UNIVERSITY SENATE | AGENDA | OCTOBER 2, 2019

3:15PM – 5:00PM | ATRIUM – STAMP STUDENT UNION

1. Call to Order
2. Approval of the September 12, 2019 Senate Minutes (Action)
3. Report of the Chair
4. Student Course Evaluation Improvement Project (Senate Document #16-17-24) (Action)
5. Review of the University of Maryland, College Park Policy on Inclusive Language (Senate Document #18-19-06) (Action)
6. PCC Proposal to Establish a Baccalaureate Program in Immersive Media Design (Senate Document #19-20-11) (Action)
7. PCC Proposal to Establish a Bachelor of Arts in Religions of the Ancient Middle East (Senate Document #19-20-13) (Action)
8. New Business
9. Adjournment

UNIVERSITY SENATE | MINUTES | OCTOBER 2, 2019

3:15PM – 5:00PM | ATRIUM – STAMP STUDENT UNION | MEMBERS PRESENT: 123

CALL TO ORDER

Senate Chair Lanford called the meeting to order at 3:18 p.m.

APPROVAL OF THE MAY 7, 2019 SENATE MINUTES (ACTION)

The minutes were approved as corrected (**in blue**).

Senators raised concerns about the student athletic fees, the use of homophobic slurs in the football program, **the health and safety of student athletes, and overly soft academic offerings,** and inquired about the model for paying student athletes, legislation that would provide student athletes with the right to collective bargaining, scholarship fund has been established to honor Jordan McNair, and how the Athletic Department solicits opinions from student athletes.

REPORT OF THE CHAIR

The 2019 BOR Staff Awards recipients include two UMD staff - Margaret Gibbs, Counseling Center for Exceptional Contribution to the Institution and/or Unit to which the Person Belongs (non-exempt) and Valencia Tirado, Dining Services for Outstanding Service to Students in an Academic or Residential Environment (non-exempt).

The presidential search committee is hosting two open forums for members of the campus community on September 24th at 10 am and 3 pm in the Hoff Theater in the Stamp Student Union. The search committee established a website https://umd.edu/presidential-search that contains information about the search committee, the search firm, the position profile, how to provide input to the search committee and how to nominate candidates.

The USM and the Board of Regents made a concerted effort to strengthen trust by emphasizing shared governance, transparency, and accountability by improving communication with campus stakeholders. The Chancellor and the Board Chair established active and open communication lines with the SEC and Senate Leadership.
The Regents appointed Louis Pope as Board Liaison for our campus. He will develop relationships and maintain regular communication with campus leadership and stakeholders in order to gain insight into the institution's priorities and challenges to help the full BOR understand our institution.

The Chancellor search is underway and the search committee anticipates naming a successor by December 2019 to prevent impacting the search for our president.
The University will have a "Commission Liaison Guidance Visit" (CLVG) on September 25th by two Middle States staff members to explain what we should include in the report that we are expected to write by March 1, 2020. They will meet with the University's leadership, members of the Board of Regents, USM leadership, and the Senate leadership. A small peer-review team will visit in early April 2020 to assess our progress and the Commission will meet in June 2020 to determine whether it would be appropriate to lift the warning.
The Special Committee on University Finance (SCUF) was appointed and it will be chaired by Katharine Abraham, Director of the Maryland Center for Economics and Policy and Professor, Department of Economics.

SPECIAL ORDER

Reka Montfort, Executive Secretary & Director, University Senate
Orientation: Senators, Senate Meetings, and Shared Governance

Reka Montfort, Executive Secretary & Director, provided an overview of the role of Senators, the operations of Senate meetings, and the University's principles of shared governance. She provided information on the role of the Senate, including advising the President on policy matters, guiding documents, and academic programs. Montfort stressed the importance of active participation by Senators by coming to meetings prepared having reviewed all the materials in advance and engaging constituents before meetings. She concluded by providing an overview of the issues before the Senate this year and noting that all Senate legislation can be tracked on the Senate website at http://www.senate.umd.edu/senateBills/.

2018-2019 SENATE LEGISLATION LOG (SENATE DOCUMENT #19-20-01) (INFORMATION)

Lanford explained that the legislation log had been provided to the Senate as an informational item. It gives an overview of the work completed by the Senate last year and includes any pending items that will carry over to this year.

APPROVAL OF THE 2019-2020 COMMITTEE & COUNCIL SLATES (SENATE DOCUMENT #19-20-02) (ACTION)

Laura Dugan, Chair of the Committee on Committees, provided background on the selection process and made a motion to approve the standing committee and council slates as presented

Lanford asked whether there was discussion on the slates; hearing none, she called for a vote of the Senate. The result was 110 in favor, 0 opposed, and 3 abstentions. **The motion to approve the revised slates as presented passed.**

PCC PROPOSAL TO ESTABLISH A DOCTORATE OF PUBLIC HEALTH (SENATE DOCUMENT #19-20-12) (ACTION)

Betsy Beise, member of the PCC Committee, presented the PCC Proposal to Establish a Doctorate of Public Health (Senate Document #19-20-12) and provided background information on the proposal.

Lanford opened the floor to discussion of the proposal.

A Senator noted that while diversity efforts were highlighted in the proposal, the same level of detail was not provided in comparison to the required library resources. They noted that diversity efforts should be a more detailed aspect of the proposal. While representatives of the college expressed the value that they place in their diversity efforts in their admissions process and curriculum, Chair Lanford noted that the concern was an important point that should be addressed in the overall process but not as it pertains to this particular proposal.

Hearing no further discussion, Lanford called for a vote on the proposal. The result was 103 in favor, 4 opposed, and 8 abstentions. **The motion to approve the proposal passed.**

REVIEW OF THE UNIVERSITY OF MARYLAND, COLLEGE PARK PROCEDURES FOR THE USE OF PHYSICAL FACILITIES (SENATE DOCUMENT #18-19-10) (ACTION)

Jo Zimmerman, Chair of the Campus Affairs, presented the Review of the University of Maryland, College Park Procedures for the Use of Physical Facilities (Senate Document #18-19-10) and provided background information on the proposal.

Lanford opened the floor to discussion of the proposal; hearing none, she called for a vote on the proposal. The result was 100 in favor, 6 opposed, and 3 abstentions. **The motion to approve the proposal passed.**

NEW BUSINESS

A Senator inquired about whether the finalists for the president and chancellor's searches would provide open forums for the campus community. Lanford responded that the Board of Regents is responsible for those searches and noted that both would be closed searches. This is common practice in most upper-level administrative searches that allow universities to attract top candidates that may not apply without the promise of anonymity.

ADJOURNMENT

The meeting was adjourned at 4:16 p.m.

Student Course Evaluation Improvement Project

PRESENTED BY	**Thomas Cohen, Chair**
REVIEW DATES	**SEC – April 8, 2019 | SENATE – April 24, 2019**
VOTING METHOD	**In a single vote**
RELEVANT POLICY/DOCUMENT	**N/A**
NECESSARY APPROVALS	**Senate, President**

ISSUE

In January 2017, the Associate Provost of Learning Initiatives and Executive Director of the Teaching & Learning Transformation Center (TLTC) submitted a proposal to the Senate Executive Committee (SEC) recommending improvements to the CourseEvalUM system. The proposal noted that the University's method of evaluating courses had not changed significantly since an electronic system was first introduced in 2008 and called for a comprehensive review of the existing approach to evaluating courses and instructors. In February 2017, the SEC voted to charge the Academic Procedures & Standards (APAS) Committee with reviewing past Senate action on course evaluations, reviewing scholarship on course assessments and practices at Big 10 and peer institutions, consulting with a range of stakeholders across campus, and recommending whether changes should be made to the current system.

RECOMMENDATIONS

The APAS Committee makes a series of recommendations regarding changes to the University's CourseEvalUM system as shown in the attached report.

COMMITTEE WORK

In spring 2017, the APAS Committee met with the proposers to discuss their concerns with course evaluations and researched past Senate action on course evaluations. It also met with representatives of the Office of Institutional Research, Planning, and Assessment (IRPA), which oversees implementation of course evaluations, and the Course Evaluation Advisory Group, which advises IRPA on the development of the system and its uses on campus. A subcommittee with members from the APAS Committee and members from the Course Evaluation Advisory Group was formed to consider the charge in-depth and make recommendations to the APAS Committee. The subcommittee met approximately twenty times between July 2017 and January 2019, and consulted with a range of subject-matter experts and stakeholders.

The subcommittee developed recommendations based on its review and submitted its report to the full APAS Committee in February 2019. APAS shared its preliminary directions with the stakeholders the subcommittee previously consulted, as well as with the Senate at its March 2019

meeting. It also consulted with the Office of General Counsel. The committee developed a final set of recommendations based on the feedback it gathered. After due consideration, the APAS Committee voted to approve its recommendations on the course evaluation system at its meeting on March 29, 2019.

ALTERNATIVES

The University could continue using the current CourseEvalUM system.

RISKS

There are no known risks.

FINANCIAL IMPLICATIONS

There may be some cost associated with implementation of the recommendations. Specifically, there could be costs associated with incorporating survey results into tools used by students when registering for classes depending on how the recommendation is implemented.

UNIVERSITY SENATE | REPORT | #16-17-24
Senate Academic Procedures & Standards (APAS) Committee

Student Course Evaluation Improvement Project

2018-2019 Committee

Thomas Cohen (Chair)
Deanna Barath (Graduate Student)
Progyan Basu (Faculty)
Lauren Brown (Undergraduate Student)
William Cohen (Ex-Officio Provost's Rep)
Linda Coleman (Faculty)
Adrian Cornelius (Ex-Officio University Registrar)
Jeffrey Franke (Ex-Officio Graduate School Rep)
Lee Friedman (Faculty)
Shannon Gundy (Ex-Officio Rep for Director of Undergraduate Admissions)
Agisilaos Iliadis (Faculty)
Lisa Kiely (Ex-Officio Undergraduate Studies Rep)
Byung-Eun Kim (Faculty)
Roberto Korzeniewicz (Faculty)
Marilee Lindemann (Faculty)
Celina McDonald (Faculty)
Benjamin Parrish (Undergraduate Student)
Julian Savelski (Exempt Staff)
Michael Sparrow (Exempt Staff)
David Straney (Faculty)
Elizabeth Warner (Faculty)

Date of Submission

April 2019

BACKGROUND

In January 2017, the Associate Provost of Learning Initiatives and Executive Director of the Teaching & Learning Transformation Center (TLTC) submitted a proposal to the Senate Executive Committee (SEC) recommending improvements to the CourseEvalUM system. The proposal noted that the University's method of evaluating courses had not changed significantly since an electronic system was first introduced in 2008, and pointed out several areas where the current CourseEvalUM system could be improved. It called for a comprehensive review of the existing approach to evaluating courses and instructors, one that would be informed by recent scholarly literature and intended to revise the course evaluation items used. In February 2017, the SEC voted to charge the Academic Procedures & Standards (APAS) Committee with reviewing past Senate action on course evaluations, reviewing scholarship on course assessments and practices at Big 10 and peer institutions, consulting with a range of stakeholders across campus, and recommending whether changes should be made to the current system (Appendix 9).

CURRENT PRACTICE

In 2002, the Senate considered a proposal relating to teaching evaluations, which led to the formation of a Joint Provost/Senate Task Force on Course Evaluations and Teaching in spring 2003. The task force presented a preliminary report and recommendations in February 2004; the Senate subsequently passed a resolution recommending that "there be a University-wide requirement for student evaluations in all undergraduate and graduate courses." The task force submitted its final report in April 2005, identifying four purposes for a new course evaluation system:

- Formative Evaluation: To provide diagnostic feedback to faculty for the improvement of teaching.
- Summative Evaluation: To provide one measure of teaching effectiveness for use in the Appointment, Promotion, and Tenure (APT) and post-tenure review processes and in annual productivity reviews.

- Informative Evaluation: To provide information to students for their use in the selection of courses and instructors.

- Outcome Evaluation: For the purposes of documenting student learning.

The task force also recommended steps to enhance the institution's ability to assess and improve curriculum and instruction. The Senate voted to approve the Recommendations for the Implementation of Web-based Student Course Evaluations (Senate Document #02-03-39) in December 2005. The Provost subsequently appointed an implementation committee, which presented items for a new University-wide course evaluation system to the Senate as an informational item in April 2006. A complete overview of past Senate action on course evaluations can be found in Appendix 1. Today, practices and priorities associated with the CourseEvalUM system are informed by the Course Evaluation Advisory Group, a body composed of representatives from each College/School and various administrative units.

There are currently sixteen CourseEvalUM survey items about instruction that are asked of students in all courses, and four that are asked about teaching assistants (Appendix 2). Fifteen of the items about instruction are forced-choice items, and one is open-ended; three of the teaching assistant items are forced-choice, and one is open-ended. Items focus on either the course or the instructor. In cases where there are multiple instructors, the instructor-specific items are asked for each individual. In addition, Colleges/Schools and departments have the ability to add additional items to the evaluations; those that do so are included in Appendix 3. In some cases, the number of these additional items is significant and more than doubles the length of the instrument. Additional items are most often used to gather insights on courses and instructors and align with the original purposes behind course evaluations; in some instances, however, they are used to gather data for accreditation purposes, and may have little or nothing to do with the course being evaluated.

Results from different items on the evaluations are available to different groups. Responses to eight of the items (Administrator Items) are only visible to instructors and authorized campus administrators, and are intended for use in evaluating and improving instructor performance. The Administrator Items also include a single open-ended item. Given that responses to the Administrator Items can inform personnel decisions, they are kept confidential and only made available to the instructor and relevant administrators. In order to ensure that students benefit from the system, eight additional items are included (Student Items) that are only visible to students and instructors. This separation is known as the "firewall." Results from these items are primarily intended to help students select courses. There is some overlap in the themes addressed by the Administrator and Student Items.

Course evaluations are administered near the end of each term, and conclude before the start of the final exam period. For standard, fifteen-week courses, the system opens two weeks before the last day of classes. Results are not available until after final grades have been submitted. Reports to instructors and administrators include the score distribution, average, and standard deviation for each item. Additionally, comparative averages by College/School, department, and course level are reported. An "overall score" summarizes the average of all five Likert-scale Administrator Items.

Presently, results dating back to 2007 are available to currently registered students. In 2014, however, the University adopted a new vended platform to conduct evaluations. The ability for students to view results gathered after 2014 was not implemented until fall 2018, meaning students have only recently been able to access results from courses offered in the last several years. The current platform cannot show student grade distributions, which were previously available. Results

for courses with five or fewer students are not made available to students, and students can only view results for a particular course/section if the response rate exceeds 70%. Over the past three years, University response rates in fall and spring semesters have ranged from about 55% to 60%, thereby making results from many courses inaccessible to students. Additional information on how CourseEvalUM results are used may be found in the Committee Findings section.

COMMITTEE WORK

In spring 2017, the APAS Committee met with the proposers to discuss their concerns with course evaluations and researched past Senate action on course evaluations. It also met with representatives of the Office of Institutional Research, Planning, and Assessment (IRPA), which oversees implementation of course evaluations, and the Course Evaluation Advisory Group. A subcommittee with members from both the APAS Committee and the Course Evaluation Advisory Group was formed to consider the charge in-depth and make recommendations to the APAS Committee. Subcommittee members included:

Phil Evers (faculty, APAS Chair from 2016-2018)

Susan Hendricks (faculty, past APAS member)

Marilee Lindemann (faculty, APAS member)

Michael Passarella George (staff, Assistant Director for Decision Support in IRPA/Course Evaluation Advisory Group member)

Doug Roberts (faculty, past APAS member)

Joseph Sullivan (faculty, Course Evaluation Advisory Group member)

Kaci Thompson (staff, Course Evaluation Advisory Group member)

The subcommittee met approximately twenty times between July 2017 and January 2019, and consulted with a range of subject-matter experts and stakeholders. The subcommittee:

- Reviewed past Senate action establishing the purposes of course evaluations;
- Reviewed research on course evaluations at UMD conducted by IRPA, including research on what our current items measure, bias in course evaluations, and how results are used by students in the course selection process;
- Met with experts in the field, including Dr. Sandra Loughlin, an educational psychologist who directed the Office of Transformational Learning in the Robert H. Smith School of Business; and Dr. Alice Donlan, an educational psychologist and Director of Research for the TLTC;
- Reviewed a survey of current literature on student assessments of teaching;
- Met with the Associate Provost for Faculty Affairs and the Council of Associate Deans for Faculty Affairs (CADFA) to discuss the use of course evaluations in making teaching assignments and improving instructor effectiveness;
- Reviewed the TLTC's new Mid-Semester Evaluation of College Teaching (MSECT) pilot;
- Consulted with both undergraduate and graduate students at two meetings of the Senate Student Affairs Committee, as well as a focus group of students;

- Evaluated possible replacement items through cognitive interviews with students conducted by Loughlin and Donlan; and

- Reviewed practices at Big 10 and peer institutions.

The subcommittee developed recommendations based on its review and submitted its report to the full APAS Committee in February 2019. In reviewing the recommendations, APAS considered whether or not the practice of conducting University-wide assessments of teaching effectiveness should be discontinued altogether. Ultimately, the committee determined that collecting University-wide data on student experiences serves a useful purpose that should be continued and improved. Its recommendations are premised on a belief that the University should take this opportunity to reimagine the instrument in light of current best practices; narrow its purpose; and develop a tool that provides more and better information to administrators, instructors, and students.

APAS shared its preliminary directions with the stakeholders the subcommittee previously consulted, as well as with the Senate at its March 2019 meeting. It also consulted with the Office of General Counsel, and sent a survey to a select group of department chairs to gather feedback on its proposed recommendations for making teaching assignments and evaluating instructor performance. The committee considered the subcommittee's recommendations and the feedback it gathered in order to develop a final set of recommendations. After due consideration, the APAS Committee voted to approve its recommendations on the course evaluation system at its meeting on March 29, 2019.

PEER INSTITUTION AND SCHOLARLY RESEARCH

Big 10 and Peer Institutions

The committee reviewed information provided by the proposer on course evaluation practices at Big 10 and peer institutions (Appendix 4). Most peer institutions have a set of campus-wide questions that are asked, and many allow colleges, departments, and sometimes instructors to include additional questions. Several articles published over the course of the committee's work indicate that institutions have identified concerns and are conducting reviews similar to the ones called for in APAS' charge (see Flaherty, 2018; Supiano, 2018; Doerer, 2019). The committee found that while institutions have adopted a range of approaches, it is difficult to identify any single instrument or set of best practices the University might adopt. Well-designed instruments are developed for particular contexts and to answer specific questions. In consultation with campus experts, the committee determined that the University should first identify what it wants to assess regarding courses and instructors, and then design or adapt an instrument that targets those elements as precisely as possible.

Scholarly and Institutional Research

The committee reviewed recent literature relevant to student evaluations of teaching, including studies addressing bias in teaching evaluations. While documenting bias can be difficult, the literature suggests that broad or vague items, and items that allow open-ended comments in particular, are more susceptible to bias (Felton et al., 2008; Lindahl and Unger, 2010; Porter, 2011). Studies also indicate that student learning is not highly correlated with student perceptions of teaching (Uttl et al., 2017). The committee found that much of the literature on student evaluations is particular to the instrument being studied, and does not necessarily yield broadly applicable insights (Linse, 2017). The committee's work was also informed by a memo from Dr. Sandra Loughlin reviewing literature on student evaluations of teaching (Appendix 5). The memo noted that such evaluations often ask students about things for which they are not the best source of data.

The committee also reviewed several studies IRPA has conducted on the current course evaluation system that investigate usability, reliability and validity of the items; the relationship between response rates and instructor scores; and whether an instructor's race/ethnicity/citizenship and gender explain differences in ratings. IRPA also conducted phone interviews to identify practices associated with higher response rates, finding that students are more likely to complete evaluations when instructors emphasize that they value the feedback and are interested in improving a course. These studies are summarized in Appendix 6.

COMMITTEE FINDINGS

Administrator & Instructor Use of Course Evaluation Results

In the course of its review, the committee consulted various administrators, including the Associate Provost for Faculty Affairs and the Senior Vice President and Provost. It also attended several meetings of CADFA and the Undergraduate Academic Programs Committee (UGAP). Once it had identified preliminary recommendations, the committee distributed them, along with a survey, to a select group of chairs from both large and small departments, as well as the dean of a non-departmentalized College.

The committee learned that course evaluation results are used by administrators and instructors to assess performance in tenure and promotion cases. They are also used to identify potential problems in an instructor's teaching and indicate where additional intervention may be necessary. Practices vary, sometimes significantly, when it comes to the way results are used in appointment and promotion processes, though the committee identified the following generalities.

- **Tenured/tenure-track (T/TT) faculty:** The role that course evaluation results play in the APT process varies by College/School, though the University has been shifting to more holistic evaluations of faculty teaching that involve peer evaluations, student mentoring, curriculum/course development, a teaching portfolio, and other instructional activities. The Office of Faculty Affairs provides a template that can be used when compiling and interpreting the numeric results of evaluations; responses to open-ended items are typically included at the discretion of the individual faculty member. In general, however, the committee found that course evaluation results play a limited and decreasing role in the APT process, particularly given teaching is only one aspect on which a T/TT faculty member is assessed.

- **Professional track (PTK) faculty:** The role course evaluations play in the Appointment, Evaluation, and Promotion (AEP) process for PTK faculty is more significant than it is in APT. There is no consistent standard for peer evaluation process for PTK faculty, and course evaluations are, in some cases, the sole or most significant factor used in making renewal or promotion decisions, particularly for purely instructional faculty.

Most administrators are aware of the results' limitations and contextualize them with other sources of data on instructor performance. This caution is not universal, however, and evaluation results are sometimes used in inappropriate ways. These include averaging all of an instructor's results into a single number for comparisons with peers or to give teaching awards, and comparing instructor averages to the College/School- and department-averages for courses of a similar level.

Instructors and administrators often use the open-ended comments to contextualize and nuance the numeric data; as one administrator put it: "the numbers tell you there is a problem and the comments tell you what the problem is." Some instructors expressed significant concerns with the

comments, however, noting that they can be biased and even abusive. Some instructors also indicated that they ignore the comments entirely. Both IRPA and the Office of Faculty Affairs have received complaints from instructors about the open-ended comments. To help address these concerns, IRPA has added the following language before the open-ended items on the evaluations:

> *In order to help instructors and administrators best use your feedback to improve teaching and learning at the university, please be thoughtful and constructive when writing comments. Inappropriate or offensive comments do not reflect the civil engagement we value as an institution, and they are generally not effective in stimulating improvements to instruction. Should any comments take the form of actual threats, they will be forwarded, with the student's identifying information, to campus police for threat assessment.*

While it has received requests from instructors to remove specific comments, IRPA is not equipped to evaluate the nature of student comments or make decisions regarding which comments should be removed. In addition, the current system does not offer a way to easily delete comments. The committee acknowledged that the use of open-ended comments can be abused, but determined that their value was significant enough that they should be retained. The committee recommended including two open-ended items that use specific prompts related to positive aspects and areas for improvement. The committee hopes that this will yield more actionable responses and may reduce the number of biased comments.

Student Use of Course Evaluation Results

The committee met twice with the Student Affairs Committee and hosted a small focus group of students from different disciplines. From these sessions, the subcommittee gained insights into how students use course evaluation results and other resources to select courses. Students reported using a range of resources including CourseEvalUM results, third-party websites (among them ratemyprofessor.com, ourumd.com, and planetterp.com), and word of mouth. Student responses to a 2016 Campus Assessment Working Group Snapshot indicated 43% of students considered CourseEvalUM a "major factor" when choosing courses (Appendix 7). Students expressed uncertainty as to whether the results were for instructors, administrators, or other students, and did not always understand which items referred to the course and which to the instructor. The distinction between Administrator and Student Items was also unfamiliar.

When asked what would make a course evaluation system more useful and improve completion rates, students asked for access to the open-ended comments, grade distributions, and a "star system" for providing a simple snapshot of student satisfaction with a course or instructor. Students reported that incentivizing participation by assigning extra credit and devoting class time to completing evaluations are both effective. Knowledge that their responses would make a difference in how a course was taught in the future is also a motivating factor, which is supported by IRPA's phone interview project looking at response rates (Appendix 6).

The committee considered ways to increase the value of the system to students. In addition to recommending that students be given access to all of the numeric results, the committee discussed ways to increase response rates to ensure that the threshold of 70% needed to release results to students is more consistently met. Its recommendations include encouraging instructors to emphasize the value they place in student feedback and set aside class time to complete evaluations. Responding to anecdotal feedback from both students and instructors that an excessive number of items decreases response rates, the committee also considered the length of the instrument. It determined that the number of University-wide items should remain the same, and recommended that the number of College/School/department items be limited to five.

TLTC Initiatives on Evaluating Teaching Effectiveness
Many of the same issues the subcommittee was considering have been considered by the TLTC. The committee learned that the TLTC has been developing a Mid-Semester Evaluation of College Teaching (MSECT), which was piloted in 2017 and 2018 (Donlan, 2019). MSECT is a survey administered through Qualtrics and modeled on the Fearless Teaching Framework (Donlan et al., 2019). It grew out of repeated requests by instructors for a way to evaluate and improve their teaching during the semester. Per the purposes identified for the current course evaluation system, instructors were interested in *formative feedback* that could be used immediately, rather than the next time a course was taught. The tool is intended primarily to help instructors improve their teaching; while instructors could incorporate results into a teaching portfolio, results would not be visible to administrators as with current CourseEvalUM results. Preliminary analysis from pilot data provides evidence that the measure is a valid and reliable assessment of teaching effectiveness. The committee was impressed by the initial results of the pilot, and its recommendations encourage further development and adoption of MSECT and other mechanisms to gather mid-semester feedback on teaching.

Firewall Between Student and Administrator Items
When the University developed its current course evaluation system, the results were treated as “evaluations” of instructors, both rhetorically and in decisions over who should have access to the results. As described above, this approach resulted in two sets of items visible to different audiences with a firewall between them. In the course of its work, and after consulting extensively with the Office of General Counsel, the committee determined that this division is no longer necessary, as results are not “evaluations” used to assess instructor performance.

Student responses are opinions regarding their experience in a particular course. Students are not subject matter experts who can speak to the organization of a course's content, nor are they trained in pedagogy and able to accurately assess an instructor's teaching. Further, there are no standards, rubrics, or specific criteria for students to apply when completing evaluations. Given this, students are not equipped to directly "evaluate" an instructor's performance. Their perspectives can be used by administrators to gain insights into instructors’ teaching effectiveness, though in such cases it is the administrator conducting the evaluation, the results/conclusions of which are the actual evaluation to be considered part of the personnel record.

Additionally, all information used in personnel evaluations need not be confidential. There are multiple other sources of information that are not confidential, including numbers and names of publications, syllabi, the number and value of grants, etc. The committee decided that allowing students, instructors, and administrators identical access to numeric results would not invalidate their use in certain personnel processes, and would increase the amount of information available to both administrators and students. It determined, however, that responses to open-ended items should remain confidential and visible only to instructors and administrators as they could contain personally identifiable information and are unaggregated, unit-level data.

Given that results are not performance evaluations, the committee determined that the “course evaluation system” should be renamed to better communicate that it gathers students’ perceptions and experiences about a course or instructor, a distinction that current terminology may blur.

Limitations of the Current Course Evaluation System
Based on the reviews of relevant literature and consultation with campus experts addressed above, the committee identified significant concerns with the CourseEvalUM items and their ostensible purpose. The items invite students to speak to themes that they are not in a position to credibly

address. For example, one item asks students to indicate whether "the standards the instructor set for the course were Too Low/Appropriate/Too High," which is better assessed by other experts in the discipline. In addition, many items are not sufficiently specific to yield information that is actionable by an instructor. This lack of specificity is also concerning as vague or imprecise items are more open to bias. The items are also unable to adequately address all four of the system's original purposes:

- **Formative Evaluation**: While results can help instructors improve their teaching, they cannot be used to inform mid-semester adjustments. As addressed above, instructors now have access to more dynamic and timely mechanisms to gather feedback throughout the semester. Further, many of the current items address vague or subjective criteria and do not ask about specific classroom practices associated with effective teaching, making it difficult for instructors to directly address possible deficiencies.

- **Summative Evaluation**: The results remain a potentially valuable measure of teaching effectiveness for use in the APT, AEP, and post-tenure review processes. Yet results are open to misuse, given they yield potentially biased information and tend to measure a single factor (general satisfaction with an instructor). In light of these shortcomings, their use by some as the primary or even sole measure of teaching effectiveness is particularly problematic.

- **Informative Evaluation**: The results remain a valuable resource for students making course selections, though increased completion rates increase information available to students.

- **Outcome Evaluation**: The current system is ill-suited to measuring student learning, which is better addressed by learning outcomes assessments and other mechanisms. Studies have also shown that student learning is not highly correlated with students' perceptions of learning, which are often informed more by other factors (how much the student enjoys the topic, whether the course was required, etc.).

The committee debated at length the purpose of the instrument, eventually determining that it should be redesigned to focus primarily on summative and informative feedback. Surveys should be summative to the instructor and to administrators and serve as one measure of teaching effectiveness to use in evaluating and improving teaching practices. Surveys should also be informative to students, in order to assist them in selecting courses and instructors. The committee determined that the current items are not able to adequately or efficiently meet these goals, and decided to recommend that they be replaced.

FRAMEWORK FOR REPLACEMENT SURVEY ITEMS

The committee decided that the number of items should remain the same as in the current instrument. It considered new items that fall into three conceptual categories:

1. Those designed to provide summative feedback for use in evaluating and improving teaching;
2. Those designed to inform student course decisions; and
3. Those intended to assess teaching assistants.

The committee determined that items in the first category should either assess baseline teaching practices that should be met or identify the utilization of best practices of teaching effectiveness. In discussing the relative balance between these two purposes, the committee considered focusing survey items solely on baseline or core teaching practices that should generally be expected of

every instructor, where consistently low scores can serve as a red flag and inspire discussions between instructors and administrators. It decided that such an approach would only exacerbate concerns that course evaluations are designed to emphasize deficiencies in teaching. It might also suggest that the University's standard for instruction is mere adequacy. Therefore, the committee determined that items addressing baseline practices should be accompanied in approximately equal numbers by items addressing best practices, which presents an opportunity to both identify practices that the University values and encourage adoption of those practices.

In light of the scholarly research discussed above, the committee determined that the work of developing and testing sound replacement items is sufficiently complex that it should be entrusted to those well versed in the scholarship. The committee decided to focus its efforts on identifying constructs that address specific teaching practices and recommend that subject-matter experts be tasked with developing the specific wording associated with each item based on those constructs. Examples of possible wording of survey items associated with most of the constructs can be found in Appendix 8. With the exception of the items intended to inform student course selection, the constructs the committee included in its recommendations are all supported by a large body of literature supporting their connection to learning. The student course selection constructs are based on requests made by students. Following their development, specific survey items would be tested and piloted by the Course Evaluation Advisory Group, IRPA, and subject-matter experts. The final survey items would then be shared with the Senate for its feedback before being implemented. IRPA would also ensure that items are presented in a logical order on the survey, rather than presenting them in the conceptual categories that informed the development of the constructs.

Stakeholder Feedback

The committee circulated its draft recommendations with a range of stakeholders including the Course Evaluation Advisory Group, the Office of Faculty Affairs, administrators, and students. A few stakeholders noted that replacing the current items would disrupt the ability to measure teaching improvement over time. Faculty going up for tenure in the next several years, for example, would have to modify their promotion materials to account for the sudden shift. After consulting with the Office of Faculty Affairs, the committee determined that the APT process could accommodate the change. The AEP process relies more on CourseEvalUM results in some cases, which led the committee to recommend that the University explore ways to provide more holistic reviews of instructional faculty. Adding past results from CourseEvalUM and data from the new survey items to the data warehouse would also facilitate more sophisticated analyses that could smooth the transition, which led to another of the committee's recommendations.

Some stakeholders raised concerns about replacing the current items and about the availability of grade distributions. The committee considered potentially retaining some of the current items for several years to bridge the transition. Stakeholder feedback identified two items in particular as valuable: "I learned a lot from this course" and "Overall, this instructor was an effective teacher." The committee determined not to retain these two items. As noted above, student learning is not highly correlated with students' perceptions of learning, and "effective teacher" is an ambiguous concept subject to significant interpretation. However, several other current items closely align with the proposed constructs, which will facilitate some comparisons between new survey data and CourseEvalUM results. Ultimately, the committee decided that a clean break with the majority of the current items was in the best interests of instructors and administrators. The committee also considered the importance of making grade distributions available to students. Students consistently request them and IRPA annually receives and complies with FOIA requests for grade distributions from third-party websites. Given that students are able to access the information regardless, the committee decided to recommend that results once again be provided directly to students.

RECOMMENDATIONS

I. Guiding Principles & Parameters

1. The University should rename the current "CourseEvalUM" system to better communicate that it gathers students' perceptions and experiences about a course or instructor and does not serve as an evaluation.

2. The University should replace the existing CourseEvalUM items with new survey items that follow these principles:

    a. The number of University-level items should be approximately the same as in the current survey instrument.

    b. The survey items should focus on measuring progress relative to baseline teaching practices and on utilization of best practices of teaching effectiveness.

    c. The survey should include only those items that students can reliably answer and should focus on those items where students are the best or only source of data.

    d. The majority of survey items should be designed so that responses can inform actionable changes by the instructor.

    e. The survey items should be written using language that makes clear what is being asked of students.

    f. Students should understand who will be reviewing their responses, in order to inform their thinking as they are filling out the survey.

    g. The survey items should focus on asking students to speak to their own student experience, rather than asking for general feedback or input based on other students' experiences, unless there is a compelling rationale to do otherwise.

    h. The survey items should be relevant for in-person, blended, and online courses.

    i. The survey items should clearly indicate whether they relate to the instructor or the course.

    j. The survey items should be positively worded so that a high score on an item is positive and a low score indicates that adjustments in practices may be needed.

3. The survey item development process should involve a pilot or other mechanism for testing and refining the new items.

4. The Course Evaluation Advisory Group and Office of Institutional Research, Planning, & Assessment (IRPA) should provide an informational report to the Senate on new survey items to gather feedback before implementation.

5. The University should consider ways to ensure that survey results are not utilized as the sole basis for giving teaching awards or for assessing progress towards accreditation standards.

II. Recommendations on Constructs & Items

1. The Course Evaluation Advisory Group and IRPA should work with subject-matter experts to develop new survey items that align with the below constructs that assess teaching effectiveness, inform student registration decisions, provide opportunities for open feedback, and allow for feedback on teaching assistants.

   Constructs that Assess Baseline and Best Practices in Teaching Effectiveness

   - Timely feedback
   - Clear assignment expectations
   - Clear grading expectations
   - Focus on course content in class sessions
   - Value of required texts
   - Climate
   - Instructor support
   - Quality feedback
   - Scaffolding
   - Cognitive engagement and/or rigor
   - Alignment of instruction to assessment

   Constructs that Inform Student Registration Decisions

   - Course satisfaction
   - Instructor satisfaction
   - Time invested
   - Major/non-major

   Constructs for Open-Ended Feedback

   - Positive Aspects
   - Areas for Improvement

   Constructs Related to Teaching Assistants

   - Climate
   - Timely feedback
   - Effective use of class time
   - Open-ended item on positive aspects
   - Open-ended item on areas for improvement

2. The Course Evaluation Advisory Group, in consultation with the Teaching and Learning Transformation Center (TLTC), should develop a bank of additional items—based on baseline and best practices of teaching effectiveness and literature in the field—that Colleges/Schools and units may include in addition to the University-level items.

3. The University should limit Colleges/Schools and units to a maximum of five additional survey items, which should be developed in consultation with the TLTC.

4. The Course Evaluation Advisory Group should carefully consider the order in which items are presented to students on the survey and whether they should correspond to the order of responses provided in reports available to administrators and instructors.

5. The Course Evaluation Advisory Group should ensure that survey items are clearly identified as applying to either the instructor or to the course.

III. Recommendations on Implementation and Usage of Survey Results

1. The University should encourage instructors to gather mid-semester feedback on their teaching, using tools such as Qualtrics and resources provided by the TLTC.

2. The University should encourage instructors to set aside time in class for students to complete surveys and to explain to students the value and impact of survey responses on teaching practices.

3. The University should make numeric data from survey results available to instructors, administrators, and students. Responses to open-ended items should remain accessible to instructors and administrators only, not students.

4. The University should consider ways to incorporate survey results in information available to students during the course selection process.

5. The Course Evaluation Advisory Group should prioritize efforts to add existing CourseEvalUM data and future survey results to the data warehouse.

6. IRPA should discontinue the practice of including department-wide and College-wide averages across all courses of a given level in survey results.

7. The University should again make course grade distributions available to students.

8. The University should not release survey results from courses with fewer than 5 students and should continue the practice of not releasing results to students if the response rate for a given course is less than 70%.

9. The University should consider how best to ensure that survey results are not utilized as the sole basis for personnel determinations of PTK faculty.

10. The Provost's Office should develop guidance on best practices for utilizing statistical analysis of data from survey results in the Appointment, Promotion, and Tenure (APT) and Appointment, Evaluation, and Promotion (AEP) processes.

APPENDICES

Appendix 1 — Past Senate Action on Course Evaluations
Appendix 2 — Current CourseEvalUM Items
Appendix 3 — Number of Evaluation Items by Unit
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Appendix 5 — Memo from Dr. Sandra Loughlin (November 1, 2017)
Appendix 6 — IRPA Studies on UMD's Course Evaluation System
Appendix 7 — CAWG Snapshot of Student Experiences
Appendix 8 — Sample Item Wording for New Constructs
Appendix 9 — Charge from the Senate Executive Committee

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Appendix 1: Past Senate Action on Course Evaluations

Summary of Past Senate Action on the Topic of Course Evaluations:

In July 2002, The Educational Affairs Committee was charged with reviewing a proposal from Lilly-CTE Fellows to establish a University policy on the evaluation of teaching (Senate Doc #01-02-63). Senate Chair Kent Cartwright sent a memo to John Pease, Chair of the Educational Affairs Committee, asking the committee whether it would like to examine the proposal in depth or forward it to a joint task force of the Senate & Academic Affairs for further study. The memo detailed specific issues and questions that should be considered, and the proposal from Lilly-CTE was attached.

In November 2002, the Educational Affairs Committee responded to the SEC, stating that it had decided not to make a formal recommendation regarding the Lilly-CTE proposal for the Establishment of a University Policy on the Evaluation of Teaching. It suggested that a Task Force be created to look into this issue further.

On January 14, 2003, the SEC reviewed the memo from the Educational Affairs Committee and voted to develop a proposal for a Task Force.

The Joint Task Force on Course Evaluations and Teaching was appointed by the Office of the Provost and the University Senate. The Task Force was charged during in the spring of 2003.

The Task Force met during the summer and fall of 2003. It presented an interim report in February 2004. One of the recommendations from this report became a resolution for a university-wide requirement for student evaluations in all undergraduate and graduate courses.

The University Senate passed the resolution on May 3, 2004, mandating a university-wide requirement for student evaluations in all undergraduate and graduate courses. Senate Doc 02-03-39 stated "we recommend that there be a university-wide requirement for student evaluations in all undergraduate and graduate courses."

Following the passage of the resolution, the SEC updated the original charge to the Task Force in September 2004. The Task Force sent a draft response to the updated charge and a draft of their final report to the SEC for its meeting on January 19, 2005 (draft report dated January 12, 2005). The draft report detailed a set of six recommendations calling for, in part, a university-wide course evaluation system (web-based), a set of universal evaluation questions, and that a portion of the evaluation results be made public to the students. On January 19, 2005, the SEC met to review the response from the Task Force to the updated charge and draft report.

The Task Force compiled its Final Report in April 2005. This report contained seven recommendations on how the academic community could enhance its capabilities to assess and improve curriculum and instruction. The Task Force members unanimously agreed that a university-wide course evaluation requirement and system should be adopted.

The SEC met on September 13, 2005, and approved a consultation between Senate Chair Berlin and the Task Force to draw certain recommendations from the final report to be presented as actionable items to the Senate, along with a report from Provost Destler on implementation.

The SEC met on November 1st and voted to invite the Chair of the Task Force to the next meeting, along with the lawyer who had been advising them.

The Task Force presented its report and recommendations to the SEC on November 15, 2005. The SEC decided that Chair Berlin would work with the Task Force to revise the language of its recommendations.

The Task Force presented a revised document to the SEC on November 29, 2005. The SEC voted to approve the Task Force's document for the December Senate agenda.

On December 12, 2005, the Chair of the Task Force, Dennis Kivlinghan, presented the actionable recommendations (Recommendations for the Implementation of Web-based Student Course Evaluations, Senate Doc #02-03-39). He explained that the nine recommendations were principles for implementing web-based course evaluations. The recommendations would be implemented through the Provost's Office.

Chair Berlin sent a memo to President Mote on December 15, 2005, stating that the Senate had approved the Recommendations for the Implementation of Web-based Student Course Evaluations.

President Mote accepted the recommendations on December 21, 2005. He stated that there remain significant issues for full implementation, both in timing and in framing the questions, and gave suggestions for how to move forward.

Chair Berlin reported to the SEC about Dr. Mote's letter at the SEC meeting on January 24, 2006. Berlin noted that the Provost had formed an implementation committee. VP and CIO Jeff Huskamp presented an informational summary of technology issues relating to the implementation of web-based student evaluations to the SEC on February 28, 2006.

Sharon La Voy Chaired the Provost's Student Course Evaluation Implementation Committee and she presented the committee's university-wide questions for online student evaluations at an SEC meeting on March 14, 2006. The questions had been reviewed by the Council of Deans. The SEC made changes, and La Voy presented a final set of questions on April 11, 2006. The SEC voted to place the questions on the April 24th Senate agenda as an informational item.

The Provost and the Implementation Committee presented the questions for the web-based evaluation instrument. The Provost explained that the Senate would not be asked to approve the questions but to provide feedback. He confirmed that responses to the set of questions for APT would not be made public. The Provost emphasized that he would require a 75% participation rate before results for a course would be published. He explained that the new system would be fully implemented in the fall of 2007.

On May 29, 2007, Chair Montgomery sent a memo to VP and CIO Jeff Huskamp expressing disappointment that implementation of the online course evaluations had been halted due to a technical problem of putting a questionnaire that includes universal, college, departmental, and professorial questions online. The SEC passed a resolution stating that a questionnaire with only universal questions be available online campus-wide in the Fall 2007 semester (Senate Doc. 06-07-56).

On August 31, 2010, the SEC charged the APAS Committee with review of Re-evaluation of the Student Teach Evaluations at UMD (Senate Doc. 10-11-36) proposed by Denny Gulick (Mathematics Professor and Past Chair, 1998-1999, of the Senate).

The APAS Committee reviewed this charge in Fall 2010. At its September 3, 2010, meeting the committee reviewed background history on this topic as provided by the Senate Office. It also researched peer institution procedures for course evaluations, off-campus course evaluation services, and potential legal concerns. During the course of its review, the APAS Committee read articles on the subject of teacher evaluations and consulted with members of the Office of Institutional Research Planning & Assessment (IRPA). Following deliberation, the APAS Committee voted, at its December 17, 2010, meeting, in favor of recommending that the CourseEvalUM system continue to undergo development

with the guidance of a governing body that is formulated in a manner consistent with the principles of shared governance. The APAS Committee's report also outlined a number of specific subjects that warranted further attention, including the recommendation that more detailed consideration should be given to how CourseEvalUM could be modified to better satisfy student needs. Additionally, the APAS Committee strongly endorsed the urgency for the addition of unit-specific questions, including course-specific and instructor-specified questions to the CourseEvalUM system.

