WORCESTER POLYTECHNIC INSTITUTE

April 14, 2022

To: The WPI Faculty From: Mark Richman

Secretary of the Faculty

The eighth faculty meeting of the 2021-2022 academic year will be held on **Thursday**, **April 14, 2022** at 3:15pm via Zoom (join after 3:00 pm at https://wpi.zoom.us/j/98981128766).

1. Call to Order M. Richman

- Approval of the Agenda
- Consideration of the Minutes from March 17, 2022
- Consideration of the Consent Agenda
- 2. Committee Business:

Committee on Academic Policy (CAP)
Committee on Academic Operations (CAO)

O. Pavlov L. Titova

• Motion to rename the WPI "Physical Education Graduation Requirement" the "Wellness and Physical Education Graduation Requirement"

Committee on Tenure and Academic Freedom (CTAF)

L. Mathews

Committee on Governance (COG)

T. El-Korchi

 Motion to extend the probationary periods for faculty members who started on the tenure track in AY21/22

Committee on Appointments and Promotions (COAP)

G. Iannacchione

Committee on Governance (COG)

T. El-Korchi

- Motion to explicitly require professional associate letters for promotion to Associate Teaching Professor
- Motion to add criteria for promotions in the Professor of Teaching track (discussion, only)
- Motion to add procedures for promotion to (full) Professor of Teaching (discussion, only)
- Motion to modify eligibility and time in rank guidelines for promotion of tenured and tenure-track faculty (discussion, only)
- 3. Committee on Governance (COG) Report: for open discussion

First Annual Report on WPI Faculty Populations - and Clarification of Faculty Categories M. Richman

4. President's Report L. Leshin

5. Provost's Report W. Soboyejo

- 6. New Business
- 7. Closing Announcements
- 8. Adjournment

TABLE OF CONTENTS Faculty Meeting Materials, April 14, 2022

1.	Faculty Meeting Minutes: March 17, 2022	Page 3
2.	Committee Business:	
	CAP/CAO Motion:	
	- to rename the WPI "Physical Education Graduation Requirement"	
	the "Wellness and Physical Education Graduation Requirement"	9
	CTAF Motion:	
	- to extend probationary periods for fac. members who started on the tenure track in AY21/22	11
	COAP Motion:	
	- to explicitly require Prof. Assoc. letters for promotion to Associate Teaching Professor	12
	- to add criteria for promotions in the Professor of Teaching track (discussion, only)	14
	- to add procedures for promotion to (full) Professor of Teaching (discussion, only)	16
	- to modify eligibility and time in rank guidelines for promotion of tenured and	
	tenure-track faculty (discussion only)	19
3.	Appendix: Consent Agenda Motions	21
	CAO Motions:	
	- to add HU 2901: Topics in Sexuality and LGBTQ+ Studies	22
	- to add MU 2642: Jazz Combo	24
	 to change description and course number for MU 2635: Stage Band to MU 2644 	25
	- to change description and course number for MU 2634: Jazz Ensemble to MU 2643	26
	 to change the concentrations within the MGE degree program 	27
	- to change the distribution requirements for the Management Engineering (MGE) degree	30
	- to change the course titles and/or descriptions for FIN 3300 and OIE 3420	35
	- to change the course prefixes, titles, and/or descriptions for BUS 1010, BUS 2060, BUS 2070,	27
	BUS 3010, BUS 3020, and BUS 4030	37 41
	 to change the economics requirement for the BU, MGE, and MIS degrees to add thirteen club sports for academic credit 	41
	 to add thirteen club sports for academic credit to add WPE designation for Wellness and Physical Education credit and change designation of 	42
	existing PE courses to WPE	44
	CGSR Motions:	
	- to add a new graduate course: ID 510 Undergraduate Research Mentoring	49
	- to change term-long course ME 5000 to semester-long course ME 500	51
	- to remove BUS 545 Intro to Health Sys. and OIE 556 Health Sys. Mod. and Improvement	53 54
	 to remove MKT 564 Global Tech. Mark't. and MKT 567 Integrated Mark't Communications. to add BUS546 as an option within five graduate business specialties 	54 55
	- to modify the Combined Bachelor's/Master's Degree Program Course Designation Form	57
	to mounty the combined bacheror sylviaster's Degree Frogram Course Designation Form	57

