

Spring (Year 2)

PLCY 692 Leadership Principles and Practices

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

Learning Outcomes
Students will understand the principles and practices of public policy management and leadership.
Students will be able to understand how the principles and practice of public policy management and leadership relate to the management of programs designed to serve the public.
Students will be able to apply the tools and techniques of public policy leadership and management to address complex problems through traditional approaches and through cross-sector, collaborative networks.

Program Modification Information

Impact on current students. It should be specifically acknowledged that students enrolled in the program prior to the effective date of any curriculum change may complete their program under the old requirements if they wish. The courses required must remain available, or suitable substitutions specifically designated.

There are currently no students in the program.

Linked Programs

Renaming Program

Provide a rationale for renaming the program.

The Maryland School of Public Policy recently reactivated the Post-Baccalaureate Certificate in Public Management after several years of being inactive. The School would now like to change the program title to Public Leadership and Management. This new title reflects the practical reality of modern governance. Governing in the public interest continues to be accomplished through traditional hierarchic bureaucracies, but must also be pursued through cross sector collaboration in network organizations and within a diverse and demographically shifting environment. The School recognizes a growing demand for both enhanced management and leadership skills to address changing governance demands. Accordingly, the School proposes to add the word "Leadership" to the title of the program.

Supporting Documents

Attachments

616_ Public Leadership and Management (Z004).pdf

Reviewer Comments

Michael Colson (mcolson) (Tue, 21 Dec 2021 19:36:53 GMT): The proposal to reactivate the program was approved by the Senate PCC committee on 12/3/2021. See attachment for that proposal.

Key: 616

Program Change Request

Date Submitted: 12/21/21 2:30 pm

Viewing: **616 : Public Leadership and Management (Z004)**

Last approved: 12/12/21 5:51 pm

Last edit: 12/21/21 2:38 pm

Changes proposed by: Michael Colson (mcolson)

Catalog Pages Using this Program
 Public Management, Post-Baccalaureate Certificate (P.B.C.)

Proposed Action	**Rename Program** ~~Curriculum Change~~
Program Name	

 Public **Leadership and** Management (Z004)

Program Status	Active
Effective Term	Fall 2022
Catalog Year	**2022-2023** ~~2021-2022~~
Program Level	Graduate Program
Program Type	Post-Baccalaureate Certificate
Delivery Method	On Campus

Departments	Department
	Public Policy

Colleges	College

History

1. Sep 16, 2019 by Angela Ambrosi (aambrosi)
2. Oct 18, 2019 by William Bryan (wbryan)
3. Dec 12, 2021 by Michael Colson (mcolson)

College
Public Policy

Program/Major Code   Z004

MHEC Inventory   Public Management
Program

CIP Code   440501 - Public Policy Analysis, General.

HEGIS   229909

MHEC Recognized
Area(s) of
Concentration

Degree(s) Awarded

Degree Awarded
Certificate, Post-Baccalaureate

If other, new
degree award:

Proposal Contact
  Tom Kennedy, Nina Harris, Phil Joyce

Proposal Summary
  The School of ~~This proposal is to reactivate the existing~~ Public **Policy recently reactivated this certificate** ~~Management~~ program ~~by updating the curriculum~~ and **would now like to change the name from** ~~renaming the program to~~ Public **Management to Public** Leadership and Management. ~~Please note that originally this proposal was submitted as new program, but since the Public Management certificate program already existed, we have worked with the Provost's Office to use the existing program instead.A copy of the new program proposal, which explains in more detail how the program will be reestablished, is attached.~~

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.

This certificate program is a four-course (twelve credit) graduate certificate program that is designed to provide skills, knowledge and experience to enable students to analyze and address complex governance challenges. The certificate will equip student to formulate innovative strategies, to negotiate the complexities of hierarchic bureaucracies and cross sector networks across local, national and global settings.

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PLCY717	Federal Budgeting: Policy and Process	
PLCY781	International Economic Policy	
Elective		3
	Any management and leadership course approved by the School of Public Policy. Any course from above may be used if not already used for a core requirement.	
Total Credits		12

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.

The PLM Certificate will be offered in a traditional semester format. Students will have the option to study full-time or part-time. Full-time students will mostly take two courses per Fall and Spring term and part-time students will mostly take one course per Fall and Spring term. The certificate may be offered in non-traditional format if desired by a partner organization.

Full-Time Track

Fall (Year 1)

PLCY 689X Performance Management

PLCY 698T Networks: Leading and Managing Across Sectors

Spring (Year 1)

PLCY 688F State, Local and Non-profit Financial Management

PLCY 692 Leadership Principles and Practices

Part-Time Track

Fall (Year 1)

PLCY 689X Performance Management

Spring (Year 1)

PLCY 698T Networks: Leading and Managing Across Sectors

Fall (Year 2)

PLCY 688F State, Local and Non-profit Financial Management

Spring (Year 2)

PLCY 692 Leadership Principles and Practices

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

Learning Outcomes
Students will understand the principles and practices of public policy management and leadership.
Students will be able to understand how the principles and practice of public policy management and leadership relate to the management of programs designed to serve the public.
Students will be able to apply the tools and techniques of public policy leadership and management to address complex problems through traditional approaches and through cross-sector, collaborative networks.

Program Modification Information

Impact on current students. It should be specifically acknowledged that students enrolled in the program prior to the effective date of any curriculum change may complete their program under the old requirements if they wish. The courses required must remain available, or suitable substitutions specifically designated.

There are currently no students in the program.

Linked Programs

Indicate in the space below all programs to which this program is formally linked (e.g., approved combined bachelor's/master's programs, dual master's programs, or joint-programs with other universities). If the proposed modification will affect the linked program, provide as an attachment the new curriculum for each arrangement and provide supporting correspondence from the director of the linked program.

Renaming Program

Provide a rationale for renaming the program.

The Maryland School of Public Policy recently reactivated the Post-Baccalaureate Certificate in Public Management after several years of being inactive. The School would now like to change the program title to Public Leadership and Management. This new title reflects the practical reality of modern governance. Governing in the public interest continues to be accomplished through traditional hierarchic bureaucracies, but must also be pursued through cross sector collaboration in network organizations and within a diverse and demographically shifting environment. The School recognizes a growing demand for both enhanced management and leadership skills to address changing governance demands. Accordingly, the School proposes to add the word "Leadership" to the title of the program.

Supporting Documents

Attachments

825_ Public Leadership and Management.pdf

Appendix 5 Library Assessment-2.pdf

Appendix 4 PLM Certificate Appendix A-D final.pdf

Appendix 3 Market Employment Projections Public Management.pdf

Appendix 2 Market Research Public Management.pdf

Appendix 1 Public Management and Leadership Budget.pdf

616_ Public Leadership and Management (Z004).pdf

Administrative

Documents

Reviewer

Comments

Michael Colson (mcolson) (12/21/21 2:36 pm): The proposal to reactivate the program was approved by the Senate PCC committee on 12/3/2021. See attachment for that proposal.

Key: 616

616: PUBLIC MANAGEMENT (Z004)

Completed Workflow

1. Academic Affairs Curriculum Manager (mcolson@umd.edu)
2. Graduate School Curriculum Manager (aambrosi@umd.edu)
3. Graduate PCC Chair (aambrosi@umd.edu)
4. Dean of the Graduate School (sfetter@umd.edu; aambrosi@umd.edu)
5. Senate PCC Chair (mcolson@umd.edu; vorlando@umd.edu)
6. Provost Office (mcolson@umd.edu)
7. Graduate Catalog Manager (aambrosi@umd.edu)

Approval Path

1. Tue, 23 Nov 2021 18:40:25 GMT
   Michael Colson (mcolson): Approved for Academic Affairs Curriculum Manager
2. Thu, 02 Dec 2021 00:03:23 GMT
   Angela Ambrosi (aambrosi): Approved for Graduate School Curriculum Manager
3. Thu, 02 Dec 2021 00:04:10 GMT
   Angela Ambrosi (aambrosi): Approved for Graduate PCC Chair
4. Thu, 02 Dec 2021 14:43:31 GMT
   Steve Fetter (sfetter): Approved for Dean of the Graduate School
5. Mon, 06 Dec 2021 18:41:46 GMT
   Valerie Orlando (vorlando): Approved for Senate PCC Chair
6. Wed, 08 Dec 2021 22:16:03 GMT
   Michael Colson (mcolson): Approved for Provost Office
7. Sun, 12 Dec 2021 22:51:45 GMT
   Angela Ambrosi (aambrosi): Approved for Graduate Catalog Manager

History

1. Sep 16, 2019 by Angela Ambrosi (aambrosi)
2. Oct 18, 2019 by William Bryan (wbryan)
3. Dec 12, 2021 by Michael Colson (mcolson)

Changes saved but not submitted
Viewing: 616 : Public Management (Z004)

Changes proposed by: Michael Colson (mcolson)

Proposed Action

Curriculum Change

Program Name

Public Management (Z004)

Program Status

Active

Effective Term

Winter 2022

Catalog Year

2021-2022

Program Level

Graduate Program

Program Type

Post-Baccalaureate Certificate

Delivery Method

On Campus

Departments

Department
Public Policy

Colleges

College
Public Policy

Program/Major Code

Z004

MHEC Inventory Program

Public Management

CIP Code

440501 - Public Policy Analysis, General.