On January 28, 2011, the SEC reviewed the APAS Committee's report and voted to forward the report to the Senate as an informational item. The SEC also voted to send a letter to the Provost requesting administrative action and a report describing actions taken by September 1, 2011. The report was presented as an informational item at the February 9, 2011 Senate meeting.

On September 1, 2011, Provost Ann Wylie sent a response to the SEC regarding the APAS Committee's report. This letter discussed the report and offered a number of recommendations (See attached letter).

On October 13, 2011, the APAS Committee wrote a response to the Provost's letter requesting more information on the implementation of unit-specific questions. The SEC forwarded this letter to the Provost on October 28, 2011.

On January 18, 2012, the SEC received a response from the Provost regarding the October 28, 2011 memo. The response included information on how the priorities for developing the CourseEvalUM system were decided and the consideration given to instructor-specified and course-specific questions. The APAS Committee reviewed this letter on February 27, 2012.

Prepared by the Senate Office – February 2017

Appendix 2: Current CourseEvalUM Items

Current Course Evaluation Items

Utilizing a universal set of course evaluation questions allows both students and academic administrators to make more meaningful and consistent comparisons among courses and their instructors. Evaluation items fall into groups based on who has access to the results as explained below. Unless otherwise noted, items are answered on the following scale:

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not Applicable

Administrator Items

Results from these items are seen by instructors and authorized campus administrators. Administrators use evaluation results to help them assess and improve faculty performance. Because faculty performance review is a personnel function, the evaluation feedback used in those decisions is confidential by Maryland law. For this reason, students and administrators see responses to different sets of items from the evaluation.

1. The instructor treated students with respect.
2. The instructor was well-prepared for class.
3. The course was intellectually challenging.
4. The standards the instructor set for students were... (Too Low, Appropriate, Too High)
5. I learned a lot from this course.
6. Overall, this instructor was an effective teacher.
7. How does this course fit into your academic plan or course of study? (CORE or General Education Requirement, Major/Certificate/Minor/Program Requirement, Elective)
8. Additional comments, e.g. about course content/materials, teaching style, etc. (free-text item)

Student Items

Results from these items are seen by instructors and students. Students use evaluation results to aid them in choosing courses each term.

1. The instructor was effective in communicating the content of the course.
2. Course guidelines were clearly described in the syllabus.
3. The required texts (e.g., books, course packs, online resources) helped me learn course material. (added Fall 2017)
4. The instructor was responsive to student concerns.
5. The instructor helped create an atmosphere that kept me engaged in course content.
6. Based on the quality of my work in this course, the grades I earned were… (Too Low, Appropriate, Too High)
7. Given the course level and number of credits, the workload was… (Too Low, Appropriate, Too High)
8. How much effort did you put into the course? (Little, Moderate, Considerable)

Teaching Assistant Items

Results from these items are seen by teaching assistants, instructors teaching with the TA, and campus administrators.

1. The teaching assistant (TA) treated students with respect.
2. The teaching assistant (TA) was well-prepared for class.
3. Overall, this teaching assistant (TA) was an effective teacher.
4. Additional comments, e.g. about the discussion/lab/studio section, TA's teaching style, etc. (free-text item)

Appendix 3: Number of Evaluation Items by Unit

CourseEvalUM - Number of Evaluation Items

Unit	Course Questions		Instructor Questions		Total without TA	TA Questions		Total with TA
	Single Selection	Open Ended	Single Selection	Open Ended		Single Selection	Open Ended	
University-wide	*8*	*1*	*7*	*0*	*16*	*3*	*1*	*20*
ARHU	0	0	0	0	16	5	0	25
ARHU-English	3	2	1	0	22	1	0	32
BMGT	1	0	0	0	17	0	0	21
BSOS	0	0	10	0	26	0	0	30
BSOS-Psychology	6	0	0	0	32	0	0	36
EDUC	1	2	4	0	23	0	0	27
ENGR	16	0	0	0	32	0	0	36
INFO	3	0	2	0	21	0	0	25
JOUR	2	2	2	3	25	0	0	29
PLCY	12	0	10	0	38	0	0	42
UGST-College Park Scholars	3	4	0	0	23	0	0	27

Updated 8/5/2017

Appendix 4: Big 10 and Peer Institution Research on Course Evaluations

Initial Peer Research on Course Evaluations

(Compiled by Ben Bederson and TLTC)

Commonalities among the Big 10

- Each university has a set of Standard/Cross-campus questions which are mandatory. Then there are departmental questions, and then the faculty can select questions.
- Some questions are multiple choice and some are open-ended. Scales differ.
- As universities move course evaluation online they have been developing strategies for incentivizing online completion.
- All campuses allow faculty to access their own student course feedback
- Reporting methods:
    - OSU provided class and cumulative reports
    - Illinois also reports longitudinal data by faculty member and/or course.
- Wisconsin was the only school identified whose course evaluations were linked to state/system-wide evaluations of teaching and hiring/promotion/salary-raises decisions.

Indiana University Bloomington

- 2014 Online Course Evaluation Template:
    - They experimented with passive vs. active voice
    - When piloting, found that students receiving F's were least likely to respond, and students receiving A's were most likely to respond.
    - Add a "not applicable" option
    - Graduate students have higher instructor ratings that undergraduates
    - Depending on the question, first year students answer differently than older students.
    - Professional graduate students find the some questions to not fit their in-class experience.
    - "student course evaluations should be judged in relation to contextual characteristics, such as class size, level, major requirement status, and other factors that systematically influence student perceptions."
- Other Information:
    - https://academics.iusb.edu/institutional-research/online-course-questionnaire.html

Michigan State

- Evaluation summaries are available to students: https://sirsonline.msu.edu/FAQ.asp
    - "Student Opinion of Courses and Teaching (SOCT) collects feedback from undergraduate students enrolled in classes taught by MSU faculty during fall and spring semesters. SOCT surveys are not collected for summer courses or any courses taught by graduate assistants. SOCT questions were developed to gather information that may be helpful to students when selecting courses and faculty members in those courses. The aggregate results of this survey are updated at least twice a year and are available to the MSU community."

- Encourage faculty to do mid-course evaluations
- Tools for evaluating online courses
- Example of how one college uses eval results in promotion and hiring https://natsci.msu.edu/faculty-staff/policies-procedures/evaluation-policy-and-resources/teaching-evaluation-guidelines/

Northwestern University

- Not available online. Will need to request information from the below office:
- http://www.northwestern.edu/ses/faculty-instructors/ctecs/running-instructor-ctec-reports.html

Ohio State University

- Standard Form:
  - https://registrar.osu.edu/sei/seiitems.pdf
  - Not flexible for team teachers
- Optional Feedback on Your Instruction (FYI) program: http://ucat.osu.edu/professional-development/fyi/
  - Only for instructor use
  - Flexible for team teachers
- Reporting: Instructors can get a report for just their one class or a report of "Overall Scores" across all courses the professor has taught
- Has student view

Pennsylvania State University

- All mandatory & approved questions: https://www.srte.psu.edu/SRTE_Items/
  - University required:
    - A1. Are you taking this course as an elective? (If uncertain, omit.)
    - A2. What grade do you expect to earn in this course?
    - A3. Rate the overall quality of this course.
    - A4. Rate the overall quality of the instructor.
  - Then, organized by Departmental questions, Instructor-selected questions, University open-ended questions, etc.
- Student Rating Teaching Effectiveness: https://www.srte.psu.edu/
- NOT available to students. "SRTE results are considered part of faculty members' personnel records so access is restricted to the faculty member and administrators."
- Faculty beliefs about encouraging student participation: http://www.schreyerinstitute.psu.edu/IncreaseSRTERespRate/

Purdue University

- Senate Teaching Evaluation Conceptual Overview
  - University required:
    - Overall, I would rate this course as: Excellent - Good - Fair - Poor - Very Poor.
    - Overall, I would rate this instructor as: Excellent - Good - Fair - Poor - Very Poor.

    - “All course evaluations include 8 standard questions, the two University "Core" items, four demographic questions used for research purposes, and two written prompts for student feedback.”
- https://www.purdue.edu/cie/IDP/courseevaluations.html

Rutgers University–New Brunswick

- Increase response rate by using a midterm informal feedback form: https://ctaar.rutgers.edu/sirs/participation.html
- Administer both paper and online surveys
- How to interpret responses: https://ctaar.rutgers.edu/sirs/guidelines.html
- Online sample: https://ctaar.rutgers.edu/sirs/osirsPreview.html
    - 1. The instructor was prepared for class and presented the material in an organized manner. N/A, Strongly disagree---Strongly agree
      2. The instructor responded effectively to student comments and questions. N/A, Strongly disagree---Strongly agree
      3. The instructor generated interest in the course material. N/A, Strongly disagree---Strongly agree
      4. The instructor had a positive attitude toward assisting all students in understanding course material. N/A, Strongly disagree---Strongly agree
      5. The instructor assigned grades fairly. N/A, Strongly disagree---Strongly agree
      6. The instructional methods encouraged student learning. N/A, Strongly disagree---Strongly agree
      7. I learned a great deal in this course. N/A, Strongly disagree---Strongly agree
      8. I had a strong prior interest in the subject matter and wanted to take this course. N/A, Strongly disagree---Strongly agree
      9. I rate the teaching effectiveness of the instructor as: N/A, Poor----Excellent
      10. I rate the overall quality of the course as: N/A, Poor----Excellent
- Paper sample: https://ctaar.rutgers.edu/images/SIRS_form.jpg
- How to add additional questions: https://ctaar.rutgers.edu/sirs/addQuestions.html
- Information hub: https://www.purdue.edu/cie/IDP/courseevaluations.html
- Use in faculty portfolio: http://senate.rutgers.edu/bestprac.html

University of Illinois at Urbana–Champaign

- Full catalogue of all question items: https://citl.illinois.edu/docs/default-source/default-document-library/icescatalog.pdf?sfvrsn=0
- Info hub: https://citl.illinois.edu/citl-101/measurement-evaluation
- Reporting: Each semester or longitudinally by course or instructor: https://citl.illinois.edu/docs/default-source/ices-documents/sample-longitudinal-profile.pdf?sfvrsn=2
- Paper example: Front, Back
- Mid-semester feedback surveys are encouraged: https://citl.illinois.edu/citl-101/measurement-evaluation/teaching-evaluation/ief
- Online:

- ICES Online allows 23 rated items and 6 open-ended items in addition to 3 global items. Faculty can write their own open-ended items. Faculty are not allowed to write any rated items, but we are continually expanding the item pool and welcome suggestions for new items.
- Opportunity to tailor for team teaching
- Have the option to not release to the department.

University of Iowa

- How to administer to prevent bias and increase responses: https://teach.its.uiowa.edu/ace-online-best-practices
- Global Items:
  - 101.This course is well planned and organized.
  - 102. The content of this course is valuable.
  - 103. This is a worthwhile course.
  - 104. Overall, this is an excellent course.
  - 105. I learned more in this course than in most other college courses I have taken.
  - 106. I learned a great deal in this class.
  - 107. I am motivated to do my best work in this course.
  - 108. This instructor is effective in teaching the subject matter of this course.
  - 109. Overall, this instructor is an effective teacher.
  - 110. This instructor is an excellent teacher.
  - 111. I would recommend a course taught by this instructor to other students.
- Item pool: https://teach.its.uiowa.edu/sites/teach.its.uiowa.edu/files/ace_item_pool.pdf
- Information hub: https://teach.its.uiowa.edu/technology-tools/ace-online-course-evaluations

University of Minnesota

- Mostly using paper surveys.
- Information Hub: https://oms.umn.edu/srt/
- Sample paper form: https://oms.umn.edu/departments/srt/answerSheets.php
- HOW responses are used: http://policy.umn.edu/education/teachingevaluation
  - "When used for salary, promotion, and tenure decisions, information from student ratings should be used in conjunction with other relevant metrics to assess instructional effectiveness."
- FAQ: https://oms.umn.edu/departments/srt/about.php
  The SRT Course Items are:
  - I have a deeper understanding of the subject matter as a result of this course.
  - My interest in the subject matter was stimulated by this course.
  - Instructional technology employed in this course was effective.
  - The grading standards for this course were clear.
  - I would recommend this course to other students.

- Approximately how many hours per week did you spend working on homework, readings, and projects for this course?
    - 0-2 hours per week
    - 3-5 hours per week
    - 6-9 hours per week
    - 10-14 hours per week
    - 15 or more hours per week

University of Nebraska–Lincoln

- https://canvas.unl.edu/courses/1/quizzes/7?module_item_id=60
- Little available information online
- Faculty can add additional questions: http://cehs.unl.edu/cyaf/course-evaluations-0/
- Housed in Blackboard
- Components: Command and Connection:
    - http://www.unl.edu/gradstudies/current/news/using-student-evaluations

University of Michigan

- "When core templates need creating or modifications, instructors working with their evaluation coordinators can design their core evaluation templates by selecting the **questions from our Question Catalog** A maximum of 30 rating questions and 5 open-ended comment questions is the limit.
- Core questions:
    - Text, Level, Dimension
    - I had a strong desire to take this course., Course, Student Motivation
    - As compared with other courses of equal credit, the workload for this course was (SA=Much Lighter, A=Lighter, N=Typical, D=Heavier, SD=Much Heavier)., Course, Perceived Workload
    - This course advanced my understanding of the subject matter., Course, Self-assessed Learning
    - My interest in the subject has increased because of this course., Course, Impact on Students
    - I knew what was expected of me in this course. (SA=Almost Always, A=Frequently, N=Sometimes, S=Occasionally, SD=Hardly Ever)., Course, Course Organization
    - The instructor seemed well prepared for class meetings. (SA=Almost Always, A=Frequently, N=Sometimes, S=Occasionally, SD=Hardly Ever), Instructor, Course Organization
    - The instructor explained material clearly. (SA=Almost Always, A=Frequently, N=Sometimes, S=Occasionally, SD=Hardly Ever), Instructor, Instructor Clarity
    - The instructor treated students with respect., Instructor, Classroom Climate
- Midterm and Final course evals
- http://ro.umich.edu/evals/#FS_Templates_Questions

University of Wisconsin–Madison

- First to address Climate as well as "information on key initiatives not typically captured by evaluations, such as alignment with the campus Essential Learning Outcomes"
- Faculty and departments can add questions
    - Moved departments in fall 2016: "Testing and Evaluation (T&E) no longer offers online course evaluations." https://testing.wisc.edu/onlinecourseevals.html
    - Now held under Teaching and Learning: https://learnuw.wisc.edu/toolbox/aefis.html
        - https://provost.wisc.edu/assessment/digital-course-evaluation-surveys.htm
- INFO HUB: https://testing.wisc.edu/standardizedcourseevals.html
- Wisconsin was the only school identified whose course evaluations were linked to state/system-wide evaluations of teaching and hiring/promotion/salary-raises decisions.
- Critique from student newspaper: https://badgerherald.com/news/2015/04/30/course-evaluations-get-a-failing-grade-in-terms-of-effectiveness/

Other Institutions (Non-Big 10, Peer)

Ball State University
Contact: James A. Jones, PhD
Director, Research and Academic Effectiveness
Ofc of the Assoc Provost & Dean, Univ College
"Generally, our response rates have been around 50% or better for the campus overall. There is a lot of variability among classes, instructors, departments, and colleges, however. The class ratings for the items tend to average around 4.2 on a 5-point scale with 1 being the negative end and 5 the positive one. This indicates the fear that instructors raised that only the students with negative opinions would complete the ratings does not appear to be a problem. There is also very little relationship between response rate and ratings received, indicating that having lower response rates than what we had compared to paper administration is not causing obvious harm.

I have attached what we use for core questions. Each department has the option of having additional questions included, and about half our departments do so. There is also a period of time about a week before the evaluation period opens that we allow instructors to add their own questions."

George Mason University
Contact: Melissa A. Broeckelman-Post, PhD, Assistant Professor and Basic Course Director, Department of Communication
"The committee started our process by reviewing other forms and doing an extensive literature review to try to identify whether there are existing high-quality (reliable and valid) measures of teaching, and they were unable to find any measures for which there was an evidence of validity. So, they decided to take on a several year process in which we first used literature to try to identify categories of criteria related to effective teaching with several examples of the types of items that might be included, and we're now surveying deans, directors, and faculty evaluation committees about which categories they think are important as well as how they use the student evaluation of teaching forms. This is about the point where I joined the committee. Our next steps are to survey faculty and students about which categories they think are important, after which we'll develop some actual potential survey items and do another faculty and student survey.

A year or two ago, though, one of my colleagues who teaches advanced quantitative methods here was talking about this issue and said that the evaluation process developed at K-State is (in her opinion) one of the most reliable and valid instructor evaluation forms in use, in part because it also accounts for students' own engagement in the course. I haven't dug in much further than that (and our committee didn't find this during their earlier search), but I plan to soon-- for now, here's the link that my colleague shared at that time: http://www.k-state.edu/tlc/course-evaluation/forms.html. It's probably worth a conversation with their Teaching & Learning Center to learn more."

Illinois State University
Contact: Cheri J. Simonds, Professor, Co-Director of Communication as Critical Inquiry School of Communication, Illinois State University
"Here is our departmental course evaluation. I was on the team that created this instrument and it is based in instructional communication theory and research. We have found that students are much more thoughtful and constructive in their feedback for instructors. I hope you find this useful."

Kansas State University
http://www.k-state.edu/tlc/course-evaluation/forms.html
"Our signature service, the IDEA **Student Ratings of Instruction** instrument (SRI) is like no other system available for translating course feedback into actionable steps to improve learning. The SRI system is supported by extensive research, controls for extraneous circumstances (e.g. class size, student motivation), and provides comparative scores. Faculty and administrators can easily integrate data into program planning, decision making, accreditation and institutional review processes. Through our partnership with Campus Labs, we offer a paperless solution with an intuitive, mobile-friendly interface."

Appendix 5: Memo from Dr. Sandra Loughlin (November 1, 2017)

UNIVERSITY OF MARYLAND
ROBERT H. SMITH SCHOOL OF BUSINESS

OFFICE OF TRANSFORMATIONAL LEARNING

TO: Dr. Phil Evers, Chair of Academic Procedures and Standards Committee
FROM: Dr. Sandra Loughlin, Director, Office of Transformational Learning, Robert H. Smith School of Business
DATE: November 1, 2017
RE: **Current Research on Use of Student Evaluation to Assess Teacher Effectiveness**

Dear Phil,

I am responding to APASs request for a review of the literature on student evaluation of teaching (SET) in higher education. This memo is a brief summary of the extant literature, with an emphasis on studies of the highest methodological caliber. In evaluating these studies and drawing conclusions, I consulted with other experts in learning and educational measurement, including Drs. Patricia Alexander, Gregory Hancock, Joshua Polanin, Elizabeth Richey, and Alice Donlan.

Please note that this analysis assumed that the purpose of SET is to primarily to assess teacher effectiveness, rather than students' satisfaction of a course. If the committee determines that purpose of the student evaluation is satisfaction, rather than an indicator of teacher effectiveness, many of these findings and recommendations are irrelevant.

Findings

- There is a significant literature on SET, however the majority of the studies use poor methods, yielding highly suspect and ungeneralizable findings. This memo only includes studies with rigorous methodologies.
- When used as the only/primary source of data, SET it is very poor indicator of teacher effectiveness. It should only be used in combination with other measures (e.g., peer evaluation of course materials, assignments, and assessments).
- Current SET instruments, including UMDs SET, routinely ask students to assess factors for which they are a poor source of data (e.g., whether the instructor is knowledgeable in his/her area).
- A significant body of research shows that SET is not associated with student learning.

- There are a few rigorous studies examining the degree to which SET is influenced of factors unrelated to teaching effectiveness (e.g., instructor gender or the type of course). These studies consistently show the teaching irrelevant factors have small, but significant influence on SET.
- Although not a focus of my research, I found that there is precedent for instructors to sue universities for wrongful termination based on reliance on SET data (Maffly, 2011). In light of the findings that SET is a poor indicator of teaching effectiveness, this may be a source of concern.

Recommendations

- Empirically test the degree to which UMDs SET measures teacher effectiveness.
- Under advisement of experts in educational measurement, consider revising the current SET instrument, administration, and data usage.
- Investigate the degree to which UMD departments and schools use SET as the only/primary source of data on teacher effectiveness for promotion, retention, tenure, merit pay, and other decisions like teaching awards.
- Provide training to administrators and faculty on the appropriate interpretation and use of SET data.

There is significant research on the value of student evaluations of teaching (SET) in higher education. Indeed, a cursory examination of the literature reveals literally thousands of studies on the subject, which draw widely varying conclusions. The high variance in study outcomes is likely related to the equally wide variance in the quality of the study design; unfortunately, much of the SET research is methodologically poor, suffering from serious threats to validity and generalizability (Hornstein, 2017; Linse, 2017; Stark & Freishtat, 2014; Wieman & Gilbert, 2014). The following is a brief discussion of the extant literature, with an emphasis on recent, methodologically sound studies.

Teacher effectiveness is a latent construct and measurement of it requires multiple sources of data. A meaningful assessment of teaching effectiveness would draw from at least five sources (Berk & Theall, 2006; Spooren, Brockx, & Mortelmans, 2013; Weiman, 2015).

- *Peer evaluation* of course materials, assessments, and assignments to determine if the course is current, rigorous, and in line with program curriculum.
- *Pedagogy expert evaluation* of class sessions and course design to determine if the instructor is using instructional practices that are predictive of student learning.
- *Direct assessment of learning* to determine the degree to which students achieved the learning goals established for the course and succeed in follow-on courses.
- *Instructor-generated portfolio* that documents how the instructor uses student learning data and other sources of feedback to improve instruction and student outcomes.
- *Student evaluation of teaching* to understand students' experience and perception of the instructor.

Although important to capture, student perception alone is an insufficient measure of teaching effectiveness, because students are not positioned to provide valuable information on many aspects of instruction (Langbien, 2008; Linse, 2017; McKeachie, 1997; Stark & Freishtat, 2014). Despite this fact, SET instruments routinely include questions for which students are a poor source of data (e.g., *The instructor is knowledgeable in his/her area*; Becker, Bosshardt, & Watts, 2012; Hornstein, 2017). This inappropriate reliance on student opinion on areas best assessed by others is evidenced in all commonly used SET (for a listing of SET instruments, see Spooren, Brockx, & Mortelmans, 2013).

Existing SET instruments are flawed measures of teacher effectiveness and should not be used as the only/primary source of data.

A significant body of research shows that SET does not explain variance in learning outcomes.

- Uttl, B., White, C. A., & Gonzalez, D. W. (2017). Meta-analysis of faculty's teaching effectiveness: Student evaluation of teaching ratings and student learning are not related. *Studies in Educational Evaluation*, *54*, 22-42.
    - Rigorous analysis of data from 97 multisection courses that include student evaluations and course outcome measures. **NOTE:** This study reanalyzed data from previously conducted studies, which exposed significant methodological flaws in prior research. Unfortunately, most reviews of SET have used the prior, poorly-designed meta-analyses and have drawn suspect conclusions regarding the concurrent validity of SET (e.g., Spooren, Brockx, & Mortelmans, 2013).
    - **FINDING:** On average in the 97 studies, SET explained >1% of variance in course grades.
    - **FINDING:** Small sample-size studies tended to show correlations between SET and learning, but large sample-size (and presumably more robust) studies did not.
    - **CONCLUSION:** Data suggests no meaningful correlation between SET and learning outcomes.
- Carrell S. E., & West J. E (2010). Does professor quality matter? Evidence from random assignment of students to professors. Journal of Political Economics, *118,* 409–432.
    - Methodologically rigorous, large-scale study (n = 12,568) with random assignment of students to courses. Using an introductory course with different instructors, the authors examine the relation between instructor factors (i.e., rank, years teaching, degree), student evaluations, and student performance in contemporaneous and follow-on courses.
    - **FINDING:** Instructor factors were negatively correlated with performance in contemporaneous course, but positively correlated with follow-on courses.
    - **FINDING:** Evaluations were positively correlated with contemporaneous course, but negatively correlated with follow-on courses.
    - **FINDING:** Contemporaneous and follow-on course performance were negatively correlated.

- **CONCLUSION:** Suggests evaluations predict course performance, but not significant learning as measured by later performance. Suggests that expert instructors (i.e., those with higher rank, years teaching, and degree) do a better job preparing students for success in follow-on courses. Also suggests we need to look beyond the course in question to really measure student learning.

- Weinberg, B. A., Fleisher, B. M., & Hashimoto, M. (2008). Evaluating teaching in higher education. *Journal of Economic Education.*
    - Using a clever design, SET and course grades were collected from 4,111 students in a foundational course and two follow-on courses.
    - **FINDING:** SET and current course grade were consistently correlated.
    - **FINDING:** When controlling for grade in prior course, SET and course grade were no longer associated.
    - **CONCLUSION:** Findings suggest a weak relationship between SET and learning.

The current literature suggests that SET is influenced by factors unrelated to teaching effectiveness, such as course type and instructor gender. **NOTE:** There is a considerable literature on gender bias showing mixed effects, but most studies in this space are poorly designed. The studies included here are experiments and represent the most rigorous level of research available on the subject.

- Uttl B, Smibert D. (2017) Student evaluations of teaching: teaching quantitative courses can be hazardous to one's career. *PeerJ* 5:e3299
    - Using a rigorous and appropriate analytical design, the study examined 35,538 courses to determine whether qualitative and quantitative courses demonstrated different patterns of SET.
    - **FINDING:** On average, quantitative courses were associated with significantly lower SET scores.
    - **FINDING:** Distribution of SET also differs by course type, with SET in quantitative courses approximating the normal distribution and SET in qualitative courses show a negative skew and high mean ratings. If cut scores for SET are arbitrarily set across schools and hold constant, instructors of quantitative courses may be a higher risk of being labeled as unsatisfactory.
    - **CONCLUSION:** SET may have a disproportionate, negative impact on instructors of quantitative courses, which may lead to negative repercussions for tenure, promotion, and/or merit pay.

- MacNell, L., Driscoll, A., & Hunt, A. N. (2015). What's in a name: exposing gender bias in student ratings of teaching. *Innovative Higher Education*, *40*(4), 291-303.
    - Clever experimental study in which students were randomly assigned to two online instructors, both of whom operated both male and female identities. This created a 2x2 condition. Instructors coordinated to write similar bios, use the same assignments and grading scale, return grades at the same time, and use the same level and pattern of interpersonal interaction. SET was written to include behaviorally-worded items (e.g., grades were returned promptly).
    - **FINDING:** Students who perceived their instructor to be male gave higher ratings of fairness, promptness, and praise, even though both instructors used the same assignments and grading scale, returned grades at the same time, and used the same level and pattern of interpersonal interaction. There were no significant differences based on instructors' actual genders.
    - **CONCLUSION:** Suggests that SET may be biased in favor of men *even when items are behavioral.*
- Arbuckle, J., & Williams, B. D. (2003). Students perceptions of expressiveness: Age and gender effects on teacher evaluation. *Sex Roles,* 49, 507-515.
    - A laboratory experiment in which students (n=352) were shown "slides of an age- and gender-neutral stick figure and listened to a neutral voice presenting a lecture and then evaluated it on teacher evaluation forms that indicated 1 of 4 different age and gender conditions (male, female, 'old,' and 'young')" [11, p. 507]. All students saw the same stick figure and heard the same voice, so differences in SET could be attributed to students' perceptions of the age and gender of the instructor.
    - **FINDING:** When students were told the instructor was young and male, students rated the instructor higher than for the other three combinations, especially on "enthusiasm," "showed interest in subject," and "using a meaningful voice tone."
    - **CONCLUSION:** SET may be biased in favor of males and younger instructors.
- Leventhal, L., Perry, R. P., & Abrami, P. C. (1977). Effects of lecturer quality and student perception of lecturer's experience on teacher ratings and student achievement. *Journal of Educational Psychology*, *69*(4), 360.
    - Experimentally manipulated lecturer quality and students' beliefs about instructors' experience. Students watched videos of high- or low-quality lecture on the same content (e,g., in the low-quality lecture, the instructor

stammered, was disorganized, was less enthusiastic) and students were told the instructor had a lot or very little experience. This created a 2x2 condition. Students were then directed to rate instructional quality and took a post-test.
- **FINDING:** Lecturer quality was more strongly associated with ratings than it was with student achievement.
- **FINDING:** Students' beliefs about the instructor's level of experience affected the relations between quality and ratings.
- **CONCLUSION:** Suggests SET is influenced by factors not associated with learning, such as presentation quality and students' perceptions about the instructor's level of experience.

The degree to which UMD's SET measures teacher effectiveness is unknown.

- To date, UMD has not conducted studies linking SET data to factors associated with teacher quality, such as learning outcomes in the current course or follow-on courses, evaluation of pedagogy by a teaching expert, or evaluation of course or materials by a peer.
- To date, UMD has not conducted studies linking SET to factors that may inappropriately skew data, such as the gender, age, and race of the instructor; whether the course is qualitative or quantitative; or whether the course is required or elective. Ideally, a statistical model would be developed to control for these factors.

UMD should consider empirically testing the degree to which the existing SET measures teacher effectiveness. This would entail linking historical SET data to learning outcomes and other measures of teacher effectiveness, where possible (e.g., peer evaluation of materials, expert evaluation of pedagogy and course design); investigating the relationship between SET and potential sources of bias; examining the factor structure in the existing measure to determine if the instrument has differential functionality in colleges/programs; assessing the degree to which the instrument as a whole, and at the item level, explains variance in learning outcomes; and examining the stability of SET scores for instructors over time. In addition, new studies involving SET could be devised, such as identifying the correlation between SET and self-reported student satisfaction or SET and self-reported student motivation.

Alternatively or in addition to studying the existing SET, UMD should consider revising it. While there is no empirical evidence to indicate whether UMDs SET instrument appropriately measures teaching effectiveness, there is evidence that the portion of current instrument that generates data shown to departments and instructors

includes items for which students may not be the best source of data. For instance, UMD students are currently asked to rate the degree to which the course was *intellectually challenging* and whether the instructor *set appropriate standards* for students. These aspects of effective teaching are best assessed by a faculty peer with knowledge of the intellectual rigor and standards necessary for the course in light of follow-on courses and the demands of the field. Students do not, nor should they be expected to, have this knowledge. UMD students are also asked to assess the degree to which they *learned a lot* from the course. Learning is best assessed by a direct measure such as performance on the final exam/project and because students are notoriously poor judges of their own learning (Tai, Klayman, & Hastie, 2008).

In light of previous research and the current configuration of UMDs SET, revision to the current instrument may be warranted. In this effort, UMD should leverage the expertise of learning and educational measurement experts. Creating a valid, reliable measure of a latent construct such as teacher effectiveness is a complex and difficult process that requires considerable training in educational and psychological measurement (Berk & Theall, 2006; Gall, Gall, & Borg, 2003). Given the potentially high-stakes use of SET data, the instrument development process should reflect a rigorous approach to measurement design (for a brief overview of the process, see Korb, 2017).

The creation of the Student Evaluation of Teaching in Medical Lectures SETMED-L (Mueller et al., 2017) is a good example of the correct approach to developing a SET instrument. Of particular note is the fact that the authors grounded the instrument a theoretical framework of effective teaching (i.e., the Stanford Faculty Development Program). While I would suggest grounding a new UMD SET in the Fearless Teaching Framework rather than the Stanford program, starting with a research-based framework is a critical first step toward creating a valid, reliable measurement of teaching or learning.

The only significant methodological concern with the creation of the SETMED-L is the fact that, like all other SETs found in the literature, the instrument includes some items for which students are not the best source of data. For instance, SETMED-L asks students to evaluate whether the amount of content covered in the course is appropriate. This is an assessment best left to the a peer evaluator with knowledge of the whole curriculum.

Unfortunately, SETMED-L was developed specifically to assess the effectiveness of lectures in medical school, so the items may not be appropriate for UMD. Moreover, the authors investigated the efficacy of SETMED-L at two medical schools and found that

the instrument performed differently at the sites. These finding suggest that UMD should create a SET that is appropriate to the culture and practices at UMD, rather than blindly relying on an instrument created for another school.

The committee could also investigate the administration of SET. Currently,UMDs SET data are collected at the conclusion of a course. However, research suggests that student input may be best solicited during the course, when the instructor can still respond to feedback (Brown, 2008). Research also suggests that providing training to students on the role and importance of SET contributes to validity and improves response rate (Spooren and Christiaens(2017). At present, student training on SET is minimal at UMD.

UMD should investigate the current use of set for personnel decisions and provide training to administrators and faculty on the appropriate interpretation and use of those data. The literature suggests that SET is often used as the sole/primary source of data for making personnel decisions (e.g., promotion, retention, tenure, merit pay) and giving teaching awarrds. Whether or not UMD decides to revise the existing SET, it is important to provide guidance to schools, departments, and faculty on the appropriate way to analyze and use SET data (for an overview of common mistakes, see Hornstein, 2017; Linse, 2017; Stark & Freishtat, 2014). This will help UMD avoid unintentionally disincentivizing effective teaching practices (e.g. active learning techniques or using data to improve instruction; Darwin, 2017, McKeachie, 1997) and mitigate the risk of litigation (e.g., Maffly, 2011). In this effort, a group of educational measurement experts would be very valuable.

Appendix 6: IRPA Studies on UMD's Course Evaluation System

Preliminary Assessments of Instrument Functionality, Reliability and Validity (Fall 2006)

In Fall 2006, UM began piloting the University-wide course evaluation items. IRPA's examination of the descriptive statistics for the items revealed highly skewed response distributions; that is, the majority of students used only the positive end of the scale. All 13 Likert-scale items are highly related to each other and to one component, suggesting that the standardized questions are targeting a single topic of "overall" course effectiveness or satisfaction. IRPA's results do not seem to indicate that students view items relating to the course and items relating to the instructor as two distinct aspects of course evaluation.

Phone Interview Project (Spring 2009)

In spring 2009, IRPA conducted interviews with faculty who had high response rates. It identified anecdotal best practices, such as verbal and electronic reminders, and actions that demonstrate the faculty member's opinion that teaching is important. Interviews with students who did not fill out any evaluations identified that the most popular reason for not participating was that they were too busy and/or ran out of time.

Relationship between Response Rates and Ratings (Fall 2009)

In fall 2009, IRPA found that a visual inspection of average instructor score by response rate bands does not suggest a strong linear relationship. A multiple linear regression analysis showed the relationship between response rate and instructor score, although positive and statistically significant, has little practical significance. It noted that there is a large proportion of the variation in instructor score (95%) that cannot be explained when class size, course level, response rate, and academic discipline are taken into account.

Course Evaluation Differences by Instructor Race/Ethnicity/Citizenship and Gender (Spring 2018)

At the request of the Office of Faculty Affairs, IRPA studied whether differences in course evaluation results can be explained by differences in instructors' race/ethnicity/citizenship and gender. Given there is no "ground truth" measure of instructor quality, the study could not assess potential bias in evaluations. The study found that "there is little evidence for consistent differences between ratings for male and female instructors. Though there is some evidence for differences between race/ethnicity/citizenship categories, these differences are very small." The study did not address open-ended comments, which often inform impressions of bias more than numerical responses.

CAWG Snapshot of Student Experiences

Selecting courses and using Syllabi

University of Maryland

2016 – Issue 1, AUGUST

This Campus Assessment Working Group (CAWG) Snapshot reports findings on junior and senior students' perceptions syllabi and how they select courses. The data included represent results from the University of Maryland Student Survey (UMSS), an annual survey administered by the CAWG Assessing Campus Experiences Subgroup (ACES). Respondents complete the survey during the spring semester in Professional Writing courses.

During the spring 2015 semester, out of 3,272 juniors and seniors enrolled in spring semester Professional Writing courses 2,201 (67%) completed the survey.

Race/Ethnicity:

- 53% were White:U.S.
- 16% were Asian:U.S.
- 13% were Black or African American:U.S.
- 8% were Hispanic:U.S.
- 4% were Foreign
- 4% were Two or More Races:U.S.
- 2% were Unknown:U.S.
- <1% were classified as Other, including American Indian and Hawaiian:U.S.

Gender:

- 53% were male
- 47% were female.

GPA:

- 31% had a GPA of 3.50 – 4.00 (the range for which students earn honors)
- 63% had a GPA of 2.30-3.49
- 6% had a GPA of 0.00 – 2.29 (the range for which students are flagged for advising intervention)

The demographic breakdown of respondents is representative of the university as a whole. The data below represent only the responses of survey respondents, not all UMD students; therefore, use caution when generalizing. Percentages may not sum to 100 due to rounding.

Syllabus Resources

In September 2012, the Student Government Association (SGA) passed a bill urging the University Senate to establish a policy to make syllabi available during class registration and the Senate voted in favor. In February 2016, the SGA passed a resolution urging the University to implement the syllabus bill passed earlier. Source: http://www.dbknews.com/2016/02/16/umd-sga-passes-syllabus-resolution-to-revive-university-senate-bill/

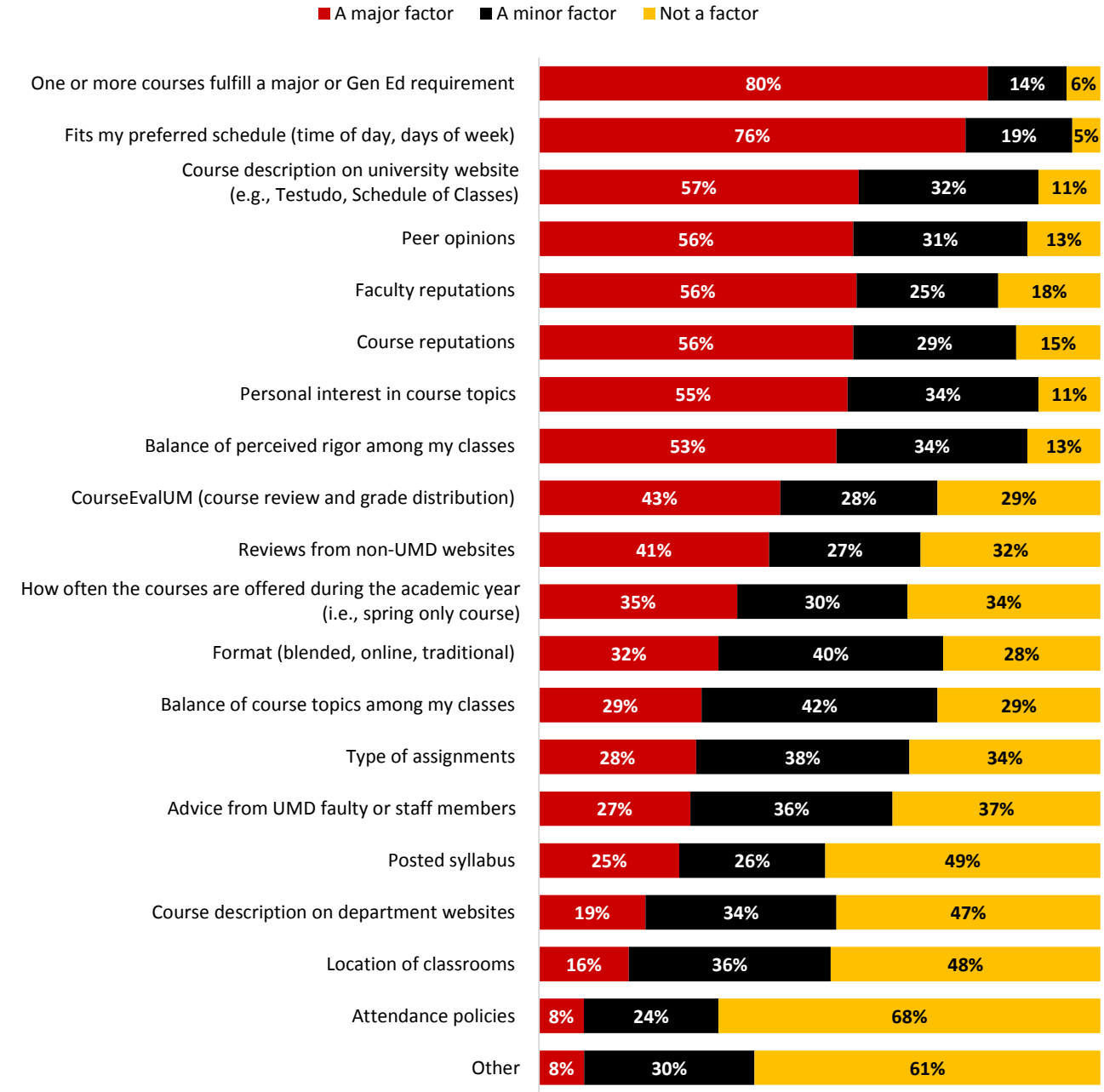
The University is committed to finding a solution and is actively working to provide one that meets these requirements. CAWG surveyed students on these questions to understand the value of syllabi and their experiences selecting courses. Note that students responded to these questions based on their current expectations and uses of resources, but these responses may change depending on increased availability of syllabi.

The Faculty Handbook and the Teaching and Learning Transformation Center (TLTC) have resources for creating syllabi:

- Syllabus Guidelines: https://faculty.umd.edu/teach/syllabus.html
- Useful Information for Preparing the Syllabus: https://faculty.umd.edu/teach/useful.html
- Beyond the Guidelines – Writing a Great Syllabus: http://tltc.umd.edu/beyond-guidelines-writing-great-syllabus

Selecting Courses

To what degree did you consider the following factors in choosing your courses this semester?

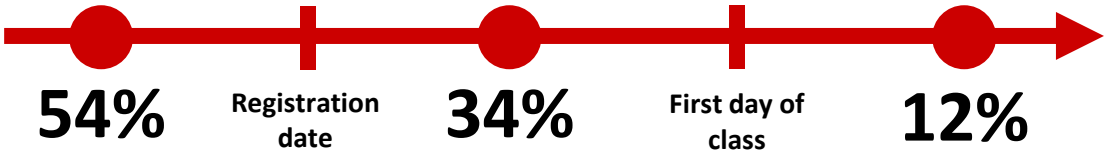


N=2183-2196, except "Other" where N=1583

- Logistical considerations are major factors – fulfilling a major or Gen Ed requirement (80%) and fitting a preferred schedule (76%).
- Course descriptions are more of a factor when posted on the university website than when posted on a departmental website (57% compared to 19%).
- Reputations and opinions (perception, faculty reputation, course reputation, reviews and evaluations) are more often a major factor in choosing classes than actual class design (format, posted syllabus, attendance policies, types of assignments).
- Fewer respondents cite location of classes and attendance policy as major factors in choosing courses.

Using Syllabi

Ideally, when would you FIRST like to see a syllabus? Select only one.