WORCESTER POLYTECHNIC INSTITUTE Faculty Meeting Minutes March 17, 2022

Summary:

- 1. Call to Order Approval of: Meeting Agenda; Minutes from Feb. 17, 2022; and Consent Agenda
- 2. Memorial Resolution (in honor of Prof. Dean O'Donnell, IMGD)
- 3. Committee Business: CITP
- 4. Special Reports: Mental Health and Well-Being Task Force; COACHE Survey Steering Committee
- 5. President's Report
- 6. Adjournment

Detail:

1. Call to Order

The seventh faculty meeting of the 2021-2022 academic year was called to order at 3:15pm via ZOOM by **Prof. Richman** (AE). Prof. Richman reminded all those in attendance that the meeting was being recorded for the purpose of accurate minutes. The agenda for the meeting was approved as amended to recognize that Provost Soboyejo would not be in attendance to give his report, and the minutes of the Feb 17, 2022 meeting were approved with a slight modification. The consent agenda was approved as distributed. Prof. Richman thanked all those in the academic departments and faculty governance who did the hard work to prepare the motions in today's consent agenda.

2. Memorial Resolution in honor of Prof. Dean O'Donnell (IMGD)

Prof. deWinter (IMGD) read the following memorial resolution in honor of Prof. Dean O'Donnell (IMGD):

We, the Faculty of Worcester Polytechnic Institute, note with profound sorrow and a great sense of loss the passing of our friend and colleague Prof. Dean O'Donnell, full Teaching Professor of IMGD, who died March 7, 2022. Dean O'Donnell graduated from WPI with a B.S. in Physics in 1986 before earning his MFA from Brandeis University in 1990 and returning to WPI as a professor in 1993. In 2004, Dean O'Donnell was a founding faculty member of IMGD.

He has written numerous short plays, including "Legwork," which has been staged in various venues, from Yale University to the Viaduct Theatre in London, and in 2002 was converted into an independent film by Javier Reyna. In 1993, Dean O'Donnell returned to WPI, this time as a professor in the Drama/Theatre program. Simultaneously, he continued to play a leadership role in the larger Boston theatre community. It is during this time in 1998 that Dean O'Donnell partnered with director Marc Smith to produce an augmented reality-enhanced rendition of *The Story of Dr. Faust* for the Foothills Theatre.

His broad thinking about storytelling took Dean O'Donnell into writing for games, working for such companies as Epic Games, Activision, and Iron Lore Entertainment. In fact, the giant statue of a minotaur that now stands in WPI's Gordon Library was from Dean's time at Iron Lore.

Immediately on the launch of IMGD, Prof. O'Donnell was pivotal to the culture of IMGD, both in never forgetting the fun and possibilities of the medium but also in the professional outreach and mentorship he provided. He drew from theatre pedagogy to introduce Master Classes to bring game professionals to WPI for intensive courses. He worked with students to design and implement our PAX East booth to highlight student work at a major industry event. For students wanting to work with industry partners, he negotiated MQP sponsorships with such giants as Disney and TenCent. During Showfest—an end-of-year event that Dean created for students to come together, barbeque, and play each other's games—he set up an interview couch, invited outside game developers and designers, and gave the students opportunities to be professionally interviewed about their newly created and released media, all streamed on Twitch. Starting in 2018, Dean O'Donnell started the IMGD annual escape room.

It is hard to fit into here his love and delight for all things Disney and Star Wars, his love of his wife and dog, and his joy from being with friends, playing games, and telling jokes. He was the heart of WPI's IMGD program since its inception.

Therefore, let it be resolved that we, the Faculty of Worcester Polytechnic Institute, recognize and express our admiration of and eternal gratitude to Prof. Dean O'Donnell, who continued to have deep passion, vision, and empathy for all things and people related to IMGD. He founded a new type of degree at WPI; he nurtured it as it grew into successful undergraduate, graduate, and extracurricular programs; and he celebrated the enormous success of our students and

alumni. Let it also be resolved that this resolution be inscribed in the permanent records of this faculty as a memorial to our beloved colleague, and that a copy be delivered to his family.