HEGIS

229909

Degree(s) Awarded

Degree Awarded
Certificate, Post-Baccalaureate

Proposal Contact

Tom Kennedy, Nina Harris, Phil Joyce

Proposal Summary

This proposal is to reactivate the existing Public Management program by updating the curriculum and renaming the program to Public Leadership and Management. Please note that originally this proposal was submitted as new program, but since the Public Management certificate program already existed, we have worked with the Provost's Office to use the existing program instead. A copy of the new program proposal, which explains in more detail how the program will be reestablished, is attached.

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.

This certificate program is a four-course (twelve credit) graduate certificate program that is designed to provide skills, knowledge and experience to enable students to analyze and address complex governance challenges. The certificate will equip student to formulate innovative strategies, to negotiate the complexities of hierarchic bureaucracies and cross sector networks across local, national and global settings.

Catalog Program Requirements:

Course	Title	Credits
Core Requirements		
PLCY689	Public Policy Topics (PLCY689X Performance Management)	3
PLCY698	Selected Topics in Public Affairs (PLCY698T Networks: Leading and Managing Across Sectors)	3
One of the following courses:		3
PLCY670	Public Budgeting & Financial Management	
PLCY688	Topics in Public Policy (PLCY688F State, Local and Nonprofit Financial Management)	
PLCY717	Federal Budgeting: Policy and Process	
PLCY781	International Economic Policy	
Elective		**3**

Any management and leadership course approved by the School of Public Policy. Any course from above may be used if not already used for a core requirement.

Total Credits	**12**

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.

The PLM Certificate will be offered in a traditional semester format. Students will have the option to study full-time or part-time. Full-time students will mostly take two courses per Fall and Spring term and part-time students will mostly take one course per Fall and Spring term. The certificate may be offered in non-traditional format if desired by a partner organization.

Full-Time Track

Fall (Year 1)

PLCY 689X Performance Management

PLCY 698T Networks: Leading and Managing Across Sectors

Spring (Year 1)

PLCY 688F State, Local and Non-profit Financial Management

PLCY 692 Leadership Principles and Practices

Part-Time Track

Fall (Year 1)

PLCY 689X Performance Management

Spring (Year 1)

PLCY 698T Networks: Leading and Managing Across Sectors

Fall (Year 2)

PLCY 688F State, Local and Non-profit Financial Management

Spring (Year 2)

PLCY 692 Leadership Principles and Practices

Use the space below for any additional comments on the courses or other requirements selected for the revised curriculum. Typical comments may be clarifications of why certain courses are being replaced or added.

The curriculum was created by the School's faculty composed of a combination of tenured and tenure-track and professional track faculty. This faculty is characterized by a combination of extensive research credentials combined with practical experience at the highest leadership levels in government such that the School is consistently ranked among the best nationally. In addition, the faculty has consulted with representatives of government agencies at the national, state and local levels and many private organizations and with our extensive alumni network.

Dean Robert Orr has been the President of the Network of Schools of Public Policy, Affairs, and Administration (NASPAA) made up of the graduate programs in public administration, public policy and public affairs and over the years several other administrative and faculty leaders have been deeply engaged in the work of the organization. Professor Elizabeth Duke has served in senior positions in the federal government, as consultant to and/or leadership positions in business, state and local government and nonprofit organizations. All faculty in the program bring deep engagement in the field and a commitment to advancing our students into the web of cross-sector leadership.

Please note that the two required courses are foundational in that one (698T) addresses leadership and management in today's world as contrasted to the command and control world of an earlier era and the other (689X) addresses performance measurement and management which is the basic essential, tool for managing and leading in this world of the new governance. The other foundational set of courses relates to financial management and the certificate offers a choice to students who may wish to go into either federal, or state, or nonprofit, or international settings.

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

Learning Outcomes
Students will understand the principles and practices of public policy management and leadership.
Students will be able to understand how the principles and practice of public policy management and leadership relate to the management of programs designed to serve the public.
Students will be able to apply the tools and techniques of public policy leadership and management to address complex problems through traditional approaches and through cross-sector, collaborative networks.

Program Modification Information

Description and Rationale for Modifications.

The Maryland School of Public Policy's ("MSPP" or "the school") certificate in Public Management has been inactive for several years. This proposal will reactivate the program with a new title (Public Leadership and Management) and curriculum.

The practical reality of modern governance is that the public interest continues to be accomplished through traditional hierarchic bureaucracies but is also pursued through cross sector collaboration in network organizations and within a diverse and demographically shifting environment. The recognizes a growing demand for enhanced management and leadership skills to address changing governance demands. As a result, the School proposes to create a Graduate Certificate in Public Leadership and Management derived in part from the existing Master of Public Management degree program to be offered for in-degree students and for other individuals and groups through SPP's entrepreneurial program.

****The information below is for proposal purposes and will not appear in the Academic Catalog*****

The proposed program requires the completion of 12 credits via three (3) required courses, and one (1) elective from the School's robust menu of public management and leadership courses. Course catalog information is included in Appendix A.

Required PLCY 689X Performance Management (3 Credits)
Required PLCY 698T Networks: Leading and Managing Across Sectors (3 Credits)
Required (Choose One, Each are 3 Credits)

PLCY 670 Public Finance and Budgeting

OR PLCY 688F State, Local and Nonprofit Financial Management

OR PLCY 717 Federal Budget

OR PLCY 781 International Economic Policy

Elective (Choose One, Each are 3 Credits)

PLCY 670 Public Finance and Budgeting (if not chosen above)

PLCY 688F State, Local and Nonprofit Financial Management (if not chosen above)

PLCY 717 Federal Budget (if not chosen above)

PLCY 781 International Economic Policy (if not chosen above)

PLCY 688G Governance: Management, Leadership and Accountability

PLCY 689Z Strategic Management for Nonprofit and Public Organizations

PLCY 689A Federal Acquisitions: Concepts and Management

PLCY 692 Leadership Principles and Practices

PLCY 698B Organizational Behavior

PLCY 699F Ethics in Public Administration Practices

PLCY 699G Leadership in Groups and Organizations

PLCY 752 Managing Differences: Resolving Conflicts and Negotiating Agreements

PLCY 798Y Nonprofit Management and Leadership

Any new management and leadership courses that may be developed and approved by faculty that will enhance the certificate program.

For new or modified courses, please provide the course catalog information (credits, description, prerequisites, etc.). Suffixed "Selected" or "Special" topics courses should be avoided. New courses and course modifications must be submitted through the course approval process at https://courseleaf.umd.edu/courseadmin (https://courseleaf.umd.edu/courseadmin/)**. You may submit individual course changes through the course approval process concurrently with the program proposal; however, the course change approvals may be held until the program proposal is approved.**

See attached list of courses.

Impact on current students. It should be specifically acknowledged that students enrolled in the program prior to the effective date of any curriculum change may complete their program under the old requirements if they wish. The courses required must remain available, or suitable substitutions specifically designated.

There are currently no students in the program.

Linked Programs

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

Admission policies will be those of the Graduate School of the University of Maryland. There will be no special criteria for students interested in the program. The admission criteria of the Graduate School include:

- Applicants should have earned a four-year baccalaureate degree or equivalent from an accredited institution.
- Applicants should have a minimum cumulative 3.0GPA (on a 4.0 scale). Official transcripts of a post-secondary degree and a resume are required along with the application.

- International applicants must meet all requirements for international admission, which have specific standards for academic credentials, language proficiency, financial support, visa requirements, etc. Refer to http://gradschool.umd.edu/admissions/international-admissions for process and requirements.

As required by the Graduate School, all application materials are to be submitted electronically:

- Graduate Application
- College or University Transcripts
- Statement of Purpose
- Letters of Recommendation
- Program Supporting Documents
- Non-refundable Application Fee

Completed applications will be reviewed by a School admissions committee. The recommendations of the committee will be submitted to the Dean of the Graduate School who will make the final admission decision.

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

Relationship to Other Units or Institutions

If a required or recommended course is o#ered 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.

No required or recommended course is o#ered by another department and there is anticipated to be no significant overlap in academic content with any existing programs.

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.

The program is not subject to accreditation. The PLM Certificate will, however, meet the same standards and adhere to the same principles as the other certificate programs run by the Graduate School and the School of Public Policy. Students will not be expected to be licensed or certified in order to engage in or be successful in the program's targeted occupations.

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

Cooperative agreements with other institutions or organizations will not be necessary for the success of this program. Such agreements, however, may be struck in order to grow the size of the program over time.