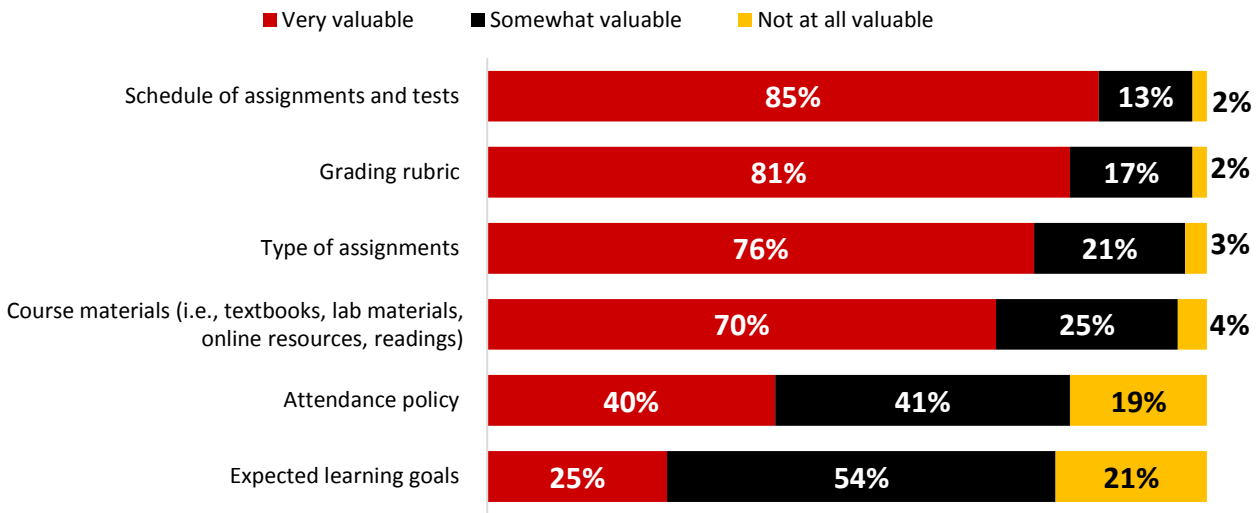
54%	Registration date	34%	First day of class	12%	1%
Prior to my registration date		Between when I register and the first day of class		The first day of class or after	N/A, I don't look at syllabi

N=2136

- The majority (54%) of respondents would like to see the syllabus prior to registration, and 88% want to see the syllabus prior to the first day of class.

Questions to consider: Why would 54% say that they want to see a syllabus prior to their registration date but only 25% consider a posted syllabus a major factor when choosing courses? How might these numbers change if all syllabi were made available earlier?

How valuable are the following elements of a syllabus?



N=2182-2192

- Course design (schedule, grading rubric, assignments, course materials) is very valuable to more respondents than expected learning goals (25%).

The Campus Assessment Working Group (CAWG) regularly gathers and exchanges information about UMD student and alumni experiences. The group is charged with developing a campus "Culture of Evidence" in which data and assessment can inform campus decision making. Its three subgroups focus on freshman experiences, junior/senior student experiences, and retention and completion efforts. For more information, to view past reports, or to join a CAWG subgroup, please visit www.umd.edu/cawg.

Appendix 8: Sample Item Wording for New Constructs

Constructs that Assess Baseline and Best Practices in Teaching Effectiveness

- **Timely feedback** (e.g. “I get timely feedback on my work” or “The instructor returned assignments and exams in a timely manner”)
- **Clear assignment expectations** (e.g. “Assignment expectations are clear to me” or “The instructor provided guidance for understanding course exercises”)
- **Clear grading expectations** (e.g. “Grading criteria are clear to me” or “The instructor grades consistently with the evaluation criteria”)
- **Focuses on course content in class sessions** (e.g. “Class sessions help me learn course material” or “The instructor used time effectively”)
- **Value of required texts** (e.g. “The required texts (e.g., books, course packs, online resources) help me learn course material”)
- **Climate** (e.g. “The instructor helps students feel welcome” or “The instructor treats students with respect”)
- **Instructor support** (e.g. “I think the instructor wants students to succeed” or “The instructor was helpful when I had difficulties or questions”)
- **Quality feedback** (e.g. “The feedback (e.g., grades, comments, discussions, rubric scores) I get from the instructor helps me improve” or “The instructor provided constructive feedback”)
- **Scaffolding** (e.g. “My instructor helps me understand new content by connecting it to things I already know” or “The course presented skills in a helpful sequence”)
- **Cognitive engagement and/or rigor** (e.g. “The course developed my ability to think critically about the subject” or “This course was intellectually challenging”)
- **Alignment of instruction to assessment** (e.g. “Assessments (e.g., tests, quizzes, papers) relate to course content” or “Graded assignments helped me understand the course material”)

Constructs that Inform Student Registration Decisions

- **Course satisfaction** (e.g. “I would recommend this class” or “This course made me want to learn more about the subject”)
- **Instructor satisfaction** (e.g. “I would take another course from this instructor if given the opportunity” or “I consistently enjoyed coming to class” or “I enjoyed learning from this instructor”)
- **Time invested** (e.g. “On average, about how much time did you spend on this class each week (e.g., doing homework, meeting with project team, studying)?”)
- **Major/Non-Major** (e.g. “How does this class fit into your academic plan or course of study?”)

Constructs for Open-Ended Feedback

- **Positive aspects** (e.g. “What did the instructor do that helped improve your learning in this course?”)
- **Areas for improvement** (e.g. “What could the instructor do better or differently next time to help improve your learning in this course?”)

Constructs Related to Teaching Assistants

- **Climate**
- **Timely feedback**
- **Effective use of class time**
- **Open-ended item on positive aspects**
- **Open-ended item on areas for improvement**

Appendix 9: Charge from the Senate Executive Committee

University Senate
CHARGE

Date:	February 3, 2017
To:	Philip Evers Chair, Academic Procedures & Standards
From:	Jordan A. Goodman Chair, University Senate
Subject:	Student Course Evaluation Improvement Project
Senate Document #:	16-17-24
Deadline:	December 15, 2017

The Senate Executive Committee (SEC) requests that the Academic Procedures & Standards Committee review the attached proposal that requests a review of the University's student course evaluation system and assess whether changes are needed.

Specifically, we ask that you:

1. Review the report and recommendations of the Task Force on Course Evaluations and Teaching (Senate Doc. No. 02-03-39)

2. Review the Re-evaluation of the Student Teacher Evaluations at UMD (Senate Doc. No. 10-11-06)

3. Review evidence-based best practices regarding student course evaluation systems and procedures at peer institutions and other Big 10 institutions.

4. Consider current scholarship related to course assessment.

5. Consult with various campus stakeholders (e.g., faculty, students, advisors, departmental and college leadership) to better understand their perspectives on current needs, frustrations, and points of satisfaction with the current evaluation process.

6. Consult with a representative from the Teaching and Learning Transformation Center.

7. Consult with a representative of the Office of Institutional Research, Planning, and Assessment (IRPA).

8. Consult with the University's Office of General Counsel on any proposed changes.

9. If appropriate, recommend whether the existing evaluation system including questions and processes related student evaluations should be revised and submit recommended revisions for Senate consideration.

10. If appropriate, recommend an evaluation strategy that utilizes incremental and comparative studies of any necessary changes to the student evaluation system in order to facilitate broad implementation.

We ask that you submit your report and recommendations to the Senate Office no later than December 15, 2017. If you have any questions or need assistance, please contact Reka Montfort in the Senate Office at 301-405-5804 or reka@umd.edu.

Attachment

JAG/rm

University Senate
PROPOSAL FORM

Name:	Benjamin Bederson & Alice Donlan
Date:	January 19, 2017
Title of Proposal:	Student Course Evaluation Improvement Project
Phone Number:	301-405-3394
Email Address:	bederson@umd.edu; adonlan@umd.edu
Campus Address:	4120 McKeldin Library
Unit/Department/College:	Teaching and Learning Transformation Center (TLTC)
Constituency (faculty, staff, undergraduate, graduate):	Faculty, staff
Description of issue/concern/policy in question:	Over ten years ago, the University of Maryland instituted student course evaluations on campus based on work from the May 2004 report to the Senate from the Task Force on Course Evaluations and Teaching (Senate document #02-03-39) which preceded Senate bill 10-11-06. There were 4 primary purposes of these evaluations articulated in the 2005 Final Report: a. Formative evaluation: to provide diagnostic feedback to faculty for the improvement of teaching b. Summative evaluation: to provide one measure of teaching effectiveness for use in the APT and post tenure review processes and in annual productivity reviews c. Informative evaluation: to provide information to students for their use in the selection of courses and instructors d. Outcome evaluation: for the purposes of documenting student learning. The Task Force outlined several recommendations to aid in the pursuit of these four purposes, including a recommendation that the University have a university-wide requirement for student evaluations in all undergraduate and graduate courses. Then, in 2010, the SEC received a proposal requesting a review of the current processes for course evaluations and the APAS Committee was tasked with reviewing the course evaluation system and considering whether it was consistent with the intent of the earlier Senate actions. The resulting Senate bill #10-11-06 recommended a

	few changes to the course evaluations system, including continued oversight of the CourseEvalUM system by a shared governance body, the development of unit-specific questions, and renewed consideration of a few specific issues, including how to better meet student needs through the course evaluations, how to educate students on the importance of civility in responses, and what efforts need to be made to ensure that APT dossiers include diverse documentation of teaching effectiveness. While the first instantiation of course evaluations made considerable progress, future efforts can build off of these recommendations to incorporate them into practice. We believe more can be done to improve the content and process of course evaluations to make the process more useful to campus stakeholders. Three concerns make this proposal particularly timely. First, the current system asks a parallel set of questions for student viewing, and personnel decisions, doubling the length of the survey instead of using questions for multiple-purposes. Second, principal components analysis of current evaluation data has shown that the current questions measure one overarching factor of course satisfaction, as opposed to measuring multiple, theoretically-grounded education constructs as it was originally designed to do. Third, recent research has identified significant bias in most student course evaluations that disadvantage female, ethnic minority, and other groups of instructors.
Description of action/changes you would like to see implemented and why:	We propose a process to evaluate and revise the current questions and procedures for course evaluations. In particular, we recommend designing the course evaluation to measure four pillars of effective education that comes from the education scholarly literature: classroom climate, course content, teaching practices, and assessment. ● **Classroom Climate:** Is the classroom environment constructed by the instructor inclusive and supportive of learning? ● **Course Content:** Is the content up-to-date, appropriate for the level of the course, and relevant for learners? ● **Teaching Practices:** Does the instructor include evidence-based teaching practices, such as providing timely feedback, scaffolding new information on to prior knowledge, and incorporating active learning assignments? ● **Assessment:** Are the assessments of learning (e.g., tests, quizzes, graded assignments) valid metrics of learning outcomes?

	Structuring the evaluation around these constructs will more effectively address the four stated purposes of course evaluations. We also anticipate that asking students about concrete classroom activities and practices instead of ambiguous questions about course satisfaction will serve to reduce bias.
Suggestions for how your proposal could be put into practice:	We recommend that the group tasked with addressing this issue perform several activities by first consulting with multiple campus stakeholders (e.g., faculty, departmental and college leadership, students, student leaders, etc.) to understand current needs, frustrations, and points of satisfaction with the current evaluation process. We recommend working closely with the Teaching and Learning Transformation Center (that has performed a preliminary review of other Big 10 school practices and scholarship) as well as IRPA to improve the process of course evaluation. They should also evaluate the best practices of other institutions and the current scholarship on course evaluations. The group should make recommendations to revise the evaluation questions and processes based on what it learns about campus needs and evidence-based best practices. We would suggest that the committee should develop its recommendation through incremental and comparative studies, so that any changes are well understood before being broadly implemented. The University could enact an experimental process that might include, for example, including new and old questions in the same class to compare them directly.
Additional Information:	

Please send your completed form and any supporting documents to senate-admin@umd.edu or University of Maryland Senate Office, 1100 Marie Mount Hall, College Park, MD 20742-7541. Thank you!

UNIVERSITY SENATE | TRANSMITTAL | #18-19-06

Senate Equity, Diversity, & Inclusion Committee

Review of the University of Maryland, College Park Policy on Inclusive Language

PRESENTED BY	**Tom Porter, Chair**
REVIEW DATES	**SEC – September 20, 2019 | SENATE – October 2, 2019**
VOTING METHOD	**In a single vote**
RELEVANT POLICY/DOCUMENT	**VI-1.00(C) UMCP Policy on Inclusive Language**
NECESSARY APPROVALS	**Senate, President**

ISSUE

In fall 2018, the Senate and President Loh approved Providing Gender Inclusive Facilities (Senate Document #16-17-32). The report made a series of recommendations, including that the Senate Equity, Diversity, & Inclusion (EDI) Committee be charged with reviewing the University's Policy on Inclusive Language to ensure that it accords with the University's principles on diversity and inclusion, as well as existing policies and practices. In September 2018, the Senate Executive Committee (SEC) considered a proposal that identified concerns with the use of gendered language across campus (Senate Document #18-19-07). The SEC determined that the EDI Committee should review this proposal as part of its broader review of the Policy on Inclusive Language.

In September 2018, the SEC charged the EDI Committee with reviewing various policies, practices, and guidelines related to non-discrimination and inclusive language at the University; reviewing similar policies and practices at Big 10 and peer institutions; consulting with a range of stakeholders and affected units on campus; and recommending changes to University policy and guidelines as appropriate.

RECOMMENDATIONS

The EDI Committee recommends that the Senate approve the revised University of Maryland College Park Policy on Inclusive Communication (VI-1.00[C]) which immediately follows the report. The committee also recommends that:

1. The Office of Strategic Communications should work with the Office of Diversity and Inclusion and other subject-matter experts to revise the University of Maryland Editorial Style Guide to include information and best practices regarding inclusive communications.

2. The Teaching and Learning Transformation Center should work with the Office of Diversity and Inclusion and other subject-matter experts to develop materials for using inclusive communication in syllabi and other instructional resources.

3. The Office of Diversity and Inclusion should establish and maintain a central webpage that provides resources and links related to inclusive communication.

4. The University should direct faculty and unit heads to available resources on inclusive communication (e.g. the Office of Diversity and Inclusion webpage) that help support their professional responsibilities.

COMMITTEE WORK

The EDI Committee reviewed the University's strategic plan for diversity (*Transforming Maryland: Expectations for Excellence in Diversity and Inclusion*), the USM Policy of Non-Discrimination on the Basis of Sexual Orientation and Gender Identity or Expression, UMD's Policy of Non-Discrimination on the Basis of Gender Identity or Expression in the Use of Gendered Facilities, and the Proposal to Evaluate Gendered Language (Senate Document #18-19-07). It also researched policies addressing inclusive language at Big10 and peer institutions. The committee consulted with a representative of the Office of General Counsel, a representative from the Office of Civil Rights and Sexual Misconduct, and the Director of the LGBT Equity Center.

Through its review, the committee determined that the policy should continue to emphasize opportunities for learning about inclusion rather than being overly prescriptive or punitive. The committee identified a need for the policy to clearly establish the importance of inclusive communications in order to establish a welcoming, inclusive environment free from discrimination. The committee developed an introduction to the policy that clearly establishes an expectation that every member of the University community treat others with dignity and respect. In response to stakeholder concerns related to academic freedom and the First Amendment, the committee worked to pair the broad expectations in the introduction of the policy with succinct policy provisions that rely on a limited, explicit definition of "official University communication" that does not include oral communication or reference instructional materials.

The Committee also developed a series of administrative recommendations that would develop more resources for instructors and staff members on how to incorporate Inclusive Communication, including developing a central webpage for hosting information and revising the University's Editorial Style Guide.

After due consideration, the Equity, Diversity, & Inclusion Committee voted to approve the revised policy and administrative recommendations at its meeting on May 23, 2019.

ALTERNATIVES

The Senate could choose not to approve the revisions to the policy. However, the University would lose the opportunity to ensure that its Policy on Inclusive Language reflects principles of diversity and inclusion.

RISKS

There are no known risks to the University.

FINANCIAL IMPLICATIONS

Financial resources may be required to implement the recommendations.

UNIVERSITY SENATE | REPORT | #18-19-06
Senate Equity, Diversity, & Inclusion (EDI) Committee

Review of the University of Maryland, College Park Policy on Inclusive Language

2018-2019 Committee Members

Tom Porter (Chair)
Samira Anderson (Faculty)
Oluwatoyin Awotunde (Undergraduate Student)
Branson Cameron (Undergraduate Student)
Moneca Clyburn (Exempt Staff)
Jennifer Dindinger (Faculty)
Cynthia Edmunds (Ex-Officio Chief Diversity Officer)
Mary Forsythe (Staff)
Rachel Gammons (Faculty)
Angela Harmon (Exempt Staff)
Yakeen Jain (Graduate Student)
Anne Martens (Ex-Officio VP Administration & Finance Rep)
Manouchehr Mokhtari (Faculty)
Daune O'Brien (Faculty)
Daniel Ostick (Ex-Officio VP Student Affairs Rep)
Jeanne Pekny (Non-Exempt Staff)
Chandra Reyna (Graduate Student)
Laura Rosenthal (Ex-Officio Provost's Rep)
Joanna Wiley (Non-Exempt Staff)
Grace Karmiol (Ex-Officio OCRSM Rep)

Date of Submission

September 13, 2019

BACKGROUND

In fall 2018, the Senate and President Loh approved Providing Gender Inclusive Facilities (Senate Document #16-17-32). The report made a series of recommendations, including that the Senate Equity, Diversity, & Inclusion (EDI) Committee be charged with reviewing the University's Policy on Inclusive Language to ensure that it accords with the University's principles on diversity and inclusion, as well as existing policies and practices. The Policy on Inclusive Language has not been updated since 1991. In September 2018, the Senate Executive Committee (SEC) considered a proposal that identified concerns with the use of gendered language across campus (Senate Document #18-19-07). The SEC determined that the EDI Committee should review this proposal as part of its broader review of the Policy on Inclusive Language.

In September 2018, the SEC charged the EDI Committee with reviewing various policies, practices, and guidelines related to non-discrimination and inclusive language at the University; reviewing similar policies and practices at Big 10 and peer institutions; consulting with a range of stakeholders and affected units on campus; and recommending changes to University policy and guidelines as appropriate (Appendix 3).

CURRENT PRACTICE

The current Policy on Inclusive Language prohibits personnel from using terms that reinforce inappropriate, outdated, or demeaning attitudes about a person based on age, disability, ethnicity, gender, national origin, race, religion, or sexual orientation when preparing official University publications or written communications. The policy requires the regular review of a range of publications, many of which are outdated, and references offices that no longer exist, including the Office of Institutional Advancement, which is tasked with oversight of the policy. In practice, guidance to faculty and staff on using inclusive language in written communication is limited. Currently, the Teaching and Learning Transformation Center offers a syllabus template with minimal guidance on pronoun usage that instructors may reference.

COMMITTEE WORK

In early 2019, the EDI Committee reviewed a range of materials, including the University's strategic plan for diversity (*Transforming Maryland: Expectations for Excellence in Diversity and Inclusion*), the USM Policy of Non-Discrimination on the Basis of Sexual Orientation and Gender Identity or Expression, UMD's Policy of Non-Discrimination on the Basis of Gender Identity or Expression in the Use of Gendered Facilities, and the Proposal to Evaluate Gendered Language (Senate Document #18-19-07) (Appendix 1). It also researched policies addressing inclusive language at Big 10 and peer institutions (Appendix 2). The committee consulted with representatives of the Office of Civil Rights & Sexual Misconduct (OCRSM) to gather background information and gain a better understanding of the legal framework, and met with the Director of the LGBT Equity Office to better understand the proposal on gendered language. The committee also consulted with the Office of General Counsel throughout its work.

The committee researched policies concerning inclusive language at Big 10 and peer institutions. It found that only three institutions have a policy on inclusive language and that each are similar in length, detail, and scope to the University's current policy. The committee found that a number of peer institutions offer a range of informational materials developed by various units that support inclusive language but are not codified into official policy. All but two institutions had a style guide for writing and presenting information using inclusive language, and over half offered explicit syllabus or other guidelines to faculty for instructional purposes.

While the current policy focuses on communication by University personnel, the committee discussed whether and how the policy should address communication by students and student organizations. The committee considered how the roles of students and student organizations differ from those of employees, and determined that it would not be possible or appropriate to address communication by students, since students are independent actors and do not represent the University in an official capacity.

The committee determined that the policy should continue to emphasize opportunities for learning about inclusion rather than being overly prescriptive or punitive. In considering the best way to ensure continued attention to the development of language and terminology, the committee considered whether the policy should be replaced with aspirational guidelines that could be updated regularly and provide more specificity than would be appropriate in a policy. However, the committee raised concerns that the impact and visibility of guidelines could be diminished, as policies are centrally located and guidelines tend to be placed on a variety of administrative web pages and referenced on an ad hoc basis. The committee also felt that guidelines, while more expansive, could carry less significance to the campus community than a policy would likely carry.

Throughout its review, the committee discussed at length ways to balance the University's commitment to diversity and inclusion with the need to respect academic freedom and individuals' First Amendment rights. The committee identified a need for the policy to clearly establish the importance of inclusive communications in order to establish a welcoming, inclusive environment free from discrimination. The committee developed an introduction to the policy that clearly establishes an expectation that every member of the University community treat others with dignity and respect. In response to stakeholder concerns related to academic freedom and the First Amendment, the committee worked to pair the broad expectations in the introduction of the policy with succinct policy provisions that rely on a limited, explicit definition of "official University communication" that does not include oral communication or reference instructional materials.

The committee consulted with the Office of Faculty Affairs and the Office of General Counsel on the agency instructors have over incorporating inclusive communication into their work. The committee developed several administrative recommendations to provide educational resources, to be developed by a number of offices in collaboration with subject-matter experts including the LGBT Equity Center, to assist faculty and staff who wish to incorporate inclusive communication into their daily interactions and written communications. In addition, the committee revised the name of the policy from “Inclusive Language” to “Inclusive Communication” in order to better convey the types of materials covered by the policy.

After due consideration, the Equity, Diversity, & Inclusion Committee voted to approve the proposed University of Maryland Policy on Inclusive Communication and administrative recommendations at its meeting on May 23, 2019, contingent on their review by the newly appointed Vice President of Diversity and Inclusion. Following that review, several minor changes were adopted to clarify the University's commitment to protecting academic freedom and freedom of expression and more clearly establish that the policy applies to materials produced by employees in the course of their duties. These changes were shared with the Office of General Counsel, the Office of Strategic Communications, and the new EDI Committee, none of which had any objections

RECOMMENDATIONS

The EDI Committee recommends that the Senate approve the revised University of Maryland Policy on Inclusive Communication (VI-1.00[C]), which immediately follows this report.

The committee also recommends that:

1. The Office of Strategic Communications should work with the Office of Diversity and Inclusion and other subject-matter experts to revise the University of Maryland Editorial Style Guide to include information and best practices regarding inclusive communications.

2. The Teaching and Learning Transformation Center should work with the Office of Diversity and Inclusion and other subject-matter experts to develop materials for using inclusive communication in syllabi and other instructional resources.

3. The Office of Diversity and Inclusion should establish and maintain a central webpage that provides resources and links related to inclusive communication.

4. The University should direct faculty and unit heads to available resources on inclusive communication (e.g. the Office of Diversity and Inclusion webpage) that help support their professional responsibilities.

APPENDICES

Appendix 1 — Proposal to Evaluate Gendered Language (Senate Document #18-19-07)
Appendix 2 — Overview of Inclusive Language Policies at Big 10 and Peer Institutions
Appendix 3 — Charge from the Senate Executive Committee

VI-1.00(C) UNIVERSITY OF MARYLAND~~, COLLEGE PARK~~ POLICY ON INCLUSIVE ~~LANGUAGE~~ **COMMUNICATION**

APPROVED BY PRESIDENT 24 APRIL 1991

I. Introduction

~~As an institution that stands for equality of educational and employment opportunity,~~ ~~t~~**T**he University of Maryland ~~at College Park reaffirms its commitment to creating a campus~~ **is committed to creating and maintaining an educational, working, and living** environment ~~free of discrimination~~ **that is welcoming, inclusive, and free from discrimination** and bias, both subtle and overt. **The University maintains this commitment while preserving the intellectual and academic freedom, freedom of speech, and freedom of expression of all students, faculty, and staff.**

~~It therefore expects all personnel, when representing the University to its publics, to use language that shows respect for human diversity. Those preparing official University publications or written communications shall accordingly avoid biased language of two kinds:~~ **Every member of the University community has an obligation to treat their colleagues and peers with dignity and respect, recognizing the various dimensions of human diversity, individual rights, and equal worth of all human beings.**

~~1. using generic masculine words or titles to refer to all persons; and~~

~~2. using terms or expressions that reinforce inappropriate, outdated, or demeaning attitudes or assumptions about persons or groups based on age, disability, ethnicity, gender, national origin, race, religion, or sexual orientation.~~

~~When illustrations are included in publications, they shall be chosen to reflect diversity. Care shall be taken to ensure that women, minorities, and persons with disabilities are portrayed in non-stereotypical ways.~~

~~The publications listed below shall be reviewed regularly for the use of inclusive language and a balanced range of illustrations. Appropriate supervisory personnel shall have the responsibility for overseeing this policy. Various reference manuals for the use of inclusive language are available in the offices of the deans and vice presidents. Concerns or questions about implementation of this policy should be addressed to the Office of Institutional Advancement.~~

~~Publications to Review Regularly:~~

~~Guidelines for Using Inclusive Language and Illustrations in University Publications~~
~~Faculty Handbook~~
~~UMCP Administrative Policies and Procedures Manual~~
~~Guide to UMCP Policies and Procedures~~
~~Undergraduate Catalog~~
~~Graduate Catalog~~
~~New Student Handbook~~
~~Graduate Assistant Handbook~~
~~Outlook~~
~~Career Development Center materials~~

~~Recruitment and admissions materials~~
~~Student financial aid materials~~
~~Brochures with campus-wide distribution~~
~~Institutional reports~~
~~News releases~~
~~Alumni and fund-raising materials~~

II. Definitions

"Inclusive Communication" means sharing information in a way that is inclusive of groups and individuals regardless of race, sex, gender identity or expression, sexual orientation, marital status, age, national origin, political affiliations, physical or mental disability, religion, protected veteran status, genetic information, personal appearance, or any other legally protected class. Inclusive Communication affirms and respects how people describe, express, and experience various components of their identity.

"Official University Communication" refers to materials produced by employees in the course of their assigned duties, whether intended for internal or external audiences (e.g. press releases and marketing materials, University websites, University policies, handbooks, and reports).

III. Applicability

This policy applies to all University of Maryland employees in the fulfillment of their duties.

IV. Policy

It is the policy of the University of Maryland that all employees shall use Inclusive Communication when preparing Official University Communication.

Unit heads shall have responsibility for communicating available resources on Inclusive Communication to the members of their unit. Inquiries about the application of this policy should be directed to the relevant unit head.

Appendix 1: Proposal to Evaluate Gendered Language

University Senate
PROPOSAL FORM

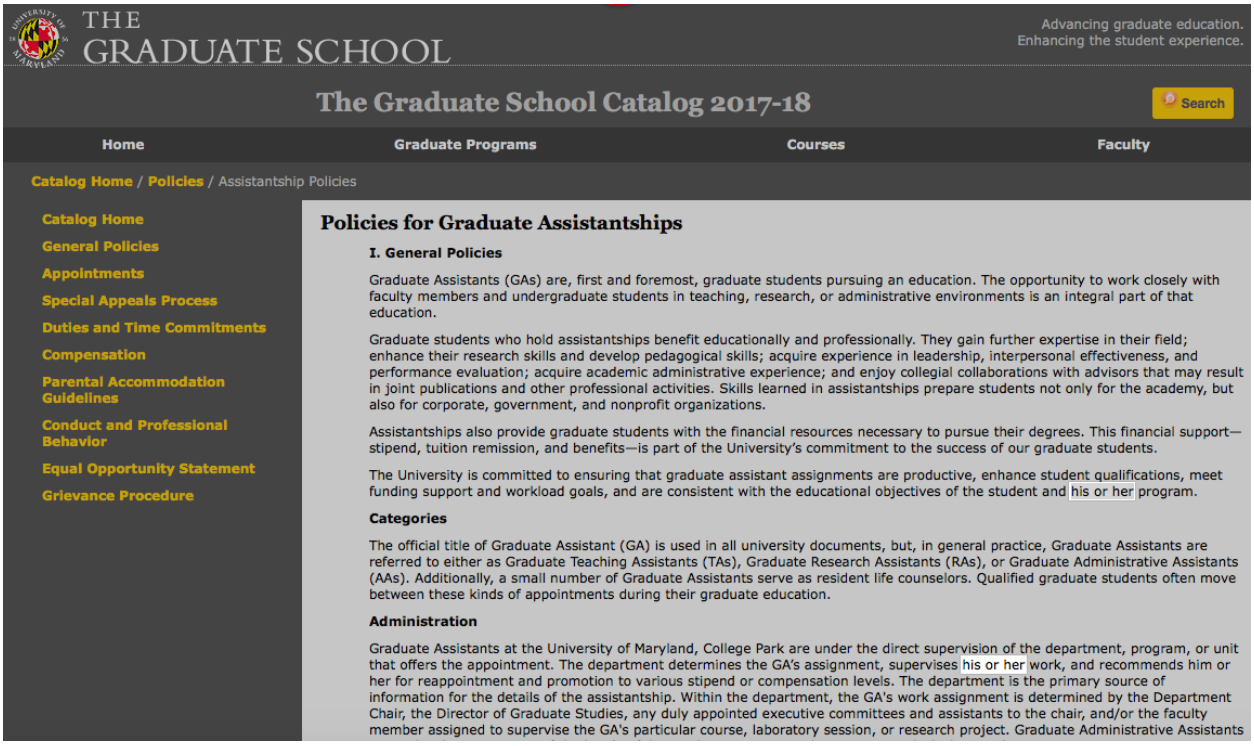
Name:	Michael Anthony Goodman (*he, him, his*)
Date:	June 13, 2018
Title of Proposal:	A Recommendation to Evaluate Gendered Language
Phone Number:	405-630-0902
Email Address:	mgood@terpmail.umd.edu
Campus Address:	3125 South Campus Dining Hall, Undergraduate Student Legal Aid
Unit/Department/College:	Higher Education, Student Affairs, International Education Policy (College of Education)
Constituency (faculty, staff, undergraduate, graduate):	Graduate Student
Description of issue/concern/policy in question:	Over the past year, I have observed multiple places where gendered language has hindered the opportunity for inclusion of individuals who identify as non-binary or another category outside of the rigid "male/female" gender identifiers. For example, website content and Graduate Assistantship offer letters often contain "he/she" and "his/hers" language when referencing students (see Appendix A). Further, onboarding documents are often written directly to "he/she" or "male/female" expectations, as illustrated in the incident that occurred earlier this year with the Computer Science handbook. These are just a few examples, which initially led me to engage deeper with students and faculty on campus to understand if these were isolated incidents. Now knowing that they are not, I write this proposal to the University Senate to address a need for inclusion regarding how the University of Maryland perpetuates a gendered expectation in undergraduate, graduate, and faculty/staff capacities. This language sets a standard that students, faculty, staff, and alumni who do not identify as "male/female" or "his/hers" are not welcome or included in various university operations. After an initial email to The Graduate School, it was recommended that this concern be considered at a higher level, which has ultimately led to this University Senate proposal.

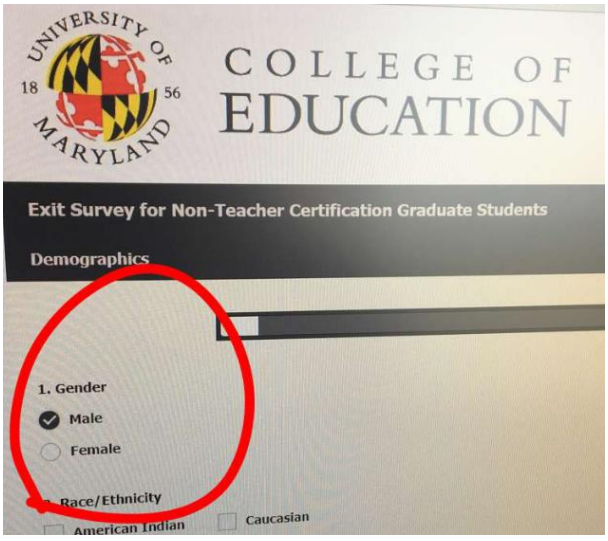
Description of action/changes you would like to see implemented and why:	I would like to see the University Senate address this concern campus-wide, which will ideally lead to a campus-wide review of documents, websites, resources, and communication. First, it should be mandated that all colleges lead a review of their documents, websites, resources, and correspondence. This includes, but is not limited to, the following: • Admissions advertisements and materials • Orientation materials • College, department, program handbooks • Job descriptions • Official Human Resources applications • Syllabi • Curriculum (PowerPoint presentations, handouts) • Website and online/social media content Departments and Colleges should remove any language exclusively citing, “he/his,” or “she/her,” and replace that language with, “the student,” or, “their/theirs,” framing.
Suggestions for how your proposal could be put into practice:	To review and address the categories listed above, Deans of the Colleges should appoint a Task Force within each college to oversee and manage the Department and College review. Each Task Force should be inclusive of individuals who are committed to equity and justice work, and involve students, staff, and faculty. Ultimately, each Task Force will operate as the accountability body for each College.
Additional Information:	The Graduate Student Government has taken steps to address this concern within our own body, and we would like the University to follow suit. For example, during the Spring 2018 semester, we passed legislation to edit our Bylaws in full, and to be reflective of “they/them/theirs” pronouns, removing all gendered pronouns. Additionally, we passed a resolution urging The Graduate School to recommend correspondence to Departments to evaluate gendered language within GA/TA/RA offer letters, handbooks, and in-College onboarding websites and documents.

Appendix A

Graduate Assistants are, first and foremost, graduate students pursuing an education. The opportunity to work closely with faculty, staff, and students in teaching, research, or administrative environments is an integral part of that education. The University and the Adele H. Stamp Student Union – Center For Campus Life are committed to ensuring that GA assignments are productive, enhance student qualifications, meet funding support and workload goals, and are consistent with the educational objectives of the student and his or her program.

The University of Maryland and the Adele H. Stamp Student Union – Center for Campus Life are academic and collegial communities. Regular and clear communication between Graduate Assistants and their advisors and supervisors is essential to maintaining an effective educational environment. Occasionally, problems may occur. A GA who experiences workload-related problems is encouraged to consult with his or her advisor or supervisor. Should the need arise, a Grievance Procedure is detailed in the Policies for Graduate Assistantships linked above.





Appendix 2: Overview of Inclusive Language Policies at Big 10 and Peer Institutions

	Policy	Last Updated	Guidence on preferd names and/or pronouns?	What groups/ activities does the policy cover?	Guidance for faculty regarding syllabus?	Notes, Related Links	Style Guide? Addresses?
University of Iowa	https://www.policy.iastate.edu/sites/default/files/resources/128/Policy-Inclusive%20Language%202018-02-26%20SECURED.pdf	2/26/18	There is a prefered name site where students can change your name on a number of official listings	All university publications and communication, whether oral or written. Applies to all faculty and staff, whenever possible, selection of academic materials will also reflect efforts to uphold this university policy.	Policy is included in the Faculty Handbook. Includes information on sexual harassment and other social issues. Teaching center has guidance in inclusive classrooms, primarily focused on cultural diversity.	https://uiowa.edu/ui-trans-resources/identity-terminology https://teach.its.uiowa.edu/resources/collections/inclusive-teaching-and-diversity	https://brand.uiowa.edu/sites/brand.uiowa.edu/files/ui_editorial_style_guide-9-12-2018.pdf Section on avoiding bias.
Indiana University	None	n/a	There is a prefered name site where students can change their name on a number of official listings.	n/a	Some guidance for faculty through Center for Innovative Teaching and Learning	https://lgbtq.indiana.edu/resources/transitioning-at-iu/IU-Transgender-Guide-Updated.pdf https://kb.iu.edu/d/bfeo https://studentaffairs.indiana.edu/glbt-student-support-services/index.shtml https://diversity.iu.edu/about/campus-environment-toolkit/awareness.html https://citl.indiana.edu/teaching-resources/diversity-inclusion/	https://brand.iu.edu/messaging-strategy/editorial-style/style-guide/index.html
University of Illinois-Urbana Champaign	None	n/a	There is a prefered name site where students can change their name on a number of official listings.	n/a	Any student who has suppressed their directory information pursuant to Family Educational Rights and Privacy Act (FERPA) should self-identify to the instructor to ensure protection of the privacy of their attendance in this course. Fairly extensive resources through Center for Research on Learning and Teaching	https://www.uillinois.edu/about/policies/preferred_first_name_statement https://oiir.illinois.edu/lgbt-resource-center/resources	http://identitystandards.illinois.edu/writingstyleguide/index.html Defines nonsexist language.
University of Michigan	None	n/a	There is a prefered name site where students can change their name on a number of official listings.	University communications and reporting. Preferred names "can and should be used wherever possible in the course of university business and education."	Fairly extensive resources provided for faculty.	https://spectrumcenter.umich.edu/article/designated-pronouns http://www.crlt.umich.edu/multicultural-teaching/inclusive-teaching-strategies *$16k Inclusive language campaign in 2015: http://sites.lsa.umich.edu/wp-content/uploads/sites/355/2016/06/Inclusive-Language-Campaign-pamphlet.pdf	https://vpcomm.umich.edu/brand/style-guide/editorial

	Policy	Last Updated	Guidence on preferd names and/or pronouns?	What groups/ activities does the policy cover?	Guidance for faculty regarding syllabus?	Notes, Related Links	Style Guide? Addresses?
Michigan State University	None	n/a	There is a prefered name site where students can change their name on a number of official listings.	n/a	Some guidance for faculty through the Academic Advancement Network.	http://www.inclusion.msu.edu/about/building-inclusive-communities.html https://natsci.msu.edu/sites/_natsci/assets/File/Faculty%20%26%20Staff/CDC-Inclusion.pdf http://lbgtrc.msu.edu/educational-resources/pronouns/ https://diversity.natsci.msu.edu/resources/faculty-and-staff-resources/course-related-resources/inclusive-language-for-course-syllabi/ https://aan.msu.edu/teaching-learning/resources-for-difficult-dialogues-in-the-classroom/	https://cabs.msu.edu/marketing/msu-editorial-style-guide.html?_ga=2.113834119.1891977233.1543849485-1978363882.1507660018 Use "nonsexist writing," addresses pronouns.
University of Minnesota	None	n/a	There is a prefered name site where students can change their name on a number of official listings.	n/a	Incorporates general guidelines on inclusivity and non-discrimination.	http://d.umn.edu/sexuality-gender-equity-initiatives/education-advocacy/pronouns Ambitious draft policy, never adopted: https://www.documentcloud.org/documents/4598811-Updated-Draft-Gender-Identity-Policy.html https://onestop.umn.edu/personal-information/pronouns-and-gender-identity https://policy.umn.edu/sites/policy.umn.edu/files/appendix/upolicy_apph.pdf http://writing.umn.edu/sws/quickhelp/grammar/nonbinary.html	https://university-relations.umn.edu/resources/editorial-style
University of Nebraska	None	n/a	From Graduate Mentoring Guidebook: Avoid homophobic, gendered, sexist, or other discriminatory comments. For example, when talking about families, avoid talking as if every family were composed of a husband, wife, and children. Use words like spouse and partner instead of just spouse or husband or wife. These terms go a long way in letting GLBT students and unmarried students know they are represented in discussions.	n/a	No	https://www.unl.edu/mentoring/sexual-orientation-and-gender-identity	https://unlcms.unl.edu/ucomm/styleguide/ Avoid gender-specific words, addresses stereotypes.

	Policy	Last Updated	Guidence on preferd names and/or pronouns?	What groups/ activities does the policy cover?	Guidance for faculty regarding syllabus?	Notes, Related Links	Style Guide? Addresses?
Northwestern University	None	n/a	Not specifically but courses on cultivating a safe space for LGBTQA students are offered.	n/a	Relatively extensive guidance provided by the Searle Center.	https://www.northwestern.edu/searle/initiatives/diversity-equity-inclusion/inclusive-learning-environments.html https://www.northwestern.edu/msa/resources/lgbtqia-resources/trans-policies-resources/index.html https://www.northwestern.edu/diversity/initiatives/gender-queer,-non-binary,-transgender-task-force.html	https://www.northwestern.edu/univ-relations/publications/resources/styleguide.html
Ohio State University	None	n/a	There is a prefered name site where students can change their name on a number of official listings.	n/a	Relatively extensive guidance provided by the Center for the Advancement of Teaching.	https://writingcenter.unc.edu/tips-and-tools/gender-inclusive-language/ https://ucat.osu.edu/inclusive-teaching/	Password protected
Penn State University	None	n/a	There is a prefered name site where students can change their name on a number of official listings.	n/a	Resources for faculty through Schreyer Institute for Teaching Excellence.	Residence Life senior assistant director Kelly Griffith and assistant director Nick Pazdziorko began an inclusive language campaign in 2015 to combat racial slurs and pronoun perferences https://www.centredaily.com/news/local/education/penn-state/article53597300.html https://studentaffairs.psu.edu/campus-community-diversity/lgbtq-community/explore-lgbtq-resources/identity-based-resources/pronouns http://www.schreyerinstitute.psu.edu/tools/	http://visualeditorialstandards.psu.edu/editorial-style-manual/word-usage/ Avoid gender stereotyping, encourage "they."
Purdue University	None	n/a	There is a prefered name site where students can change their name on a number of official listings.	n/a	Purdue University is committed to maintaining a community which recognizes and values the inherent worth and dignity of every person; fosters tolerance, sensitivity, understanding, and mutual respect among its members; and encourages each individual to strive to reach his or her own potential. In pursuit of its goal of academic excellence, the University seeks to develop and nurture diversity. The University believes that diversity among its many members strengthens the institution, stimulates creativity, promotes the exchange of ideas, and enriches campus life.	https://www.washingtonexaminer.com/purdue-online-writing-lab-quietly-changes-guidelines-around-sexist-language-again	https://owl.purdue.edu/owl/general_writing/grammar/pronouns/gendered_pronouns_and_singular_they.html https://owl.purdue.edu/owl/general_writing/academic_writing/using_appropriate_language/stereotypes_and_biased_language.html

	Policy	Last Updated	Guidence on preferd names and/or pronouns?	What groups/ activities does the policy cover?	Guidance for faculty regarding syllabus?	Notes, Related Links	Style Guide? Addresses?
University of Wisconsin - Madison	None	n/a	There is a prefered name site where students can change their name on a number of official listings.	n/a	No	https://www.uwec.edu/kb/article/policies-gender-inclusive-language/ Policy from UW: Eau Claire https://www.chronicle.com/article/Colleges-Consider-Adopting-/233757 https://www.wisconsin.edu/inclusive-excellence https://lgbt.wiscweb.wisc.edu/wp-content/uploads/sites/175/2016/07/LGBTCC-Gender-pronoun-guide.pdf	
University of Wisconsin - Eau Claire	https://www.uwec.edu/kb/article/policies-gender-inclusive-language/	8/2018	There is a prefered name site where students can change their name on a number of official listings.	Students, faculty, and staff.	Yes, password protected		Password protected
Rutgers	None	n/a	There is a prefered name site where students can change their name on a number of official listings.	n/a	No	http://socialjustice.rutgers.edu/safer-space-training-program/language-matters-campaign/	https://communications.rutgers.edu/files/rutgerseditstyleguide2018-finalpdf Section on gender-neutral language, LGBTQA language (addresses pronouns).
UC - Berkeley	None	n/a	There is a prefered name site where students can change their name on a number of official listings.	n/a	No	https://campusclimate.berkeley.edu/students/ejce/geneq/resources/lgbtq-resources/definition-terms	https://identity.berkeley.edu/downloads/berkeley-editorial-style-13.pdf Has section on avoiding gendered language
University of North Carolina-Chapel Hill	https://unc.policystat.com/policy/4745272/latest/	8/1/2016	There is a prefered name site where students can change their name on a number of official listings.	University documents, websites and policies	Minimal, linked resources through Center for Faculty Excellence https://cfe.unc.edu/initiatives/diversity-and-inclusion/	https://writingcenter.unc.edu/tips-and-tools/gender-inclusive-language/ Style guide for policies: https://policies.unc.edu/files/2018/02/UNC-Policy-Style-and-Development-Guide.pdf	No
UCLA	None	n/a	There is a prefered name site where students can change their name on a number of official listings.	n/a	https://equity.ucla.edu/wp-content/uploads/2016/06/CreatingaPositiveClassroomClimateWeb-2.pdf	https://www.lgbt.ucla.edu/Resources/LGBTQ-Terminology https://www.uclahealth.org/gender-health/educational-materials	Password protected

Appendix 3: Senate Executive Committee Charge on Review of the University of Maryland, College Park Policy on Inclusive Language

UNIVERSITY SENATE | **CHARGE**

Charged: November 26, 2018 | Deadline: May 10, 2019

Review of the University of Maryland, College Park Policy on Inclusive Language
(Senate Document #18-19-06)
Equity, Diversity, & Inclusion (EDI) Committee | Chair: Tom Porter

The Senate Executive Committee (SEC) and Senate Chair Walsh request that the Equity, Diversity, & Inclusion (EDI) Committee review the University of Maryland, College Park Policy on Inclusive Language (VI-1.00[C]) and make recommendations, as necessary.