Prof. Richman asked everyone to "unmute" their remote connections and he put the resolution to a voice vote. The resolution **passed** unanimously. A moment of silence was observed in Professor O'Donnell's honor.

3. Committee Business

CITP

Prof. Cowlagi (AE) presented a refresher on WPI's Acceptable Use Policy (AUP) and a preliminary motion (for discussion only) on proposed revisions to the AUP. (See **Addendum #1** on file with these minutes.) The policy was last revised and updated in 2015. The proposed revisions, which are agreeable to both CITP and Information Technology Security (ITS), are mainly to reformat the policy in accordance with the new template, describe certain provisions more explicitly, and include some terminology changes. The key elements of this policy have not changed considerably. Users are now clearly defined as all members of the WPI community who are authorized to access "WPI computing and networking (C&N) resources." The policy applies to all systems and devices owned by WPI and also includes personal devices used to access WPI C&N resources.

The policy itself has five key unchanged elements: comply with the intended use of WPI C&N resources; ensure the ethical and legal use of C&N resources; respect WPI property and WPI C&N resources; respect the personal property and privacy of other users; and use WPI C&N resources for non-commercial purposes only.

First and/or minor violations are to be resolved in a non-adversarial and educational manner. In the case of repeat violations, students may be referred to the Dean of Students office for resolution and employees may be directed to Talent and Inclusion. For serious violations (with malicious intent to compromise security), access to C&N resources may be suspended pending resolution with the Dean of Students (for students) and Talent and Inclusion (for employees). Exceptions for academic activities can be requested by faculty members if needed and may be granted by ITS.

The revisions include changing the term "offenses" to "violations." However, this may cause problems for people who inadvertently violate the AUP and then are asked as part of a future job application process to sign an statement that they have never violated a university AUP. CITP will revise this language with this consideration in mind.

Prof. Richman reminded everyone that the chat is an informal mechanism of discussion that is not part of the formal proceedings and will not be recorded in the minutes. He also reminded everyone that even for informal presentations such as this one, we adhere closely to Robert's Rules of Order for the purpose of managing the discussion.

Prof. Martin (MA) asked if we have had any expert look at the wording of the policy to make sure that we don't ruin our students' chances of getting security clearances. Prof. Cowlagi explained that CITP is now soliciting feedback from the community but not yet from outside experts.

Prof. Richman asked if there is anything in the policy that differentiated the process that would follow if a faculty member were to commit an offense from the process to be used for other employees. **Prof. Cowlagi** explained that the policy makes no such distinction but CITP was open to changing the language based on such feedback.

4. Special Reports

Mental Health and Well-Being Task Force

Prof. Foo (DIGS) began a presentation that included an addition to Phase One and the results of Phase Two of the Mental Health and Well-Being (MHWB) task force report. (See **Addendum #2** on file with these minutes.)

The addition focused on the following groups: Black, Indigenous, and People of Color (BIPOC); African American, Latino/a American, Asian American (ALANA); and Lesbian, Gay, Bisexual, Trans, Queer, Intersex, Asexual, Aromatic,

Agender, and Pansexual (LGBTQIAP+). In general, these students identified disconnection as the driver of their poor mental health. Their specific stressors were financial stress, a lack of representation of minority populations on the faculty, a lack of spaces for cultural groups, a lack of institutional knowledge passed down from student to student, inaction regarding instances of disrespect, a lack of DEI training for faculty, a lack of connection to faculty, and food insecurity.

The survey of the faculty had a 23 percent response rate (170 people) and included three town hall meetings in which 90 faculty members participated. The results indicate that the three primary drivers of poor faculty mental health are teaching expectations, research expectations, and a lack of self-care and balance. Two moderate drivers are poor campus morale both before and during the pandemic, and a lack of social connection. Of low impact are service overload, administrative workload, and personal financial and institutional resource concerns.