Supporting Documents

Attachments

825_ Public Leadership and Management.pdf
Appendix 5 Library Assessment-2.pdf
Appendix 4 PLM Certificate Appendix A-D final.pdf
Appendix 3 Market Employment Projections Public Management.pdf
Appendix 2 Market Research Public Management.pdf
Appendix 1 Public Management and Leadership Budget.pdf

Reviewer Comments

Michael Colson (mcolson) (Tue, 23 Nov 2021 18:36:52 GMT): This proposal was originally submitted as a new stand-alone certificate program, but since the School already has an existing Public Management certificate, we administratively created this modification proposal to replace the initial proposal. The original proposal, with approval signatures from the college, is attached.

Key: 616

School of Public Policy					
Public Management and Leadership, PS-GC, Fall 2022					
[This program is self-support. Instructors may not teach on-load and administrators must be paid through revenue generated by the program]					
Estimated Tuition Revenue	Year 1	Year 2	Year 3	Year 4	Year 5
A. Total # of students per year	9	10	11	12	13
B. Total Courses per year	4	4	4	4	4
C. Graduate Tuition Per Course; Assumes 5% increase	$3,500	$3,675	$3,859	$4,052	$4,254
Total Estimated Tuition Revenue	**$126,000**	**$147,000**	**$169,785**	**$194,481**	**$221,222**
Estimated Instructional Expenses	Year 1	Year 2	Year 3	Year 4	Year 5
A. Instructor Salaries and Benefits Total	**$46,548**	**$47,479**	**$48,429**	**$49,397**	**$50,385**
1. Subtotal: 4-course salaries (assumes 2% annual increase)	$36,000	$36,720	$37,454	$38,203	$38,968
a. Average instrcutor salary per course	9,000	9,180	9,364	9,551	9,742
b. Total # of courses taught per year	4	4	4	4	4
2. Benefits: 29.3%	$10,548	$10,759	$10,974	$11,194	$11,417
B. Grader Salaires and Benefits	**$14,916**	**$15,214**	**$15,519**	**$15,829**	**$16,146**
1. Subtotal: Salary (assumes 2% annual increase)	$12,000	$12,240	$12,485	$12,734	$12,989
a. Average grader stipened per course	3,000	3,060	3,121	3,184	3,247
b. Total # of courses	4	4	4	4	4
2. Benefits: 24.3%	$2,916	$2,974	$3,034	$3,094	$3,156
Total Instructional Expenses	**$61,464**	**$62,693**	**$63,947**	**$65,226**	**$66,531**

	Year 1	Year 2	Year 3	Year 4	Year 5
Total Estimated Tuition Revenue	$126,000	$147,000	$169,785	$194,481	$221,222
Total Instructional Expenses	$61,464	$62,693	$63,947	$65,226	$66,531
Total OES Administrative Fee (10% Tuition Revenue)	$12,600	$14,700	$16,979	$19,448	$22,122
Total Graduate School Administrative Fee	$1,080	$1,200	$1,320	$1,440	$1,560
1. Fee assessed per each semester	$60	$60	$60	$60	$60
2. Total # of semesters per year	2	2	2	2	2
3. Total number of students per year	9	10	11	12	13
Total Distributable Revenue	**$50,856**	**$68,407**	**$87,539**	**$108,367**	**$131,009**

Other Program Expenses to Be Covered by Net Revenue Distribution					
Categories of Other Program Expenses (estimated)	Year 1	Year 2	Year 3	Year 4	Year 5
Academic Administration Totals	**$40,620**	**$41,432**	**$42,261**	**$43,106**	**$43,968**
1. Total Academic Admin Salary (assumes 2% increase)	30,000	30,600	31,212	31,836	32,473
a. Academic Director	30,000	30,600	31,212	31,836	32,473
2. Benefits: Total (35.4%)	10,620	10,832	11,049	11,270	11,495
Materials & Supplies	**$0**	**$0**	**$0**	**$0**	**$0**
1. Cost per course (estimated)	$0	$0	$0	$0	$0
2. Total number of courses	0	0	0	0	0
3. Total number of students	0	0	0	0	0
Marketing & Website	**$0**	**$0**	**$0**	**$0**	**$0**
1. Marketing	0	0	0	0	0

2. Website	0	0	0	0	0
Equipment	**$1,200**	**$0**	**$0**	**$1,200**	**$0**
1. Laptops / Monitors	1,000	0	0	1,000	0
2. Printers	200	0	0	200	0
3. Other Devices	0	0	0	0	0
Other Operational Expenses	**$4,000**	**$4,000**	**$4,000**	**$4,000**	**$4,000**
1. Travel (for recruitment)	3,000	3,000	3,000	3,000	3,000
2. Graduation-related	500	500	500	500	500
3. Other	500	500	500	500	500
Courses: Development & Design	**$0**	**$0**	**$0**	**$0**	**$0**
1. New Course: Per course instructor stipend	0	0	0	0	0
2. Ttl # of new courses	0	0	0		0
Total Other Estimated Program Expenses	**$45,820**	**$45,432**	**$46,261**	**$48,306**	**$47,968**

Net Revenue & Non-Instructional Expenses	Year 1	Year 2	Year 3	Year 4	Year 5
Net Revenue for Distribution	$50,856	$68,407	$87,539	$108,367	$131,009
Other Program Expenses	$45,820	$45,432	$46,261	$48,306	$47,968
Profit	**$5,036**	**$22,974**	**$41,278**	**$60,061**	**$83,041**

OES In-House Market Research: Other Institution Comparison

Program Name = Public Leadership and Management, GC

Institution	Website	Delivery Method	Degree Name & Type (MPS, MA, MS, MPH, etc.)	# of Credits	Tuition (course or credit)		Target Population	Prior Education / Pre-Requisites
					Resident	Non-Resident		
Big Ten Institutions								
Indiana University Bloomington	https://oneill.indiana.edu/online-programs/online-certificates/public-management.html	Online	Public Management, GC	15 credits	$655/credit	$1,324/credit	Designed for professionals in a public or private sector agency and are interested in taking on a managerial role, our certificate can help.	Bachelor's degree from a regionally accredited college or university with minimum 3.0 undergraduate GPA
University of Minnesota Twin Cities	https://www.hhh.umn.edu/certificate-programs/certificate-public-affairs-leadership	F2F	Public Affairs Leadership, GC	12 credits	$989/credit	$1,209/credit	The Certificate in Public Affairs Leadership offers mid-career professionals specific knowledge and skills in leadership, management public policy, and analysis to succeed in today's challenging environment.	Bachelor's degree from a regionally accredited college or university. Prerequisites: At least 10 years of post baccalaureate professional work experience. Pre-baccalaureate experience may be considered for applicants with a significant gap (15 years or more) between completion of high school and college.
University of Nebraska	https://online.nebraska.edu/program/public-management-graduate-certificate-60ebb2b68e2dd10007bbeb27/	Online	Public Management, GC	15 credits	$365/credit	$600/credit	Designed to expand and enhance the educational background of graduate students and individuals working in the public sector.	Bachelor's degree from a regionally accredited college or university. At least three years of work experience in the public sector or completed part of their graduate course work in a related field of study.
Ohio State University	http://ppm.osu.edu/graduate/public-management-certificate/	Online	Public Management, GC	13 credits	$722/credit	$922/credit	Designed to meet the needs of working professionals in the public sector who desire to enhance their public management and leadership skills.	Bachelor's degree from a regionally accredited college or university with minimum 3.0 undergraduate GPA
Rutgers University New Brunswick	https://spaa.newark.rutgers.edu/leadership-public-organizations-certificate		Leadership of Public Organizations, GC	18 credits	$780/credit	$1,312/credit	Provides students with a focus on human resources topics including best practice policy; diversity and inclusion; management and leadership techniques; and a comprehensive review of all local, state, and federal policies that govern employment, and employment practices.	Bachelor's degree from a regionally accredited college or university with minimum 3.0 undergraduate GPA
State of Maryland System Institutions: Overseen by MHEC (http://mhec.maryland.gov/publications/Pages/research/index.aspx)								
Notre Dame of Maryland University	https://www.ndm.edu/grad-prof-studies/academics/programs/leadership-and-management	F2F or Online	Leadership & Management, Post-Baccalaureate Certificate	18 credits	$595/credit		Our curriculum prepares leaders to master challenges and to effect change through discernment and ethics. Our graduates lead people, manage organizations, and support communities all over the planet. You'll find them in managerial, executive, and volunteer leadership roles in for-profit, government, education, nonprofit, and philanthropic ventures.	Bachelor's degree from a regionally accredited college or university
UMGC UMD University Global Campus	https://www.umgc.edu/academic-programs/graduate-certificates/leadership-and-management.cfm	Online	Leadership & Management, GC	12 credits	$504/credit	$659/credit	Prepare to become a leader in the workforce. The graduate certificate program in leadership and management at University of Maryland Global Campus is designed to provide you with the skills and leadership ability to navigate a variety of workplaces. You'll gain a foundation in organizational and management theory as well as skills in decision making, communication, strategic planning, and coaching and managing others.	Bachelor's degree from a regionally accredited college or university
Colleges & Universities in the Washington DC - Baltimore MD area								
American University	https://www.american.edu/spa/key/executive-leadership-graduate-certificate-temp.cfm	F2F	Executive Leadership, GC	12 credits	$1,812/credit		Designed for students who typically holds a GS-12 (or above) level or equivalent NGO, private sector, or leadership/management experience.	This certificate is open to students with a bachelor's degree or equivalent from an accredited institution.
Cornell University	https://ecornell.cornell.edu/certificates/leadership-and-strategic-management/public-sector-leadership/	Online	Public Sector Leadership, Certificate	6 CEUS	2520 (on sale from original $3,600)-complete program cost.		In this certificate program, Seth Harris, former U.S. Deputy Secretary of Labor, will help you explore management practices in the public sector. Designed for: People who work in or with public service or public policy organizations, Leaders, aspiring leaders, and staff who work in organizations involved in public affairs or engaged with government at any level.	Not specified.
George Mason	https://schar.gmu.edu/programs/graduate-certificate-programs/graduate-certificate-public-management	F2F	Public Management, GC	15 credits	$743/credit	$1,531/credit	This graduate-level certificate prepares you to succeed in managing today's increasingly complex public and nonprofit organizations. Designed for middle- and senior-level managers who want to expand their knowledge and skills but do not require the full 12-course MPA degree program.	Bachelor's degree from a regionally accredited college or university.
Virginia Tech	https://spia.vt.edu/academics/certificates/local-government-management.html	F2F or Online	Local Government Management, GC	12 credits	$850/credit		Provides the next generation of local government managers and leaders with the tools to advance their careers and to provide exceptional leadership within the communities where they work.	Bachelor's degree from a regionally accredited college or university.
Other Major Institutions Offering Similar Programs								
University of Connecticut	https://dpp.uconn.edu/leadership-public-management-certificate/	F2F or Online	Leadership and Public Management, GC	12 credits	$900/credit		Designed to provide students with fundamental foundations in key areas of public sector management.	Bachelor's degree from a regionally accredited college or university with minimum 3.0 undergraduate GPA.
Syracuse University	https://www.maxwell.syr.edu/paia/midcareer/certificates/public-leadership-and-management/	F2F	Public Leadership and Management, GC	12 credits	$1,734/credit		Designed for midcareer professionals who desire a rigorous educational experience focusing on significant elements of the public administration. Most individuals taking the certificate state an interest in improving their management and leadership skills or in having an interest in developing concrete knowledge of a specific policy area.	Bachelor's degree from a regionally accredited college or university.
North Illinois University	https://www.niu.edu/online/certificates/certificate-public-management.shtml	Online	Public Management, GC	15 credits	$586/credit		If you currently work for a local government in the U.S., our Certificate of Graduate Study in Public Management can help you advance your career. This program is ideal for you if you hold a management position in an area such as public safety, public works, finance, budgeting, parks and recreation, or housing.	Bachelor's degree from a regionally accredited college or university.