Specifically, the committee is asked to:

1. Review the USM Policy of Non-Discrimination on the Basis of Sexual Orientation and Gender Identity or Expression (VI-1.05).

2. Consider the University of Maryland Policy of Non-Discrimination on the Basis of Gender Identity or Expression in the Use of Gendered Facilities (VI-1.05[A]).

3. Review the proposal entitled, *A Recommendation to Evaluate Gendered Language (Senate Document #18-19-07).*

4. Review the principles within the University's strategic plan for diversity, *Transforming Maryland: Expectations for Excellence in Diversity and Inclusion*.

5. Consider whether the scope of the current policy aligns with the University's principles on diversity and inclusion, as well as with existing policies and procedures.

6. Review similar policies and procedures at Big 10 and other peer institutions.

7. Consult with a representative of the Office of Civil Rights & Sexual Misconduct (OCRSM).

8. Consult with a representative of the Office of Diversity & Inclusion (ODI).

9. Consult with a representative of the Office of Strategic Communications.

10. Consult with a representative of the Office of General Counsel on any proposed changes to the University's policy.

11. If appropriate, recommend whether the policy should be revised and submit recommended revisions for Senate consideration.

We ask that you submit a report to the Senate Office no later than **May 10, 2019**. If you have questions or need assistance, please contact Reka Montfort in the Senate Office, extension 5-5804.

PCC Proposal to Establish a Bachelor's Program in Immersive Media Design (PCC 18071)

PRESENTED BY	**Janna Bianchini, Chair, Senate Programs, Curricula, & Courses Committee**
REVIEW DATES	**SEC – September 20, 2019 | SENATE – October 2, 2019**
VOTING METHOD	**In a single vote**
RELEVANT POLICY/DOCUMENT	**NA**
NECESSARY APPROVALS	**Senate, President, University System of Maryland Board of Regents, and Maryland Higher Education Commission**

ISSUE

The Department of Art and the Department of Computer Science, within the Colleges of Arts and Humanities (ARHU) and Computer, Mathematics, and Natural Sciences (CMNS), respectfully, propose to establish a Bachelor's program in Immersive Media Design. The field of Immersive Media Design encompasses a broad spectrum of practices drawing from both the creative arts and computing sciences. It addresses emerging developments across disciplines and utilizes practices from augmented and virtual reality, computer graphics and game programming, digital fabrication, software art, tangible computing, interactive installations, and computer sensing. Immersive media design allows for the creation of multisensorial content that actively engages its participants in deep interactivity in both virtual and physical settings. The program will offer two tracks for the major. Track One: Computing is focused on the implementation and creation of computer science methods used in the creation of immersive media, and Track Two: Emerging Creatives focuses on content creation and concept exploration from an aesthetic and artistic standpoint. Track One will result in a Bachelor of Science and Track Two will result in a Bachelor of Arts.

Just as mobile technology has connected everyone to the world around them, immersive virtual and augmented reality is the next leap forward in the ever-expanding information revolution. By creating an independent, virtual world, or by overlaying, or augmenting, digital information atop real-world settings, immersive virtual and augmented reality allows people from all walks of life—health care professionals, educators, industrial workers, artists, and everyday people—to see and use the information that matters most to them.

The curriculum will consist of 77 credits for Track One and 59 credits for Track Two. The credits will be organized as follows:

Track One: Computing

- 3 credits from a restricted list of ENGL courses
- 8 credits of MATH courses
- 18 credits of CMSC courses
- 9 credits of ARTT courses

- 9 credits of major electives
- 18 credits of IMDM lecture/studio courses
- 8 credits of Capstone Courses

Track Two: Emerging Creatives

- 3 credits from a restricted list of ENGL courses
- 3 credits of MATH courses
- 3 credits of CMSC courses
- 24 credits of ARTT courses
- 18 credits of IMDM lecture/studio courses
- 8 credits of Capstone Courses

As an emerging field, immersive media design is becoming an important part of a number industries, including computer science, entertainment, game design, graphic design, the fine arts, architecture, and other related fields. Although similar programs exist in the state of Maryland, none has the interdisciplinary resources and focus on augmented and virtual reality that this program will have. A survey of more than 1000 students from several majors across multiple colleges found that nearly half of the students would be interested in a major that focuses on immersive media design.

In order to provide governance and coordination for this interdisciplinary program, the units will establish an “Academy of Immersive Media” (AIM) within the University of Maryland Institute for Advanced Computer Studies. AIM will have an Academic Director and staff, and will work with faculty who will teach IMDM courses. AIM will also coordinate learning outcomes assessment, curricular development, and facilities management. Advising for the program will be organized by interest track, with CMNS advising students in Track One: Computing and ARHU advising students in Track Two: Emerging Creatives.

This proposal was approved by the Senate Programs, Curricula, and Courses committee on May 3, 2019.

RECOMMENDATION(S)

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

COMMITTEE WORK

The committee considered this proposal at its meeting on May 3, 2019. The following participants presented the proposal and responded to committee questions: Bob Infantino, Associate Dean of CMNS; Ralph Bauer, Associate Dean of ARHU; Roger Eastman, Professor of the Practice, Computer Science, and Brandon Morse, Associate Professor of Art. The proposal was unanimously approved by the committee.

ALTERNATIVES

The Senate could decline to approve this new degree program.

RISKS

If the Senate declines to approve this degree program, the university will lose an opportunity to offer a new undergraduate program that prepares students for an emerging technological field and workforce need.

FINANCIAL IMPLICATIONS

Resources for the new program will be drawn from new resources to the campus through the Governor's Workforce Development Initiative, from current resources of the sponsoring colleges and from reallocated funds from campus central budget.

University of Maryland PCC
Program/Curriculum/Unit Proposal

PCC Log No: 18071

Program: Immersive Media Design (IMDM)

Department/Unit: ARTT - Studio Art & CMSC - Computer Science

College/School: ARHU - Arts and Humanities & CMNS Computer Mathematical and Natural Sciences

Proposal Contact Person (with email): Brandon Morse (bmorse1@umd.edu) Roger Eastman (reastman@cs.umd.edu)

Type of Action (check one):

- ☐ Curriculum change (includes modifying minors, concentrations/specializations and creating informal specializations)
  - ☐ Curriculum change is for an LEP Program
- ☐ *Rename a program or formal Area of Concentration*
- ☐ *Establish/Discontinue a formal Area of Concentration*
- ☐ Other:
- ☒ *Establish a new academic degree/certificate program*
- ☐ Create an online version of an existing program
- ☐ Establish a new minor
- ☐ *Suspend/Discontinue a degree/certificate program*
- ☐ Establish a new Master or Certificate of Professional Studies program
  - ☐ New Professional Studies program will be administered by Office of Extended Studies

Italics indicate that the proposal must be presented to the full University Senate for consideration.

Approval Signatures - *Please print name, sign, and date. For proposals requiring multiple unit approvals, please use additional cover sheet(s).*

1. Department Committee Chair E. Brandon Morse 2/22/19
2. Department Chair William Richardson 2/22/19
3. College/School PCC Chair Alejandro Camegre 2/22/19
4. Dean Ralph Bava 2/22/19
5. Dean of the Graduate School (if required) _____
6. Chair, Senate PCC Jim Blanchini 5.5.19
7. University Senate Chair (if required) _____
8. Senior Vice President and Provost _____

Instructions:
When approved by the dean of the college or school, please send the proposal and signed form to the Office of the Associate Provost for Academic Planning and Programs, 1119 Main Administration Building, Campus-5031, **and** email the proposal document as an MSWord attachment to pcc-submissions@umd.edu.

Summary of Proposed Action (use additional sheet if necessary):

The Colleges of Arts and Humanities (ARHU) and Computer Mathematical and Natural Sciences (CMNS) jointly propose to offer Bachelor of Science and Bachelor of Arts degrees in Immersive Media Design. The field of Immersive Media Design encompasses a broad spectrum of practices drawing from both the creative arts and computing sciences. It addresses emerging developments across both disciplines and utilizes practices in augmented and virtual reality, computer graphics and game programming, digital fabrication, software art, tangible computing and computer sensing allowing for the creation of multisensorial content which actively engages with its participants through deep interactivity in both virtual and dimensional settings.

Continued on p 2.

Unit Code(s) (to be entered by the Office of Academic Planning and Programs):

This proposed major represents a substantive collaboration between STEM fields and the Arts and Humanities and will prepare our students to be leaders in the production of Augmented Reality, Virtual Reality, and the aforementioned related Immersive Media Design disciplines. Students in this major will engaged in a sustained interdisciplinary practice wherein groups from computer science and the arts and design collaborate over the course of several semesters to jointly study and address some of today's most pressing questions about the role of technology as a creative medium.

The applications for augmented and virtual reality are vast and its growth as an industry and vehicle for cultural capital is imminent. The National Academy of Engineering has identified enhancing virtual reality as one of the grand challenges for the 21st century and VR and AR are on their way to evolving as the eighth mass market following print, recordings, cinema, radio, TV, the Internet, and mobile technology. Just as mobile technology has connected everyone to the world around them, immersive virtual and augmented reality is the next leap forward in the ever-expanding information revolution.

As technology increasingly becomes interwoven into the fabric of everyday life, the development of a program of study solely dedicated to this momentous shift will place the University of Maryland at the forefront of a nascent field of study and will contribute to the continued upward trajectory of this institution as it pertains to the recruiting of top-tier students, researchers and educators from not only across the state, but also from the nation and internationally.

University of Maryland PCC
Program/Curriculum/Unit Proposal

PCC Log No: 18071

Program: Immersive Media Design (IMDM)

Department/Unit: ARTT - Studio Art & CMSC - Computer Science

College/School: ARHU - Arts and Humanities & CMNS Computer Mathematical and Natural Sciences

Proposal Contact Person (with email): Brandon Morse (bmorse1@umd.edu) Roger Eastman (reastman@cs.umd.edu)

Type of Action (check one):

- ☐ Curriculum change (includes modifying minors, concentrations/specializations and creating informal specializations)
  - ☐ Curriculum change is for an LEP Program
- ☐ *Rename a program or formal Area of Concentration*
- ☐ *Establish/Discontinue a formal Area of Concentration*
- ☐ Other:
- ☒ *Establish a new academic degree/certificate program*
- ☐ Create an online version of an existing program
- ☐ Establish a new minor
- ☐ *Suspend/Discontinue a degree/certificate program*
- ☐ Establish a new Master or Certificate of Professional Studies program
  - ☐ New Professional Studies program will be administered by Office of Extended Studies

Italics indicate that the proposal must be presented to the full University Senate for consideration.

Approval Signatures - *Please print name, sign, and date. For proposals requiring multiple unit approvals, please use additional cover sheet(s).*

1. Department Committee Chair Michael Hicks 2/21/2019
2. Department Chair Ming Lin 2/21/2019
3. College/School PCC Chair Robert Infantino 2/21/2019
4. Dean AMITABH VARSHNEY 2/22/2019
5. Dean of the Graduate School (if required) _____
6. Chair, Senate PCC _____
7. University Senate Chair (if required) _____
8. Senior Vice President and Provost _____

Instructions:
When approved by the dean of the college or school, please send the proposal and signed form to the Office of the Associate Provost for Academic Planning and Programs, 1119 Main Administration Building, Campus-5031, **and** email the proposal document as an MSWord attachment to pcc-submissions@umd.edu.

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Continued on p 2.

Unit Code(s) (to be entered by the Office of Academic Planning and Programs):

This proposed major represents a substantive collaboration between STEM fields and the Arts and Humanities and will prepare our students to be leaders in the production of Augmented Reality, Virtual Reality, and the aforementioned related Immersive Media Design disciplines. Students in this major will engaged in a sustained interdisciplinary practice wherein groups from computer science and the arts and design collaborate over the course of several semesters to jointly study and address some of today's most pressing questions about the role of technology as a creative medium.

The applications for augmented and virtual reality are vast and its growth as an industry and vehicle for cultural capital is imminent. The National Academy of Engineering has identified enhancing virtual reality as one of the grand challenges for the 21st century and VR and AR are on their way to evolving as the eighth mass market following print, recordings, cinema, radio, TV, the Internet, and mobile technology. Just as mobile technology has connected everyone to the world around them, immersive virtual and augmented reality is the next leap forward in the ever-expanding information revolution.

As technology increasingly becomes interwoven into the fabric of everyday life, the development of a program of study solely dedicated to this momentous shift will place the University of Maryland at the forefront of a nascent field of study and will contribute to the continued upward trajectory of this institution as it pertains to the recruiting of top-tier students, researchers and educators from not only across the state, but also from the nation and internationally.

PROPOSAL FOR
NEW INSTRUCTIONAL PROGRAM
UNIVERSITY OF MARYLAND AT COLLEGE PARK, MARYLAND
BACHELOR OF SCIENCE IN IMMERSIVE MEDIA DESIGN
BACHELOR OF ARTS IN IMMERSIVE MEDIA DESIGN

COLLEGE OF ARTS AND HUMANITIES
DEAN BONNIE THORNTON DILL
COLLEGE OF COMPUTER, MATHEMATICAL
AND NATURAL SCIENCES
DEAN AMITABH VARSHNEY

Immersive Media Major Proposal
Table of Contents

Program: Bachelor of Science & Bachelor of Arts in Immersive Media Design

Date of Proposal: January 2019

Start Term for New Program: Fall 2020

Mission and Purpose

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

The Colleges of Arts and Humanities and Computer, Mathematical and Natural Sciences jointly propose to offer a new major to grant Bachelor of Science and Bachelor of Arts degrees in Immersive Media Design. The IMD major (IMDM) will prepare our students to be leaders in the production of augmented and virtual reality, as well as related immersive media. We define immersive media here as media that immerses the user, that surrounds them in a virtual world, or embeds reactive technology tangibly and seamlessly in the real world, or overlays digital information on the real world, for purposes of effective communication, data exploration, or artistic expression. This can be virtual and augmented reality (VR and AR), but is not limited to those technologies can include innovative use of mobile devices, projective displays in different environments, digitally mediated and interactive sculpture, and other emerging non-standard interfaces. This proposed major represents a substantive collaboration between STEM fields and the Arts and Humanities and a response to considerable student interest in the area.

The applications for virtual and augmented reality (VR and AR) are vast and its growth as an industry and vehicle for cultural capital is imminent. The National Academy of Engineering has identified enhancing virtual reality as one of the grand challenges for the 21st century and VR and AR are on their way to evolving as the eighth mass market following print, recordings, cinema, radio, TV, the Internet, and mobile technology. Just as mobile technology has connected everyone to the world around them, immersive virtual and augmented reality is the next leap forward in the ever-expanding information revolution. By overlaying, or augmenting, digital information on top of real-world settings, immersive augmented reality allows people from all walks of life—health care professionals, educators, industrial workers, artists, and everyday people—to see and use the information that matters most to them.

The creation of such media demands a skill set that represents a blend of training in aesthetics, media theory and formalism concatenated with technically demanding skills in programming, mathematics, and related fields such as data visualization. To answer this demand, we propose to establish an Immersive Media Design major (IMDM). This major will be offered through a unique collaboration of expert faculty members and resources at the University of Maryland (UMD). This collaboration incorporates resources and expertise from a broad spectrum of colleges and departments. It reflects the recognition that the production of works of immersive media requires that practitioners be conversant in the prominent theories, concepts and practices of both computer science and the arts and humanities and that they maintain expertise in one or more of these areas. Providing exposure to this spectrum and encouraging the development of expertise in this diverse range of disciplines is the core of this proposed major.

The proposed is a response to the changing state of the digital and immersive media industries, the academic interests of incoming students and the shifting demands of today's collaborative workplace. Interdisciplinary teams of instructors from Computer Science and Studio Art will teach the major's core classes. Students will work in interdisciplinary teams to complete projects based upon their interests and bolstered by expertise of the instructor pairings. Our major will also be

a catalyst for securing large, multi-institutional research and education grants from nearby federal agencies and other sources, promising to position Maryland as a leader in our nation's new economy based on technology and innovation.

The Immersive Media Design Major combines a comprehensively collaborative structure with a rigorous theoretical underpinning conforming with the scholarly traditions of our campus. It mirrors the trends within the digital media and creative technological industries toward interdisciplinary practices. Graduates of this program will be well prepared to meet and exceed the dynamic and changing expectations of the marketplace. Interdisciplinary pairings of instructors will educate teams of students with diverse backgrounds in the arts, design, computer science and mathematics. This major is infused with courses that will provide context to these new technologies by exploring the history, culture and practices of these fields. It will cultivate students who are thinkers as well as makers and doers. The courses will challenge students to apply foundational context to research in virtual reality, visual and performing arts, and creative computational practices. Students will incorporate knowledge of software development, coding structure, mechanical functions, visual aesthetics, storytelling, resource optimization and audience considerations to produce innovative works of media technology in a rapidly emerging field.

This major will serve the University of Maryland's mission in pursuing five strategic goals: 1) developing educational opportunities in virtual and augmented reality (VR and AR) and related media; 2) creating a new cross-campus major which offers alternate, yet high-demand academic paths for students; 3) drawing exceptional undergraduate talent with a nationally-unique program in arts and computing; 4) fostering new opportunities for research, scholarship and creativity that are interdisciplinary and will define future disciplines for the new media landscape; and 5) synergizing with key economic drivers in Maryland, including the digital media industry.

Program Characteristics

2. 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 Immersive Media Design Major offers students an interdisciplinary, intensive experience with the concepts, theories and tools for creating innovative works in immersive and other emerging technologies. Just as mobile technology has connected everyone to the world around them, immersive virtual and augmented reality is the next leap forward in the ever-expanding information revolution. By creating an independent, virtual world, or by overlaying, or augmenting, digital information atop real-world settings, immersive virtual and augmented reality allows people from all walks of life—health care professionals, educators, industrial workers, artists, and everyday people—to see and use the information that matters most to them. The creation of such immersive environments - utilizing a balance of skills in art, design, computer science and engineering—demands a new way of thinking. To answer this demand, the Immersive Media Design Major - through a unique cross-campus collaboration of expert faculty members and resources at the University of Maryland will provide the scientific and scholarly foundations needed to advance the extraordinary potential of virtual and augmented reality applications. Immersive Media Design majors will be creative thinkers and makers who understand the impact technology has on our lives and are invested in exploring the creative potential inherent in emerging technology and media. Working in fields such as Augmented and Virtual Reality, Creative Coding, Digital Fabrication and Tangible Computing among others, the B.S. and B.A. in Immersive Media Design prepares students for professional roles through its cross-disciplinary, hands-on curriculum.

The first two years of coursework helps students develop mastery in a variety of tools and applications in computer science, art, visual communications, and related hybrid-practices. Through lecture and theory courses, they develop the

critical thinking skills necessary to create compelling and original content for immersive media. During the last two years, students apply this knowledge to content and context-specific projects in both physical and digital environments. Students work on real-world projects in collaboration with industry sponsors.

The major has different tracks of academic study to afford mastery in target areas. Track One (Computing) is focused on the implementation and creation of computer science methods used in the creation of immersive media, whereas Track Two (Emerging Creatives) focuses on content creation and concept exploration from an aesthetic and artistic standpoint. Though there are separate tracks in the major, all students in the major enroll in 'collaborative studio' courses, which foster a sustained collaborative work and study experience and which encourage students from both tracks to work together on team-based projects. Through this process students will gain a richer understanding of the field as a whole – technically-minded students in track 1 will become conversant in artistic concepts and structures, while students in track 2 will develop an understanding of, and general proficiency in, the technical concepts and practices in the field.

3. What are the educational objectives of the program?

IMDM graduates within 5 years of graduation will impact the local, state, national and global communities by:

a. Becoming principals, leaders and recognized experts in the practice, theory and implementation of emerging immersive media design disciplines.

b. Making substantive contributions to the fields of immersive media through commercial, entrepreneurial, social or artistic endeavors.

c. Adding to the cultural landscape by adapting to and anticipating to the ever-evolving nature of the field in the pursuit of the creation of new knowledge and new digital artifacts of immersive media.

d. Engage in lifelong learning, such as graduate school and other professional education.

A major goal of the program is to provide education and training to undergraduate students to prepare them to take positions at the forefront of the emerging visual IT workforce. Program faculty will be deeply involved in teaching undergraduate students in their labs, and the program's education and outreach programs will enrich our local communities. In this truly collaborative major, the structure of the courses mirror the interdisciplinary employment environment these students will enter by creating linkages between concepts and practices in the creative arts and STEM fields - in particular Computer Science. Working as collaborative problem-solving teams, this cohort will discover the convergence of their differing perspectives and pave the way for groundbreaking new research. These uniquely well-equipped students will emerge into Maryland’s educated workforce, able to pursue a robust array of in-demand careers, and poised to drive innovation in a broad range of industries with their hands-on knowledge of novel digital technology. These include the computer gaming industry, graphic design, fine arts, retail, real estate, education, healthcare, defense and engineering.

4. Describe any selective admissions policy or special criteria for students selecting this program.

Due to the nature of the subject matter, and the collaborative manner in which it will be taught, this major will require small classes affording students with substantive one-on-one mentorship and guidance from our faculty. Specifically, the collaborative studio courses which constitute the conceptual core of this major will require a level of individual instruction reflective of classes in the visual and performing arts, and advanced courses in computer science.

Working either individually or in collaborative teams, it is expected that students in this major will be creating works of media that are unique in their creative approach, and distinct from others in their technological underpinnings. In many substantive ways, the works being created in this major may have no precedent. As opposed to traditional Computer Science pedagogy, there are no readily available means to automatically 'unit test' a work of creative technology. Admittedly, it is requisite that completed work pass some low bar of simply functioning, however this major is fundamentally about the creative exploration of ideas and content. Our majors will be evaluated not simply on whether a thing can compute an answer, rather on how they effective convey concepts and ideas through technology. All this dictates that instructors dedicate greater amounts of time to individualized instruction than those relying on large lectures to convey a standardized set of knowledge to a large population. IMDM instructors will need to evaluate both the aesthetic and technical success, and to give careful feedback as to the successes and failures of those they mentor. This is an involved process requiring careful attention to cultural, artistic and technological history, theory and practice. Maintaining a tight and sustainable cohort will be essential for the success of this major.

As evidenced by a university-wide survey we anticipate a substantial number of students who will wish to pursue this major. This survey, administered in December 2016, asked UMD students about their interest in this major. Of the more than 1,100 respondents, 48% (543) said they would be interested in pursuing this major. This number well exceeds our proposed overall steady state target of 240 majors: 40 students for each of the four years in Track One and 20 students for each of the four years in Track Two. In addition, the lack of other immersive media design programs, the proliferation of immersive media in the marketplace will contribute to overall high demand for this program. The steady state number of 240 majors does not include first year and other beginning students who take the introductory courses but do not continue. We have used a figure of 60 for that population to estimate course enrollment, for a total of 300 majors.

To offer the optimal balance of faculty and resources to our majors, we propose to offer IMDM as a limited enrollment program. Given the dual-track nature of the major, the gateway process for the major will vary from track to track, though some common requirements be in place. Students intending to enroll in track 1 (computing) will be required to take a large number of courses offered in Computer Science, and therefore it is necessary that these students meet the same LEP requirements as put forth in Computer Science. In order to enroll in track 1 courses students must first meet the requirements put forth by the department of Computer Science for either incoming freshman, or for internal or external transfers to the major. Additionally, track one students must also meet the gateway requirements stipulated by Computer Science, namely: Completion of CMSC 131, CMSC 132, and MATH 140 with a minimum grade of C- at 45 credits. Given the number of upper-level computer science courses required of track one, were we to not apply these gateway requirements, IMDM would open back doors into the upper level CS courses to students who may otherwise be ineligible.

Additionally, students enrolling in either track will be required to pass a set of IMDM-specific gateway requirements, namely: In the semester in which they complete 45 credits, all IMDM majors, regardless of track must pass a portfolio review to enroll in upper-level IMDM courses. The portfolio review process will require students to submit a portfolio of pertinent work product from IMDM and related courses - the contents of this portfolio and its assessment criteria will be reflective of which track of the major they intend to pursue. The portfolio itself will be multi-valent, with some technical and some artistic elements, those largely visual in nature in order to gauge an applicant's potential for success within the program. A secondary component of the portfolio will be an essay describing their goals and strategies for successfully completing the major. This essay will indicate areas of specific interest, speculate as to the type of work they intend to pursue in their intermediate and advanced level studies and discuss how the major aligns with their career aspirations. The criteria for a successful portfolio will vary depending on intended track of study, but will retain common means of

assessment which reflect the shared course experiences between tracks 1 and 2 - this may include an application-specific small-scale project tailored to the expectations set forth in our learning outcomes. A minimum overall GPA of 3.0 at the point of portfolio review will also be required. Students will upload these materials to an online application site, allowing consideration of off-campus and transfer students. The Program Director and IMDM faculty will review and select applicants to move forward in the program. We will strive to accept all students who meet objective standards at the review, so the goals of 40 students in track 1 and 20 in track 1 are not hard limits, but our ability to serve students will depend on resources.

Those students who are deemed to be making successful progress in all major course requirements, but do not pass the portfolio review may be encouraged to re-apply one semester later, if the committee portfolio review suggests that there are a small number of elements which, if more fully developed, would allow for successful entry/completion of the major. However, students in track 1 must meet the gateway LEP requirements (occurring at 45 credits) put forth by the Department of Computer Science without exception. It must also be noted that great effort has been taken to structure the first semesters of the major in a way that closely mirrors the major requirements for Computer Science (track 1), and Studio Art (track 2). This was done in attempts to allow unsuccessful candidates for the major to switch to majors in CMSC or ARTT with as little disruption to time-to-degree as possible. We will also work to advise students on other logical alternative majors, such as information systems, geographic information systems, and others.

We expect that students will add to their portfolio through the rest of their college career, in part to document their individual contributions to the frequent group work projects in the program. Their portfolios will help faculty evaluate and recommend each student as individuals, and help as they apply for positions in a creative field. We'll start the development of portfolios in the first course (IMDM101) and continue in other courses throughout their time in the major to assist students in adding and sharpening . We expect to provide students an online portfolio system.

5. Indicate the course requirements with course numbers, titles and credits. If applicable, indicate if any course will also count for a general education requirement. In an appendix, provide the course catalog information (credits, description, prerequisites, etc.) for all of the courses.

In both IMDM tracks, Track 1 (Computing) and Track 2 (Emerging Creatives), students take a set of CMSC, ARTT and IMDM courses as part of the major, so all students are introduced to the practices of the base disciplines.

Throughout the four-year sequence both tracks take a sequence of IMDM courses that emphasize the development of skills in collaborative media design. See Appendix B: IMDM Four-Year Semester Plan (Tracks 1 & 2)

In the first year both tracks take IMDM101 (Introduction to Immersive Media) and IMDM150 (Introduction to Digital Media Theory and Culture). In the fall IMDM 101 students will be introduced to the practice of immersive media, both experiencing and creating examples, with a group project to introduce the collaborative nature of the field. This course will be self-contained for students who elect not to continue. In the spring IMDM 150 students will approach immersive media from a larger, theoretical and cultural context, to understand the historical and social aspects.

In the second year both tracks take IMDM227 (Introduction to Computational Media) and IMDM290 (Collab. Studio I: Image + Time) . In the fall IMDM227 students will build more substantial immersive media projects, with an emphasis on interactive technologies and virtual/augmented reality. In the spring IMDM290 majors will take that technology knowledge, plus knowledge from ARTT and CMSC courses, and work in collaborative, cross-disciplinary groups to build projects of their own initiative and design.

This pattern repeats in the third year as in the fall the major will focus on developing specific artistic, technical and programming skills that then in the spring, they will explore in a collaborative studio course. Track 1 majors will take IMDM327 (Augmented and Virtual Reality) in the fall, and further develop skills in this technology. Track 2 majors will take a digital ARTT digital course. Then both will take IMDM390 (Collab. Studio III: Experiential Computing) in the spring to again work collaboratively on innovative projects, either of their design or chosen from projects offered by external mentors.

In the fourth, senior year majors will take electives, and IMDM490 (Capstone I) and IMDM491 (Capstone II) in which they will initiate, carry out and exhibit substantial projects of their own design, or in coordination with external mentors. The sequence of collaborative studio labs IMDM290-390-490/491 are key to the major, as majors will learn professional practice through collaborative and communication with a team of fellow majors with varying skill sets.

While taking the IMDM course sequence, Track 1 (Computing) majors will take a sequence of CMSC courses that get them into advanced courses in the CMSC major, so these students can master the algorithms and technologies on which immersive media is based.

While taking the IMDM course sequence Track 2 (Emerging Creatives) majors will similarly take a sequence of ARTT courses that take them into advanced ARTT courses.

In both tracks the four year plans are designed so majors can take more CMSC or ARTT, as appropriate, to strengthen their mastery of each field, up to completing the courses required for a major in each field.

IMDM Course Requirements – Track 1 - Computing

Number	Title	Credits	Format	Status	GE
ENGL	ENGL elective (143/245/255/290/294)	3	Lecture		*HU
MATH 140	Calculus	4	Lecture		*AR
MATH 141	Calculus II	4	Lecture		
CMSC 131	Object-Oriented Programming I	4	Lecture		
CMSC 132	Object-Oriented Programming II	4	Lecture		
CMSC 216	Introduction to Computer Systems	4	Lecture		
CMSC 250	Discrete Structures	4	Lecture		
CMSC 330	Programming Languages	3	Lecture		
CMSC 351	Algorithms	3	Lecture		
Major Elective	CMSC 4XX (Graphics Programming)	3			
CMSC Elective	CMSC 4XX (Graphics Programming)	3	Lecture		
ARTT 100	Two-Dimensional Design Fundamentals	3	Studio		*SP
ARTT 200	Three-Dimensional Art Fundamentals	3	Studio		
ARTT 255	Introduction to Digital Art & Design Practices	3	Studio		
Major Elective	ARTT 37x/47x (Digital Media)	3	Studio		
IMDM 101	Introduction to Immersive Media	3	Studio	New	*HS
IMDM 150	Introduction to Digital Theory and Culture	3	Lecture	New	*HU
IMDM 227	Introduction to Computational Media	3	Lecture/Lab	New	
IMDM 290	Collaborative Studio I – Image + Time	3	Studio	New	
IMDM 327	Augmented and Virtual Reality	3	Lab/Lecture	New	
IMDM 390	Collaborative Studio II Experiential Computing	3	Studio	New	
IMDM 490	Capstone I	4	Studio	New	
IMDM 491	Capstone II	4	Studio	New	

IMDM Course Requirements – Track 2 – Emerging Creatives

Number	Title	Credits	Format	Status	
ENGL elec.	Choice: ENGL: 143 /245/255/290/294	3	Lecture		*HU
MATH 115	Precalculus	3	Lecture		
CMSC 122	Introduction to Programming via Web	3	Lecture		*SP
ARTT 100	Two-Dimensional Design Fundamentals	3	Studio		*SP
ARTT 110	Elements of Drawing	3	Studio		*SP
ARTT 200	Three-Dimensional Art Fundamentals	3	Studio		
ARTT 210	Drawing II	3	Studio		
ARTT 255	Introduction to Digital Art and Design Practices	3	Studio		
ARTT 37x	Choice: ARTT: 370 / 371	3	Studio		
ARTT 47x	Advanced Digital Media choice: 479a/c/d/e	3	Studio		
IMDM 101	Introduction to Immersive Media	3	Lab/Seminar	New	
IMDM 127	Creative Coding for Digital Media	3	Lab/Studio	New	
IMDM 150	Introduction to Digital Media Theory and Culture	3	Lecture	New	
IMDM 227	Introduction to Computational Media	3	Lab/Lecture	New	
IMDM 290	Collab. Studio I: Image + Time	3	Studio	New	
IMDM 350	Advanced Digital Media Theory	3	Lecture	New	*IS
IMDM 390	Collab. Studio III: Experiential Computing	3	Studio	New	
IMDM 490	Capstone I	4	Studio	New	
IMDM 491	Capstone II	4	Studio	New	

6. Summarize the factors that were considered in developing the proposed curriculum.

In Fall 2014 Provost Rankin asked faculty with expertise in digital media to explore the possibility of a new cross-disciplinary major. Amitabh Varshney chaired the committee, which included faculty from multiple campus units and disciplines including Art, Art History, Computer Science, Engineering, English, Geographical Sciences, the i-School, Psychology, and MITH. In recognition of advances in immersive media technologies and related industries along with the push to transition from a STEM to STEAM curriculum, in April 2016 the committee proposed the Immersive Media Design Major. The proposed is a response to the changing digital media industries, the academic interests of incoming students and the shifting demands of today's collaborative workplace.

In 2016, the Immersive Media Design Major committee convened to discuss development of a new major on campus in response to the changing digital and immersive media industry, the academic interests of incoming students and the shifting demands of today's collaborative workplace.

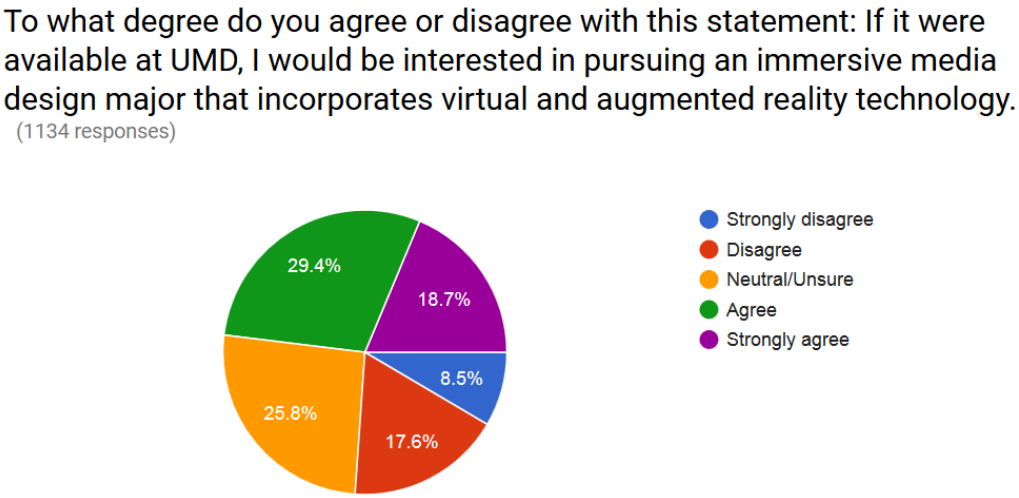
Chair: Amitabh Varshney, College of Computer, Mathematical, and Natural Sciences-UMIACS, Computer Science; Co-Chair(2014-2018):
Audra Buck-Coleman, College of Arts and Humanities-Art; Co-Chair(2014-2018):
David Mount, College of Computer, Mathematical, and Natural Sciences-Computer Science; Co-Chair(2018-Present):
Brandon Morse, College of Arts and Humanities – Art; Co-Chair(2017 – Present):
Roger Eastman , College of Computer, Mathematical and Natural Sciences – Computer Science.
Members: Shannon Collis, College of Arts and Humanities-Art,
Hasan Elahi, College of Arts and Humanities-Art,
Neil R. Fraistat, College of Arts and Humanities-English,
Henry Duval Gregory, College of Arts and Humanities-Art History & Archaeology,
Satyandra K. Gupta, A. James Clark School of Engineering-Mechanical Engineering,
Wendy Jacobs, College of Arts and Humanities-Art,
Matthew G. Kirschenbaum, College of Arts and Humanities-English,
Kari Kraus, College of Information Studies,
Kent Norman, College of Behavioral and Social Sciences-Psychology,
Justin Strom, College of Arts and Humanities-Art,
Paul Torrens, College of Behavioral and Social Sciences-Geography).

To help the committee assess the student demand for the major it carried out a survey of current UMD students from December 11 to December 16, 2016. The survey was administered through a Google forms interface and was shared with several departments and colleges, including Art, Architecture, Psychology, Theater, CMNS, ENGR, iSchool, Journalism, and Undergraduate Studies. We also reached out to Honors students in ACES, DCC, and Gemstone.

The survey started by stating the motivation:

> *The University of Maryland is exploring the possibility of creating a new major on immersive media design that would combine studio art, digital storytelling, design, and computing, using virtual reality (VR) / augmented reality (AR) technology.*
>
> *During its first phase, the major will include elements of game design, augmented and virtual reality, physical computing, and digital fabrication. The curricula would also provide a foundation for an artistic practice that would incorporate AR/VR technology. This new major would prepare students for a variety of AR-VR focused careers including jobs in the entertainment and computer games industry, education, healthcare, defense, journalism, and architecture.*
>
> *Through this survey, we seek your input to help us gauge student interest in such a major.*

The main question of the survey and its responses are below:



Overall, we received 1134 responses. Nearly half of the students (48%) strongly agreed (212) or agreed (333) that they had an interest in enrolling in the immersive media design major, if it were offered on our campus. Of the 212 who strongly agreed, 84 are currently in Computer Science, 25 in Art, 21 in Electrical/Computer Engineering, and 15 in Mechanical Engineering. Of the 333 who agreed, 87 are in Computer Science, 44 in Electrical/Computer Engineering, 33 in Mechanical Engineering, and 15 in Art.

After an initial report of the committee was accepted by the campus, the curriculum underwent multiple rounds of review and revision by ARTT and CMSC faculty who consulted with working professionals in relevant fields and compared the program to similar at other schools. There is no current accrediting body or agency for newer digital media undergraduate curricula such as proposed here. One of the largest professional groups in computer science, Institute of Electrical and Electronics Engineers (IEEE), is assembling an international task force under the **IEEE Digital Reality Initiative** to create developing an open, interdisciplinary curriculum framework for XR (VR, AR, MR) along with a set of guidelines/recommendations programs and courses for courses in this area, with this task force collaborate with the Association for Computing Machines (ACM) SIGGRAPH Education Committee, and we plan to work with this initiative as it develops. However, this curriculum will be primarily related to Track 1 of the IMDM program, and not cover the substantial collaborative elements of art and computer science.

7. 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*.

See Appendix B: IMDM Four-Year Semester Plan (Tracks 1 & 2)

Since the major has two tracks that integrate courses from ARTT, CMSC and IMDM, and students may take different routes into major starting as first year majors, or transferring into the major from another on or off campus, it will be hard to expect all to follow a single, standard four year plan.. A specific issue is trying to balance keeping students progressing in ARTT, CMSC, IMDM and general education requirements in a timely fashion, balancing their interests in major courses with the need to take general education requirements early. We expect through optional plans and advising to support specific student needs.

In Appendix B we give four year plans for both tracks, and an alternative four year plan for Track 1 that accelerates General Education requirements for students who would like to finish those earlier.

8. Indicate whether the program will be offered in a non-standard delivery format, such as online delivery, off-campus, or through non-standard terms.

This program is intended for a standard delivery format with lectures, studio classes and lab sessions. Online components will supplement and enhance, but not replace, traditional delivery.

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

N/A

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

Upon graduation from the program, students in both tracks of the major will demonstrate:

1. Technical proficiency, skill, and contextual knowledge of immersive media technologies, products, and applications so as to produce physical and digital works that are technically proficient, aesthetically engaging, and which demonstrate conceptual sophistication.
2. Deep learned cross-disciplinary problem-solving and collaborative skills in both technical and creative arenas.
3. Knowledge and proficiency in user-centered practices as they pertain to the development and application of immersive media projects.
4. Capacity to adapt to new technologies, concepts and processes as well as anticipate new technical and conceptual developments in this emerging field.

Upon graduation from the program, students in Track 1 (Computing) will demonstrate:

1. Technical proficiency in the development of coding structures and algorithms central to the practices of immersive media
2. Fluency in the methodologies of computer graphics programing for real-time and AR/VR contexts.
3. Ability to create and implement user-facing tools and algorithms for immersive media design.
4. Ability to critically evaluate and apply relevant areas of immersive media scholarship.
5. Ability to anticipate and adapt to the advent of new technological concepts, methods and practices in the field.

Upon graduation from the program, students in Track 2 (Emerging Creatives) will demonstrate:

1. Ability to effectively communicate ideas and concepts visually through the use of immersive media conventions.
2. Technical proficiency in common methods of content creation for immersive media such as creative coding, digital fabrication, physical computing, and 3-D modeling.
3. Ability to critically evaluate works of creative technology in terms of their formal, conceptual, historical and social impacts.
4. Ability to appropriately couple new technologies with traditional media in the creation of tangible immersive media projects.
5. Ability to market and promote ones work through portfolio development and business planning.

The degree to which the IMDM is meeting its goals will be assessed by means of the program' Learning Outcomes Assessment Plan (see: Appendix C: *IMDM Leaning Outcomes Assessment Plan*).

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

At its core, the Immersive Media Design Major is about the production of cultural content. Though this content will be mediated through emerging technologies, the central focus of the program is the portrayal of unique and compelling concepts and content. It is our belief that this requires a diversity of voice, perspective and background in order to meaningfully occur. Whether it be through narrative storytelling, virtual interactive experience, or novel uses of experimental technology, our students' primary responsibility will be the conveyance of ideas that resonate with diverse audiences and which have the potential to reflect on the human condition.

Currently, the populations of the two principal departments are relatively diverse in and of themselves: Underrepresented Minorities compose 30.4% (2017) of the student population in Art, an increase of 14% from twenty years ago. In Computer Science, the percentage of Underrepresented Minorities is 13.6% (2017) while the overall percentage of other minorities comprises 37.1% of its total population.

Gender diversity is less clear – In Art, there is actually a gender imbalance skewing female: in 2017, 75% of Art majors identified as female. In Computer Science, this number is just 19.6% (though this number has been trending upwards for the past 11 years).

To meet diversity standards in the IMDM, the Education Program Director will be tasked with ensuring that we effectively recruit and retain an appropriately diverse student population. Though it would be easy to state that we could rely on the gender diversity in Art to bolster the corresponding lack of diversity in this area in Computer Science, we do not wish to find ourselves in a scenario where there is a gender (or racial) disparity in population amongst the tracks. To ensure this does not happen, we will rely on model efforts already in place in Computer Science to mitigate these potential issues, in particular the Maryland Center for Women in Computing. This outreach program already has in place numerous workshops relevant to the subject matter of IMDM – previous 'High School Computing Workshops at UMD' have covered subjects such as 'Virtual Reality Programming' and 'Creating Animations with Alice Programming' which are directly relevant to IMDM course material. We will work closely with this and other community outreach programs to maintain appropriate diversity levels within both tracks of the major.

Relationship to Other Units or Institutions

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

The IMDM structure does require courses from two departments external to the major, namely the Departments of English and Math.

In the case of English, we have consulted with the chair of the Department, Prof. Amanda Bailey as well as the Director of Undergraduate Studies, Prof. Christina Walter. As a result of this meeting, Prof. Walter was supportive of the major in general and had several suggestions as to courses within English which would be suitable for the major. Her input

explicitly led to the listing of English electives laid out in the four-year plan, specifically she recommended the following courses as suitable offerings for the major and supported their inclusion:
ENGL 143 – Visualizing Knowledge: From Data to Images - though a section of seats in this course are reserved for 'Carillon' students, once those students register, the remaining seats would open to IMDM students.
ENGL 146 – Seeing the Present: Design, Graphic Storytelling, and the Politics of Visualization - expected to have Gen Ed approval by fall 2019 – no undo pressure on seats was expected at least at the initial expected enrollment of 60 students in the major.
ENGL 245 – Film Form and Culture
ENGL 290 – Introduction to Digital Studies
ENGL 293 – Writing in the Wireless World
ENGL 294 – Persuasion and Cleverness in Social Media
ENGL 398A – Professional Writing: Writing for the Arts.

Prof. Walter has affirmed the support of the English Department in offering these courses to IMDM majors in email correspondences with both Prof. Buck-Coleman, and Prof. Morse.

In the case of Mathematics, we consulted with the chair of the department, Prof. Scott Wolpert, and corresponded with faculty interested in courses relevant to immersive media. Mathematics has traditionally offered courses required by Computer Science majors, including as CMSC140 Calculus I and CMSC141 Calculus II, along with an advanced class, CMSC431, Geometry of Computer Graphics, that would be a good elective for IMDM Track 1 majors. We did discuss a potential Mathematics course designed specifically for Track 2 majors, but have not completed the course design and are currently using CMSC115.

For Documentation of correspondence between IMDM development personnel and both ENG and MATH, see *Appendix D: Affirmation of Support From External Departments.*

13. Accreditation and Licensure. Will program need to be accredited?

N/A

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

N/A

Faculty and organization.

15. Faculty and organization. Who will provide academic direction and oversight for the program? As an appendix, please indicate the faculty involved in the program. Include their titles, credentials, and courses they may teach for the program.

Given the interdisciplinary structure of this major, we believe that a governance structure that is independent of the principle academic units involved is necessary. To this end we intend the creation of an 'Academy of Immersive Media' (AIM) to provide academic direction and oversight for the program. The University of Maryland Institute for Advanced Computer Studies will initially serve as the home for this new academy. The governance structure will consist of:

Academic Director: The Education Program Director will be responsible for overall program development, administration, and supervision of all IMDM tracks; and develop assessment protocols to track program effectiveness and student success. The Education Program Director will also provide leadership in recruitment of new students to the program as well as review and approve new applications for admission to the program; This position will also assist in supervision of the faculty, staff and TAs related to the program.

AIM Staff: Advising, administration, promotion and various other duties will be undertaken by staff as outlined in section 19 of this document.

AIM Faculty: All faculty responsible for administering IMDM courses will share responsibility in ongoing governance, consisting of, but not limited to service duties in curricular guidance, learning outcome assessment, admission portfolio assessment, and facilities development. For a listing of faculty involved in the program, see Appendix E: *Faculty and Organization: Potential Faculty Involvement in IMDM*

Advising:
The academic and career advising for IMDM majors will principally be administered by IMDM academic advisors. One full-time advisor will be dedicated to each track within the major and each advisor will be housed within the Department most closely associated with the track, i.e Computer Science for Track 1, and Art for track 2. College level advising will be housed in CMNS for track 1, and ARHU for track 2. Given the LEP requirements of the major, students in the IMDM major below the 45 credit LEP threshold will be closely advised as to their potential to move forward through the LEP process and into the upper level IMDM courses. Students in the first three semesters of study will be counseled not only by the IMDM academic advisors, but also mentor faculty and staff within the program with careful attention being paid to a student's potential routes though the major. All IMDM majors will be afforded the option of switching tracks within the major depending on individual skills and interests. For instance, if a student enrolled in track 1 be lacking in certain technical skills, yet have outstanding creative thinking potential, they may be counseled to switch tracks to the 'Emerging Creatives' track. Likewise a student enrolled in track 2 who perhaps exhibits higher levels of technical sophistication at the expense of creative and artistic skills may consider switching to track 1.

In addition, care was taken to ensure that those students who do not meet the LEP requirements at 45 credits may move to affiliated majors without losing time to degree. The first three semesters of both track 1 and track 2 consist of curricula which heavily overlap with relevant majors, namely Computer Science for track 1, and Studio Art for Track 2. Students not passing the LEP process would be able to move to these majors with little to no effect on time to degree.

Students who have completed the LEP process will be advised by dedicated advisors in each track on an ongoing basis, and advisors will work closely with the Program Director, as well as the IMDM faculty to ensure each student is offered

timely and prescient academic and career advising. Advisors will report to the program director on a regular basis to aid in this process. Upon completion of the LEP process, academic advising will proceed as follows:

IMDM- Track 1 'Computing'. IMDM/CMNS will be the academic advising department / college for students in track 1. Students in this concentration will graduate with a Bachelor of Science in Immersive Media Design from CMNS.

IMDM- Track 2 'Emerging Creatives' IMDM/ARHU will be the academic advising department / college for students in track 2. Students in this concentration will graduate with a Bachelor of Arts in Immersive Media Design from ARHU.

Resource Needs and Sources

16. Each new program is required to have a library assessment in order to determine any new library resources that may be required. Please contact your departmental/programmatic library liaison or Daniel Mack at dmack@umd.edu, Associate Dean of Collections, to request a library assessment that will be added as an appendix.

See Appendix F: Library Assessment.

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

Given the unique nature of the student work in this major, and the collaborative manner in which they will be undertaking it, assessing the adequacy of physical facilities is a complicated and multi-valent affair. Students in this major will be creating unique works of immersive media design utilizing practices and skills derived from the fields of art and design, coupled with practices in physical and creative computing. Works of this nature, i.e. works which are intended by their very name to be 'immersive' require a scale and flexibility in physical facilities that broadly aligns with those of traditional programs in Art, Design, Architecture, and to a lesser degree Performing Arts. Given the field, there is an additional necessity of immediate access to high-tech equipment and high-end computer labs to facilitate the work being undertaken by students in the major.

Due to the dual-track nature of this major, we expect some variance in facilities requirements between tracks, however with the focus on maintaining an ongoing collaborative experience between tracks, and emphasis on team-based teaching and learning we expect that the shared courses, i.e. the 'IMDM' prefix courses will carry with them the following facilities requirements:

The IMDM collaborative and studio-based courses need to facilitate a range of instructional needs: lectures and PowerPoints by instructors, class discussions, critiques of finished professional work as well as in-progress student work in a variety of media (from paper prints to screen-based versions to VR/AR to physical objects), and technical instruction. These spaces need to be outfitted with appropriate supporting technology including green screens, AR/VR headsets for testing works, and physical computing needs including 3D printers and related digital fabrication tools such as laser cutters and circuit building equipment. A lecture hall space or generic classroom will not be sufficient. The work being conducted by these students will be expansive and, in many ways, without precedent. It follows that the spaces in which they will work must facilitate this practice; they must conducive to experimentation, be open and flexible and allow for easy access to the latest technology in the field. We do expect that IMDM majors may use different spaces on campus, such as Makerspaces maintained by the Library, or other similar campus-level resoruces.

We are currently working with the College Park administration to identify suitable space as a core facility for the major, a central space for collaboration and specialized equipment. We do expect to use space across campus as appropriate and available, such as Makerspaces supported by the library. Currently, the Department of Computer Science has set aside a space in the Iribe Center for use by the IMDM program for primarily AR/VR, and combined with a collaborative classroom and the new Makerspace on the same floor, this may prove adequate for foundations-level offerings in IMDM (namely IMDM 101, 127, & 227). It should be noted that this space is currently slated to be shared by IMDM and other organizations within CS, and its shared-usage status, along with its limitations with regards to fabrication, projection, and exhibition leave it wanting in terms of its ability to service the collaborative and capstone courses offered at the upper level of the major. Additionally, the Department of Art has one dedicated digital media production space as well as spaces sufficiently equipped for fabrication and production needs, however these spaces are already scheduled at or near full capacity. The digital media space already services at minimum three courses in digital media per semester; leaving room for at most an additional three sections per semester. The fabrication facilities in the Department of Art are scheduled to near capacity leaving little capacity or flexibility to service the fabrication-related needs of the major.

Collaborative and proximate classrooms and lab spaces will be essential for the success of this program. Given the experiential nature of the subject of the major, allowing students and faculty to easily see what others are doing and facilitating impromptu in-progress critique and problem solving is essential. To that end, we strongly advocate for a space that will accommodate the spatial needs of both Track 1 and Track 2 simultaneously. We foresee the division of these two tracks across physical spaces (such as in separate buildings) as detrimental to the overall interdisciplinary and transdisciplinary mission of the major. Without ample proximate teaching and making space, the collaborative potential of this major will be reduced. With this in mind, it is apparent that current facilities are not adequate. To effectively offer this major, we anticipate the following needs:

Collaborative studio & lab learning spaces:

Fabrication & teaching space (1) : This space would be for creating physical objects and specialized VR/AR/interface construction. This space is set up for messes to be made without adversely affecting the necessary technology. This space could include electronic workbenches, vinyl cutters, 3D printers, CNC routers and other machinery as well as tables and workstations.

Estimated square footage need: 3,000

Technology and teaching space (1): These spaces would be dedicated to digital content creation and would have dedicated computers in the space as well as space for presentation, critique and discussion. Ideally, this space would be situated adjacent to the production and exhibition space described below. This space is available for students to test projections, wearables, and other in-progress works. Having proximity to the assigned classroom space will allow other students to keep working on computers as needed as instructors flow back and forth between spaces as needed.

Estimated square footage need: 1,500 - 2,000 sq. ft.

Production / Exhibition Space: A space set up with production and media capture equipment such as motion capture and a green-screen to be used for projection-based and immersive media (AR/VR, performance, animation) course work. This space will need dedicated computers with ample processing power and the corresponding hardware and software to facilitate exploration and creation of IMDM projects.

If outfitted properly, this space may also serve a dual purpose as a space to showcase and exhibit works done by students in the major. In addition to providing a venue for students to learn through doing, it will serve as a calling card and recruitment gem for the major itself. An advisor, faculty mentor, or student should be able to at any moment point to the amazing work being done in the major as a way to recruit top-level students into the program. This space would also serve as a space for symposia, visiting scholar presentations and lectures.

Estimated square footage need: 2,000

Studio Spaces: A series of relatively small (200-300 sq. ft) spaces in which capstone teams and students may work on their ongoing projects without having to worry about leaving works-in-progress out in an unsecured or publicly available space. These studios would be dedicated to a limited number of capstone projects determined by project needs and strengths.

Estimated square footage need: 1500

We recommend that the aforementioned facilities be located in spaces that are advantageous to both tracks involved in the major. In order to facilitate collaboration and maintain parity amongst the tracks, it is not desirable that the gravity of location swing towards one department or another. Facilities should encourage egalitarianism and be conducive to the unique collaborative nature of the major. In lieu of a purpose built home for this major, we seek spatial resources that provide balance between the disparate homes of the major, namely Computer Science and Studio Art. We will of course leverage the unique strengths of each department's facilities where necessary, i.e. large-scale installation, exhibition and fabrication in Art Studio and high-end computing environments in Computer Science.

Administrative and faculty offices (7-12): We envision that as the program grows the need to hire more staff and faculty members will as well. Thus, the space needs to be able to accommodate this growth. We anticipate a need for 5-8 faculty offices. The lower end would be needed at the beginning of the program, and the higher end would be needed as the program develops. We would also 2-5 administrative office spaces. We foresee needing the more spaces as the program expands and thus so would the need for more administrative positions. These positions would include a program director, course advisor, recruitment and marketing position and an administrative assistant.

18. 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.

Faculty (10)

Studio-based courses in subjective, creative fields like the arts require an approach to instruction which involves substantial time working with students individually or in small teams. The nature of the field is such that no two outcomes are ever the same – each student, or group of students bring their own creativity, aesthetic and conceptual training, and personal history to a project. This requires carefully tailored feedback from instructors which address the unique qualities of any given project. To facilitate this level of instruction, faculty will need to be brought on in both CMSC, and ARTT to accommodate the course offerings. It is important to note that the hiring of these faculty may be staggered over the course of the first four years of the major's existence: As students matriculate to upper-level courses, faculty may be hired in anticipation of this cohort reaching yearly benchmarks. For a detailed breakdown of faculty requirements and timeline, see: Appendix G: *Instructional Resources - Faculty timeline.*

Teaching Assistants (14.5): Integral to accommodating the instructional workload of the IMDM program develops are an appropriate compliment of dedicated Graduate Teaching Assistants (TAs). TAs are, first and foremost, graduate students pursuing an education. The opportunity to work closely with faculty members and undergraduate students in teaching, research, or administrative environments is an integral part of that education. Graduate students who hold assistantships gain further expertise in their field; enhance their research skills and develop pedagogical skills; acquire experience in leadership, interpersonal effectiveness, and performance evaluation; acquire academic administrative experience; and enjoy collegial collaborations with advisors that may result in joint publications and other professional activities. For IMDM TAs, duties include assuming teaching responsibility for a laboratory or discussion session of a course; assisting a faculty member in the grading, advising, and administrative duties necessary for a course(s); and assisting in general departmental administrative duties, such as advising or the administration of community programs, workshops and other projects. All

TAs serving in any capacity are under the direction and close supervision of a member of the faculty. For a detailed breakdown of requirements and timeline, also see: Appendix G: *Instructional Resources - Faculty timeline.*

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

Educational Program Director (1): The Education Program Director will: provide leadership for the recruiting of new students for the program; review and approve new applications for admission to the program; review and assess overall diversity benchmarks for the program; be responsible for overall program development, administration, and supervision of all IMDM tracks; and develop assessment protocols to track program effectiveness and student success. This position will also assist in supervision of the coordinator and GAs.

Advisors (2): The IMDM's two full-time advisors will help students to appropriately shape and target their coursework to meet their academic and professional interests. They will: assist with review and approval of new applications for admission; meet with incoming advisees for orientation to the program and its tracks; and will subsequently meet at least once each semester with continuing students to plan for the coming semester and to review/revise long-range academic program schedules. They will also monitor student progress toward educational/career goals and meet at least once each semester to review the progress toward completing the proposed academic program and to discuss grades and other performance indicators.

Coordinator (1): We include full-time effort for a coordinator position for the proposed major. This kind of intensive campus-wide activity, which pulls together 12 faculty, 8 staff members and 16 teaching assistants from across colleges and departments will require significant administrative support. As such we have identified a need for one full-time staff position to serve as the IMDM administrative coordinator. This position will be responsible for: working with IMDM faculty, advisors and students as program develops; identifying and securing meeting venues; coordinating with vendors; assisting in the development of printed and electronic publicity material; managing the IMDM website; responding to general email or telephone questions from the public; and assisting educational and research program directors with other tasks as necessary.

Content Production Assistant (1): AR/VR promises to fundamentally transform how we educate and train across all age groups and a diverse array of disciplines. The key to realizing this potential in the IMDM program is *virtual content creation*; to this end, we believe that a content production assistant will provide vital assistance to the faculty, staff and students in the major. This person will work in tandem to with faculty, staff and students to design compelling VR environments and create frameworks for educational experiences in key thrust areas that we'll develop with corporate partners and stakeholders which will dramatically enrich students' educational experiences, and improve their portfolios. For example, we imagine modules that allow a student to grasp the spatial relationship amongst the atoms of a protein through an interactive 3D model; modules that allow physics students to explore 3D projectile motion in AR to see what path an infinitely bouncing ball would take when thrown against the wall of the classroom, or thrown in the gravitational fields on the Moon or Mars; or modules that are in essence virtual field trips that show students how their own carbon footprints contribute to ocean acidification and the eventual destruction of coral reefs. The potential for embodied cognition inherent in this content will allow us to create lessons that go far beyond text, but will depend on the expertise and support of the content production assistant.

Lab Technician/IT (2): Technology support will be vital to the smooth and efficient operation of the Academy. Lab technicians will be responsible for: providing and maintaining online account access, backup and storage for students and faculty; implementing and maintaining lab hardware and software upgrades; implementing and maintaining security measures to safeguard both information and equipment; and providing network maintenance, research computing support, and general technology support and training.

Marketing (0.5): We note that there are several similar digital media design programs nationwide; in order to quickly and competitively establish a presence on the national stage, we will require marketing support, at the level of one-half FTE, for both student recruitment efforts, and for outreach to potential corporate partners. This position's duties will include: assistance with the design of comprehensive program marketing plans; development and support of communications strategies; assurance of quality and appropriateness of marketing activities; and coordination of surveys, evaluations and assessments of external communications activities in order to determine the effectiveness of the program's marketing and communications plans.

Finance/Budget (0.5): To maintain fiscally-responsible operations, we advise finance/budget support at the level of one-half FTE. This position's duties include: analysis of a variety of financial information (e.g. revenues, expenditures, cash management, and cost projections) for the purpose of providing financial direction, maximizing use of funds, and ensuring overall operations are within budget.

20. Use the Maryland Higher Education Commission (MHEC) commission financial tables to describe the program's financial plan for the next five years. Add these tables as attachments. Use the space below for any additional comments on program funding. DRAFT ONLY

Expenditure Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Full-time Faculty (b+c below)	$478,800	$772,624	$1,269,897	$1,307,994	$1,347,234
a. #FTE	4.0	6.0	9.0	9.0	9.0
b. Total Salary	$360,000	$580,920	$954,810	$983,454	$1,012,958
c. Total Benefits	$118,800	$191,704	$315,087	$324,540	$334,276
2. Part time Faculty (b+c below)	$12,000	$24,000	$60,000	$60,000	$60,000
a. #FTE	0.2	0.4	1.0	1.0	1.0
b. Total Salary	$12,000	$24,000	$60,000	$60,000	$60,000
c. Total Benefits	$0	$0	$0	$0	$0
3. Admin. Staff (b+c below)	$139,650	$143,840	$246,924	$254,332	$261,962
a. #FTE	1.5	1.5	2.5	2.5	2.5
b. Total Salary	$105,000	$108,150	$185,658	$191,227	$196,964
c. Total Benefits	$34,650	$35,690	$61,267	$63,105	$64,998
4. Total Support Staff (b+c below)	$133,000	$205,485	$211,650	$217,999	$224,539
a. #FTE	2.0	3.0	3.0	3.0	3.0
b. Total Salary	$100,000	$154,500	$159,135	$163,909	$168,826
c. Total Benefits	$33,000	$50,985	$52,515	$54,090	$55,713
5. Graduate Assistants (b+c)	$148,832	$229,945	$276,318	$325,265	$335,023
a. #FTE	4.0	6.0	7.0	8.0	8.0
b. Stipend	$80,000	$123,600	$148,526	$174,836	$180,081
c. Tuition Remission	$68,832	$106,345	$127,792	$150,429	$154,942
6. Equipment	$60,000	$60,000	$60,000	$60,000	$60,000
7. Library	$5,000	$5,000	$5,000	$5,000	$5,000
8. New or Renovated Space	$500,000	$125,000	$100,000	$100,000	$100,000
9. Other Expenses: Operational Expenses	$80,000	$80,000	$80,000	$80,000	$80,000
TOTAL (Add 1 - 8)	**$1,557,282**	**$1,645,894**	**$2,309,789**	**$2,410,591**	**$2,473,759**

The university is not anticipating overall enrollment growth as a result of this major (more so a shift in major selection by matriculating students), so no new tuition revenue is assumed in identifying resources. Resources will come from redirection of tuition revenue at the campus level, redirection of instructional resources from the collaborating colleges, from enhancement funding, and from other reallocated resources within the university.

21. 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.".

With the advent of the Internet and related technologies, we have witnessed a substantial and necessary turn towards the STEM fields at academic institutions the world around. Researchers working in computer science and related fields have opened doors and democratized information in a manner that was previously unimaginable. Though this process, scientists have solved countless problems and paved the way towards a society empowered with commonplace technologies that would have seemed impossible only a few years ago.

As this technological landscape matures, focus increasingly turns towards how these tools are being used to affect our cultural and societal landscape. Increasingly, those in the STEM fields look to incorporate the creative problem-solving and inventiveness often associated with those in the arts as a means to contextualize and enliven advances in technology. Likewise, artists and creatives in the twenty-first century must take into account ubiquitous technology as they address the cultural landscape around them. Indeed, it has become impossible to effectively function as an artist, designer or creative entrepreneur without mastery of numerous technical skill sets ranging from simple image manipulation to advanced generative and reactive creative computation practices.

The concatenation of STEM practices with the arts within the academy has come to be known as STEAM (Science Technology Engineering Arts and Math). The Immersive Media Design Major represents a substantive union of the STEM fields and the creative practices. It is a concrete example of STEAM curriculum in practice; one which has the potential to engender unique ways of navigating both fields for a new generation of thinkers, makers and doers. Students in computing, art, education, engineering, behavioral and social sciences, information and business—working together—will discover the convergence of their differing perspectives and pave the way for groundbreaking new research. These uniquely well-equipped students will emerge into Maryland's educated workforce in three to five years able to pursue a robust array of in-demand careers and poised to drive innovation in a broad range of industries with their hands-on knowledge of novel digital technologies.

The State of Maryland and greater Washington region are poised to capitalize on the virtual and augmented reality industry. The region has many startups, including Machine Elf (program for developers, architects and engineers to better communicate building plans via a virtual reality headset), Agora VR (software that lets users attend seminars, university lectures or business meetings with the help of a virtual reality headset), VisiSonics (hardware and software designed to bring life-like audio to gaming, virtual-reality environments, movies and music), Brightline Interactive (created virtual reality gaming experience for Toyota to accurately illustrate the dangers of distracted driving), and Sensics (builds open-source virtual reality headsets and software).

By training students to be thinkers as well as makers and doers, we can incentivize them to transition their study into practice. Specifically, our major will coordinate with an annual programming and building contest (VR Camp), bringing together hundreds to thousands of student attendees, where students take what they love, fuse it with technology, and build something the world has never seen. Unlike other "hackathons," these events will bring together students that are exclusively focused on VR and AR, but from an interdisciplinary point of view, including computer scientists, engineers, psychologists, and artists. Through significant collaboration with the local and national digital media industry, we anticipate at least 10 startups will arise from this initiative over a period of five years, further showcasing Maryland as a unique location for entrepreneurial and innovative business opportunities in the country.

Further, Maryland has one of the largest clusters of computer gaming companies on the East Coast, with over 50 companies involved in games and games-related ventures. Our links to this growing industry remain strong, including a steady flow of graduates to both established companies and startups. Oculus VR co-founders and their families committed $38 million to UMD in September 2014 to help establish our leadership in virtual and augmented reality. UMD is also strongly supported by NVIDIA, a leading vendor of visual computing processors, through the company's Center of Excellence program. According to a 2010 report prepared by Sage Policy Group for the Maryland Department of Business and Economic Development, "Digital media is a $5.5 billion industry in Maryland. Once one considers multiplier effects, the industry is associated with $15 billion in economic activity in Maryland each year; in fiscal year 2008, Maryland's digital media industry contributed more than $1 billion to State and local government revenue." We are uniquely positioned to catalyze this rapidly growing segment of the local and national economy.

The Immersive Media Design Major also addresses several goals put forth in the Maryland State Plan for Postsecondary Education. The State Plan identifies 'Innovation' as one of six primary goals. In particular, it defines innovation as "the use of new, transformative approaches to delivering and evaluating postsecondary institutions' offerings, instructional methods, and training models and systems as a way of facilitating student success." It goes on to state: "The State encourages the development of new, diverse, creative, and collaborative practices that enhance the quality, effectiveness, and adeptness of offerings and services provided by postsecondary institutions. " The Immersive Media Design Major was envisioned from the beginning as a model of interdisciplinary collaboration bringing together disciplines from across campus. The comprehensive collaborative nature of the major, which involves team teaching with faculty from different colleges and departments, along with the expectation that students from disparate fields collaborate to find success seems uniquely prescient to this goal of the State Plan. In addition, it should be obvious from the content of this proposal that this program itself addresses a newly emerging high-tech field which is poised to become ubiquitous in daily life. The State Plan specifically outlines trends which underscore the need for educational innovation to include:" the need for more high-tech, cyber security, health and education workers." The IMDM specifically addresses this need for more high-tech workers in the state workforce.

In addition, Goal 5 of the State Plan: 'Economic Growth and Vitality" the plan goes on to put emphasis on partnerships with industry: "Collaboration among postsecondary institutions and business and industry is essential to the development and adoption of innovative approaches and strategies that can address the changing needs of the workplace and workers." A required component of the capstone year of the IMDM program is that each and every student work with an 'External Mentor' though that mentor can come from the campus community, it is explicitly encouraged that this mentor be a professional from a relevant industry or field, thus ensuring input and feedback from relevant business and industry.

The IMDM also addresses several challenges put forth in the state plan, among them, collaboration: "Collaborative efforts can reduce burdens on individual institutions, agencies, and businesses, and enhance the coordination of strategies to better identify and respond to student and workforce needs." The collaborative nature of this major speaks directly to this challenge. Indeed, IMDM envisions a scenario where collaboration is the defining characteristic of the curriculum. It recognizes intrinsically that collaboration fosters a synergetic scenario in which complementary disciplines work together to better serve our student population.

22. 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, or Maryland state Occupational and Industry Projections over the next five years.

Broadly speaking, the field of Immersive Media Design encompasses a constellation of industries from computer science, entertainment, game design, graphic design, industrial design, the fine arts, architecture, and other related fields. Specifically, Virtual & Augmented Reality as a field unto itself is in its infancy, and as such, employment and market data is sparse. It is precisely this nascence which makes this major so promising; It situates the University of Maryland as a forerunner in the field and, in doing so, positions the program in an aspirational position for top-ranked students from around the world and as exemplar for other institutions across the country. We expect to graduate 60 students a year at steady state.

Projections indicate that AR/VR as a field is set to expand rapidly over the next five to ten years: A five-year projection of total AR/VR spending by Digi-Capital suggests a growth in revenue in AR/VR markets which will grow from $2B in 2016 to nearly $110B in 2021. Govini – a government spending analysis firm shows that DoD spending alone on AR/VR grew at a 16.9% compound annual growth rate between 2012 and 2017. A January, 2017 report by TechCrunch anticipates that by 2021, AR/VR fields could command a market of $108B annually, and a recent International Data Corporation (IDC) study shows that spending on AR/VR services will reach $27B in 2018, a 92% increase over spending in 2017. Further, the IDC study expects a five year compound annual growth rate of 72% (2017-2022)[1]. In a January 2016 report, Goldman Sachs predicted that by 2025, virtual and augmented reality technologies will command an addressable market of $85B. The Goldman Sachs analysis goes on to discuss the breadth and potential of the AR/VR landscape – it estimates the following spending across the enumerated fields:

- Video Games: $11.6 Billion by 2025 with an estimated 216 million users
- Live Event Production: $4.1 billion by 2025 with an estimated 95 million users
- Video Entertainment: $3.2 billion by 2025 with an estimated 79 million users
- Retail: $1.6 billion by 2025 with an estimated 32 million users
- Real Estate: $2.6 billion with an estimated 300,000 users
- Healthcare: $5.1 Billion with an estimated 3.4 million users
- Education: $700 million with an estimated 15 million users
- Military: $1.4 billion with an estimated 700,000 users
- Engineering: $4.7 billion with an estimated 3.2 million users

Further, in 2017, Citi Research predicted that by 2035, that market could grow to $2T[2]. The potential for disruption in the job market in the near future is clearly massive.

For sources and graphs, see: Appendix H: *AR/VR Market Analysis*

[1] https://www.zdnet.com/article/demand-for-augmented-and-virtual-reality-expected-to-soar-this-year/

[2] https://www.citibank.com/commercialbank/insights/assets/docs/virtual-and-augmented-reality.pdf

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

In public institutions in the state of Maryland, the following offer programs which may be considered similar to the IMDM proposal:

1) University of Maryland, Baltimore County – Degrees Offered: BA, BFA Visual Arts with a Concentration in Animation/Interactive Media
2) Bowie State University – Degrees Offered: BS in Visual Communication and Digital Media Arts (VCDMA) with a Concentration in Animation & Motion Graphics, Digital Cinema & Time-Based Media, and Digital Media Arts
3) University of Maryland, Baltimore County – Game Development track in the Computer Science BS degree
4) Notre Dame of Maryland University Digital Media Arts BA
5) Maryland Institute College of Art - Degrees Offered: BFA Animation, Interaction Design and Art; MFA Illustration Practice
6) Salisbury University - Degrees Offered: BA, BFA Art with a New Media Track. Note: Video, Audio, Animation, Web Design, and Screen Graphics are all components of the New Media Track.
7) Towson University - Degrees Offered: BFA Art and Design with Concentration in Digital Art and Design, Illustration; MFA Studio Art; Post-Baccalaureate Certificate in Interactive Media Design
8) University of Baltimore, BS. in Simulation and Game Design

The listing above represents an exhaustive listing of institutions in the state which have degree programs which explore to varying degrees the overlap of technology and the arts. An examination of the curricula of said programs indicates that the IMDM will not replicate the curricula or learning outcomes of any of these programs in any substantive manner.
This is due primarily to several defining characteristics of the IMDM curriculum that are not present in any of the aforementioned programs:

1. The programs listed above all exist as siloed programs within singular academic homes; they do not offer the sustained collaborative curriculum between Computer Science and the Arts as defined in the IMDM curriculum. Though the 'Gaming Arts and Interactive Media' program at UMBC does in fact contain both an 'arts track' and a 'computing track' there are no courses listed in which students from both tracks are asked to work collaboratively. IMDM seeks to maintain a semester-to-semester collaborative experience and reinforces this with numerous courses in which the subject matter explicitly demands successful collaboration between the technically and artistically-minded.
2. None of the programs enumerated above explicitly prepare students for careers in Immersive Media Design. Though the curriculum of the programs above deal with the intersection of technology and the arts, none of the aforementioned programs explicitly cover Augmented or Virtual Reality – they place primacy in several realms, be it game design, 3-D modeling and Animation, or Screen-based Creative Coding, however none of these programs are described as approaching computing as a field that can be physically experienced and as encompassing of all of the senses as Immersive Media Design with its focus on AR/VR, tangible computing, digital fabrication and physical interactivity.
3. The IMDM curriculum is written as a ground-up standalone major which draws on the strengths of our faculty in Art, Design, and Computer Science. It consists of a four-year curriculum which builds skills and critical-thinking capacity year-over-year from the freshman year though graduation. In contrast, the programs above by and large consist of two-year (junior and senior) addenda to existing majors, or as major-elective tracks consisting entirely of 400-level courses taken only in the student's junior and senior years.

24. 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?

Of programs in the state at Historically Black Institutions, the 'Visual Communications & Digital Media Arts' concentrations at Bowie State University appears to be the sole program with meaningful overlap in curriculum with the IMDM proposal. This comes in the form of several courses within the Digital Media Arts concentration, namely: ART 342 – New Media Public Art Installation, ART 230 – Introduction to Computer Graphics, and ART 470 – Self-Promotion & Marketing in the Arts, ART 479 Animation and Modeling II.

Though these courses overlap in subject matter with several courses in the IMDM proposal, these courses cover subject matter which may be said to be foundational practices within the media, and therefore overlap is expected. The Visual Communications and Digital Media Arts concentrations at Bowie State University are offered entirely within the context of a 'Department of Fine and Performing Arts.' They do not offer a program with a similar interdisciplinary bent as that which is put forth in this proposal. Further, there is no mention of software development, tangible computing, digital fabrication, and related Immersive Media Design fields within the curriculum at Bowie State University. With this in mind, we do not anticipate that the IMDM program will adversely affect the existing program at Bowie State University.

25. For new Post-Baccalaureate Certificates derived from existing master's programs only, include the complete curriculum of the existing master's program.

N/A

Appendix A: Course Descriptions and Prerequisites

Course Descriptions: IMDM course listings (tracks 1 & 2)

IMDM 101 – Introduction to Immersive Media
Credits: 3
Prerequisite: N/A
Course Description:
IMDM 101 is an introduction to the basic practices, concepts and issues in the field of Immersive Media Design. This course is a hybrid studio / lecture course in which students will work collaboratively in teams to complete both research and practical projects related to the field. Topics covered include: creative labs with software and interactive hardware, surveying the contemporary and historic works of Immersive Media Design, and speculative project design.

IMDM 127 – Creative Coding for Digital Media
Credits: 3
Prerequisite: N/A
Course Description:
An introduction to program supported by exercises in creative coding, creating code for algorithmic and interactive art. Students will use a problem-driven approach to design and build software for the visual and auditory arts. The course also includes an introduction to a wide variety of issues relating to computational including software design and construction, supporting mathematics, and how computational approaches impact artistic choice. The course assumes no background in programming and is targeted to students with a broad diversity in backgrounds and interests.

IMDM 150 – Introduction to Digital Media Theory and Culture
Credits: 3
Prerequisites: N/A
Course Description:
IMDM 150 is an introduction to the fundamental structures and themes of digital culture in contemporary society as related to immersive media. This course will provide examples of contemporary works of Immersive Media Design, New Media Art, and emerging cultural technologies to demonstrate pathways towards becoming active producers, critics, and consumers of digital culture. It will explore the dynamic interplay between culture and emerging digital technologies and examine the many ways in which they influence our lives.

IMDM 227 Intro to Computational Media.
Credits: 3
Prerequisites: IMDM 127 or CMSC 131
Course Description:
IMDM 227 is an introduction to practices in computational media as they pertain to the implementation and creation of virtual and augmented reality applications. This course will cover this subject matter from both technical and aesthetic viewpoints. Students are introduced to basic programming constructs, digital asset creation processes, algorithms, and data structures associated with Augmented and Virtual Reality (AR/VR) production pipelines.

IMDM 290 – Collaborative Studio I: Image + Time
Credits: 3
Prerequisites: IMDM 101, IMDM 150, ARTT255, IMDM 227, Candidate Portfolio Review
Course Description:
IMDM 290 is concept-driven team-taught studio course in which you will work together in groups to create intellectually engaging and technically innovative works of time-based media. It bridges the technical and creative tracks of the major to expose students to the process of working collaboratively on team-based projects in a manner that reflects contemporary practices in the fields of art, design, and creative technical industries. Topics include: image manipulation, audio/video production, generative and procedural image manipulation processes, as well as effective teamwork, exhibition, installation and presentation design.

IMDM 327 – Augmented and Virtual Reality
Credits: 3
Prerequisites: IMDM227, CMSC132
Course Description:
Introduction to mechanisms and programming for virtual reality, augmented reality, and related technologies. Covers elements of a standard VR system, including creating, managing and rendering visual and audio VR content, tracking orientation and positions of head mounted display (HMD) and controller, rendering stereo imagery for VR headsets, and implementing approaches for user interactivity.

IMDM 350 – Advanced Digital Media Theory
Credits: 3
Prerequisites: IMDM 290
Course Description:
IMDM 350 is an lecture course covering advanced theories and concepts in the fields of immersive media design, new media art, design, and cultural technology. Building on the foundation of IMDM 150, this course looks at ways in which contemporary societal norms are being shaped by game culture, social and mobile media, AR/VR escapism, network aesthetics, hacktivism, open-source culture, neural networks, artificial intelligence, and machine learning, among others. This course addresses the broad range of ways in which the accelerating pace of technological advances influence how we mediate the world around us and examines the environmental, social, political, and ethical implications of its use.

IMDM 351 – Digital Innovation Marketing and Business
Credits: 3
Prerequisites: IMDM 290
Course Description:
IMDM 351 is a lecture course in which students research and learn how to implement best practice strategies in building support for wide ranging projects in the fields of applied creativity (such as entrepreneurial ventures, media startups, public media arts and design projects). Students in IMDM 310 will learn how to effectively build a modern promotional portfolio that supports their entrepreneurial, creative, emerging technology, new-media, and artistic endeavors. Topics include: portfolio building, grant writing, social media public relations, oral presentation and promotion.

IMDM 358 – Experiential Learning
Credits: 2-6
Prerequisites: IMDM 290
IMDM 358 supports those students wishing to seek out professional experience in relevant Immersive Media Design fields. This course is an elective open to students from all tracks of the major who wish to participate in

internships in a position or at an organization which will offer real-word experience, knowledge and feedback from mentors working in a relevant field.

IMDM 390 – Collaborative Studio II: Experiential Computing
Credits: 3
Prerequisites: IMDM 290, ARTT37x or IMDM 327
Course Description:
IMDM 390 is an intermediate-level concept-driven team-taught studio course wherein students work in groups consisting of students across both tracks of the major. The objective of the course is to create multi-sensorial works of art, design, and cultural technology through the use of inventive digital processes such as 3-D modeling, procedural animation, audio synthesis, and interactivity. Emphasis is placed on the development of works which envelop the viewer or participant and exhibit a physicality which manifests from the ephemera of digital media. Topics covered include: 3-D modeling, digital cinematography and lighting design, digital fabrication, projection design, sound design and electronics.

IMDM 470 – Performative Computing
Credits: 3:
Prerequisites: IMDM 390
Course Description:
IMDM 450 is a studio course which introduces intermediate and advanced level practices and theories of designing physically interactive immersive media experiences. Through the use of emerging systems of interaction design, digital sensing, fabrication, and display, students explore the methods and processes involved in the creation of materialized media for a broad range of multi-sensorial applications. Topics include: technology-augmented live performance, audio and visual responsive environments, data responsive design, media architecture, site specific new-media installation.

IMDM 490 – Capstone 1
Credits: 4
Prerequisites: IMDM 390
Course Description:
The first in a two-semester series of courses (with IMDM 491), this team-taught studio course examines the generative process of creating a large-scale immersive media design project. Students will commence pre-production and early-stage production processes for a large-scale capstone project. Topics covered include: project ideation, feasibility studies, computational tool-building and pipeline logistics, external mentorship, and in-class peer critiques of in progress work.

IMDM 491 – Capstone II
Credits: 4
Prerequisites: IMDM 490
Course Description:
The second in a two-semester series of courses (with IMDM 490), in this team-taught studio course you will complete the process of creating and publicly exhibiting a large-scale immersive media design project. Topics covered include exhibition design, exhibition venue research, public relations, and team-based collaboration.

Course Descriptions: ARTT Course listings required in tracks one or two:

ARTT 100 – Two-Dimensional Design Fundamentals
Credits: 3
Prerequisites: N/A
Course Description:
Principles and elements of two-dimensional design. Introduction to visual communication.

ARTT 110 – Elements of Drawing I
Credits: 3
Prerequisites: N/A
Course Description:
Fundamental concepts, media, and processes of drawing. Emphasis on observation and representation in combination with individual expression. Subject matter includes still life, human figure, nature, the built environment, and conceptual projects.

ARTT 200 – Three-Dimensional Art Fundamentals
Credits: 3
Prerequisites: ARTT 100, ARTT 110
Course Description:
Fundamental concepts of three-dimensional form and space examined through the manipulation and organization of various materials.

ARTT 210 – Elements of Drawing II
Credits: 3
Prerequisites: ARTT 110
Course Description:
Continuation of ARTT110 with additional emphasis on color, figure drawing, and contemporary issues.

ARTT 255 – Introduction to Digital Art and Design Processes
Credits: 3
Prerequisites ARTT 100, ARTT 110
Course Description:
Introduction to basic software and principles of digital imaging, and how they are applied to art and design. Topics covered: Digital image construction and manipulation, Vector-Based digital techniques layout, typography, etc), time-based digital techniques (video and audio composition and manipulation), and basic interactivity (web-design). Digital media used to explore visual principles established in ARTT100.

ARTT 370 – Elements of Digital Media
Credits: 3
Prerequisites: ARTT 255 or permission of ARHU-ARTT
Course Description:
Exploration of creativity through code and software development, image creation and manipulation, interactivity, and linkages between digital audio and video. Emphasis on issues in contemporary digital art.

ARTT 371 – Digital Video and Sound Installation
Credits: 3
Prerequisites: ARTT 255
This course focuses on the acquisition of practical and theoretical skills integral to digital videoand sound installation as an evolving form that extends beyond the screen and into site-specific,immersive, and multiple-channel environments. Through technical demonstrations, individualprojects, assigned readings, and class

discussions, students will develop and extend theirunderstanding of time-based media and installation practices, learn the historical/culturalsignificance of the medium, and discuss the work of various artists.

ARTT479A – Advanced Digital Media Studio: Code and Form
Credits: 3
Prerequisites: ARTT 370
Course Description:
Advanced level course in Digital Media emphasizing contemporary practices and theories in the area of Digital Fabrication. 3-D modeling, 3-D printing and related digital fabrication techniques are covered.

ARTT 479D – Advanced Digital Media Studio: Immersive and Virtual Environments.
Credits: 3
Prerequisites: ARTT 370
Course Description:
Introduction to the uses of game development software in an artistic context. Practical examination of interactive, immersive and installation art as mediated through the context of real-time computer generated imagery and game engine methodologies.

Course Descriptions: CMSC Course listings required in tracks one or two:

CMSC122 Introduction to Computer Programming via the Web
Credits: 3
Prerequisites: None
Restriction: Must not have completed any courses from CMSC131-499 course range; and must not be concurrently enrolled in CMSC131. Credit only granted for: CMSC106, CMSC122, or INST126**.**
Course Description:
Introduction to computer programming in the context of developing full featured dynamic web sites. Uses a problem solving approach to teach basics of program design and implementation using JavaScript; relates these skills to creation of dynamic web sites; then explores both the potential and limits of web-based information sources for use in research. Intended to help relate a student's major to these emerging technologies.

CMSC131 Object-Oriented Programming I
Credits: 4
Corequisites: MATH140; and permission of CMNS-Computer Science department
Course Description:
Introduction to programming and computer science. Emphasizes understanding and implementation of applications using object-oriented techniques. Develops skills such as program design and testing as well as implementation of programs using a graphical IDE. Programming done in Java.

CMSC132 Object-Oriented Programming II
Credits: 3
Prerequisites: Minimum grade of C- in CMSC131; or must have earned a score of 5 on the A Java AP exam. Or permission of the department based on satisfactory performance on the department placement exam; and minimum grade of C- in MATH140; and permission of CMNS-Computer Science department
Course Description:
Introduction to use of computers to solve problems using software engineering principles. Design, build, test, and debug medium -size software systems and learn to use relevant tools. Use object-oriented methods to create

effective and efficient problem solutions. Use and implement application programming interfaces (APIs). Programming done in Java.

CMSC250 Discrete Structures
Credits: 3
Prerequisites: Minimum grade of C- in CMSC131; or must have earned a score of 5 on the A Java AP exam. Or permission of the department based on satisfactory performance on the department placement exam; and minimum grade of C- in MATH140; and permission of CMNS-Computer Science department
Course Description:
Introduction to use of computers to solve problems using software engineering principles. Design, build, test, and debug medium -size software systems and learn to use relevant tools. Use object-oriented methods to create effective and efficient problem solutions. Use and implement application programming interfaces (APIs). Programming done in Java.