Due to the demand and need for investing in local government leadership, in-state tuition is available to all students who enroll in the Local Government Management program.

OES In-House Market Research: Projected Enrollment Information

Program Name = Public Leadership & Management, GC

Occupation	# of Jobs in the Field	Where Professionals are Employed	Professional Salary Information	Projected Job Growth
Information from U.S. Bureau of Labor Statistics' Occupational Outlook Handbook				
Management Analysts	907,600	Professional, scientific, and technical services- 31% Government- 17% Self-Employed workers- 16% Finance and Insurance- 13% Management of companies and enterprises- 5%	$87,660/year	14% (Faster than average)
Administrative Services and Facilities Managers	322,000	Healthcare and social assistance-13% Educational services; state, local, and private-13% Professional, scientific, and technical services-9% Local government, excluding education and hospitals-8% Finance and insurance-7%	$98,890/year	9% (As fast as average)
Information from State of Maryland's Occupational and Industry Projections				
Management Analysts	19,790	Professional, scientific, and technical services- 31% Government- 17% Self-Employed workers- 16% Finance and Insurance- 13% Management of companies and enterprises- 5%	$102,850	14% (Faster than average)
Administrative Services and Facilities Managers	5,900	Healthcare and social assistance-13% Educational services; state, local, and private-13% Professional, scientific, and technical services-9% Local government, excluding education and hospitals-8% Finance and insurance-7%	$117,860	9% (As fast as average)

Appendix A

Course Catalog Information

These two courses in the certificate program would be required:

PLCY 689X Performance Management

This course provides frameworks, tools, and skills to improve program results in an environment where policy challenges span organizational boundaries and third parties implement programs. Several results-oriented frameworks and case illustrations will be examined in depth, including the Government Performance and Results Act, federal, state and local Performance-Stat systems and the use of performance dashboards, executive branch performance management initiatives, and international and US initiatives to foster civic engagement through open government and web based performance reporting.

PLCY 698T Networks: Leading and Managing Across Sectors

This course in grounded in the practical reality that collaborative, third-party governance involving combinations across the public, private/for profit and nonprofit sectors is the way the modern state is administered, and the public interest is pursued. The course relates this reality to emerging theory and contemporary research and places it within historical context. The focus is on network leadership and management as well as the challenges involved in the use of a variety of tools and techniques of indirect governance. Also addressed are oversight and accountability mechanisms as means for preventing corruption and for assuring maximum efficiency and effectiveness consistent with democratic values. Among the topics included are emergency management, economic development, environmental protection, transportation, education and human investment.

The third required course may be chosen from the following four courses:

PLCY 670 Public Finance and Budgeting.

This course will focus on the foundational principles of governmental finance and budgeting and the relationship between public funds and program goals and objectives. The course will broadly survey three major topics: tax policy and revenue analysis, public budgeting, and public financial management.

PLCY 688F State, Local, and Nonprofit Financial Management.

This course is designed to teach the fundamentals of accounting and finance for public and not-for-profit organizations. Through course readings, case studies, and short assignments, students will learn how to use financial information to inform strategy and decision-making in the public and non-profit sectors.

PLCY 717 Federal Budgeting: Policy and Process.

This course provides a full understanding of the process for both the student interested in budgeting and for those interested in policy. Policy is, after all, highly dependent on the availability of resources. The Course is, in a very real sense, a comparison of how the process is supposed to function and how it does. It focuses on definitions and concepts and discusses the process from the beginning in the executive branch to the final expenditure of funds. It does so through lectures, discussions and a semester-long simulation.

PLCY 781: International Economic Policy.

This course focuses on the economics of exchange rates, capital flows, and implications for policies. It covers influences on currency values; the role of exchange rates in the macroeconomy; the choice of exchange rate regimes, the euro; policy issues facing China and other emerging economies; and issues related to capital flows and the international financial system.

The one required elective course would be chosen for the list below (or new approved courses)

PLCY 688G Governance: Management, Leadership and Accountability.

This course emphasizes the reality that most public policy practitioners, regardless of technical specialization will be required to lead people, manage resources and be held accountable for their actions. The purpose of this course is to equip students with knowledge, insights, skills and abilities to pursue the public interest successfully and responsibility. The foundational difference between leadership in the public sector as contrasted with experience in the other sectors will be addressed. The course will also consider the paradigm shift from government-centered monopoly toward a global world of shared discretion and multi-sector partnerships and multi-stakeholder engagement.

PLCY 689A: Federal Acquisitions: Concepts and Management.

This course provides an overview of federal acquisition as one of the basic functions of government. Specific focus will be on the scope of acquisition, including organizational structures, regulations, and issues of acquisition processes and management, from the development of an initial capability or need, through design, development, production, fielding, sustainment, and disposal. The course introduces the principles and concepts that underlie successful acquisition management – from major systems development and production, through buying services and common commodities; with a special consideration of state and local levels.

PLCY 689Z: Strategic Management for Nonprofits & Public Organizations

This course provides an integrated approach to leading theories and concepts, research, and modern practices related to strategy development and execution. Students will gain a deep understanding of how strategy can be effectively developed, implemented and managed in these organizations. With this knowledge, students will be prepared to provide leadership and guidance to nonprofit and public organizations.

PLCY 692 Leadership Principles and Practices

This course addresses the knowledge, capacity and skills necessary for leadership of groups and organizations. Contemporary theories of leadership are applied to learn about interpersonal and organizational dynamics, the culture of organizations and effective decision-making. Through a variety of approaches, it emphasizes motivation, empowerment and finding ways to best increase the capacity of followers.

PLCY 698B   Organizational Behavior

This course rests on the assumption that people behave differently in organizations than they do individually. It seeks to improve insight into organizational dynamics and how people and groups relate, support, challenge and coalesce to further an organizational mission. It focuses on the practical use of power and explicit strategy to solve complex problems. It especially focuses on entrepreneurship as a means of addressing change and the need for creative innovation.

PLCY 699F Ethics of Public Administration

This course examines how we do ethics every day in the public sector. It discussed the types of ethical risks that individuals as well as public institutions face, how civil servants and others perceive those risks, and what they can and cannot do about them. It explores personal ethical values and considers how they impact everyday decisions. The focus is on tools, techniques and frameworks used to address ethical questions, as well as several emerging ethical issues faced by communities, institutions and governments.

PLCY 699G Leadership in Groups and Organizations.

This course offers the opportunities to learn about and to understand group dynamics associated with the exercise of leadership and authority in groups and organizational settings. The primary focus of the course is on leading change in public and non-profit organizations, and leading for better results. This class is both practical and theoretical, and learning will be through a variety of approaches, including very active class participation, discussions, case studies, readings, research, experiential activities and lectures. This course is designed as a small interactive seminar—a series of "leadership off-sites—in which we explore theories, practice skills of leadership, and examine the experiences of people who lead.

PLCY 752 Managing Differences: Resolving Conflicts and Negotiating Agreements

This course is designed to enhance the participants' negotiation and leadership skills for managing differences between individuals and groups. It introduces students to the theory and practice of negotiation. The ability to negotiate successfully rests on a combination of analytical and interpersonal skills. It considers how negotiations are affected by a number of factors, including the perceived importance of the issue, the interests of the other party, the characteristics of the actors involved, and the structural elements that serve to generally frame the negotiation. It addresses the structure of negotiations as practiced in a variety of settings.

PLCY 798Y Nonprofit Management and Leadership.

Nonprofit organizations, nongovernmental organizations (NGOs), philanthropy, civil society, and social entrepreneurs are major players in how public policy gets developed and implemented as well as how change occurs in the United States as well as countries around the world. In the United States alone, the nonprofit sector encompasses over a million organizations, annually reports trillions of dollars in revenue and assets, represents approximately ten percent of the workforce, annually generates over four hundred billion dollars through donations and volunteers, and is primarily funded by government. The nonprofit sector is so heavily intertwined with the public sector that government executives will find themselves interacting and partnering with nonprofits on a regular basis. Through discussions of contemporary trends, challenges and issues, this course provides an introduction to the nonprofit sector and the leadership and management skills required to achieve social impact.

Appendix B

Learning Assessment Plan

The learning outcomes of the program include:

Learning Outcome 1: Students will understand the principles and practices of public policy management and leadership.

Learning Outcome 2: Students will be able to understand how the principles and practice of public policy management and leadership relate to the management of programs designed to serve the public.

Learning Outcome 3: Students will be able to apply the tools and techniques of public policy leadership and management to address complex problems through traditional approaches and through cross-sector, collaborative networks.

Assessment: Formal program review will be carried out according to the University of Maryland's policies including conduct of course evaluations relative to the learning objectives of the program. The evaluations will indicate students' satisfaction with instructor effectiveness and the value of the course. Graduates will be asked to participate in an exit interview to assess the program for its value and relevance and for the effectiveness of its instructors. A follow-up survey will be conducted one year after graduation in light of graduates' current professional activities. Also, the School will seek to measure learning outcomes "directly", that is directly testing how well, not just whether the students have actually learned each of the planned learning outcomes. We will do this by pulling course assignments that directly relate to each outcome and having them scored separately from the course relative to the learning outcomes.

Appendix C

Faculty and Courses

The program will utilize MSPP's nationally renowned, resident practitioner scholars as well as adjunct practitioners who are preeminent in the field. Permanent faculty member may teach these courses either as part of their regular teaching load or on an overload basis, depending on whether the students are in traditional classes or part of an entrepreneurial cohort. All faculty will be member of the Graduate Faculty and approved by the Dean of the Graduate School to teach. Faculty who will likely teach courses include:

- Kenneth Apfel, Professor of the Practice
- Margaret Brindle, Lecturer
- Joan Dubinsky, Lecturer
- Nathan Dietz, Associate Research Professor
- Elizabeth Duke, Clinical Professor; Florence and Norman Brody Forum Professor of Public Policy
- Diana Fridl, Lecturer
- Philip Joyce, Senior Associate Dean and Professor of Public Finance
- Robert Sheehan, Academic Director, Executive MBA Programs, RH Smith School of Business
- Thomas Luke Spreen, Assistant Professor
- Philip Swagel, Professor of Public Policy
- William Lucyshyn, Senior Research Professor
- S. Anthony McCann, Senior Lecturer of Public Policy
- Christopher Mihm, Senior Lecturer of Public Policy
- Joannie Tremblay-Boire, Assistant Professor of Public Policy

Course	Faculty
PLCY 689X Performance Management	Dr. Phillip Joyce Christopher Mihm
PLCY 698T Networks: Leading and Managing Across Sectors	Dr. Elizabeth Duke S. Anthony McCann
PLCY 688F State, Local, and Nonprofit Financial Management	Dr. Nathan Dietz Dr. Thomas Luke Spreen
PLCY 798Y Nonprofit Management and Leadership	Dr. Robert Sheehan Dr. Joannie Tremblay-Boire
PLCY 699G Leadership in Groups and Organizations	Kenneth Apfel
PLCY 689A: Federal Acquisitions: Concepts and Management	Dr. William Lucychin
PLCY 717 Federal Budgeting: Policy and Process	S. Anthony McCann Dr. Phillip Joyce
PLCY 781 International Economic Policy	Dr. Phil Swagel
PLCY 752 Managing Differences: Conflicts and Negotiating Agreements	Diana Fridl
PLCY 699F Ethics of Public Administration	Joan Dubinsky
PLCY 688G Governance: Management, Leadership and Accountability	Margaret Brindle

Appendix D

Actions and Strategies to Recruit and Retain a Diverse Student Body

The Certificate in Public Leadership and Management is proposed to be offered on-campus and online. Both versions of the proposed Certificate in Public Leadership and Management will seek to recruit and retain a diverse student body in largely the same manner that the School of Public Policy (SPP) currently utilizes for its existing graduate degree and certificate programs. Below is an overview of the School diversity recruiting plan and specific actions to be taken.

Overview

1. SPP will show a commitment to diversity and inclusion in curriculum, faculty, and programming and use these activities in promotional materials.

2. SPP will recruit from diverse groups and networks.

3. SPP will encourage diverse current students and alumni to refer friends and colleagues.

Recruitment Actions

1. Utilize UMD and SPP organizational relationships for program and application invitations. These include the McNair Post-Baccalaureate Achievement program; network and recruitment events of The Public Policy and International Affairs Program (PPIA), a not-for-profit that has been supporting efforts to increase diversity in public service for 39 years; the Association of Professional Schools of International Affairs (APSIA) Diversity Initiatives, and The Network of Schools of Public Policy, Affairs, and Administration (NASPAA) Diversity Initiatives.

2. Dedicated Historically Black Colleges and Universities (HBCU) informational events that include application fee waivers for attendees and outreach to faculty at minority serving institutions.

3. Leverage diverse current students, alumni, faculty and staff by keeping them apprised of student recruiting events and asking that they share announcements with their networks. These include general events as well as events targeting specific underrepresented populations.

Retention

Both the online and on-campus versions of the proposed Certificate in Public Leadership and Management will be managed in the same manner as the School's entrepreneurial degree programs – the Master of Professional Studies in Public Administration and the Executive Master of Public Management – that draw domestic and international students. These programs are 'high touch' programs, with customer service provision that allows staff to individually interact with students to forestall any problems that may hinder completion. In this way, retention is thus high for the professional programs overall (over 90%) and equally high for traditionally under represented student populations.

DATE: November 8, 2021

TO: Kenneth Apfel, Professor of the Practice, Leadership and Management
        Elizabeth Duke, Clinical Professor; Florence Brody Family Foundation Public Policy
        Forum Professor
        Robert Grimm, Professor of the Practice and Chair of the Entrepreneurial Committee
        Philip Joyce, Professor and Senior Associate Dean
        Thomas Kennedy, Director, Executive & Cohort Programs
        Anthony McCann, Lecturer, Public Leadership and Management

FROM: On behalf of the University of Maryland Libraries:

           Judy Markowitz, Librarian for Government and Politics, Public Policy, Women, Gender,
           and Sexuality Studies.

           Maggie Saponaro, Director of Collection Development Strategies

           Daniel Mack, Associate Dean, Collection Strategies & Services

RE: Library Collection Assessment

We are providing this assessment in response to a proposal by The School of Public Policy to create an on-campus/online Post-Baccalaureate Certificate in Public Leadership and Management. The School of Public Policy 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 both an on-campus/online program, 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 publish articles in the areas of Public Leadership and Management.

Because of the many aspects of the proposed program that are listed in the program description, the categories in the Social Sciences Edition of *Journal Citation Reports** used to assess our subscriptions are many. The Libraries subscribe to many of the top ranked journals that are listed in the following categories:

Public Administration; Management; Psychology, Applied; Business, Finance; Economics

Those categories are being used for this assessment since they were noted in the program description: ("is designed to provide skills, knowledge and experience to enable students to analyze and address complex governance challenges. The certificate will equip student to formulate innovative strategies, to negotiate the complexities of hierarchic bureaucracies and cross sector networks across local, national and global settings.").