CMSC330 Organization of Programming Languages
Credits: 3
Prerequisites: Minimum grade of C- in CMSC250 and CMSC216; and permission of CMNS-Computer Science department.
Course Description:
The semantics of programming languages and their run-time organization. Several different models of languages are discussed, including procedural (e.g., C, Pascal), functional (e.g., ML, LISP), rule-based (e.g., Prolog), and object-oriented (e.g., C++, Smalltalk). Run-time structures, including dynamic versus static scope rules, storage for strings, arrays, records, and object inheritance are explored.

CMSC351 Algorithms
Credits: 3
Prerequisites: Minimum grade of C- in CMSC250 and CMSC216; and permission of CMNS-Computer Science department.
Course Description:
A systematic study of the complexity of some elementary algorithms related to sorting, graphs and trees, and combinatorics. Algorithms are analyzed using mathematical techniques to solve recurrences and summations.

Course Descriptions: CMSC Course listings recommended in track one

CMSC420 Data Structures
Credits: 3
Prerequisites: Minimum grade of C- in CMSC351 and CMSC330; and permission of CMNS-Computer Science department. Or must be in the (Computer Science (Doctoral), Computer Science (Master's)) program.
Course Description:
Description, properties, and storage allocation of data structures including lists and trees. Algorithms for manipulating structures. Applications from areas such as data processing, information retrieval, symbol manipulation, and operating systems.

CMSC425 Game Programming
Credits: 3
Prerequisites: Minimum grade of C- in CMSC420.
Course Description:
An introduction to the principles and practice of computer game programming and design. This includes an introduction to game hardware and systems, the principles of game design, object and terrain modeling, game physics, artificial intelligence for games, networking for games, rendering and animation, and aural rendering. Course topics are reinforced through the design and implementation of a working computer game.

CMSC426 Computer Vision
Credits: 3
Prerequisites: Minimum grade of C- in CMSC330 and CMSC351; or must be in the (Computer Science (Doctoral), Computer Science (Master's)) program.
Restriction: Permission of CMNS-Computer Science department.
Course Description:
An introduction to basic concepts and techniques in computervision. This includes low-level operations such as image filtering and edge detection, 3D reconstruction of scenes using stereo and structure from motion, and object detection, recognition and classification.

CMSC427 Computer Graphics
Credits: 3
Prerequisites: MATH240; and minimum grade of C- in CMSC420; and permission of CMNS-Computer Science department. Or must be in the (Computer Science (Doctoral), Computer Science (Master's)) program.
Course Description:
An introduction to the principles of computer graphics. Includes an introduction to graphics displays and systems. Introduction to the mathematics of affine and projective transformations, perspective, curve and surface modeling, algorithms for hidden-surface removal, color models, methods for modeling illumination, shading, and reflection.

CMCS434 Introduction to Human-Computer Interaction
Credits: 3
Prerequisites: Minimum grade of C- in CMSC330 and CMSC351; and permission of CMNS-Computer Science department. Or must be in the (Computer Science (Doctoral), Computer Science (Master's)) program.
Course Description:
Assess usability by quantitative and qualitative methods. Conduct task analyses, usability tests, expert reviews, and continuing assessments of working products by interviews, surveys, and logging. Apply design processes and guidelines to develop professional quality user interfaces. Build low-fidelity paper mockups, and a high-fidelity prototype using contemporary tools such as graphic editors and a graphical programming environment (eg: Visual Basic, Java).

Appendix B: Four Year Plan with Benchmarks

The follow three pages show four-year plans for the IMDM major.

The central thread of the major is the sequence of IMDM courses, and most specifically the collaborative studio series IMDM290, 390 and 491/491. We hope to develop cohorts of majors that proceed through these as a group.

However, students come to majors with many backgrounds. They may have coursework from high school, they may be an internal transfer from another major, they be an external transfer from another school, they may have started in ARTT or CMSC and wish to switch. We expect to work on different routes through the major for students of different backgrounds and interests. The major already accommodates artistically minded students in Track 2, and technically minded students in Track 1. We expect to accommodate other variations in the sequence in which students take CMSC and ARTT courses.

Specifically, to accommodate students who wish to emphasize CMSC courses in Track 1, we have a four-year plan "Track 1: Computing – Accelerated Computer Science". For Track 1 students who wish to extend their CMSC sequence over more semesters, we have "Track 1: Computing – Extended Computer Science.' The latter allows students to complete more General Education (Gen Ed) courses earlier.

Track 1: Computing – Accelerated Computer Science

	Fall	Spring
Year 1	CMSC 131 - Object Oriented Programming I (4) MATH 140 - Calculus (4) FSAR ARTT 100 - Two-Dimensional Design Fundamentals (3) DSSP IMDM 101 - Intro to Immersive Media (3)[NEW]† ENGL 101 - Academic Writing (3) FSAW Credits: 17 (semester 1)	MATH 141 - Calculus II (4) CMSC 132 - Object-Oriented Programming II (4) ARTT 200 - Three-Dimensional Art Fundamentals (3) IMDM 150 - Intro to Digital Media Theory and Culture (3)[NEW]† DSHU Credits 14 / 31 (semester 2)
Year 2 Benchmark Requirements - Semester three: Successfully complete portfolio review process between 31-47 credits Completion or enrollment in: CMSC 216, 250, IMDM 227, ARTT 255 *Must also meet Limited Enrollment Criteria of Computer Science Major	IMDM 227 - Intro to Computational Media (3) [NEW] CMSC 216 - Intro to Computer Systems (4) CMSC 250 - Discrete Structures (4) ARTT 255 - Intro to Digital Art and Design Practices (3) COMM 107 - Oral Communication (3) FSOC Credits: 17 / 48 (semester 3)	CMSC 330 - Programming Languages (3) CMSC 351 Algorithms (3) IMDM 290 - Collaborative Studio I: Image + Time (3) Gen Ed (3) DSNS ENGL Elective (143/245/255/290/294) (3) DSHU Credits: 15 / 63 (semester 4)
Year 3 Benchmark Requirements - Semester five: Completion or Enrollment in: IMDM 390,Professional Writing, COMM 107	CMSC 4xx Elective (3) IMDM 327 - Augmented and Virtual Reality (3) Gen Ed (3) DSHS Gen Ed (4) DSNL Gen Ed (3) DSSP (Non-major) Credits: 16 / 79 (semester 5)	IMDM 390 - Collaborative Studio II: Experiential Computing (3) Professional Writing (3) FSPW Gen Ed (3) DSHS Open Elective (3) Open Elective (3) Credits 15 / 94 (semester 6)
Year 4	IMDM 490 - Capstone I (4) ARTT 37X / 47X elective (3) Open Elective (3) Open Elective (3) Credits: 13 / 107 (semester 7)	IMDM 491 Capstone II (4) CMSC 4XX Elective (3) Open Elective (3) Open Elective (3) Credits: 13 /120 (semester 8)

* - must fulfill I-Series requirements | ** - must fulfill Understanding Plural Societies requirement | † - offered every semester

Track 1: Computing – Extended Computer Science

	Fall	Spring
Year 1	CMSC 131 - Object Oriented Programming I (4) MATH 140 - Calculus (4) FSAR ARTT 100 - Two-Dimensional Design Fundamentals (3) DSSP IMDM 101 - Intro to Immersive Media (3)[NEW]† ENGL 101 - Academic Writing (3) FSAW Credits: 17 (semester 1)	MATH 141 - Calculus II (4) CMSC 132 - Object-Oriented Programming II (4) ARTT 200 - Three-Dimensional Art Fundamentals (3) IMDM 150 - Intro to Digital Media Theory and Culture (3)[NEW]† DSHU Credits 14 / 31 (semester 2)
Year 2 Benchmark Requirements - Semester three: Successfully complete portfolio review process between 31-47 credits Completion or enrollment in: CMSC 216, 250, IMDM 227, ARTT 255 *Must also meet Limited Enrollment Criteria of Computer Science Major	IMDM 227 - Intro to Computational Media (3) [NEW] CMSC 250 - Discrete Structures (4) Gen Ed (3) DSNS ARTT 255 - Intro to Digital Art and Design Practices (3) COMM 107 - Oral Communication (3) FSOC Credits: 16 / 47 semester 3)	CMSC 216 - Intro to Computer Systems (4) IMDM 290 - Collaborative Studio I: Image + Time (3) Gen Ed (3) DSHS ENGL Elective (143/245/255/290/294) (3) DSHU Gen Ed (4) DSNL Credits: 17 / 64 (semester 4)
Year 3 Benchmark Requirements - Semester five: Completion or Enrollment in: IMDM 390,Professional Writing, COMM 107	CMSC 330 - Programming Languages (3) CMSC 351 Algorithms (3) IMDM 327 - Augmented and Virtual Reality (3) Gen Ed (3) DSHS Gen Ed (3) DSSP (Non-major) Credits: 15 / 79 (semester 5)	IMDM 390 - Collaborative Studio II: Experiential Computing (3) Professional Writing (3) FSPW CMSC 4xx Elective (3) Open Elective (3) Open Elective (3) Credits 15 / 94 (semester 6)
Year 4	IMDM 490 - Capstone I (4) ARTT 37X / 47X elective (3) Open Elective (3) Open Elective (3) Credits: 13 / 107 (semester 7)	IMDM 491 Capstone II (4) CMSC 4XX Elective (3) Open Elective (3) Open Elective (3) Credits: 13 /120 (semester 8)

* - must fulfill I-Series requirements | ** - must fulfill Understanding Plural Societies requirement | † - offered every semester

Track 2: Emerging Creatives

	Fall	Spring
Year 1	ARHU 158 (3) MATH 115 - Precalculus (3) FSMA• CMSC 122 - Intro to Programming via Web (3) ARTT 100 - Two-Dimensional Design Fundamentals (3) IMDM 101 - Intro to Immersive Media (3)† DSSP Credits: 15 (Semester 1)	Gen Ed (3) ENGL101 FSAW • IMDM 127 - Creative Coding for Digital Media(3) [NEW] ARTT 200 - Three-Dimensional Art Fundamentals (3) IMDM 150 - Intro to Digital Media and Theory & Culture (3)† DSHU ARTT 110 - Elements of Drawing (3) Credits: 15 / 30 (semester 2)
Year 2 Benchmark Requirements - Semester three: Successfully complete portfolio review process between 30 & 45 credits COMM107 ARTT210,255 IMDM 290, 227	Gen Ed (3) FSAR COMM 107 - Oral Communication (3) FSOC ARTT 210 - Drawing II (3) ARTT 255 - Intro to Digital Art and Design Practices (3) IMDM 227 - Intro to Computational Media (3) [New] Credits: 15 / 45 (Semester 3)	ENGL Elective (143/245/255/290/294) (3) DSHU Gen Ed (3) DSNS Gen Ed (3) DSHS Gen Ed (3) ** IMDM 290 - Collaborative Studio I: Image + Time (3)[NEW] Credits 15 / 60 (Semester 4)
Year 3 Benchmark requirements - Semester five: ARTT 34x, 37x IMDM 350	Gen Ed (3) DSHS Gen Ed (4) DSNL Open Elective (3) ARTT 37X elective (3) IMDM 350 - Advanced Digital Media Theory (3) [NEW]IS Credits: 16 / 76 (Semester 5)	Professional Writing (3) PW Open Elective (3) Gen Ed (3) DSSP (Non-major) IMDM 351 - Digital Innovation Marketing and Business (3)[NEW] IS IMDM 390 - Collaborative Studio II: Experiential Computing (3) [NEW] Credits: 15 / 91 (Semester 6)
Year 4	Open Elective 3xx/4xx(3) Open Elective (3) Open Elective(3) IMDM 470 - Performative Computing (3)[NEW] IMDM 490 - Capstone I (4)[NEW] Credits: 16 / 107 (Semester 7)	Open Elective 3xx/4xx (3) Open Elective 3xx/4xx (3) ARTT 37X / 47X elective (3) IMDM 491 - Capstone II (4)[NEW] Credits 13 / 120 (Semester 8)

* - must fulfill I-Series requirements | ** - must fulfill Understanding Plural Societies requirement | † - offered every semester | • must complete by 30 credits

All students must complete two Distributive Studies courses that are approved for I-Series courses. The Understanding Plural Societies and Cultural Competence courses may also fulfill Distributive Studies categories

Track 2 students must fulfill ARHU global engagement requirements.

Appendix C: IMDM Learning Outcomes Assessment Plan

The IMDM program will work to set, monitor, and maintain high standards for the program under a shared vision of an excellent student learning experience leading to outstanding educational outcomes. The program will apply these standards to courses, activities, advising, faculty effectiveness, administrative services and technical support for students, and regular assessment under the standards will be use to guide the development and revision of curriculum and services for continual improvement.

The program goals, outcomes, courses and services will be assessed regularly under an Assessment Plan developed and monitored by the Undergraduate Programs Committee (UPC), and consistent with UMD Undergraduate Program Learning Outcomes Assessment Plan. The program plan will lay out responsibilities, metrics, timelines and procedures for assessment. Performance of the overall curriculum will be assessed by two factors: direct evaluation of student mastery of program learning outcomes during the senior year, and indirect evaluation by tracking of alumni career performance over time. To assess senior year mastery, selected senior projects and portfolios will be evaluated by faculty and external partners under metrics developed by the UPC. To evaluate professional success, the UPC will work with the Career Center to appropriately track initial placement and mid-career status, and survey graduate and employers.

Performance of individual courses and course outcomes will be regularly assessed on a rotating basis, with a subset of courses assessed in detail each year and all courses assessed every four years. The focus will be on IMDM courses for which the program has primary responsibility, with coordination with assessment processes in departments (notably CMSC and ARTT) which support the program with required courses. Mastery of course material will be assessed by performance on examinations or projects as appropriate for the course. The Undergraduate Program Committee will direct assessment of the curriculum and courses, with assessments conducted annually in the spring semester, beginning in the first year of the program. The Undergraduate Program Committee will direct the assessment process. Assessments will be conducted annually in the spring semester, beginning in the first year of the program. The assessment report to the Provost each fall will include the results of the assessment and recommendations for program improvement that are based on these results.

Performance of administrative and technical support services will be evaluated regularly by the program administration in consultation with the UPC to insure high quality delivery to students of services such as course technology, learner support, advising and accessibility.

In additional to ongoing internal assessment, formal program review will follow the University of Maryland's policy for Periodic Review of Academic Units. This entails a review of the academic programs offered by, and the research and administration of, the academic unit (http://www.president.umd.edu/policies/2014-i-600a.html). Program Review is conducted following the guidelines of the campus-wide cycle of Learning Outcomes Assessment (https://www.irpa.umd.edu/Assessment/LOA.html). Program faculty will be reviewed according to the University's Policy on Periodic Evaluation of Faculty Performance (http://www.president.umd.edu/policies/2014-ii-120a.html).

Appendix G: Affirmation of Support from External Departments.

Email correspondence between Prof. Morse (ARTT/IMDM) and Prof. Walter (Director of Undergraduate Studies, ENGL):

Immersive Media Design Major - ENGL course offerings
5 messages

Brandon Morse <ebmorse@gmail.com>	**Mon, Jul 2, 2018 at 2:06 PM**
To: Christina Walter <cmwalter@umd.edu>	

Hello Prof. Walter,
My name is Brandon Morse from the Department of Art. As you might be aware, I have taken on some of the responsibilities in seeing the new Immersive Media Design Major through the PCC process. I wanted to touch base with you quickly to reaffirm some information about our suggested ENGL electives for the major.

According to notes given to me by Audra Buck-Coleman, she met with you at some point last year to discuss english classes that would fit the major. You made a number of recommendations and I have added them to our current four-year plan for the IMDM major. Currently each of the two trackcs of the major has an 'English Elective' and we ask that they take one course from the following list:

ENGL 143 / 146 / 245 / 290 / 293 / 294 as well as Professional Writing 398a

So, as we put the PCC document together, I want to make sure what was given to me is accurate. Do these courses accurately align with your recollection of your meeting with Prof. Buck-Coleman? In her notes, you had suggested a number of 400-level courses as well which we haven't listed.

If this is accurate, can we get affirmation that you support this roster of courses as a part of the IMDM major?

If you'd like to meet in person I'm available before July 11, and after the 18th. If you would like to speak on the phone, I'm available anytime that's convenient.

best,
Brandon

Brandon Morse
http://coplanar.org
ebmorse@gmail.com

Christina Walter <cmwalter@umd.edu>	**Tue, Jul 3, 2018 at 12:46 PM**
To: Brandon Morse <ebmorse@gmail.com>	

Hi Brandon,
That list of 200- and 300-level courses is accurate. You could also consider including:

ENGL275 Scriptwriting for Theater, Film, and Television (3 Credits)
Introduction to the theory and practice of scriptwriting with an opportunity to read, view, evaluate, write, and revise texts meant to be performed. Students will practice writing for the stage, film, and television and also examine selected scripts, performances, and film and television clips as models for their own creative work. Students will complete frequent writing exercises, participate in workshops, and learn to apply scholarship to the analysis and critique of scripts.Also offered as: ARHU275.
Credit Only Granted for: ENGL278D, ENGL275, ARHU319B, or ARHU275.
Formerly: ENGL278D; ARHU319B.

ENGL329 Special Topics in Film Studies (3 Credits)
Studies in various periods and genres of film.
Prerequisite: ENGL245, FILM245, FILM283, or SLLC283; or permission of ARHU-English department.
Repeatable to: 9 credits if content differs.

ENGL387 Visual Rhetoric (3 Credits)
Investigation of the persuasive power of visuals based on how they construct and communicate their content and predispose viewers to an interpretation or attitude. "Iconic" images and other modes of visual representation including diagrams, graphs, and page or screen design. Most attention given to a grammar and rhetoric of visuals. Also the elements of images and their arrangement and consideration of historical and generic contexts and the "affordances" of various media. Not a course in "high art" or in video, TV, or film. Emphasis on visuals that accompany or replace verbal texts.
Credit Only Granted for: ENGL387 or ENGL488F (Spring 2013 only).
Formerly: ENGL488F (Spring 2013 only).

There are a number of 400-level courses that would also be pertinent and non-majors can take 400-level courses if they have had 1-2 prior English courses OR if they get permission from the department. I won't, however, list out the 400-level courses for the moment; just let me know if you would like that list (which would include, for example, ENGL 467: Critical and Creative Approaches to Digital Texuality). I would also note that we will be developing some additional courses over the next year or so, so you can check back next spring about whether there's anything new of interest.

In any case, I support the courses you listed as part of the roster of courses for the IMDM major. Let me know if you need anything else.

Best,
Christina

Christina Walter
Associate Professor of English
Director of Undergraduate Studies in English
Coordinator of ARHU Graduate Certificate in Critical Theory
University of Maryland
Office: 1128 Tawes Hall Ph: 301-405-3825
Pronouns: She/Her/Hers

[Quoted text hidden]

Christina Walter <cmwalter@umd.edu>	Tue, Jul 3, 2018 at 1:28 PM
To: Brandon Morse <ebmorse@gmail.com>	

One more course of interest at the 300-level would be:

ENGL321 American Comics (3 Credits)
Survey of the long and vibrant history of the American graphic novel, from its origins in newspapers, through the underground comix movement of the 1960s, to its present moment of cultural ascendency. Exploration of the representational possibilities of comics, the graphic novel, and graphic narrative more broadly as well as the history of its incorporation into high culture.

Best,
Christina

Christina Walter
Associate Professor of English
Director of Undergraduate Studies in English
Coordinator of ARHU Graduate Certificate in Critical Theory
University of Maryland
Office: 1128 Tawes Hall Ph: 301-405-3825
Pronouns: She/Her/Hers

[Quoted text hidden]

Brandon Morse <ebmorse@gmail.com>	Tue, Jul 3, 2018 at 2:52 PM
To: Christina Walter <cmwalter@umd.edu>	

Hi Christina,
Thank you for getting back to me, I'll run your suggestions past my colleagues and make the changes - 275 in particular looks perfect!

best,
Brandon

Brandon Morse
http://coplanar.org
ebmorse@gmail.com

[Quoted text hidden]

Christina Walter <cmwalter@umd.edu>	Wed, Jul 4, 2018 at 12:38 PM
To: Brandon Morse <ebmorse@gmail.com>	

Sounds good. Thanks, Brandon.

Best,
Christina

Christina Walter
Associate Professor of English
Director of Undergraduate Studies in English
Coordinator of ARHU Graduate Certificate in Critical Theory
University of Maryland
Office: 1128 Tawes Hall Ph: 301-405-3825
Pronouns: She/Her/Hers

APPENDIX E: Faculty and Organization: Potential Faculty Involvement in IMDM:

Faculty Name	Title/Expertise	Credentials	Potential courses taught in program:
Brandon Morse	Associate Professor, ARTT Digital and physical instantiation of generative systems, video and installation works	MFA, Art & Technology from The Ohio State University	ARTT37x/47x IMDM 470 IMDM390 IMDM490 IMDM491
Shannon Collis	Associate Professor, ARTT Digital installations and interactive environments	MFA, University of Alberta with post-graduate work in Digital Media and Computation Arts	ARTT255 ARTT37x IMDM290 IMDM490 IMDM491
Hassan Elahi	Associate Professor, ARTT Interdisciplinary media artist with emphasis on technology and surveillance	MFA, Cranbrook Academy of Art	IMDM150 IMDM350
Justin Strom	Associate Professor, ARTT Mixed-media print, digital imaging	MFA, University of Wisconsin-Madison	ARTT34x IMDM290 IMDM490 IMDM491
Cy Keener	Assistant Professor, ARTT Digital fabrication and media	MFA, Stanford University M.Arch, University of California, Berkeley	ARTT37x ARTT47x IMDM390 IMDM490 IMDM491
David Jacobs	Professor, CMSC AI and Robotics, Computer Vision and Machine Perception	Ph.D., Massachusetts Institute of Technology	CMSC 426
David Mount	Professor, CMSC Algorithms and Theory, Information Retrieval and Geographic Information Systems (GIS)	Ph.D., Purdue University	CMSC 425

Matthias Zwicker	Professor, CMSC Graphics Visualization and VR AR	Ph.D., ETH Zurich	IMDM 327 CMSC 427
Faculty Name	Title/Expertise	Credentials	Potential courses taught in program:
Dinesh Manocha	Professor, CMSC AI and Robotics, Graphics Visualization and VR AR, High Performance and Scientific Computing	Ph.D., University of California at Berkeley	CMSC 427
Larry Davis	Professor, CMSC Computer vision, Artificial intelligence, High performance computing	Ph.D., University of Maryland	CMSC 426
Cornelia Fermuller	Assoc. Research Scientist, CMSC Bio-inspired solutions for active vision	Ph.D., Technical University of Vienna	CMSC 426
Huaishu Peng	Asst. Professor, CMSC Human Computer Interaction, IoT and Wearables Technology	Ph.D., Cornell University	IMDM101 IMDM227 CMSC434
Roger Eastman	Professor of the Practice, CMSC AI and Robotics, Computer Vision and Machine Perception, Graphics Visualization and VR AR	Ph.D., University of Maryland	IMDM 101 IMDM 227 IMDM 327 CMSC 425 CMSC 426 CMSC 427
Evan Golub	Senior Lecturer, CMSC Human Computer interaction, ubiquitous computing, computer science education, information technology and non-majors	Ph.D.,University of Maryland	IMDM 101 IMDM 227 IMDM 327 CMSC 434

Appendix F: Library Assessment:

DATE: 8/27/18
TO: College of Arts and Humanities/College of Computer, Mathematical & Natural Sciences
FROM: On behalf of the University of Maryland Libraries:
Patricia Kosco Cossard, Art/Sociology Librarian
Nevenka Zdravkovska, Head of STEM Library
Maggie Saponaro, Head of Collection Development
Daniel Mack, Associate Dean, Collection Strategies & Services
RE: Library Collection Assessment
We are providing this assessment in response to a proposal by the Immersive Media Design Major (IMDM) Committee in the College of Arts and Humanities – Art and the College of Computer, Mathematical and Natural Sciences – Computer Science to create Bachelor of Sciences and Arts in Immersive Media Design (BASI). The IMDM 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.

Library Technology

The University of Maryland Libraries currently provide access to a number of technologies that will support this major. The following Library spaces/units have been outfitted with appropriate supporting technology including AR/VR headsets for testing works, and physical computing needs including 3D printers and related digital fabrication tools such as laser cutters. These spaces evolve rapidly to keep up with user demands.

- Library Media Services (LMS) (http://www.lib.umd.edu/lms) supports access to and the creation of audio/visual media as data and information. The services are: general and research audiovisual collections, media-centric learning and teaching spaces, multimedia production facilities, and staff, including a Production Specialist. Consult the webpage for up-to-date information. (https://www.lib.umd.edu/lms/learn-more/equipment-information-copy)
- John and Stella Graves Makerspace (https://www.lib.umd.edu/tlc/makerspace) provides access to equipment to experiment with emerging technologies, create models and prototypes. Resources for Virtual/Augmented Reality include: HTC Vive & Hand Controllers, Oculus Rift with Touch Controllers either as a kit that includes a gaming laptop or with a laptop hook up, Microsoft HoloLens headset and the Google Tango phone. The Graves Makerspace is part of McKeldin Library's second floor Terrapin Learning Center which is described below in the "Additional Resources" section.
- STEM Library (https://www.lib.umd.edu/stem/equipment-and-technology/3d-printing) is complementing the John and Stella Graves Makerspace to respond to the needs of the STEM community on Campus. Currently they are 3D printers, and additional equipment is expected, like laser cutter. Its Equipment for Loan service includes: a Ricoh Theta S 360-degree camera and a Knox V2 Cardboard

Serial Publications

The University of Maryland Libraries currently subscribe to a large number of scholarly journals—almost all in online format--that focus on *studio art, digital storytelling, design, computing, and using virtual reality (VR) / augmented reality (AR) technology*.
The Libraries subscribe to several of the top ranked journals that are listed in thein the [Arts and Humanities Edition/Science Edition /Social Sciences Edition/ of *Journal Citation Reports.**
It is noteworthy, that this is a new field and new titles will be forthcoming. The Libraries will make every effort to purchase these, however, articles in journals that we do not own likely will be available through Interlibrary Loan/Document Delivery.
*Note: *Journal Citation Reports* is a tool for evaluating scholarly journals. It computes these evaluations from the relative number of citations compiled in the *Science Citation Index* and *Social Sciences Citation Index* database tools.

Databases

The Libraries' *Database Finder* (http://www.lib.umd.edu/dbfinder) resource offers online access to databases that provide indexing and access to scholarly journal articles and other information sources. [Many/some/few] of these databases cover subject areas that would be relevant to this proposed program. Databases that would be useful in the field of Immersive Media Design Are Web of Science, IEEEXplore, ACM Digital Library, and ScienceDirect, especially for Track I. Artbibliographies Modern, Art Abstracts, and Art Full Text would be useful for Track II.
In many-and likely in most--cases, these indexes offer full text copies of the relevant journal articles. In those instances in which the journal articles are available only in print format, the Libraries can make copies available to graduate students through either the Libraries' Scan & Deliver Program (http://www.lib.umd.edu/access/scan-deliver) or via Interlibrary Loan. (Note: see below.)

Monographs

The Libraries regularly acquire scholarly monographs in *studio art, digital storytelling, design, and computing, using virtual reality (VR) / augmented reality (AR) technology, game design, augmented and virtual reality, physical computing, and digital fabrication* and allied subject disciplines. Monographs not already part of the collection can usually be added upon request.
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 such as over 1,000 books on *digital storytelling*, and over 3,000 on *digital game design*. A further search revealed that the Libraries' membership in the Big Ten Academic Alliance (BTAA) dramatically increases these holdings and citations three-fold (3,000 on digital storytelling and 10,000 on game design.

Scan & Deliver and Interlibrary Loan

These services offer 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. Scan & Deliver and Interlibrary Loan are available free of charge.
The Scan & Deliver 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, Scan & Deliver will automatically refer the request to Interlibrary Loan (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 Resources

In addition to serials, monographs and databases available through the University Libraries, students in the proposed program will have access to a wide range of media, datasets, software, and technology. Library Media Services (http://www.lib.umd.edu/lms) houses media in a variety of formats that can be utilized both on-site and via ELMS course media. GIS Datasets are available through the GIS Data Repository (http://www.lib.umd.edu/gis/dataset) while statistical consulting and additional research support is available through the Research Commons (http://www.lib.umd.edu/rc) and group study rooms, technology/printing support and equipment loan services are available through the Terrapin Learning Commons (http://www.lib.umd.edu/tlc) .
The subject specialist librarians for the disciplines also serve as an important resource to programs such as the one proposed.

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. These include the Library of Congress, the National Archives, the Folger Shakespeare Library, the Smithsonian, and other institutions.

Conclusion

With our substantial journals holdings and index databases, as well as additional support services and resources, the University of Maryland Libraries have resources to support teaching and learning in Studio Art and Computer Science. These materials are supplemented by a strong monograph collection. Additionally, the Libraries Scan & Deliver and Interlibrary Loan services make materials that otherwise would not be available online, accessible to

remote users in online courses. As a result, our assessment is that the University of Maryland Libraries are able to meet the curricular and research needs of the proposed Immersive Media Design Major.

Appendix G: Instructional Resources - Faculty timeline.

Given a nominal initial enrollment of 60 students a year enrolled per year in the Immersive Media Design Major (IMDM), plus assuming we have about 50% more or 90 in the first year and not all continue, we anticipate the need to hire 10 faculty and to provide 14 Graduate Assistantships over the course of the initial four years of the major offering. These faculty will have academic homes in each of the two principal departments and colleges supporting this major, namely the departments of Computer Science and Studio Art and the College of Computer Mathematical and Natural Sciences and College of Arts and Humanities. Given the structure of the major, a staggered hiring of faculty in targeted areas over the course of the initial four years of the major offering is recommended:

Art Studio Instructional Resource Requirements -Initial Four Years of Degree Offering:

Year 1:

Faculty Requirement: 0

Instructor Requirement: 1

GA Requirement: 1.5

In their first year, incoming majors will impact a number of currently offered Studio Art Foundations courses, including: ARTT100, ARTT110, and ARTT 200. ARTT 100 and 110 are frequently taught by graduate assistants or PTK instructors; provided support for new graduate assistant lines, it is not anticipated that new faculty will be necessary to support this component of the major. However, all students in the major will be enrolled in ARTT 200 as well as two IMDM courses; IMDM 101 and IMDM 150. ARTT 290 is a studio course in which students learn foundational concepts and practices related to sculpture and physical making - students are often using equipment and tools which require close supervision, and therefore section sizes must be smaller to maintain safety. To accommodate the influx of students from both tracks of the IMDM major in a responsible manner, we anticipate the need for four additional sections of this course per year requiring the addition of one PTK instructor and one-half of GA position to monitor student safety during shop hours outside of class. The subject matter of IMDM 150 is such that it will require administration from the Studio Art contingent of faculty. We currently have faculty in place who have expressed interest in offering this course, so we do not anticipate an initial need to hire new faculty or instructors for this course, however GA support will be necessary to aid in discussion sections.

Year 2:

Faculty Requirement: 2

Instructor Requirement: 0

GA Requirement: 0.5

Second year students within the major will encumber the Department of Art with enough additional seats to require additional sections of ARTT 210 (2 sections) and ARTT255(2 sections). ARTT 210 can be supported through instructors and graduate assistants, however

given that ARTT 255 covers subject matter central to the major, it is imperative that a full-time tenure-track faculty member be committed to the instruction of these sections. In addition, year 2 is where students from both track 1 and track 2 formally converge to collaborate and work in teams via IMDM 201. IMDM 201 is envisioned as a team-taught course involving one faculty member from Art Studio and one faculty/instructor from Computer Science. ARTT255, and IMDM 201 are each anticipated to require two sections per year. We anticipate the need for two additional faculty in the areas of Digital Foundations (1) and Digital Media (1). To facilitate student research across disciplines, IMDM 290 will have GA support from the home departments of both tracks necessitating and ARTT 255 requires GA support as well. Put together, an additional one-half GA support for Studio Art (course support as well as lab facilities monitoring) will be necessary in year 2 of the program.

Year 3:
Faculty Requirement: 1
Instructor Requirement: 0
GA Requirement: 1
The third year of the major represents the most substantial exposure to practice-specific courses in the series; students in both tracks will enroll in intermediate and advanced level digital media courses offered by the Department of Art, specifically ARTT 370, ARTT371, and ARTT479A, ARTT 479C, ARTT 479D, and ARTT 479E. In addition, IMDM course offerings directly involving faculty from Studio Art include: IMDM 390 (2 sections) IMDM 350 (1 Section), and IMDM 351 (1 Section). We anticipate again the need for 1 new faculty line to service additional sections of existing courses as well as the proposed IMDM offerings. Additionally, GA support will need to be provided from Studio Art for IMDM 390, IMDM 350, and IMDM 351 as well as to support the increased burden on all of the digital production facilities within the Department of Art.

Year 4:
Faculty Requirement: 1
Instructor Requirement:0
GA Requirement: 1.5
A major component of the final year of the major is a two-semester capstone series (IMDM 490 & IMDM 491). We anticipate the need to offer two sections of IMDM 490 in the fall semester, and two sections of IMDM 491 in the spring semester. These courses are the culmination of the major and are collaborative experiences which are team-taught between faculty in Studio Art and Computer Science. IMDM 470 is solely a component of track 2, and it is anticipated that we will have faculty in place at this point to service these courses. In addition to the IMDM course requirements, students enrolled in track 2 are required to take two advanced or intermediate level digital media courses throughout the year. We anticipate the need for one additional faculty line in Digital Media to facilitate the offering of these courses (coupled with the two additional faculty from the previous year). Again, sufficient GA support will be required to assist in the

IMDM courses, but also to offer supervision, and technical support during off-class open-studio hours.

Computer Science Instructional Resource Requirements:

Year 1

Faculty Requirement: 0

Instructor Requirement: 1

GA Requirement: 3

In the first year the major is offered we assume track 1 and track 2 students will take the introductory CMSC and IMDM courses. The forty track 1 students will take CMSC131/132 and effectively add an additional section of 32 requiring a graduate assistant or equivalent undergraduate assistants. The twenty track 2 students will take IMDM 127, requiring an instructor and a graduate assistant, and all students will take CMSC-taught IMDM101 when the major starts, with 90 students for the year and three sections. In total, this requires a net of 6 instructor slots or one new instructor, with three graduate assistants at two sections each.

Year 2:

Faculty Requirement: 1

Instructor Requirement: 0.5

GA Requirement: 2

In the second year track 1 students will continue to take introductory CMSC courses 216, 250, 330 and 351, requiring additional sections of each with corresponding teaching assistants. Track 1 and 2 students will both take IMDM 227, adding two additional courses with required instructors for two course instructors. The spring will have studio course IMDM290 as a team-taught course involving one faculty member from Art Studio and one faculty member from Computer Science, with two sections, and we assume a tenure track faculty is needed to provide leadership for 290. The net requirements are instructors for four courses.

Year 3:

Faculty Requirement: 1

Instructor Requirement: 0.5

GA Requirement: 3

In the third year the enrollment of Track 1 students in CMSC courses becomes more complex as the 40 students will start taking electives and potentially be scattered through 400 level courses, making the impact harder to predict. However, we can assume that in net, the department may need to add an additional section of a CMSC42x course (420, 425, 426, 427, and a potential 400 level VR course), so would require one course instructor, best provided by a tenure track hire. Track 1 and 2 students continue the studio sequence with IMDM390 and therefore require one

faculty member from Art Studio and one faculty member from Computer Science, with two sections. CMSC will be responsible for one section for IMDM327 in the fall. The net requirements are instructors for about five courses, one of which we assume we will cover through an adjunct so four need to be covered by full time faculty, with 3 graduate assistants.

Year 4:

Faculty Requirement: 1

Instructor Requirement: 0

GA Requirement: 2

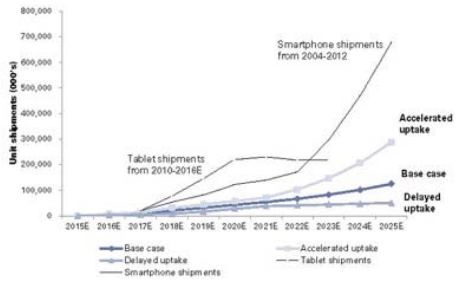
Again, Track 1 students will take CMSC400 level electives, and we can assume that in net, the department may need to add an additional section of a CMSC42x course (420, 425, 426, 427, and a potential 400 level VR course), but we assume this can covered by the tenure track hire in year or an adjunct. A major component of the final year of the major is a two-semester capstone series (IMDM 490 & IMDM 491). We anticipate the need to offer two sections of IMDM 490 in the fall semester, and two sections of IMDM 491 in the spring semester, some of which can be covered by adjuncts. These courses are the culmination of the major and are collaborative experiences which are team-taught between faculty in Studio Art and Computer Science. Providing leadership in 490/491 would require a TT hire.

Appendix H: AR/VR Market Analysis Data Sources and Charts

Data Source: Goldman Sachs: 'Profiles in Innovation – Virtual and Augmented Reality – Understanding the Race for the Next Computing Platform,' Jan. 13, 2016. http://www.goldmansachs.com/our-thinking/pages/technology-driving-innovation-folder/virtual-and-augmented-reality/report.pdf

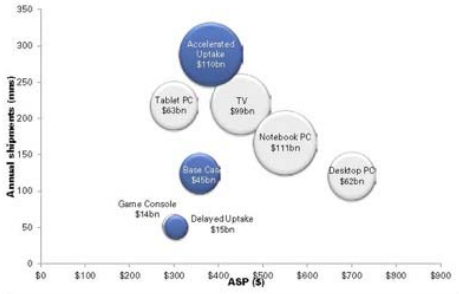
Virtual and augmented reality in 6 charts

Exhibit 1: Our VR/AR unit forecasts assume far slower adoption than smartphones or tablets



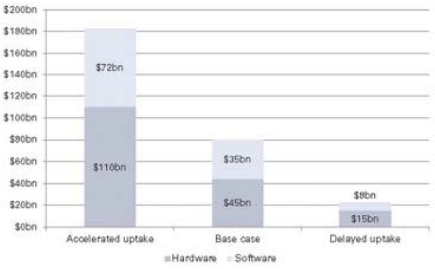
Source: Goldman Sachs Global Investment Research, IDC.

Exhibit 2: Our three scenarios for a 2025 VR/AR hardware market



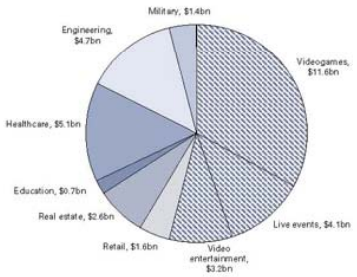
Source: Goldman Sachs Global Investment Research, IDC.

Exhibit 3: Our combined 2025 VR/AR hardware and software scenarios



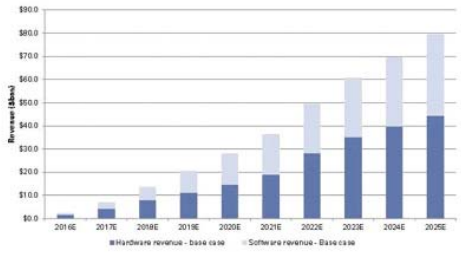
Source: Goldman Sachs Global Investment Research.

Exhibit 4: Our 2025 base case VR/AR software assumptions by use case



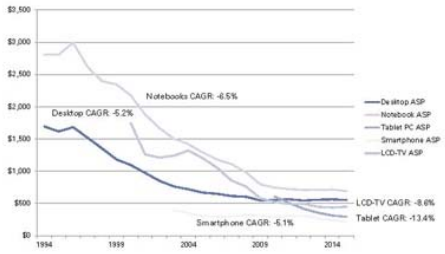
Source: Goldman Sachs Global Investment Research.

Exhibit 5: The progression of our base case hardware and software forecasts



Source: Goldman Sachs Global Investment Research.

Exhibit 6: HMD price declines could be similar to what we've seen in the past



Source: Goldman Sachs Global Investment Research.

Use cases and software market detail

We believe VR and AR have the potential to not only create new markets but also disrupt existing ones. We've identified 9 use cases for VR/AR technology which we see currently emerging: videogames, live events, video entertainment, retail, real estate, education, healthcare, engineering, and military.

For each of these use cases, we assess the following:

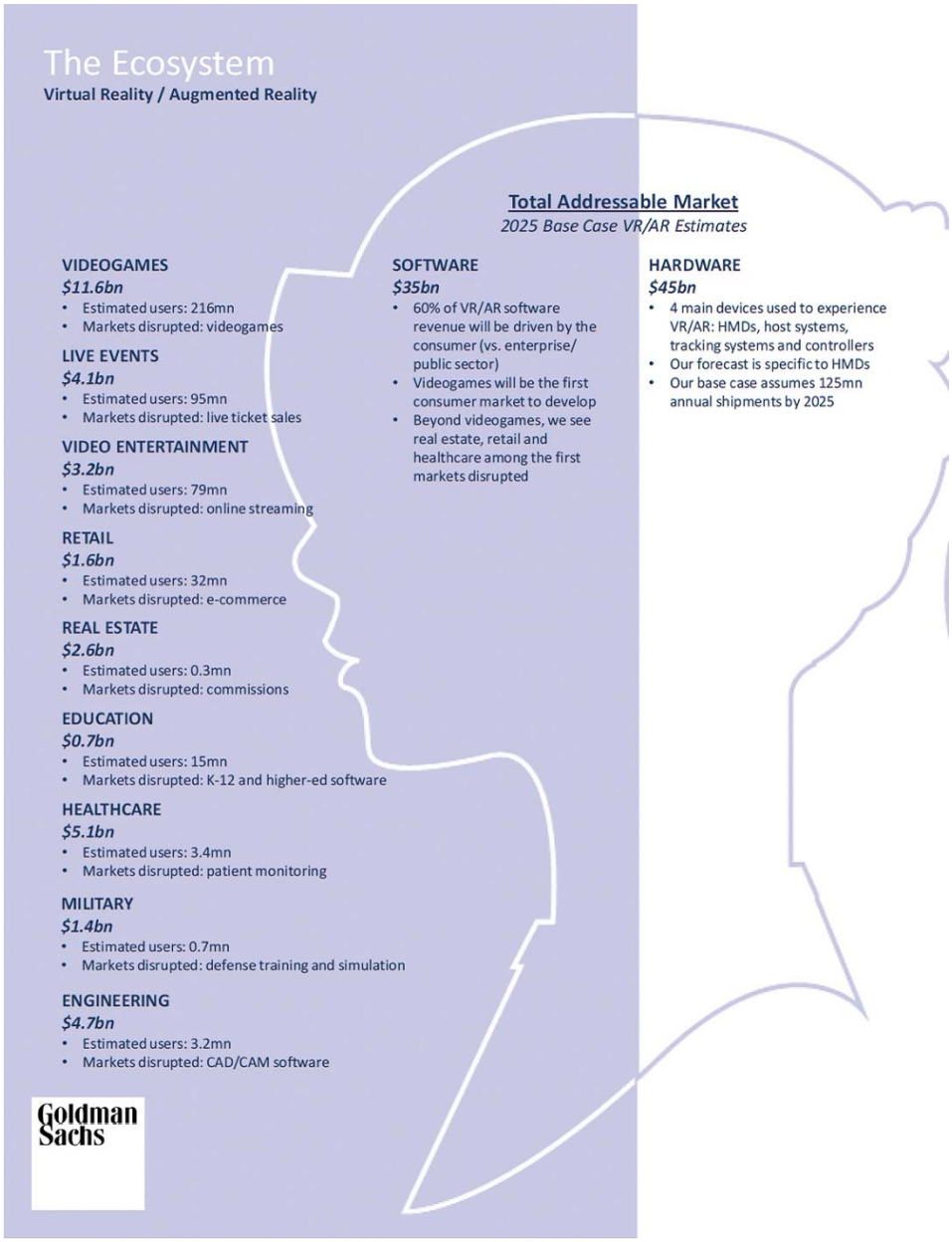
1) The potential market reach in terms of users
2) The current challenges to execute on this use case
3) The existing revenue pool that VR/AR adoption could disrupt
4) Revenue drivers and estimate the software/subscription revenue potential through 2025

The following exhibit summarizes our software estimates by use case and key data points to gauge the market.