Categories:

Public Administration – top 5
Journal of European Public Policy
Journal of Public Administration Research and Theory
Public Management Review
Regulation & Governance
Review of Public Personnel Administration

Management – top 5
Annual Review of Organizational Psychology and Organizational Behavior
Academy of Management Annals
International Journal of Management Reviews
Academy of Management Review
Journal of Management

Psychology, Applied – top 5
International Review of Sport and Exercise Psychology (probably not relevant, but it was the #1 Journal in this category)
Annual Review of Organizational Psychology and Organizational Behavior
Journal of Management
Leadership Quarterly
Organizational Research Methods

Business, Finance
Forbes
Journal of Finance
Journal of Financial Economics
Journal of Accounting and Economics
Review of Financial Studies

Economics
Quarterly Journal of Economics
Economic Geography
American Economic Review
Journal of Economic Literature
Cambridge Journal of Regions Economy and Society (#5 – we do not own – use ILL)

Additional Core Journals covering Public Leadership and Management:
Administrative Science Quarterly
British Accounting Review
Finance Research Letters
Industrial and Organizational Psychology – Perspectives on Science and Practice
International Journal of Accounting Information Systems
International Review of Financial Analysis
Journal of Applied Psychology
Journal of Business and Psychology
Journal of Financial Intermediation
Journal of International Business Studies
Journal of Occupational Health Psychology
Journal of Policy Analysis and Management
Journal of Service Management
Journal of Strategic Information Systems
Leadership
Nonprofit and Voluntary Sector Quarterly
Nonprofit Management and Leadership
Nonprofit Policy Forum
Personnel Psychology
Policy and Society
Policy Studies Journal
Public Administration Review
Stanford Social Innovation Review

*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 would be useful for Public Leadership and Management.

APA PsycInfo
America. History & Life Full Text
Business Source Complete
Communication and Mass Media Complete
Congressional Publications
EconLit
Education Source
Factiva
International Political Science Abstracts
Military and Government Collection
PAIS

Psychology and Behavioral Sciences Collection
Regional Business News
SocINDEX
Web of Science Core Collection
Worldwide Political Science Abstracts

The following general/multidisciplinary databases are also good sources of articles relevant to this topic: *Academic Search Ultimate, MasterFILE Premier, JSTOR,* and *ProjectMUSE* .

In many-and likely in most--cases, these databases offer full text copies of the relevant journal articles. In those instances, in which the journal articles are not available or available only in print format, the Libraries can make copies available through the Libraries' Interlibrary Loan service (https://www.lib.umd.edu/access/ill-article-request). (Note: see below.)

Monographs

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

 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 (https://www.lib.umd.edu/access/ill-article-request). (Note: see 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 in print and ebook and published in the last 10 years:

Corporate Governance = 659 (can add: business & economics; international; finance…)
Economic Policy = 27,336 (can add: United States; specific countries; decision making…)
Finance, Public = 2043
Leadership = 3030
Management = 20,834 (can add: business & economics; industrial; educational; organizational behavior…)
Nonprofit Organizations = 296   (can add management; finance; marketing; case studies…)
Organizational Behavior = 3839
Political Science Public Policy Economic Policy = 816
Public Administration = 2593

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.

Please note that one limitation of these services that might create some challenges for the online student is that the Libraries are not allowed to make online copies of entire books. The only way that a student can get access to a print copy of an entire book is to physically come to the Libraries and check out that book.

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, remote users who take 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 journals, monographs and databases available through the University Libraries, students in the proposed program will have access to 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 (http://www.lib.umd.edu/gis/dataset).

Statistical consulting, workshops and additional research support is available through the Research Commons (http://www.lib.umd.edu/rc).

Technology support and services are available through the Terrapin Learning Commons (http://www.lib.umd.edu/tlc).

Research Data Services (Data Archiving, Data Management Plans, Managing Data, Open Data) lib-research-data@umd.edu.

The subject specialist librarian for Public Policy, Judy Markowitz, judym@umd.edu, also serves as an important resource to programs such as the one proposed. Subject librarians for Business, Economics and Psychology can be called upon to help as needed. 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 Public Leadership and Management. These include the Library of Congress and the National Archives.

Conclusion

With our journals holdings, monographs and databases, as well as additional support services and resources, at this point in time, our assessment is that the University of Maryland Libraries are able to meet the curricular and research needs of the proposed Post-Baccalaureate Certificate in Public Leadership and Management.

Every year we are faced with resource inflation costs and a finite budget allocation. The Libraries cannot guarantee that we will continue to have access to these resources in the near future. Although journal articles, books and book chapters can be requested and received via Interlibrary Loan (ILL), access to databases cannot be fulfilled this way.

Student Mental Health

UNIVERSITY OF MARYLAND
18 56

DIVISION OF
STUDENT AFFAIRS

COUNSELING CENTER

Topics Covered

1. Collegiate mental health trends, the last decade
2. Collegiate mental health trends, the pandemic
3. UMD Counseling Service utilization and trends, the pandemic
4. Innovations and new services at the Counseling Center
5. Counseling Center Services

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Collegiate mental health trends, the last decade

1. Increased demand for services
2. Increased severity of presentation
3. Increased self-threat indicators
4. Increased demand for rapid access treatment modalities
5. Outreach and prevention has worked, but mostly for White students.

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Collegiate mental health trends, the pandemic

1. Depression and anxiety leveled off during the pandemic year
2. Eating disorder and family distress showed an uptick
3. Academic distress showed the most substantial increase
4. Anxiety is the most common presenting concern
5. Average number of individual therapy sessions received by students increased
6. Experience of trauma increased during the pandemic year
7. Alcohol use decreased but marijuana use increased
8. Overall experienced stress increased last year

UMD Counseling Service utilization and trends, the pandemic

1. Reduced number of unique clients entering the clinical system last year
2. Clients who did seek out services, received extended care in a timely fashion
3. Wellness workshops were piloted and well attended
4. Hybrid treatment format was piloted successfully, with uniformly positive reviews
5. Anxiety was top presenting concern, followed by concentration and academic motivation related problems
6. After hours crisis calls increased 26% as compared to the previous year

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Innovations, new services, and things to come at the Counseling Center

1. Hybrid Treatment
2. Wellness Workshops
3. Biofeedback devices for meditation
4. VR for treatment of phobias, trauma,
5. SKY Happiness retreats
6. Narrative 4 for connection
7. T.E.R.P.S FOR TERPS
8. The Mental Health Coalition
9. Mental health proposal
10. Mental health Transport proposal

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STUDENT AFFAIRS
COUNSELING CENTER

Counseling Center Divisions

Counseling Service …………………………………(301) 314-7651

Accessibility and Disability Service ……….(301) 314-7682

Testing Office …………………………………………(301) 314-7688

Research Unit ………………………………………….(301) 314-7660

https://counseling.umd.edu/

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Counseling Service Quick Facts

- Located in **Shoemaker Building**, First Floor

- Phone Number: (301) 314-7651

  - Call this number for the **After Hours Phone Line** for crisis situations

- Hours:

  - Fall/Spring: Mon-Thurs: 8:30am-7:00pm, Fri: 8:30am-4:30pm

  - Summer: Mon-Fri 8:30am-4:30pm

- *Free* and *confidential* psychological services

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Accessing the Counseling Service (CS)

- First-time Sessions
  - Intake Appointment (call or come in to schedule)
  - Urgent Visits (same day visit for urgent situations)
  - Drop-in Hours for Underrepresented Students (**3-4pm weekdays**)
    - Students of Color, Rainbow (LGBTQ), International Students, Student Vets/Military
      - Faculty and Parent Warm Line

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CS Services

- Clinical Services (hybrid model)
  - Short-term individual counseling (personal or career counseling)
  - Workshops That Work
    - Anxiety Toolbox, Getting Unstuck, Mindfulness Meditation
  - Group counseling
    - Examples: General Therapy, Anxiety, Sexual Assault Recovery, Identity-Based Groups, Depression, Self-Compassion
  - Short-term couples counseling
  - Assistance with referrals

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Wellness Workshops

- The Counseling Center is hosting a series of workshops that will take place **Monday-Thursday at 4pm** throughout the semester
    - Coping Skills Series: Mondays at 4pm
    - Academic Success Series: Tuesdays at 4pm
    - Relationships and Communication Series: Wednesdays at 4pm
    - Resilience and Adaptability Series: Thursdays at 4pm
    - The topics within each series will rotate based on the week of the month and the rotation will re-start at the beginning of the next month
- These workshops are all drop-in and do not require advanced registration or any prior contact with the Counseling Center
- The workshops are NOT a therapeutic space and confidentiality is NOT guaranteed

How Are We Doing?