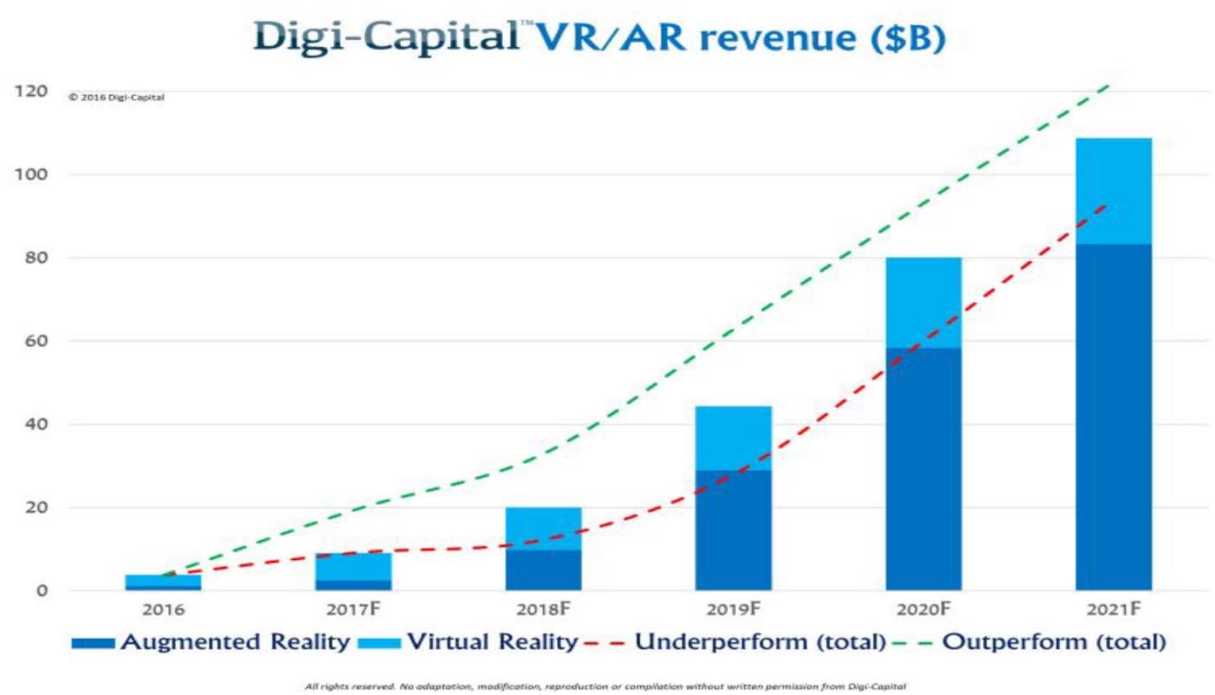
Exhibit 13: Our base case user and software revenue assumptions

	Current market size	Datapoints on the population that could use VR/AR	2020 Base case assumptions		2025 Base case assumptions	
	The market VR/AR is playing into	*To gauge the magnitude, the population that VR/AR could sell into*	**Users**	**Software revenue**	**Users**	**Software revenue**
Videogames	$106bn videogame market	~230mn installed base of video game consoles ~150mn PC gamers in developed markets	70mn	$6.9bn	216mn	$11.6bn
Live events	$44bn in live sports ticketing revenue	~715mn viewers of World Cup ~160mn viewers of the Super Bowl ~92mn ESPN subscribers	28mn	$0.8bn	95mn	$4.1bn
Video entertainment	$50bn online video TAM	~450mn household online video addressable market	24mn	$0.8bn	79mn	$3.2bn
Real estate	$107bn total real estate commission market in US, Japan, UK, and Germany	1.4mn real estate agents in US, Japan, UK, and Germany	0.2mn	$0.8bn	0.3mn	$2.6bn
Retail	$3bn in ecommerce software market (impacting $1.5tr ecommerce market)	1bn+ online shoppers In-store shoppers	9.5mn	$0.5bn	31.5mn	$1.6bn
Education	Education software market: $5bn for K-12, $7bn for higher education	~200mn primary and secondary students in developed markets In US, ~50mn K-12 and ~20mn college students	7mn	$0.3bn	15mn	$0.7bn
Healthcare	$16bn patient monitoring devices market	~8mn physicians and EMTs in developed markets In US, ~800k physicians and 240k EMTs	0.8mn	$1.2bn	3.4mn	$5.1bn
Engineering	$20bn engineering software market	~6mn engineers in US, Europe and Japan ~2.4mn engineers/technicians in the US	1.0mn	$1.5bn	3.2mn	$4.7bn
Military	$9bn defense industry training and simulation market	~6.9mn military personnel in "high income countries" (World Bank) ~1.3mn US military personnel	Assuming proprietary HMDs	$0.5bn	Assuming proprietary HMDs	$1.4bn
Total			**95mn**	**$13.1bn**	**315mn**	**$35.0bn**

Source: Goldman Sachs Global Investment Research/ Data point stats from: Gartner, IDC, World Bank, US Bureau of Labor Statistics, National Center for Education Statistics, Nielsen, FIFA, American Medical Association, Research and Markets, National Association of Realtors, OC&C Strategy Consultants, the Japan Ministry of Land, Infrastructure, Transport and Tourism, the Land Institute of Japan, Borrell Associates, CAE, Eurostat, and Statistics Japan.



Data Source: Digi-Capital Augmented/Virtual Reality Report Q3 2018:



Source: https://techcrunch.com/2017/01/11/the-reality-of-vrar-growth/

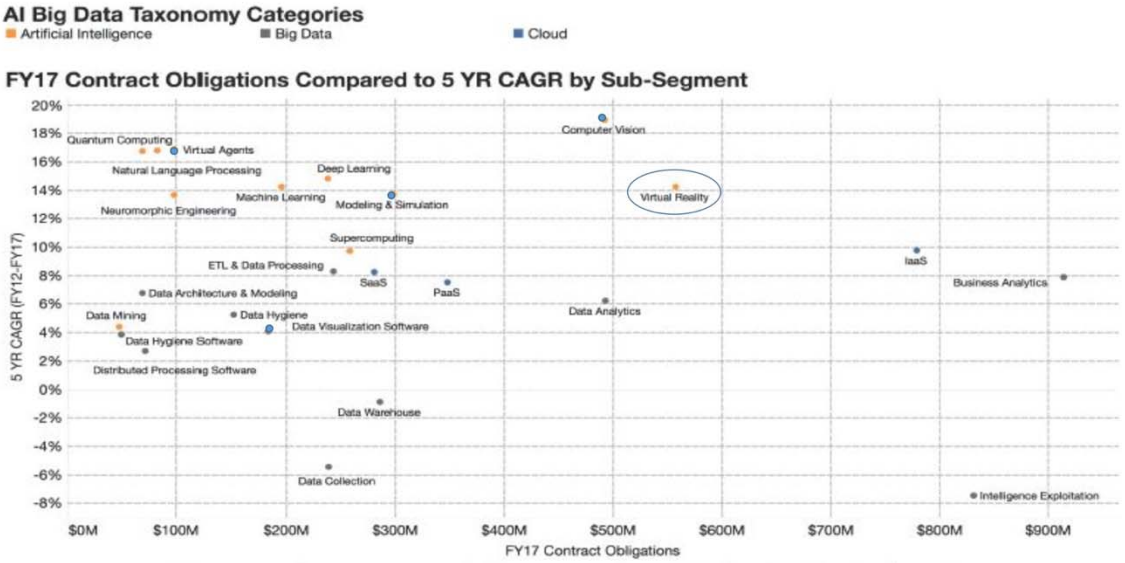


Exhibit 2: AI sub-segments (orange) had the most grow from FY2012 through FY2017. Spending on Computer Vision grew the most by 19 percent to $492.3 million in FY2017. Virtual Agents, another AI sub-segment grew by a CAGR of 16.9 percent, followed by Quantum Computing, Natural Language Processing, Deep Learning, Machine Learning, Modeling & Simulation and Neuromorphic Engineering.

.govini

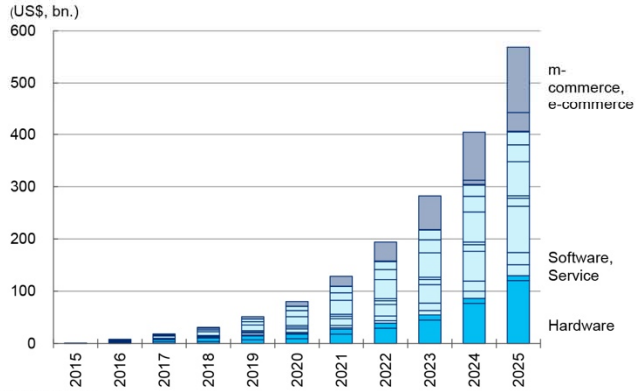
Data Source: Citi GPS: Are You Sure It Isn't Real?:

https://www.citibank.com/commercialbank/insights/assets/docs/virtual-and-augmented-reality.pdf

Market Size and Growth

Based on the aforementioned classifications, we believe the VR/AR market will expand to $7.6 billion in 2016, $18.2 billion in 2017, $80 billion in 2020, and $569 billion in 2025. We forecast the market for headsets and other hardware will expand from $3.6 billion in 2016 to $130 billion in 2025 (a compound annual growth rate, or CAGR of 49%), and the market for software, contents, and services will expand from $3.9 billion in 2016 to $276 billion in 2025 (61% CAGR). In the next chapter, we introduce technologies and systems for VR/AR hardware and software, content, and services.

Figure 11. VR/AR Market Scale Forecasts



Source: Citi Research

ADDENDUM

Supplement to spring 2019 IMDM Proposal

August 2019

PROPOSAL FOR
NEW INSTRUCTIONAL PROGRAM
UNIVERSITY OF MARYLAND AT COLLEGE PARK, MARYLAND
BACHELOR OF SCIENCE IN IMMERSIVE MEDIA DESIGN
BACHELOR OF ARTS IN IMMERSIVE MEDIA DESIGN

COLLEGE OF ARTS AND HUMANITIES
DEAN BONNIE THORNTON DILL
COLLEGE OF COMPUTER, MATHEMATICAL
AND NATURAL SCIENCES
DEAN AMITABH VARSHNEY

Introduction

This document supplements the original IMDM proposal presented to the Senate in spring 2019. The document includes responses to questions from the Senate PCC Committee from their spring review, and some modifications to the original PCC proposal after additional budget and administrative review. The curriculum remains the same as presented to the Senate in the spring.

Table of Contents

Section 1: Clarify the advising home for incoming students

The advising home for declared, accepted incoming IMDM majors will be in the IMDM program itself.
This was implied but not stated clearly in the original Senate PCC proposal. “Students in the first three semesters of study will be counseled not only by the IMDM academic advisors, but also mentored by faculty and staff within the program with careful attention being paid to a student’s potential routes through the major.” In their first year we expect to support students with a professional advisor and additional formal advising from IMDM instructors. Also, in their first semester of IMDM students should take the introductory course IMDM101, and we plan in that course to include advising units on the IMDM major, curriculum, and career opportunities. The latter is to ensure students considering the major, but not yet formally declared, get the information they need.

As for the college assigned to incoming declared IMDM students, the two IMDM tracks diverge quickly enough that they will be asked to choose a track on admission, and then assigned a college corresponding to their track in the first 45 credits. For those students uncertain as to which track they wish to take, they will be directed to Track 1 which requires CMSC131/132. Those courses meet requirements for both tracks, putting students in a position to continue in Track 1 or switch to Track 2 if interested.

IMDM- Track 1 ‘Computing’. IMDM/CMNS will be the academic advising department / college for students in track 1. Students in this concentration will graduate with a Bachelor of Science in Immersive Media Design from CMNS. IMDM will coordinate with the college advisors in CMNS, and the departmental advisors in CMSC, to ensure students are consistently well-advised.

IMDM- Track 2 ‘Emerging Creatives’ IMDM/ARHU will be the academic advising department / college for students in track 2. Students in this concentration will graduate with a Bachelor of Arts in Immersive Media Design from ARHU. Again, IMDM will coordinate with ARHU and ARTT advisors.

Section 2: Clarify the admissions process

From the original Senate PCC document, page 7.

“To offer the optimal balance of faculty and resources to our majors, we propose to offer IMDM as a limited enrollment program. Given the dual-track nature of the major, the gateway process for the major will vary from track to track, though some common requirements will be in place. Students intending to enroll in track 1 (computing) will be required to take a large number of courses offered in Computer Science, and therefore it is necessary that these students meet the same LEP requirements as put forth in Computer Science. In order to enroll in track 1 courses students must first meet the requirements put forth by the department of Computer Science for either incoming freshman, or for internal or external transfers to the major.”

Given that Track 1 students should satisfy the requirements for the existing undergraduate CMSC major LEP program, this constrains the admission process for that track. Incoming students declaring an interest in Track 1 of IMDM will have their application reviewed in a process that includes IMDM and CMSC faculty and staff, evaluating each application relative to a rubric that includes their computing background as currently assessed by the CMSC major admissions process, and in addition an assessment of their preparation for the ARTT and IMDM courses in Track 1 as judged by previous art, digital media and similar coursework.

While students in Track 2 do not have the constraint of meeting the CMSC LEP, we expect to have a parallel process for admissions where applications are reviewed by relevant IMDM and ARTT faculty in which their previous art, digital media and computing coursework is assessed.

Students that pass this review would be admitted directly into the IMDM major. Students that do not would still be able to take the gateway courses in Track 1 and Track 2. If they pass only the CMSC admission requirements as incoming students, they could be admitted into that major. If they pass only the ARTT admission requirements, or they pass neither, they could be admitted into ARHU for a standard ARTT major (which has no restrictions at entry), or encouraged to start in Letters and Sciences. In all three cases they will be free to take the gateway courses and be admitted to IMDM at the 45 credit hour review.

All students, whether formally in the major or not, can take the IMDM gateway courses and at 45 credits submit a portfolio for admission into the program.

For Track 1, the proposed gateway courses are the same as in the CMSC LEP: CMSC131, CMSC132 and MATH140 all with a C- or higher. For Track 2, the proposed gateway courses are intended to mimic first-year benchmark courses for the Studio Art major: ARTT110, ARTT100, IMDM127/CMSC131 or equivalent, all with a C- or higher.

The portfolio review at 45 credits applies to both tracks. This review will be modeled after the portfolio review for the existing Graphic Design concentration in the ARTT department. For that review students submit online a selection of their artistic works as well an essay and transcripts and a committee of faculty review this work for signs of potential success in Graphics Design course and career. In creative fields such as graphics design, game design, animation, and many related to immersive media, the professional practice is to weigh portfolios heavily in the evaluation of job applicants. The 45 credit hour review in IMDM is primarily intended to ensure that students are ready and able to succeed in these collaborative, interdisciplinary careers that emphasize creativity and independence. Students will submit online their self-selected best work from ARTT100 and ARTT200 (or equivalent courses in their record), and one project from CMSC122/IMDM127/CMSC131 depending which they have taken. We intend to monitor the effectiveness of the gateway courses and portfolio review in predicting the success of students in the major and adjust the LEP requirements as needed. Students that do not pass the IMDM portfolio review will have a number of options for an alternative major, including CMSC, for those in Track 1 that pass CMSC gateway courses and GPA cutoff, but not the portfolio review; and ARTT, for those in Track 2 that do not pass the portfolio review.

Section 3. Clarify the procedures for transfer from community college

Transfer students for both tracks who are reviewed for direct admission will have their record reviewed in a process similar to that used for first year admissions. The University of Maryland's four main transfer institutions offer introductory courses that are required for the IMDM degree requirements.

Anne Arundel Community College	
Track 1	**Track 2**
MATH140 - MAT191, MAT191H	MATH115 - MAT151
	ARTT100 - ART100
	ARTT200 - ART102

Prince George's Community College	
Track 1	**Track 2**
MATH140 - MAT2410	MATH115 - MAT1370
	ARTT100 - ART1510
	ARTT200 - ART1550, ART2510

Montgomery College	
Track 1	**Track 2**
MATH140 - MATH181, MATH181HC, MATH181HM	MATH115 - MAT165, MATH165HC, MATH165HM
CMSC131 - CMSC203	ARTT100 - ARTT102, ARTT102H,
CMSC132 - CMSC204	ARTT200 - ART103, ARTT221

College of Southern Maryland	
Track 1	**Track 2**
MATH140 - MTH1200	MATH115 - MTH1150
	ARTT100 - ART1200

The IMDM major requirements consist of courses offered by computer science, art and the immersive media program itself. The latter courses, with the code IMDM, are new at UMD, and exactly matching courses are not offered at many other schools, in particular IMDM101. However, students may have taken material similar to IMDM101 in a combination of courses. Immersive Media Design acknowledges that the transition to UMD is not an easy process and can be daunting for any incoming student. With this in mind, the program may grant exceptions

in cases where a student has demonstrated skills in introductory material and can either be exempt from a course or take the course as a co-requisite to another course. These exceptions are meant to assist students in completing their degrees in a timely manner. In particular, for students with appropriate background and experience, the IMD program will develop a process for waiving the introductory course IMDM101 which will assist students in proceeding directly to the second year of IMDM. To grant exceptions for computer science (CMSC) or art (ARTT) courses would require coordination with the appropriate department and is not in control of the IMDM program.

For students whose previous institution did not offer direct equivalencies to CMSC coursework, IMDM encourages students to take exemption exams offered by the Computer Science department. Exemption exams are offered for CMSC131, CMSC132, CMSC250, and CMSC216 throughout the summers and winters in line with new student orientations. CMSC122 in web programming, required for IMDM Track 2, matches with Web Development courses and programs at most community colleges, so we expect many students can arrive with suitable equivalences. The Computer Science Department is working on better articulation with Maryland community colleges which will clarify and strengthen transfer options.

Section 4: Clarify a plan for living learning

We have reviewed the compatibility of the IMDM curriculum with existing Living Learning and other special programs (LLOSPs). Because of IMDM course loads, it may be difficult for students to accommodate both their LLOSP requirements and the IMDM requirements, but we will continue to work on compatibility and in particular work with individual students whose advanced credit may make programs feasible.

There are a number of special program that philosophically align with IMDM. For example, Design Cultures and Creativity has similar focus as the IMD program, with emphasis on creativity, leadership, cooperation, and independence, and innovative new media work; and CIVIUS, Global Communities and Language House would all support, for IMDM, what we hope would be an outward looking sense of social engagement and service to the world.

However, it is currently difficult to combine the current IMDM curriculum with several of the LLOSPs. IMDM includes ARTT, CMSC and IMDM courses, along with General Education requirements, in the first two years. Some of the LLOSP requirements would fulfill General Education. But since most LLOSPs require 10 or more credit hours in the first two years, this can mean single semester loads over 18 credits which is not advisable. We would consider the IMD major incompatible with a Living Learning program if the combination requires more than 18 credits in any semester. We present below the compatibility of the existing IMDM curriculum, as presented in the original PCC document, with selected Living Learning programs. However, many students do come in with enough Advanced Placement (AP) credit that they will be able to fit Honors Living-Learning courses into their schedule. For example, if a student arrives with MATH140, 141 or CMSC131, they can combine IMDM with a wider set of compatible Living Learning programs. We also present below this expanded set of compatible programs would

Going forward, we plan to prepare advising material with this information. We also plan to continue to explore options other options to increase the compatibility of IMDM with more LL programs.

Track 1 students with no AP credit will not be able to fit Living Learning programs in as stands. Track 1 students who have AP credit for MATH140, are eligible for all Honors Living Learning Programs with the exception of Integrated Life Sciences (ILS). Students who have AP credit for MATH140 and MATH141, are eligible for all Honors Living-Learning Programs.

Honor's Living Learning Program	Track 1 w/No AP Credit	Track 1 w/credit for MATH140	Track 1 w/credit for MATH140 and MATH141
Design Cultures and Creativity		✔	✔
Gemstone		✔	✔
Advanced Cybersecurity Experience for Students (ACES)		✔	✔
University Honors		✔	✔
Integrated Life Sciences (assumes AP BSCI credit)			✔
Honors Humanities		✔	✔

Track 2 students who have no AP credit for MATH140 would be eligible for University Honors and Advanced Cybersecurity Experience for Students (ACES); all other Honors Living-Learning Programs create semesters of 18 or more credits. Track 2 students who have AP credit for MATH140 would be eligible for all Honors Living-Learning Programs with the exception of Integrated Life Sciences, Honors Humanities, and Digital Design Cultures and Creativity.

Honor's Living Learning Program	Track 2 w/No AP Credit	Track 2 w/credit for MATH140
Design Cultures and Creativity		
Gemstone		✔
Advanced Cybersecurity Experience for Students (ACES)		✔
University Honors		✔
Integrated Life Sciences (assumes AP BSCI credit)		
Honors Humanities		

Modifications to original Proposal

Since the original IMDM proposal was submitted to the Senate in spring 2019, there have been additional campus discussions on resources for the program, primarily on budget considerations for instructional and administrative staffing. We were asked to review our budget carefully and look for efficiencies to reduce program overhead. After this review and consultation with the administration we have developed a staffing plan that we believe will meet the needs of the program.

Position	Original Proposal	Current Proposal
Faculty	10 FTE	9 FTE
Staff	7.5 FTE	5.5 FTE
Graduate Teaching Assistants (GTA)	14.5 FTE	8 FTE

What follows explains how these changes modify the text of the original spring 2019 proposal.

Section 18, page 23. Instructional Staff

This section of the original proposal lists 10 faculty FTEs and 14.5 GTA FTEs. The original proposal had 5 faculty FTEs each in ARTT and CMSC. The revised number is 4 FTEs in ARTT, and initially 4 FTEs in CMSC, with a fifth FTE in CMSC to come as enrollment justifies. We are planning for enrollment of 20 students/year in Track 2 which is the ARTT focused track, and 40 students/year in Track 1 which is the CMSC focused track, so we expect additional demand in CMSC but not twice as much since CMSC courses are generally larger than ARTT. For GTAs, we have looked more carefully at the courses that will require them, and have reset the number to a more realistic level.

Section 19, page 25. Administration and Advising

The IMDM proposal submitted in Spring 2019 had two advisors, one each housed in the departments of Computer Science and Art. After reviewing budget and program needs, we have changed this to one advisor housed in the IMDM program itself and reporting to the IMDM Program Director. With the expectation of around 240 majors in the program, one advisor is typically enough to manage this case load. This meets National Academic Advising Association (NACADA) recommended standards, in which the caseload for an advisor should be 300 students or fewer.

The Spring proposal had three technician positions. Two laboratory technicians, and one "Content Provider Assistant" who focuses on digital media software support, essentially a software technician. After considering in more detail the needs for laboratory support, and the expertise of technical staff in other units that IMDM can draw on, we have revised this to one

laboratory technician and one content provider. We believe that the two can cover the support needs of the program for the near future.

Appendix G, page 53, Instructional Resources - Timeline

To update Appendix G on the timeline for instructional hires we present this table, which gives hiring plans for administrative, technical and instructional staff. The schedule for instructional hires is based on the number of new sections of courses offered each year as the first cohort of students starts in fall 2020 and goes through the first, second, third and fourth year of required courses.

Position	Year 0	Year 1	Year 2	Year 3	Year 4
	AY19-20	AY20-21	AY21-22	AY22-23	AY23-24
Staff					
Director 0.5 FTE	Start				
Coordinator	Start				
Advisor		Start			
Technician	Start				
Software Tech		Start			
Marketing 0.5 FTE	Start				
Budget 0.5 FTE		Start			
CMSC TTK #1		Start			
CMSC TTK #2				Start	
CMCS TTK #3					Start
CMSC PTK #1		Start			
CMSC PTK #2			Start		
ARTT TTK #1		Start			
ARTT TTK #2				Start	
ARTT PTK #1		Start			
ARTT PTK #2			Start		
Graduate TAs		Hire 4	Hire +2	Hire +1	Hire +1

Note on extending IMDM to include additional academic units

The question has been asked of how IMDM might extend to support other academic units. The original 2016 Provost's Task Force included representatives from a number of colleges and departments on campus, and envisioned a broad, interdisciplinary program with the potential for enriching programs across campus, starting with the departments of Computer Science and Studio Arts.

The current plan is that the IMDM program will explore how to support and enrich other academic programs outside of CS and Art. Students in IMDM will be encouraged to use their electives to take relevant courses and get expertise in other departments, and collaborate in their capstone projects with students and faculty from other units. As feasible, we expect to make the undergraduate focused IMDM laboratories available for these collaborations, enhancing the campus with new facilities and allowing other departments to explore how to use these technologies. Those explorations could establish relationships for future curricular collaborations. The introductory IMDM courses will be open as possible to all students so any students can integrate immersive media concepts into other majors. And, we intend to carefully explore more formal curricular relationships with other departments, including high impact areas in which UMD is nationally renowned such as immersive storytelling in Journalism. Key to any extension of IMDM is that it be beneficial to the programs involved, and to the campus.

PCC Proposal to Establish a Bachelor of Arts in Religions of the Ancient Middle East (PCC 18094)

PRESENTED BY	**Janna Bianchini, Chair, Senate Programs, Curricula, and Courses Committee**
REVIEW DATES	**SEC – September 20, 2019 | SENATE – October 2, 2019**
VOTING METHOD	**In a single vote**
RELEVANT POLICY/DOCUMENT	**NA**
NECESSARY APPROVALS	**Senate, President, University System of Maryland Board of Regents, and Maryland Higher Education Commission**

ISSUE

The Meyerhoff Center for Jewish Studies, within the Colleges of Arts and Humanities (ARHU), proposes to establish a Bachelor of Arts in Religions of the Ancient Middle East. The major will offer students the opportunity to explore the world out of which biblical Israel and ancient Judaism, Christianity, and early Islam emerged, as well as the wide array of other religious and cultural beliefs, practices, and institutions that flourished between about 1200 BCE/BC and 850 CE/AD. Religion, and among them specifically Judaism, Christianity, and Islam, is clearly important to many students on campus; it is important in public policy and civil society from the local to the international level. Religion is also central to understanding the history and culture of the ancient Middle East, and in particular the emergence of Judaism, Christianity, and Islam. This program provides a framework for the study of the emergence of these traditions in a broad historical, cultural, and comparative context. The program also provides instruction in a broad variety of tools and methods that are required to do justice to the highly varied evidence for the ancient Near East. These tools and methods include (but are by no means limited to) close textual study, archaeology, economic modeling, historical inquiry, and comparative study.

The program is 30-credits. In Foundations courses (12 credits) students take at least one course that addresses a significant question about the nature of religion and religious change or the interplay of religious groups. In addition, they must take two courses that survey two geographical, cultural, or chronological sub areas. In addition to Electives (15 credits), all students take an interdisciplinary Capstone seminar, typically in their final year. The program will also have an optional language track, which requires 6 credits of Hebrew, Arabic, Greek, or other relevant language beyond the first-year level. An honors track is also available.

In anticipation that many students in the program will use this program as a second major, the program-credit level is set to 30 to allow for students to double major. The program is expected to have 20 to 30 students enrolled at steady state. Marketing survey results show that there is interest in the subject area, and biblical studies courses continue to enroll well. Although the number of students expressing interest is small relative to other majors, the responses indicate that there is enough interest to support a major with the anticipated enrollment size.

The courses needed for the program already exist. Faculty, mainly from Jewish Studies but also from other ARHU departments, already offer courses in this area. The physical and administrative infrastructure for the program also already exist in the Meyerhoff Center for Jewish Studies, which offers the Jewish Studies major. Consequently, the need for new resources to operate the program is minimal.

This proposal was approved by the Senate Programs, Curricula, and Courses committee on September 6, 2019.

RECOMMENDATION(S)

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

COMMITTEE WORK

The committee considered this proposal at its meeting on September 6, 2019. Hayim Lapin, Professor and Director of the Meyerhoff Center for Jewish Studies, and Ralph Bauer, Associate Dean for Arts and Humanities, presented the proposal and responded to questions from the committee. The proposal was approved by the committee.

ALTERNATIVES

The Senate could decline to approve this new degree program.

RISKS

If the Senate declines to approve this degree program, the University will lose an opportunity to offer an interdisciplinary and culturally-relevant undergraduate program that utilizes existing resources to fill an existing gap in the university's liberal arts offerings.

FINANCIAL IMPLICATIONS

The courses, faculty, advising resources, administration, and facilities already exist for this program, and as a result, there are minimal financial implications for this major.

University of Maryland PCC Program/Curriculum/Unit Proposal

PCC Log No: 18094

Program: Religions of the Ancient Middle East

Department/Unit: JWST (Meyerhoff Center and Program for Jewish Studies)

College/School: ARHU

Proposal Contact Person (with email): Hayim Lapin (hlapin@umd.edu)

Type of Action (check one):

- ☐ Curriculum change (includes modifying minors, concentrations/specializations and creating informal specializations)
  - ☐ Curriculum change is for an LEP Program
- ☐ *Rename a program or formal Area of Concentration*
- ☐ *Establish/Discontinue a formal Area of Concentration*
- ☐ Other:
- ☒ *Establish a new academic degree/certificate program*
- ☐ Create an online version of an existing program
- ☐ Establish a new minor
- ☐ *Suspend/Discontinue a degree/certificate program*
- ☐ Establish a new Master or Certificate of Professional Studies program
  - ☐ New Professional Studies program will be administered by Office of Extended Studies

Italics indicate that the proposal must be presented to the full University Senate for consideration.

Approval Signatures - *Please print name, sign, and date. For proposals requiring multiple unit approvals, please use additional cover sheet(s).*

1. Department Committee Chair Hayim Lapin 4/15/19
2. Department Chair Hayim Lapin 4/15/19
3. College/School PCC Chair Alejandro Cañeque 4/16/2019
4. Dean Ralph Bauer 9/15/19
5. Dean of the Graduate School (if required) _____
6. Chair, Senate PCC Jana Bianchini 9.6.19
7. University Senate Chair (if required) _____
8. Senior Vice President and Provost _____

Instructions:
When approved by the dean of the college or school, please send the proposal and signed form to the Office of the Associate Provost for Academic Planning and Programs, 1119 Main Administration Building, Campus-5031, **and** email the proposal document as an MSWord attachment to pcc-submissions@umd.edu.

Summary of Proposed Action (use additional sheet if necessary):

Proposal to create a new undergraduate major within the Jewish Studies Department for Religions of the Ancient Middle East (RAME), giving students the opportunity to study the historical and cultural origins and developments of Jewish, Christian, and Islamic religious and cultural systems.

Unit Code(s) (to be entered by the Office of Academic Planning and Programs):

2018-2019 PCC New Degree or Certificate Program Proposal

In order to complete this form, you will need to copy this template to your own document, then complete, print, and submit this proposal with the PCC Cover Sheet

Program: Religions of the Ancient Middle East (RAME)

Date of Proposal: February 3, 2019

Start Term for New Program: Fall 2019

A new degree program proposal will need to be approved not just by campus but also by the University System of Maryland (USM) Board of Regents and the Maryland Higher Education Commission (MHEC). New certificate programs need to be approved by the USM Chancellor and MHEC. The following prompts are based on academic policies for programs and reflect campus requirements and MHEC requirements. The prompts also include questions frequently asked by review committees. See http://mhec.maryland.gov/institutions_training/Pages/acadaff/AcadProgInstitApprovals/NewAcademicProgramProposals.aspx for more information about MHEC requirements. Please feel free to add additional information at the end of this document or in a separate appendix.

Mission and Purpose

1. Describe the program and explain how it fits the institutional mission statement and planning priorities. The University Mission Statement and Strategic Plan can be found on this site: https://www.umd.edu/history-and-mission.

Inasmuch as contemporary politics and the media debate the role of the Jewish State to American politics, the Christian character of the United States, and the relationship between Islam and terror, fostering the study of the historical, cultural, and archaeological contexts of the emergence of Judaism, Christianity, and earliest Islam, and promotes ***knowledge in areas of importance to the State, the nation, and the world***.
The RAME program gives undergraduate students from across the academic spectrum the opportunity to study the historical and cultural roots of Jewish, Christian, and Islamic culture, and to study the origins and developments of these religious and cultural systems as fields of interest in their own right.

In addition, we respond to the following points raised by the University mission for undergraduate education.

- Programs that are comprehensive and challenging, and that serve students well as a foundation for the workplace, advanced study, and a productive, fulfilling life.

In addition to the long-term career benefits in ***the workplace*** of Humanities degrees that emphasize research, critical thinking, and writing, we certainly aim to provide the foundations for ***advanced study***, and believe strongly that a rich, critical, nuanced understanding of religious systems still in place today contribute to a ***productive and fulfilling life***.

Program Characteristics

2. 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 major in Religions of the Ancient Middle East (RAME) (30 cr) offers students the opportunity to explore the world out of which biblical Israel and ancient Judaism, Christianity, and early Islam emerged, as well as the wide array of other religious and cultural beliefs, practices, and institutions that flourished between about 1200 BCE/BC and 850 CE/AD. In *Foundations* courses students take at least one course that addresses a

significant question about the nature of religion and religious change or the interplay of religious groups. In addition they must take two courses that survey two geographical, cultural, or chronological sub areas. In addition to *Electives*, all students take an interdisciplinary *Capstone* seminar, typically in their final year.

Language Track (min. 36 cr). Although there are no language requirements for the major, students who wish to incorporate ancient languages into their work are encouraged to pursue a language enhanced track. Students take six credits of language at the second year level as part of their major. They are also are expected to make use of their target languages in completing the research project for the Capstone course.

The University currently offers Arabic, Hebrew, and Greek. The number of credits per course varies by language. Other languages such as Aramaic, Akkadian, or Syriac taken through CourseShare or the Consortium of Universities of the Washington Metropolitan Area may be substituted.

Note: Students pursuing the language track may need to take up to 12 credits in language prerequisites to attain the second year level.

Honors Track (min 36 cr). We encourage students with very strong research interests and academic performance in the major to apply to the Honors Track.

As a prerequisite for applying to Honors in Religion and Culture in the Ancient and Late Antique Near East students must also pursue the language track and have acquired basic knowledge of at least one ancient language by the end of their third year.

The plan of study is as follows:

- In the first semester of third year, candidates apply in writing to pursue the honors program. The application must include a proposed area of interest, and be accompanied by a letter of support from a faculty mentor who will work with the student to develop a plan for honors study.
- Students complete two upper-level, H-section, or graduate courses that support their field of study, selected in consultation with the mentor. These may be completed between the second semester of the third year and the end of their fourth year and replace two upper division electives taken by RAME majors.
- In the first semester of the fourth year, students take RELS408H, a tailored section of RELS408 (capstone course). It is expected that work in RELS408H seminar will contribute to the student's foundations for later thesis work.
- In the second semester of the fourth year, students enroll in RELS488 (Honors Thesis Research). This course replaces three credits of upper division major electives.

3. What are the educational objectives of the program?

1. RAME is not JWST

To avoid confusion that has arisen at the College PCC level, we preface this discussion of educational objectives with a discussion of the difference between the proposed major and the Jewish Studies major. Jewish Studies majors study modern Hebrew, and take courses that span some three thousand years and have a geographical range that includes not only the Levant and Mesopotamia, but Africa, Europe, and the Americas. In addition, courses that fulfill the Jewish Studies major always deal with Jews, Judaism, or Jewishness as a primary subject either directly (e.g., History of the Jews) or indirectly (as in courses that deal with Israel and the Middle East, or with Anti-Semitism).

By contrast, RAME deals with antiquity, has a geographical focus, and Jews are only one of the groups whose history, literature, and culture is studied. Majors study Levantine or Mesopotamian polytheism, Hellenistic and early Roman culture in the Near East, the rise of Christianity, and early Islam. In addition, the I-Series courses required of all majors are interdisciplinary in that they explicitly deal with methodological questions involving the impact of religion on human communities and on human change, and generally many cover multiple religious groups.
Some ten to twelve TTK and PTK faculty teach in Jewish Studies. Of these, only three are directly involved with RAME. The RAME committee includes an early Islamicist who is not in Jewish Studies, and will work collaboratively with faculty in Classics and Art History and Archaeology.
A substantial number of RAME courses *do* originate in Jewish Studies. Partly, this has to do with the nature of the fields that RAME covers: None of the relevant RAME faculty in JWST had their training in departments of Jewish Studies, and their research and teaching expertise and areas of interest expand beyond the "Jewish" alone. In addition, they have been voluntarily offering these courses to fill obvious gaps in the course offerings on campus.

2. RAME educational objectives.
"Critics not Caretakers." Religion, and among them specifically Judaism, Christianity, and Islam, is clearly important to many students on campus; it is important in the public policy and civil society of the State of Maryland, and in national and international politics. Religion is also central to understanding the history and culture of the ancient Middle East, and in particular the emergence of Judaism, Christianity, and Islam. Not surprisingly, the lines between who we are and how we study the past, how we see winners and losers and right and wrong, can become deeply tangled. This major aims, first of all, to provide a framework for the study of the emergence of these traditions in a broad historical, cultural, and comparative context. Second, the program endorses the view formulated by Russ McCutcheon that as ***academic*** teachers about religion, our goal is to encourage students to be "critics"—to cultivate the distance, and the analytical tools to separate their own prior understanding based on their own contemporary knowledge or beliefs from those of the people they study, and to question the assumptions and practices of ancient founders and practitioners—rather than to be "caretakers" whose analyses must always be measured against the traditional values of the religious groups including those of contemporary leaders and practitioners.

Continuity and Change. Students take courses in more than one time period, region, or cultural area. Students learn that, for instance, to study Biblical Israel and Jews in late antique Iraq, or the world of Jesus and of Christianity in the fourth century, even though there are strong continuities between the first and the second, means, taking into account significant changes of context and circumstances, and taking seriously the view that new developments are important in their own right not merely accretions to an originally pure form.

Interdisciplinarity. A broad variety of tools and methods are required to do justice to the highly varied evidence for the ancient Near East. These include (but are by no means limited to) close textual study, archaeology, economic modeling, historical inquiry, and comparative study. The individual courses typically reflect a range of methods, informed by the instructor's specific areas of expertise. Moreover, the Capstone seminar by design is organized around an interdisciplinary question (death, attitudes toward sex, law), and students are encouraged to deepen their understanding of areas they have already studied, enriched by interests and approaches that the instructor and other seminar participants bring to the class.

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

There are no selective admission criteria

5. Indicate the course requirements with course numbers, titles and credits. If applicable, indicate if any course will also count for a general education requirement. In an appendix, provide the course catalog information (credits, description, prerequisites, etc.) for all of the courses. Note that suffixed "selected" or "special" topics courses should be avoided. If suffixed-selected or special topics courses are offered regularly in the new program, you should make the courses permanent. Also, please review the basic requirements of degree programs or certificate programs to ensure that they meet the minimum policy requirements.

Please note: new courses or modifications to courses need to be submitted through the Testudo Curriculum Management system and will need to follow the normal VPAC course proposal review process. You may submit individual course changes to VPAC concurrently with the PCC proposal; however, the course changes may be held depending on the outcome of the PCC proposal.

1. The Major.

Foundations (12 cr)

One approved I-Series course (3 cr)
RELS 289I: What is Religion? (DSHU,DSCC)
RELS 289M: Jesus, Mani, and Muhammad (DSPS, DSHU)
JWST 289J: Jerusalem in Antiquity: The History of Sacred Space in a Holy City (DSPS, DSHU)
JWST 230: Inventing Tradition: The Making of Rabbinic Judaism[*] (DSPS, DSHU)

Three courses in two or more geographical, chronological, or cultural sub-areas (9 cr)
HIST120: Islamic Civilization (DSHU)
RELS264: Intro to New Testament (DSHU)
JWST225: Religions of the Ancient Near East (DSHU)
JWST231: Jewish Texts and Cultures of the Second Temple Period (DSHU, DSPS)
JWST262: Intro to Hebrew Bible/Old Testament (DSHU)

Electives (15 cr; four courses at the upper level)

CLAS305: Archaeological Methods and Practice (DSHS)
HIST110: The Ancient World (DSHU)
HIST320: Early Christianity: Jesus to Constantine
HIST428R: Selected Topics in History; Transition to Islam: From the Ancient to the Medieval Muslim World
JWST324: Biblical History and Culture (3)
JWST325: Jews and Judaism in Antiquity I: Sixth Century BCE through the First Century CE (DSHS or DSHU, DSSP, DSPC)
JWST326: Jews and Judaism in Antiquity II: First through Seventh Centuries (DSSP)
JWST430: Dead Sea Scrolls (DSHU, DSSP)
JWST468: Readings in the Hebrew Bible (3-4)
JWST469: Readings in Rabbinic Hebrew (3-4)

Other courses by permission.

Capstone (3 cr)

RELS408: Capstone Seminar in Religion and Culture in the Ancient and Late Antique Near East [**]

2. Language Track (min. 6 additional cr.; min. 36 total)
Prerequisite: First year language (6-12 credits).

Six credits in Hebrew, Arabic, Greek or other relevant language beyond the first year level.
Note: Students who place directly into second year language or above need only complete six credits of language. The number of prerequisite language credits varies by language.

3. Honors Track (Language Track + in-track requirements; min. 36 total)
   Six credits in the upper-level, H-section, or graduate-level coursework, taken in consultation with with faculty mentor.
   RELS408H: Capstone Seminar in Religion and Culture of the Ancient Near East (3) [**]
   RELS488: Honors Thesis in Religious Studies (3) [**]
   Note: The Honors Track does not add any credits beyond those required by the Language Track. .

[*] Existing course, currently under review for I-Series approval.
[**] New course, VPAC and GenEd submission in coordination with this proposal.

6. 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 University of Maryland has been offering a credential (first, a “citation;” later, a “minor”) in Religious Studies since 2001. For most of that time, it has been administered by the Meyerhoff Center for Jewish Studies. Since 2001 interested faculty have consulted regularly about developing an undergraduate major. However, we have historically been unable to guarantee coverage across the major regions and religious formations of the world. In addition the difficulty of coordinating shared courses across BSOS, ARHU as well as other Colleges with no budget or FTEs has been daunting.
The RAME major is proposed as a first step and a “proof of concept” for a major in Religious Studies. Our assessment is that we can support religious studies in three areas: The ancient Middle East, Religions of the West (that is, Europe and the Americas, but without many resources for indigenous religions), and Islam. This proposal takes on the first of these. Structurally, the broader major would really require only one small adjustment: All students would take RELS289I. Beyond that, the basic pattern of foundations, concentration, and electives would govern the major.
Concurrently, faculty in Jewish Studies, which has historically housed the Religious Studies minor, noticed that despite a rather precipitous decline in the major and in some historically well-enrolled classes, classes in “biblical studies” broadly conceived (Hebrew Bible/Old Testament, Ancient Near East, Early Christianity, and so on) did continue to enroll well. These courses are taught by Jewish Studies faculty either in JWST or (as in the case of one faculty member with a joint appointment in History) HIST. Since we have faculty in place and demonstrable student interest in one coherent (and perennially salient) slice of the field: the history, literature, and culture that gave birth to Judaism, Christianity, and Islam, we elected to develop this as the first step toward a religious studies major.
To facilitate this, we have brought the early Islamicist in HIST fully into our planning and have also invited the archaeologists and art historians in ARTH with expertise in related chronological or geographical fields to participate in the committee. We have consulted with HIST and with CLAS to make sure that we were not unintentionally undermining programs or creating administrative burdens for these two units. In fact, for a time the plan was for a major jointly run by CLAS and JWST. While we would not rule out such a program in the future, both units found it simpler for JWST to proceed along a separate track.
Finally, we conducted a marketing survey, sent to approximately 9,000 students, predominantly First Years. The survey had a 13% rate of return (almost 1,200 respondents).
There was very high interest in the subject area. As an indicator, more than half of respondents said that they would like to be contacted about further developments. Language questions had a surprisingly high rate of

return with almost half saying they were interested in language at some level. In the question about interest in specific languages, Hebrew, Greek, Arabic or Aramaic ***each*** received about ***200 (194) or above*** positive responses.
The number of students expressing interest in the major is relatively small, but large enough to support a major: about 11% of all respondents, and 16% of those who responded to the question about interest in the major showed some interest in the major. The same question asked students about a minor as well, which may have driven down the response about the major. There is every indication that this would be a very popular minor and we will strongly consider adding a RAME minor in the near future.

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

Sample 4-Year Plan #1 (Basic Major)
Year 1 Fall
ENGL101 (FSAW)[1] (3 credits)
ARHU158 (3 credits)
RELS289I [2] (DSHU #1; SCIS #1) (3 credits)
Diversity #1 [3] (DVUP) (3 credits)
1xx-2xx elective (3 credits)
---
15 credits
[1] Must attempt by 30 credits
[2] Can be substituted by other Foundations courses of the major approved for SCIS and DSHU credit.
[3] The DVUP and DVCC courses may also fulfill DS and IS categories

Year 1 Spring
Math (FSMA) [1] (3 credits)
HIST120 [4] (DSHU #2) (3 credits)
DSHS #1 (3 credits)
Diversity #2 [3] (DVUP or DVCC) (3 credits)
SCIS #2 (3 credits)
---
15 credits
[1] Must attempt by 30 credits
[3] DVUP and DVCC courses may also fulfill DS and IS categories
[4] Can be substituted by other Foundations courses of the major approved for DSHU credit.

Year 2 Fall
RELS264 [5] (3 credits)
Analytic Reasoning (FSAR) (3 credits)
DSSP #1 (non-major) [6] (3 credits)
1xx-2xx Elective (6)
---
15 Credits
[5] Can be substituted by other Foundations courses.
[6] DSSP courses may also fill other DS categories.

Year 2 Spring

JWST225 [5] (3 credits)
Natural Sciences (DSNS) (3 credits)
Oral Communication (FSOC) (3 credits)
1xx-2xx Elective (3 credits)
3xx-4xx Elective (3 credits)
---
15 Credits
[5] Can be substituted by other Foundations courses.

Year 3 Fall
Major elective, lower level (3 credits)
Major elective, upper level (3 credits)
Natural Science Lab (DSNL) (4 credits)
Global Engagement (3 credits)
3xx-4xx Elective (3 credits)
---
16 Credits

Year 3 Spring
Major elective, upper level (3 credits)
Major elective, upper level (3 credits)
DSHS #2 (3 credits)
FSPW (3 credits)
3xx-4xx Elective (3 credits)
---
15 Credits

Year 4 Fall
RELS 408 (DSSP #2, proposed) (3 credits)
3xx-4xx Elective (12)
---
15 Credits

Year 4 Spring
Major Elective (upper level) (3 credits)
3xx-4xx Elective (12)
---
15 Credits

Total Credits: 121, at least 45 credits 3xx or above.
Total Major Credits 30; at least 15 credits 3xx or above.

Sample 4-year plan #2: Language Track
Year 1 Fall
ENGL101 (FSAW) [1] (3 credits)
Language prerequisite #1 (3 credits)
RELS289I [2] (DSHU #1; SCIS #1) (3 credits)
Diversity #1 [3] (DVUP) (3 credits)
1xx-2xx elective (3 credits)
---

15 credits
[1] Must attempt by 30 credits
[2] Can be substituted by other Foundations courses of the major approved for SCIS and DSHU credit.
[3] DVUP and DVCC courses may also fulfill DS and IS categories

Year 1 Spring
Math (FSMA)[1] (3 credits)
HIST120 [4] (DSHU #2) (3 credits)
Language prerequisite #2 (3 credits)
DSHS #1 (3 credits)
SCIS #2 (3 credits)
---
15 credits
[1] Must attempt by 30 credits
[4] Can be substituted by other Foundations courses of the major approved for DSHU credit.

Year 2 Fall
RELS264 [5] (3 credits)
Second year language (3 credits)
Analytic Reasoning (FSAR) (3 credits)
DSSP #1 (non-major) [6] (3 credits)
Diversity #2 [3] (DVUP or DVCC) (3 credits)
---
15 credits
[3] DVUP and DVCC courses may also fulfill DS and SCIS categories
[5] Can be substituted by other Foundations courses.
[6] DSSP courses may also fill other DS categories.

Year 2 Spring
JWST225 [5] (3 credits)
Second year language #2 (Global Engagement) (3 credits)
Natural Sciences (DSNS) (3 credits)
Oral Communication (FSOC) (3 credits)
3xx-4xx Elective (3 credits)
---
15 Credits
[5] Can be substituted by other Foundations courses.

Year 3 Fall
Major elective, lower level (3 credits)
Major elective, upper level (3 credits)
Natural Science Lab (DSNL) (4 credits)
3xx-4xx Elective (6 credits)
---
16 Credits

Year 3 Spring
Major elective, upper level (3 credits)
Major elective, upper level (3 credits)
DSHS #2 (3 credits)

FSPW (3 credits)
3xx-4xx Elective (3 credits)
---
15 Credits

Year 4 Fall
RELS408 (DSSP #2, proposed) (3 credits)
3xx-4xx Elective (12)
---
15 Credits

Year 4 Spring
Major Elective (upper level) (3 credits)

3xx-4xx Elective (12)
---
15 Credits

Total Credits: 121, at least 45 credits 3xx or above.
Total Major Credits: 6 language prerequisite; 36 required; at least 15 credits 3xx or above.

Sample 4-year plan #3: Honors Track
Year 1 Fall
ENGL101 (FSAW) [1] (3 credits)
RELS289I [2] (DSHU#1; SCIS #1) (3 credits)
Language prerequisite #1 (3 credits)
Diversity #1 [3] (DVUP) (3 credits)
1xx-2xx elective (3 credits)
---

15 credits
[1] Must attempt by 30 credits
[2] Can be substituted by other Foundations courses of the major approved for SCIS and DSHU credit.
[3] DVUP and DVCC courses may also fulfill DS and SCIS categories

Year 1 Spring
Math (FSMA) [1] (3 credits)
HIST120 [4] (DSHU #2) (3 credits)
Language prerequisite #2 (3 credits)
DSHS #1 (3 credits)
SCIS #2 (3 credits)
---
15 credits
[1] Must attempt by 30 credits
[4] Can be substituted by other Foundations courses of the major approved for DSHU credit.

Year 2 Fall
RELS264 [5] (3 credits)

Second year language (3 credits)
Analytic Reasoning (FSAR) (3 credits)
DSSP #1 (non-major) [6] (3 credits)
Diversity #2 [3] (DVUP or DVCC) (3 credits)
---
15 credits
[3] DVUP and DVCC courses may also fulfill DS and SCIS categories
[5] Can be substituted by other Foundations courses.
[6] DSSP courses may also fill other DS categories.

Year 2 Spring
JWST225 [5] (3 credits)
Second year language #2 (Global Engagement) (3 credits)
Natural Sciences (DSNS) (3 credits)
Oral Communication (FSOC) (3 credits)
3xx-4xx Elective (3 credits)
---
15 Credits
[5] Can be substituted by other Foundations courses.

Year 3 Fall
Major elective, lower level (3 credits)
Major elective, upper level (3 credits)
Natural Science Lab (DSNL) (4 credits)
3xx-4xx Elective (6 credits)
---
16 Credits

Year 3 Spring
Major elective, upper level (H-section or graduate level) (3 credits)
DSHS #2 (3 credits)
FSPW (3 credits)
3xx-4xx Elective (6 credits)
---
15 Credits

Year 4 Fall
RELS 408H (DSSP #2, proposed) (3 credits)
Major elective, upper level (H-section or graduate level) (3 credits)
3xx-4xx Elective (9)
---
15 Credits

Year 4 Spring
RELS488 (Honors Thesis) (3 credits)
3xx-4xx Elective (12)
---
15 Credits
[3] The UPS and CC courses may also fulfill DS and SCIS categories

Total Credits: 121, at least 45 credits 3xx or above.

Total Major Credits: 6 language prerequisite; 36 required; at least 15 credits 3xx or above.

8. Indicate whether the program will be offered either online or off-campus. Please note that MHEC requires a separate proposal for off-campus delivery. If the program will be offered exclusively online or will have both a face-to-face and online version of the program, please complete this additional form and add as an appendix:
https://docs.google.com/document/d/1ojpUBt4mAWINPCiQNzZ48UH68zGPYj31TPgEOfW3q1E/

On campus delivery

9. If the program will be offered in a non-semester format, identify the term structure that will be used for the program:
- **Approved Campus 12-Week Term (see Academic Calendars)**
- ***Non-Standard Term**

***If you are using a non-standard term structure, indicate whether relevant offices, such as the Registrar's Office and International Scholar & Student Services, have been notified and support the program. Non-standard terms need to fit within the university's scheduling system calendar, and non-standard terms need to work with international student visa requirements.**

Term structure: Standard semester format

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

NA

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

Major
Successful Majors in Religions of the Ancient Middle East (RAME) will:
- ***Demonstrate an understanding of*** fundamental methodological, historical, and/or comparative approaches to the study of religion and culture in the ancient Near East and ***apply this understanding*** to specific relevant examples. [Demonstrated through written work or final exam in one of the approved I-series courses]
- ***Describe*** and **illustrate** the development of at least two chronological, geographical, or cultural sub-areas. [Foundations]
- ***Formulate*** and ***defend*** an argument about religion and culture in the ancient near east informed by the modern scholarship and amply illustrated with reference to ancient evidence. [Demonstrated through written work, potentially including a major research paper, in the capstone course]

Language Track
In addition to the above, Language Track students
- ***Demonstrate*** the ability to use the languages they have studied as a tool for deep engagement with ancient source material.

Honors

In addition to the above, Honors students in RAME

- ***Apply*** knowledge and approaches to ***investigate*** a high-level research question and to ***defend*** a thesis that is methodologically informed, makes ample use of ancient textual and/or non-textual evidence as well modern scholarly work, and present the results in clear and well-organized academic prose.

See Appendix: Item 11 Learning Outcomes

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

Introductory courses in Religious Studies have proven to provide significant recruitment tools for the current Religious Studies minor, and we expect them to be even more effective as an advertisement for the new major. Among the current Religious Studies course offerings are three I-series classes (RELS 289I "What is Religion?"; RELS 289J "Jerusalem in Antiquity"; and RELS 289M "Jesus, Mani, and Muhammad") that attract 60 to 100 students each time they are taught. These courses are highly attractive to students from a wide variety of backgrounds and disciplines, not only for their contents but because they fulfill significant General Education requirements (in Humanities, Cultural Competence, I-Series). Advertisement of the new major in these courses will provide an opportunity to recruit a diverse student body to the major.

Both currently and throughout its 18-year history, the Religious Studies minor has attracted students of highly diverse racial, ethnic, religious, gender, and sexual identities. The subject matter under discussion lends itself to broad and diverse interest, and our commitment to personal and engaged academic advising has always contributed to retention of diverse students from across the university.

Relationship to Other Units or Institutions

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

The proposed major relies in part on courses offered by or cross-listed with HIST. Based on our assessment, there is room in these classes for additional students and that the major will create incentives for additional students to take historically under-enrolled classes.

In drafting this proposal, we include almost no classes from Classics (with the exception of a general Archaeology class cross listed by several units). In fact, Greek language and some Classics courses are quite relevant, but we wanted to demonstrate clearly that the proposed program does not unduly rely on Classics or reproduce its Classical Cultures track. We are pleased to report that Classics fully supports this proposal.

Currently ARTH does not offer courses that would clearly count toward the major. (The two scholars in that department closest to the field emphasize time periods or geographies that are outside our proposed scope.) For that reason, we have not requested letters of support, although we would certainly welcome relevant courses from that department.

Letters of support from Classics and History are attached: Appendix: Item 13a and b, Letters

We add in addition that the various units on campus that support research and teaching in ancient history, languages, and culture (ARTH, CLASS, JWST, HIST) have always worked collaboratively. Recent and anticipated retirements in History have prompted renewed conversations about how we can best support the study of antiquity. Our program, far from negatively impacting existing programs, is proposed in a spirit of providing greater teaching and learning opportunities in the field of ancient Mediterranean and Middle Eastern Studies.

14. 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.

None

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

Faculty and Organization

16. Faculty and organization. Who will provide academic direction and oversight for the program? As an appendix, please indicate the faculty involved in the program. Include their titles, credentials, and courses they may teach for the program.

The program will be overseen by the Meyerhoff Program and Center for Jewish Studies, which also houses the Religious Studies minor.
As an interdisciplinary unit, the Meyerhoff Center has a mechanism for granting "Core Faculty Status" to faculties not appointed in Jewish Studies. We expect to extend this structure for RAME faculty as well. We note that this will require a change of the plan of organization of the Meyerhoff Center.
At this point the faculty committee consists of three faculty from Jewish Studies and one from History.
See Appendix: Item 16 Faculty

Resource Needs and Sources

17. 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. Please contact the University Libraries staff person who is your departmental/programmatic liaison or Daniel Mack at dmack@umd.edu, Associate Dean of Collections, to request a library assessment that will be added as an appendix. Please note that this assessment must be done by the University Libraries.

See Appendix Item 17 Library Assessment.

There are no new needs. The Meyerhoff Center already supports the collections of the Libraries to a higher degree than most units.

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

The program needs no new facilities.

19. 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.

Faculty:
We do not anticipate considerable new resource requirements. Most of the courses listed for the major are currently taught already. The principle task will be to make sure that Foundations courses are taught frequently enough. This can primarily be met by reallocating teaching responsibilities away from under-enrolled classes to make sure necessary courses are covered. To do so, the Meyerhoff Center is prepared to re-allocate up to the equivalent of 0.4 FTE (but spread between several faculty members) to teaching specifically for this major. In practice, however, we expect the actual reallocation to be 0.2 to 0.3 FTE. Occasionally, we may need to use soft funds to hire an adjunct instructor or buy out a course from another unit to allow a faculty member to teach for the major.

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

Staffing:
The program is not expected to generate extensive ***new*** scheduling or business related tasks for staff and only modest increase in existing scheduling or appointment duties. We estimate that at a ***maximum*** together this will require an additional 0.05 FTE (2-3 weeks per year), mostly falling on the coordinator in Jewish Studies. To free this time, we will consolidate or reduce other activities such as visiting lectures and conferences.
Advising:
Because of a sharp reduction in the number of JWST undergraduate majors and minors in recent years, our advisor is under utilized. The half-time GA currently assigned to undergraduate advising should be sufficient to serve the anticipated major in the immediate term.

21. The Maryland Higher Education Commission (MHEC) commission requires financial tables to describe the program's financial plan for the next five years. Please consult with our office before completing these templates: https://docs.google.com/spreadsheets/d/1V6iSZG05edMitWP6CAOXjCoGO58Gf6VXxPaacKfrhZ4/edit#gid=0. Once finalized in consultation with our office, these tables must be added as attachments. Use the space below for any additional comments on program funding.

See Appendix: Item 21 Budget.

Implications for the State (Additional Information Required by MHEC and the Board of Regents)
If the proposed program is for a Post-Baccalaureate Certificate that is derived entirely from existing courses within an existing Master's degree program, then you **only** need to respond to prompts 22 (on market demand) and 25 (curriculum of current master's degree program).

22. 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.

The proposed program advances knowledge around a key set of issues about which Americans are woefully ignorant. It promotes diversity and inclusion per the MSPPSE, and meets the MSPPSE stated principle of Innovation.

- Complex political issues rooted in the rise of Judaism, Christianity, and Islam are debated every day at the local, state and federal level and in the national media. These debates often take place on the basis of uninformed opinion or conventional knowledge that is frequently based on one person's own religious community's biases about others. Our major fosters knowledge and clear-eyed, unsentimental understanding of origins and the historical past as one factor in decision making, in addition to political, diplomatic, and military factors.
- For the Meyerhoff Center, the proposed major represents a specific effort to enhance its ability to reach a diverse population. Our courses—and particularly the courses that are at the foundations of the proposed BA program—have often drawn widely across the campus, and we have actively sought out CORE and now GenEd approval precisely to reach those students. However, the name (and subject matter) of the JWST major is too tied to one sub-population on campus to really attract a diverse student body. With this proposed major we break out of the existing mold and actively seek out the much broader student body interested in Jewish, Christian, and Islamic origins.
- As we note below (item 24) there is no comparable program to the one we propose at any State of Maryland institution. We provide an opportunity for students to explore fundamental issues of personal importance to many students and of significance to contemporary society that is not available elsewhere in the State.

In addition, we note consistently high enrollment in ancient history courses and the number of heritage students in the DC area, especially of Iranian and Ethiopian descent.

23. 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, or Maryland state Occupational and Industry Projections 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 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.

Our proposed major is not a professional degree, and we cannot link it with specific job prospects. It does provide important preparatory work for Museum work, for education at the secondary level, and for government work in the Middle East. Location in the greater Washington area means that there are significant opportunities for graduates.

Employment rates from BAs from the College of Arts and Humanities are at 90-95%. In addition, we note that the most recent Humanities Indicators Report showed that while for Humanities BAs unemployment was higher than for some other BA/BS fields, it was lower than the total US average, and that Humanities graduates find significant job satisfaction.[1]
When fully in place, we expect the major to be between 20 and 30 students at any given time.

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

The proposed program is truly unique among humanities offerings in the state of Maryland.

At present, a half dozen institutions in the state offer majors in Religious Studies (Towson University, Hood College, Goucher College, McDaniel College, St. Mary's College of Maryland, and Notre Dame of Maryland University), while another handful (including UMD) offer minors in the field (UMBC, Morgan State, Salisbury University, and Stevenson University; students at Morgan State can also complete a major in Philosophy that incorporates a religious studies track). Other relevant offerings in the state include a major in Near East Studies (Johns Hopkins University); minors in Arabic and Middle Eastern Studies, Medieval Studies, and Renaissance Studies (Hood College); and a minor in Book Studies (Goucher College).

The proposed program is in conversation with each of these other areas of study, but it overlaps directly with none of them. It will be the only program in the state to focus on the study of religion and culture in the ancient and Late Antique Near East. As such, it will also be the first program in the state to introduce students to the integrated study of Judaism, Christianity, and Islam, in both their origins and their extended historical development.

25. 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?

The proposed program does not impact the uniqueness or identity of any Maryland HBI. It is most comparable to the offerings of Morgan State University, whose Department of Philosophy and Religious Studies offers a minor in Religious Studies and a Major in Philosophy with a Religious Studies track. However, while the program at Morgan State offers general instruction in Religious Studies (comparable to the general Religious Studies minor already offered by our program), the proposed program is more specifically focused in terms of geography, time period, and culture. Other Maryland HBIs, including Coppin State University, Bowie State University, and the University of Maryland, Eastern Shore, include religious studies courses in their catalogs but do not provide specific programs in religious studies.

26. For new Post-Baccalaureate Certificates derived from existing master's programs only, include the complete curriculum of the existing master's program.

[1] See also: https://www.chronicle.com/article/Jobs-Will-Save-the-Humanities/243767

Appendix: Item 11 Learning Outcomes

RAME Learning Outcomes Assessment Plan

Annually: Collect data from Foundations and I-Series classes, Capstone courses, and Honors theses.

- Faculty in relevant courses use rubrics to assess majors. Data compares majors to all course takers
- Faculty reports outcomes to LOA coordinator
- Rubrics are attached.

Year 1

Outcome 1: Methodological, historical, and/or comparative approaches

- Assesment based on final assignment in an I-Series Foundations courses

Outcome 2: Developments in two or more regional, geographical, or chronological sub-areas

- Assessments of individual areas based on Foundations courses
- LOA coordinator and committee will need to cross-check to verify that students are meeting expectations in two or more areas.

Year 2

Outcome 3: Formulate and defend an independent argument about religion and culture in the ancient Near East

- Assessment based on final work product in Captstone/Thesis

Language track: Use the primary languages as a tool for deep engagement

- Assessment based on final work product in Captstone/Thesis

Honors track Apply knowledge and approaches to a high level research question

- Assessment based on final work product in Captstone/Thesis

- Successful Majors in Religions of the Ancient Middle East (RAME) will ***demonstrate an understanding of*** fundamental methodological, historical, and/or comparative approaches to the study of religion and culture in the ancient Near East and will ***apply this understanding*** to specific relevant examples. [Demonstrated through written work or final exam in one of the approved I-series courses]

	Exceeds Expectations	Meets Expectations	Does Not Meet Expectations
Understanding of method/theory	Demonstrates a sophisticated understanding of the historical backdrop and major innovations of the approach. Shows a deep understanding of key terminology and an integrated sense of the relationships of concepts within the approach.	Demonstrates an understanding of the historical backdrop and major innovations of the approach. Shows some understanding of key terminology and begins to integrate concepts within the approach.	Has difficulty demonstrating an understanding of the historical backdrop and major innovations of the approach. Can identify key terminology but may have trouble integrating concepts within the approach.
Application of method/theory to relevant examples	Identifies a relevant example for which this approach is appropriate. Applies the approach to the example in a consistent, thorough, and descriptive manner. Coherently integrates this application into a larger understanding of the approach.	Identifies an example for which this approach may be appropriate. Applies the approach to the example and provides some description. Provides a context for integration of this application.	Identifies an example for assessment of this approach, without attention to appropriateness. Applies the approach to the example. Has some difficulty providing a context for integration of the application.
Critique and analysis of method/theory	Understands the limits of the approach and can suggest contexts in which it might be especially valuable or in some way problematic.	Can identify limits for the approach and some of its potential benefits or shortcomings.	Has difficulty identifying the limits of this approach and its potential benefits or shortcomings.
Extrapolation from findings	Extrapolates in creative, interesting, and novel ways from this work to its larger possibilities.	Can extrapolates from this work to its larger possibilities.	Has difficulty extrapolating from this work to its larger possibilities.

- Successful Majors in Religions of the Ancient Middle East (RAME) will ***describe*** and **illustrate** the development of at least two chronological, geographical, or cultural sub-areas. [Demonstrated through written work or final exam in one or more of the approved foundations courses]

	Exceeds Expectations	Meets Expectations	Does Not Meet Expectations
Description of a chronological, geographic or cultural subgroup (must be completed for two different groups)	Shows a deep understanding of the historical setting and development of the group. Demonstrates a coherent and sophisticated understanding of major social, cultural, and historical developments of the group. Uses concepts and terminology with rigor and clarity.	Shows an understanding of the historical setting and development of the group. Demonstrates understanding of some social, cultural, and historical developments of the group. Can define concepts and terminology with some clarity.	Has difficulty showing understanding of the historical setting and development of the group. Can identify some social, cultural, and historical developments of the group. Can define concepts and terminology to a limited extent.
Illustration of historical example (must be completed for two different groups)	Identifies a relevant and significant example of social, cultural, or historical significance. Engages with the example in a consistent, thorough, and descriptive manner. Coherently integrates this illustration into a larger understanding of group.	Identifies an example of some social, cultural, or historical significance. Engages with the example and integrates it into a reasonable understanding of group.	Has difficulty identifying a relevant and significant example of social, cultural, or historical significance. Engages minimally with the example and and shows a limited ability to understand it in terms of group.
Critique and analysis of the process	Understands the limits of the illustration process and can suggest contexts in which it might be especially valuable or in some way problematic.	Can identify limits for the process and some of its potential benefits or shortcomings.	Has difficulty identifying the limits of this process and its potential benefits or shortcomings.
Extrapolation from findings	Extrapolates in creative, interesting, and novel ways from this work to its larger possibilities.	Can extrapolates from this work to its larger possibilities.	Has difficulty extrapolating from this work to its larger possibilities.

- Successful Majors in Religions of the Ancient Middle East (RAME) will ***formulate*** and ***defend*** an argument about the ancient near east informed by the modern scholarship and amply illustrated with reference to ancient evidence. [Demonstrated through written work, potentially including a major research paper, in the capstone course]

	Exceeds Expectations	Meets Expectations	Does Not Meet Expectations
Formulation of argument	Thinks creatively about the possibilities for cultivating a research question that is significant and responsible. Sets appropriate limits for the range and content of the argument to be defended.	Develops a reasonable research question and sets some limits on the range and content of the argument to be defended.	Has difficulty developing an independent research question and setting limits on the range and content of the argument to be defended.
Research in support of argument	Identifies relevant and appropriate primary and secondary sources. Reviews sources using a coherent approach, and records findings in responsible detail.	Identifies a limited number of primary and secondary sources. Reviews sources with relative thoroughness and records findings in some detail.	Has difficulty identifying relevant and appropriate sources. Reviews sources without a coherent approach, and does not fully record findings in responsible detail.
Presentation and defense of argument	Generates a convincing argument, supported by copious primary and secondary sources. Presents final paper with proper attention to style, mechanics, and annotation.	Generates an acceptable argument, supported by primary and secondary sources. May have some shortcomings in style or mechanics, but not in annotation.	Generates an argument, not fully supported by sources. Presents final paper with significant problems in style or mechanics. (Failure demonstrate proper annotation may be an honor offense).
Scholarly sophistication and creativity	Presents work that reflects scholarly creativity and insight.	Presents work in which some scholarly independence is evident.	Has difficulty working independently.

In addition to the above, Language Track students

- ***Demonstrate*** the ability to use the languages they have studied as a tool for deep engagement with ancient source material.

	Exceeds Expectations	Meets Expectations	Does Not Meet Expectations
Support a thesis or argument that depends on use of extended source material in the original language	Claims based on the reading of the source material are always correct and conclusions drawn always appropriate to the source material.	Claims based on the reading of the source material are usually correct and conclusions drawn usually appropriate to the source material.	Claims based on the reading of the source material are frequently incorrect and/or conclusions drawn inappropriate to the source material.
Support a thesis or argument with analysis of specific grammatical, morphological, or syntactic data from the source material.	Analysis is always correct and conclusions drawn always appropriate to the source material.	Analysis is usually correct; conclusions drawn are usually appropriate to the source material.	Analysis may be substantially incorrect and/or conclusions drawn inappropriate to the source material.

In addition to the above, Honors students in RAME

- ***Apply*** knowledge and approaches to ***investigate*** a high level research question and to ***defend*** a thesis that is methodologically informed, makes ample use of ancient textual and/or non-textual evidence as well modern scholarly work, and present the results in clear and well-organized academic prose.

	Exceeds Expectations	Meets Expectations	Does not Meet Expectations
Assembly and critical assessment of bibliography	The student is always able to recognize appropriate source material.	The student is able to recognize appropriate source material.	The student is not able to recognize appropriate source material.
Clarity and coherence of writing	The student's writing is consistent in its organization and lucidity, displaying a clear objective.	The student's writing is organized and/or displays a clear objective.	The student's writing is not well organized and displays a clear objective.
Articulation of a thesis and extended argument	The student is able to identify a problem in research and organize a strong argument around this problem.	The student is able to identify a problem in research and organize an argument around this problem.	The student is not able to identify a problem in research and organize a argument around this problem.
High level research question	Research question and use of sources critique and/or extend current research in the field.	Research question and use of sources correctly and fully represent scholarship without extensive critique or extension.	Research question and use of sources may not show correctly or adequately reflect current research. Student is unable to critique current approaches.

Appendix: Item 13a Classics Letter

Department of Classics
1210 Marie Mount Hall
College Park MD 20742

January 31, 2019

Professor Hayim Lapin
Meyerhoff Center for Jewish Studies
University of Maryland
4141 Susquehanna Hall
Campus

Dear Hayim,

I am writing in support of the proposed major in Religions and Cultures of the Ancient Near Eastern that JWST is proposing. Although we use a different method to encourage languages within the major, we like your idea of formalizing an “advanced" language-enhanced track.

We appreciate the concern that your new major may conflict with the Classical Humanities track in the Classics major. Although you make a point of not listing Classics courses in the description of the major (to emphasize the lack of conflict), I think most of your constituency will be different from ours. In the same way that JWST or RELS courses have been counted toward the Classical Humanities major track, Classics would have no problem with Classics courses counting toward the new proposed major.

In fact, if a student wanted to undertake both majors, I would encourage it. And if enough of your students wanted to take Greek to make it feasible for us to offer *koine* Greek (the Greek of the New Testament) every year, we could do that too.

If I can provide any further information, please let me know.

Sincerely,

Lillian E. Doherty

Lillian E. Doherty
Professor and Chair
Department of Classics
Ldoherty@umd.edu
301-405-2022

Appendix: Item 13b History Letter

UNIVERSITY OF MARYLAND

DEPARTMENT OF HISTORY

2115 Francis Scott Key Hall
4282 Chapel Lane
College Park, MD 20742-7315
301.405.4263 TEL 301.314.9399 FAX

February 4, 2019

Professor Hayim Lapin
Meyerhoff Center for Jewish Studies
University of Maryland
4141 Susquehanna Hall
Campus Mail

Dear Hayim,

I am writing in support of the proposed major in Religions and Cultures of the Ancient Near Eastern that Jewish Studies is proposing. The Department of History supports this major and sees no conflict between this new major and the undergraduate History major.

In addition, I can affirm that history plans to continue to offer the following History courses that are regularly cross-listed with JWST or RELS.
HIST110: The Ancient World (3)
HIST120: Islamic Civilization (3)
HIST219I: Religions of the Ancient Near East (3)
HIST281: Rabbinic Movement: History and Culture (3)
HIST289T: Jesus, Mani, and Muhammad
HIST320: Early Christianity: Jesus to Constantine (3)
HIST320: Early Christianity: Jesus to Constantine (3)
HIST321: Biblical History and Culture (3)

If I can provide any further information, please let me know.

Sincerely,

Peter Wien
Professor and Interim Chair

Appendix: Item 16 Faculty

Religions of the Ancient Middle East

JWST Faculty
Maxine Grossman, Associate Professor JWST; Coordinator for the new major. *Dead Sea Scrolls; Hebrew Bible; Religious Studies Methodology*

- RELS 289I: What is Religion?
- JWST 262: Intro to Hebrew Bible/Old Testament
- JWST 231: Jewish Texts and Cultures of the Second Temple Period

Hayim Lapin, Professor JWST and HIST; Director Meyerhoff Center. *Judaism in Late Antiquity; Early Christianity; Religion in the Later Roman World.*

- RELS 289M: Jesus, Mani, and Muhammad
- HIST 281: Inventing Tradition: The Making of Rabbinic Judaism
- RELS 264: Intro to New Testament
- JWST 230: Rabbinic Movement: History and Culture

Matthew Suriano, Associate Professor JWST. *Archaeology, Ancient Near East, Hebrew Biblical Studies*

- JWST 289J: Jerusalem in Antiquity The History of Sacred Space in a Holy City
- JWST 225: Religions of the Ancient Near East
- JWST 262: Intro to Hebrew Bible/Old Testament

Other Faculty
Antoine Borrut, Associate Professor HIST. *Islam, Pre- and Early Islamic Arabia and the Middle East.*

- HIST 120: Islamic Civilization
- HIST 428R: Selected Topics in History; Transition to Islam: From the Ancient to the Medieval Muslim World

Appendix: Item 17 Library Assessment

DATE: 2/11/19
TO: Dr. Hayim Lapin
Director, Jewish Studies Program
FROM: On behalf of the University of Maryland Libraries:
Yelena Luckert, Director of Research and Learning and Liaison to Jewish Studies
Maggie Saponaro, Director, 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 Dr. Hayim Lapin, Chair, in the Jewish Studies Program to create a new major program in Ancient Middle eastern Religions and Cultures. The Jewish Studies Program asked that we at the University of Maryland Libraries assess our collection resources to determine how well the Libraries support the curriculum of this proposed program.
It is important to note that the new Ancient Middle Eastern Religions and Cultures will be based on gathering the existing courses already being offered by the University of Maryland. These courses primarily will come from the existing JWST offerings, supplemented by the HIST and Religious Studies Program. The Libraries have already more than adequate resources for these courses. In fact our general collections in Jewish Studies, including Ancient Middle Eastern Religions and Cultures, consisting of over 100,00 monographs and multitude of other resources, is one of the best in the Mid-Atlantic Region, second only to the Library of Congress.

Serial Publications

The University of Maryland Libraries currently subscribe to a number of scholarly journals—almost all in online format--that focus on ancient Middle East, religion, Judaism and Islam. Here are some examples:

- Journal of Ancient Middle Eastern Religions
- Journal of Islamic Studies
- Islamic Quarterly
- Revue de Qumran
- Megilot: meḥḳarim bi-megilot Midbar Yehudah.
- Dead Sea discoveries: a journal of current research on the scrolls and related literature.
- The Jewish Bible Quaterly
- Journal for the study of the Old Testament
- The Review of Rabbinic Judaism
- Sinai

Databases

The Libraries' *Database Finder* (http://www.lib.umd.edu/dbfinder) resource offers online access to databases that provide indexing and access to scholarly journal articles and other information sources.

Many of these databases cover subject areas that would be relevant to this proposed program. Databases that would be useful in the field of Ancient Middle Eastern Religions and Cultures are

- RAMBI Reshimat Ma'amarim Be'mada'e Ha-yahadut/Index of Articles on Jewish Studies
- IJP - Index to Jewish Periodicals
- ATLA (American Theological Library Association) Religion Database
- Biblical Archaeology Society Online Archive
- Middle Eastern & Central Asian Studies (MECAS)
- Index Islamicus
- AnthroSource

A very important database that would be relevant to this curriculum is *The Global Jewish Database (the Responsa Project)*, which can be described as a text mining tool.

Also three general/multidisciplinary databases, *Academic Search Premier, MasterFILE Premier* and *ProjectMUSE* are good sources of articles relevant to this topic.

In many-and likely in most--cases, these indexes offer full text copies of the relevant journal articles. In those instances in which the journal articles are available only in print format, the Libraries can make copies available through either the Libraries' Scan & Deliver Program (http://www.lib.umd.edu/access/scan-deliver) or via Interlibrary Loan. (Note: see below.)

Monographs

The Libraries regularly acquire scholarly monographs in Ancient Middle Eastern Religions and Cultures and allied subject disciplines. Monographs not already part of the collection can usually be added upon request.

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. For example, a quick search on "ancient middle east religion" yielded 662 monographs; on "Qumran" 579; and on "ancient Judaism" 1259. A further search revealed that the Libraries' membership in the Big Ten Academic Alliance (BTAA) increases these holdings and citations, however not by much, as our Judaica holdings are superior to other BTAA institutions.

Scan & Deliver and Interlibrary Loan

These services offer 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. Scan & Deliver and Interlibrary Loan are available free of charge.

The Scan & Deliver 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, Scan & Deliver will automatically refer the request to Interlibrary Loan (ILL). Interlibrary Loan is a service that enables borrowers to obtain online articles and book chapters from materials not held in the University System of Maryland.

Additional Materials and Resources

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

The subject specialist librarian for the discipline, Yelena Luckert, yluckert@umd.edu also serve as an important resource to programs such as the one proposed.

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 Ancient Middle Eastern Religions and Cultures, in particular the Library of Congress.

Conclusion

With our substantial monograph collections, journals holdings and index databases, as well as additional support services and resources, the University of Maryland Libraries have resources to support teaching and learning in the Ancient Middle Eastern Religions and Cultures. Additionally, the Libraries Scan & Deliver and Interlibrary Loan services make materials that otherwise would not be available online, accessible to remote users in online courses. As a result, our assessment is that the University of Maryland Libraries are able to meet the curricular and research needs of the proposed the Ancient Middle Eastern Religions and Cultures.

Appendix: Item 21 Budget

TABLE 1: RESOURCES

Resources Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1.Reallocated Funds	$ 89,784	$ 92,178	$ 94,643	$ 97,182	$ 99,798
2. Tuition/Fee Revenue (c+g below)	$ -	$ -	$ -	$ -	$ -
a. #FT Students	20	20	20	20	20
b. Annual Tuition/Fee Rate	$ 13,575	$ 13,982	$ 14,402	$ 14,834	$ 15,279
c. Annual FT Revenue (a x b)	$ -	$ -	$ -	$ -	$ -
d. # PT Students	1	2	3	5	5
e. Credit Hour Rate	$ 565.40	$ 582.36	$ 599.83	$ 617.83	$ 636.36
f. Annual Credit Hours	20	20	20	20	20
g. Total Part Time Revenue (d x e x f)	$ -	$ -	$ -	$ -	$ -
3. Grants, Contracts, & Other External Sources	$ -	$ -	$ -	$ -	$ -
4. Other Sources	$ -	$ -	$ -	$ -	$ -
TOTAL (Add 1 - 4)	**$89,784**	**$92,178**	**$94,643**	**$97,182**	**$99,798**

Undergraduate	**Full time**	**Part Time**	**Full time**		**Part time**	
(FY2019)	**annual**	**per credit hour**	**inflation**		**% in□state**	
resident tuition	$ 8,651.00	$ 360.00		1.03	0.80	0.90
non-resident tuition	$ 33,272.00	$ 1,387.00			0.20	0.10
diff'l addition (BMGT, ENGR, CS)	$ 1,400.00	$ 116.00				
Graduate						
(FY2019)	**annual**	**per credit hour**				
resident	$ 17,208.00	$ 717.00				
non-resident	$ 37,152.00	$ 1,548.00				

TABLE 2: EXPENDITURES

Expenditure Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Faculty (b+c below)	$45,220	$46,577	$47,974	$49,413	$50,896
a. #FTE	0.4	0.4	0.4	0.4	0.4
b. Total Salary	$34,000	$35,020	$36,071	$37,153	$38,267
c. Total Benefits	$11,220	$11,557	$11,903	$12,260	$12,628
2. Admin. Staff (b+c below)	$9,310	$9,589	$9,877	$10,173	$10,478
a. #FTE	0.1	0.1	0.1	0.1	0.1
b. Total Salary	$7,000	$7,210	$7,426	$7,649	$7,879
c. Total Benefits	$2,310	$2,379	$2,451	$2,524	$2,600
3. Total Support Staff (b+c below)	$6,650	$6,850	$7,055	$7,267	$7,485
a. #FTE	0.1	0.1	0.1	0.1	0.1
b. Total Salary	$5,000	$5,150	$5,305	$5,464	$5,628
c. Total Benefits	$1,650	$1,700	$1,750	$1,803	$1,857
4. Graduate Assistants (b+c)	$18,604	$19,162	$19,737	$20,329	$20,939
a. #FTE	0.5	0.5	0.5	0.5	0.5
b. Stipend	$10,000	$10,300	$10,609	$10,927	$11,255
c. Tuition Remission	$8,604	$8,862	$9,128	$9,402	$9,684
5. Equipment	$0	$0	$0	$0	$0
6. Library	$0	$0	$0	$0	$0
7. New or Renovated Space	$0	$0	$0	$0	$0
8. Other Expenses: Operational Expenses	$10,000	$10,000	$10,000	$10,000	$10,000
TOTAL (Add 1 - 8)	**$89,784**	**$92,178**	**$94,643**	**$97,182**	**$99,798**
resources - expenditures	$0	$0	$0	$0	$0

benefits	0.33
inflation	1.03

Appendix: Item 26 Survey

Ancient Mediterranean Religions and Cultures

Start of Block: About myself

Q1.1 **Thank you for agreeing to take this brief survey!**

Please tell us a bit about yourself. This will help us gauge student interest and plan for the future. At the end, you can give us contact information and be entered to win an Amazon gift card.

Q1.2 Next semester, I will be a:

- First year student (1)
- Second year student (2)
- Junior (3)
- Senior (4)
- Gone! I'm graduating! (5)

Q1.3 My major(s)

_____

Q1.4 My minor(s)

_____

End of Block: About myself

Start of Block: About the proposed program

Q2.1 I would be interested in a ***major or minor*** that studies the religions and cultures of the ancient world

	Major (1)	***Minor*** (2)
Yes (1)	○	○
Maybe (2)	○	○
No (3)	○	○

Q2.2 My primary interests are in (click as many as apply):

- ☐ Ancient Near East (1)
- ☐ Ancient Judaism (2)
- ☐ Biblical Israel (3)
- ☐ Early Christianity (4)
- ☐ Early Islam (5)
- ☐ Greek and/or Roman paganism (6)
- ☐ Other (7) _____

Q2.3 Within those primary interests I would be most interested in (as may as are relevant):

- [ ] Archaeology (1)
- [ ] History (2)
- [ ] Reading primary texts (3)
- [ ] Rituals and practices (4)
- [ ] Gender Studies (5)
- [ ] Mythololgy (6)
- [ ] Other (7) _____

End of Block: About the proposed program

Start of Block: Languages

Q3.1 Some students interested in this major might want to study ancient languages. Your answers here will help us gauge that interest.

Q3.2 Reading sources in the original languages is of interest to me:

- ○ Yes! Sign me up! (1)
- ○ I'm mildly interested, but not excited. (2)
- ○ No, thank you, I'll stick with translations (3)

Skip To: End of Block If Reading sources in the original languages is of interest to me: = No, thank you, I'll stick with translations

Q3.3
Given the opportunity, I would be interested in studying ...

(click as many as apply)

- [ ] Biblical Hebrew (1)
- [ ] Classical or New Testament Greek (2)
- [ ] Qur'anic Arabic (3)
- [ ] Aramaic (Biblical, Jewish, or Christian Syriac) (4)
- [ ] Ancient Near Eastern languages (Akkadian, Sumerian, Ugaritic) (5)
- [ ] Late antique languages (Coptic, Ethiopic, South Arabian, Armenian) (6)
- [ ] Other (7) _____

End of Block: Languages

Start of Block: Following up

Q4.1
Can we be in touch with you to keep you informed about developments or to ask for feedback? By giving us your contact information, you will be entered to win an Amazon gift card.

Q4.2 Please contact me and/or keep me in the loop

- ○ Yes please contact me (1)
- ○ No do not contact me (2)

Skip To: End of Survey If Please contact me and/or keep me in the loop = No do not contact me

Display This Question:

If Please contact me and/or keep me in the loop = Yes please contact me

Q4.3 Contact information

- First Name (1) _____
- Last Name (2) _____
- Email (3) _____

Q4.4 Additional thoughts?
Please feel free to add any information or ideas that might help us make this program a reality.

_____

_____

_____

_____

_____

End of Block: Following up

Start of Block: Thank you!

Addendum

The Honors track portion of the proposal represents initial thinking, and will not necessarily be implemented as written. A separate proposal for an Honors designation within the major will be submitted for review by the Honors College after the program is approved but prior to implementation.