EMOTIONAL REACTIONS OF FACULTY AND STAFF AT UMD TO COVID-19, RACIAL STRIFE, POLITICAL UNREST AND THE MENTAL HEALTH PANDEMIC

TOM RUGGIERI, LCSW-C

FACULTY STAFF ASSISTANCE PROGRAM

FSAP Services

- Assessment, referral and short term counseling (up to 10 visits) for mental health, substance use, work conflict, family issues, etc. These services are free and confidential

- Presentations on a variety of topics, including: Managing the Stress of COVID; Returning to Work; Managing Conflict; Managing Stress, etc.

- Debriefings following traumatic events;

- Fitness for Duty Evaluations

What are we experiencing?

- What is normal? What's wrong with me? Am I okay?

- Emotional reactions are across the board

- A 2021 Harris Survey poll found the following:
  - 47% of adults reported anxiety;
  - 44% reported sadness;
  - 39% reported anger
  - 81% were stressed about the future of our nation;
  - 74% were stressed about the political unrest in the country;
  - 80% were stressed about the COVID pandemic;

Different Responses to COVID

- While a pandemic might seem like an unusual catalyst for inspiring positive life changes, experts say it's typical to see a range of responses to a collective trauma.

- In some individuals, the toll of the past year led to worsening mental health. But research indicates others may emerge more resilient.

- Some people may even experience post-traumatic growth, which could include a deeper appreciation for life, a greater sense of personal strength and new possibilities for their live

- **"Pandemic Brought Out Something Positive for Some People – Resilience"** (https://www.washingtonpost.com/health/pandemic-resilience/2021/06/18/a82d69fc-a9f011eb-8d25-7b30e74923ea_story.html)

Three Stressors Facing Current UMD Staff

1. Employees are leaving, sometimes without another offer in hand;

2. Trying to replace them has proven to be difficult. Many failed searches. We don't have nearly the number of qualified applicants as we have had in the past;

3. Those left behind are complaining about burnout, as the tasks of those who left are now falling on to those who have stayed in their jobs and are being asked to do more.

Reasons Faculty and Staff Are Leaving

- Opportunities to work remotely in other settings;

- Opportunities for more flexibility in scheduling in other settings;

- Fears of being in a COVID workplace and lack of management requirements for staff to follow masking and vaccination policies;

- Struggles with child-care and eldercare throughout COVID;

- Commuting is even more stressful now that people have had the chance to NOT commute;

- COVID has allowed many to pause and reflect on what they want from work and many have discovered that THIS IS NOT IT;

Data From UMD Human Resources

"Quits" decreased in pandemic year 1 but were back on the rise through November 2021.
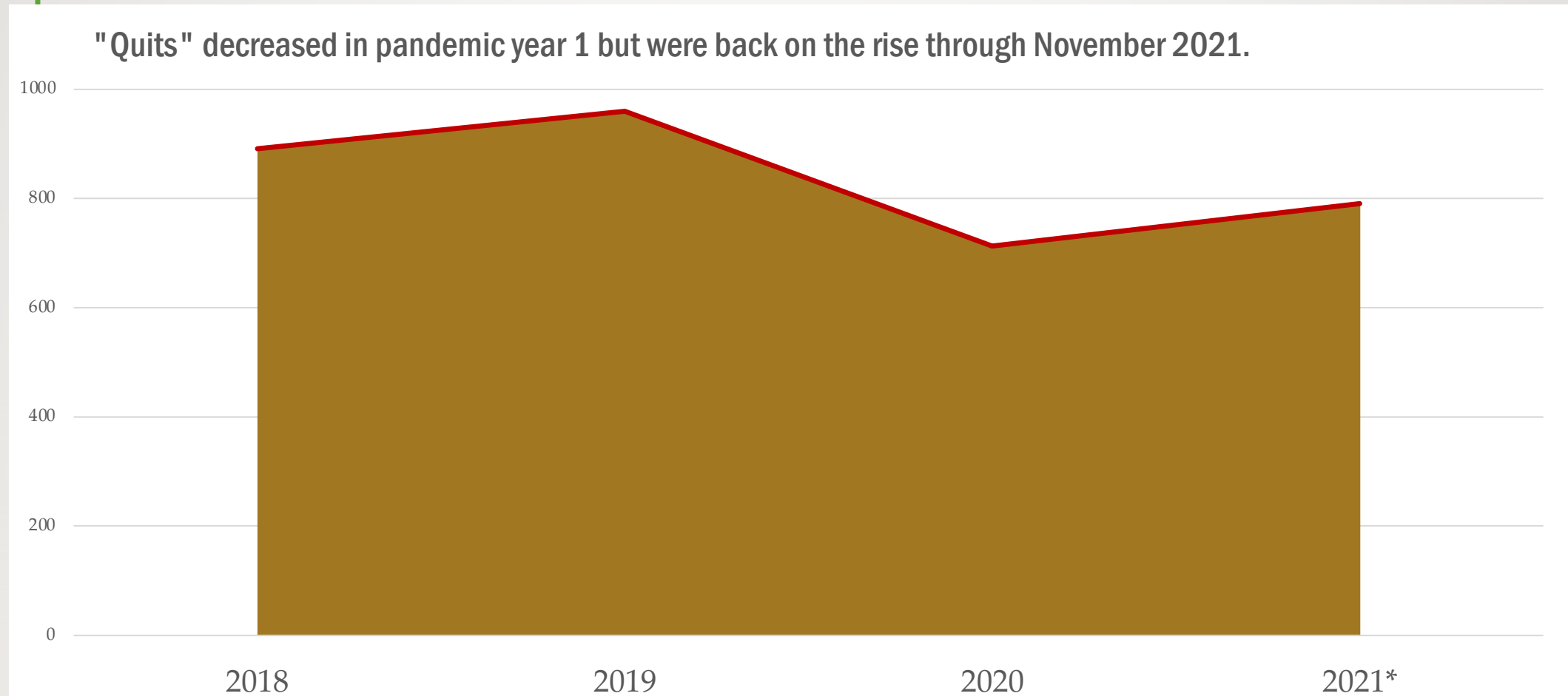
- Regular and C2 employees (Regular Staff/Faculty, Exempt/NonExempt C2)
- Based on total regular/C2 population in each year, turnover % was approximately 9% in both 2018 and 2019 and 8% in 2020 and through mid-November 2021

Faculty Disengagement

- Most faculty are not making big moves. Instead they are disengaging from their usual activities and often doing enough just to "hang on";

- "They are still teaching classes and supporting students, but connections to the institution have been frayed. The work is getting done but there isn't much spark to it";

- This, in many cases, is a self-preservation strategy that will hopefully change post-covid, or at least we hope so.

- From "The Great Faculty Disengagement," by Kevin McLure and Alisa Hicklin Fryar, Chronicle of Higher Education, January 19, 2022

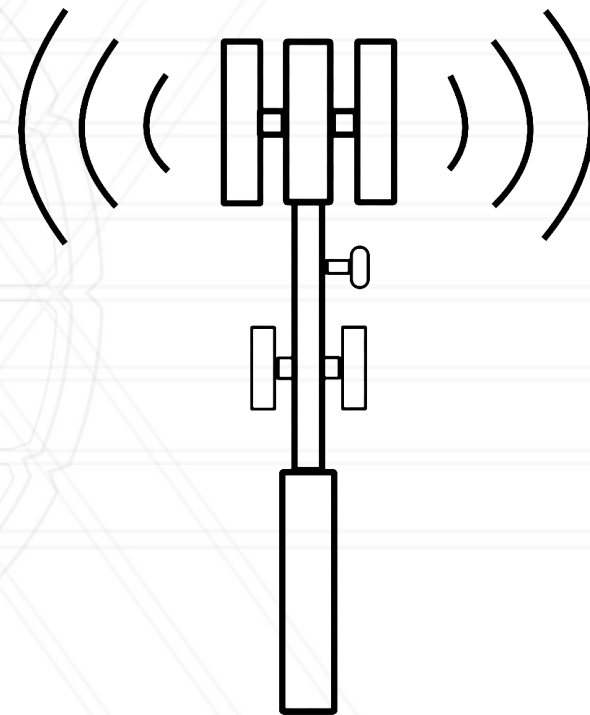# Pandemic Fatigue (Languishing)

Current and Future 5G/6G Campus Initiatives

Outline

- Cellular Technology Overview
- Why is this important to UMD?
- What are some current challenges?
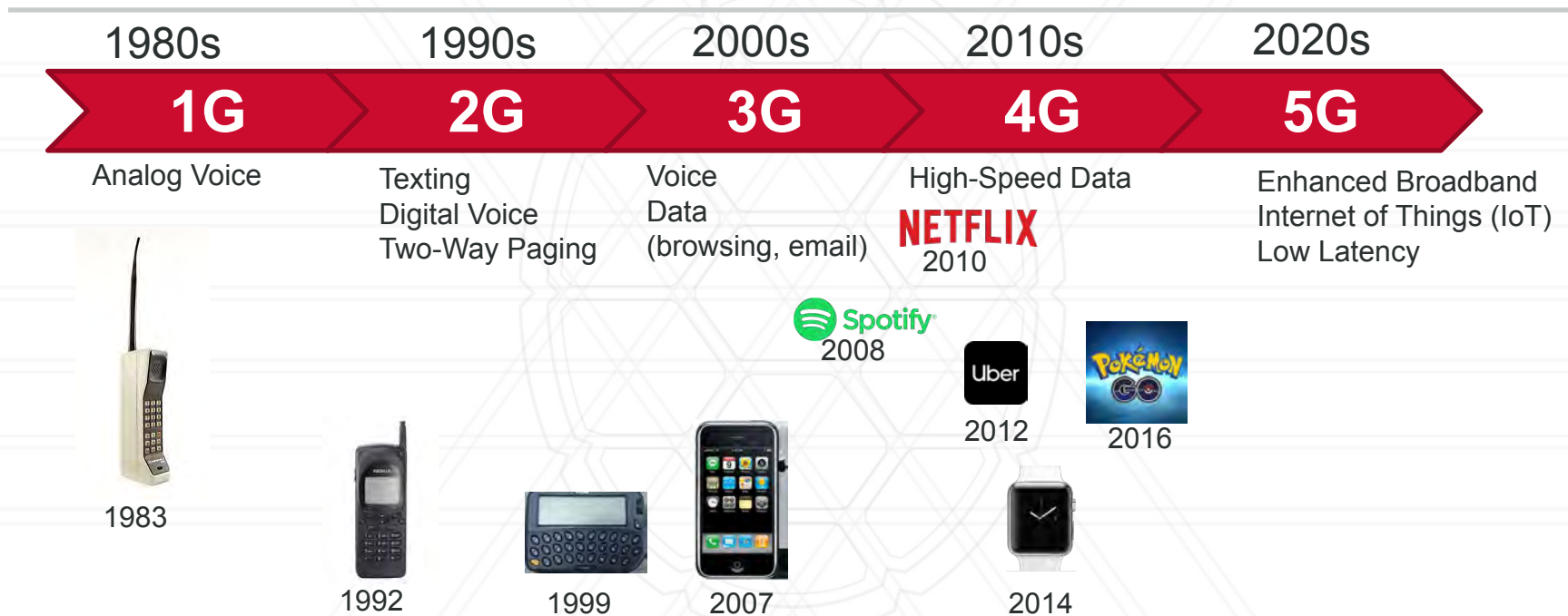- What is actively being done today?

5G/6G Working Group Members

- **Joseph JaJa (ECE, ENGR), chair**
- Wayne Phoel (ISR/ARLIS), co-chair
- Ira Levy (AMP)
- Ken Ulman (Economic Development)
- Axel Persaud (DIT)
- Marcio Oliveira (Provost Office / DIT)
- Thomas Jacobs (ENGR/Transportation)
- Tara Burke (ARCH/Smart Growth)
- Bill Olen (Administrative Operations)
- Keith Marzullo (I-School)
- Sennur Ulukus (ENGR/ECE)
- Nirupam Roy (CMNS/CS)
- Amanda Stein (VPR)

Cellular Technology Timeline

1980s	1990s	2000s	2010s	2020s
1G	**2G**	**3G**	**4G**	**5G**

1G — Analog Voice

2G — Texting / Digital Voice / Two-Way Paging

3G — Voice / Data (browsing, email)

4G — High-Speed Data

5G — Enhanced Broadband / Internet of Things (IoT) / Low Latency

NETFLIX 2010

Spotify 2008

Uber 2012

Pokémon GO 2016

1983

1992

1999

2007

2014

Cellular Technology Capabilities
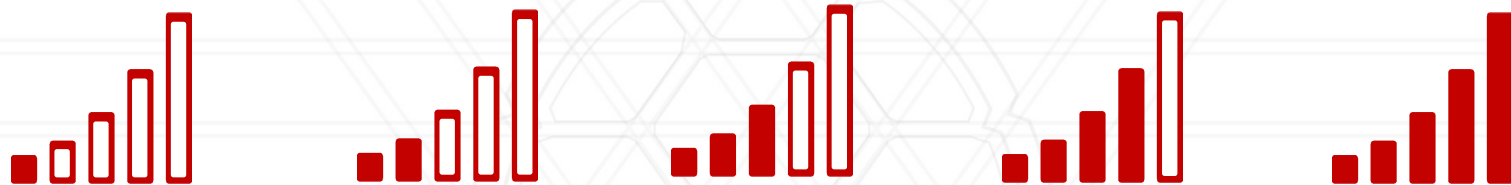
	3G	4G	5G	6G
Deployment	2004-05	2006-10	2020	2030
Bandwidth	2 Mbps	200 Mbps	>1Gbps	1 Tbps
Latency	100-500 ms	36-48 ms	17-26 ms	<1 ms
Average Speed	144 Kbps	25 Mbps	200-400Mbps	

*Voice Call (64kbps), HD Video (10Mbps), 4K Video (25Mbps)

Current Challenges - Low-E Glass

Low-E glass rejects UV light and solar heat

Visible light passes through

Wireless signal is reflected
Typical attenuation = 30dB

Heat (or in warm climates, cool), is kept inside

Results in weak in-building signal
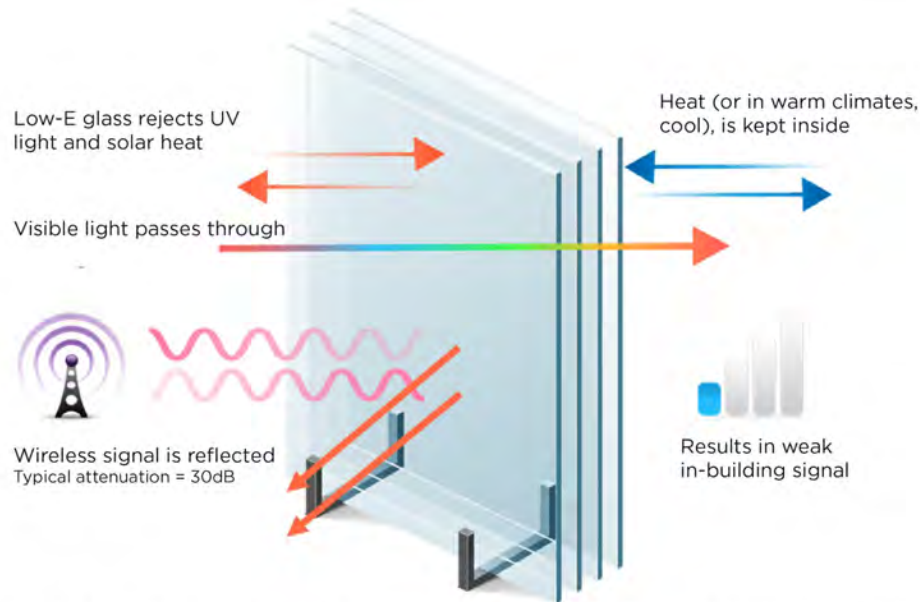
The effect of Low-E glass on cellular radio waves, image courtesy of Safer Buildings Coalition

Building Material	dB Loss
Foliage	-3 to -20
Drywall	-2
Fiberglass Insulation	-2
Clear Glass	-4
Plywood	-4 to -6
Solid wood	-5 to -12
Plaster	-8 to -16
Brick	-8 to -28
Concrete & cement (6 inches)	-10 to -20
Tinted & Low-E Glass	-24 to -40
Metal	-32 to -50

Other Challenges

Technology Limitations

- Signal Strength / Max Distance

Infrastructure Limitations

- Fiber
- Density

Coordination with multiple providers

- Technology is not uniform

Technology	Distance
4G	10 miles
5G	750 feet
6G	300 feet

Why is this important to UMD?

Industry	Relevant Capabilities	Technologies
Health and Safety	Emergency Notification, IoT, AR for MFRI	Edge computing, Ultra-high data rates, ultra-low latency, AR, security and reliability
DOTS	Autonomous Vehicles, Enhanced traffic management	Low latency, low-power IoT, security and reliability
Athletics	Enhanced fan experience, wearables	AR, VR, low latency, increased bandwidth, Edge computing
ARHU	School of Music, Performing Arts (real time collaboration over long distances)	AR, VR, low latency,
eSports (~$1B in 2021)	AI at the edge, VR	Edge computing, Ultra-high data rates, ultra-low latency

AR: Augmented Reality
VR: Virtual Reality
XR: Extended Reality

mMTC: massive machine-type communications
IoT: Internet of Things
AI: Artificial Intelligence

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What is actively being done today?

Vendor site visits

- Identify Locations
- Finalize requirements

Next Steps

- XXX Approval
- Contract Amendments
- Scheduling (12-18 months)
- Project Kickoff

What is actively being done today?

Strategic Partnership

- Identify Viable Use Cases
- UMD Testbed
    - Campus Location
    - Rt 1 corridor
    - Discovery District
- Flexible Classroom
- Internships

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FEARLESS IDEAS

Next Steps

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Questions?

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