The most significant factors contributing to poor faculty mental health are having too much work to complete within a scheduled week (identified by 64 percent of faculty surveyed), heavy teaching loads (identified by 54 percent of faculty surveyed), and missing out on time with family and friends (identified by 50 percent of faculty surveyed). Pressures to publish and obtain grant funding, and feelings of not having their voices heard in decision making and poor dynamics within departments were also significant factors.

The overriding finding is that WPI reflects a culture of systematic overwork in which people perpetually feel the pressure to do more and more. Recommendations include improving teaching loads, hiring more faculty, acknowledging labor of marginalized faculty, expanding the academic schedule to allow more time for interactions outside the classroom, restricting meetings, and providing terms off for faculty from teaching.

A second general finding is that campus morale is low and faculty do not feel appreciated. Recommendations are as follows: eliminating the label of "merit-based" pay increases; prioritizing service and engagement within our community in addition to teaching and research as an explicit part of merit, tenure, and promotion; providing teaching buyouts for faculty who provide exemplary student support or play administrative roles; and holding faculty accountable by requiring training and performance improvement plans when appropriate.

A third finding is that faculty members feel unprepared to address student mental health challenges, which creates an imbalance between their ability and their willingness to support students. The report recommends increasing resources for faculty and staff beyond referrals to the employee assistance program (EAP), supporting faculty who take on disproportionate mentoring responsibilities, finding ways to address feelings of exclusion experienced by certain subgroups of faculty, setting realistic expectations and boundaries for work and working hours, and providing training on how to interact with minority populations concerning mental health.

The fourth finding for faculty (as well as staff) is that work and life are out of balance. Recommendations include decreasing work hours and providing more flexibility, transitioning to shorter meetings, streamlining and simplifying tasks, and discouraging working through illnesses.

The staff data is primarily based on a survey of 203 staff members (or 28 percent of the staff population). Similar to the faculty, the staff feels overworked, overextended, adversely affected by a culture of overwork and a poor ability to achieve a healthy work-life balance. In contrast to the faculty findings, poor compensation was reported as having a major impact on the mental health of the staff. They would also like improved benefits and higher employee retention. In general, they feel unappreciated, they want to be more involved in campus decisions, especially those that require their support, and they want more opportunities to connect with others and to build community. Almost two-thirds of respondents reported feelings of being overwhelmed often or very often. Both faculty and staff identified work-life balance and more realistic expectations as priority areas that must be addressed to improve mental health.

Dir. Barry (Asst. Dir. for Comm. Devel.) pointed out the concerns shared by students, faculty, and staff: overwork; work/life balance; lack of appreciation and support; and mental health challenges. In order to make progress on

these issues we need to make radical changes in our support systems, respond to the pressures affecting all groups, redefine success and establish realistic expectations, and destigmatize mental illness.

The next steps will be taken by the Mental Health Implementation Team with groups focused on student life, academics, programs and training, first-year experience, and communications. This implementation structure was developed for students, and the implementation team is working on action items for the needs of staff and faculty with some overlap with the existing plan expected.

Prof. Boudreau (HUA) was gratified to see data reflecting what we've all been feeling. She wanted to know whether the faculty load model project (described at the May 2021 faculty meeting), which came out of analysis done for us by Huron consultants and included a goal of saving \$500K per year by re-evaluating faculty workloads, was still a work in progress. She was concerned because, as the MHWB task force report demonstrates, faculty memebrs are having the work piled on and students are complaining that we are not being responsive. She suggested that one recommendation that should be made is to stop that project. **Dir. Barry** could not speak to the faculty load model project, but he indicated that some student-support offices have been adding staff and are asking for more.

Prof. deWinter (HUA) was worried that it was superficial, for example, to eliminate the language about one percent merit raises as a way to improve morale. She emphasized that it will be our actions rather than the language we use to describe them that will improve morale and address other mental health issues. She asked how we are delving into this and other such contradictions in the report. **Dir. Barry** agreed that the issues uncovered in the report required meaningful institutional change. **Prof. Foo** added that it is demoralizing to describe one percent raises as any measure of merit, but she agreed with Prof. deWinter's larger point. Prof. deWinter saw many other contradictions as well, including the contradiction of developing a more inclusive community while punishing people for not being inclusive. She wondered how the contradictions would be addressed.

Dean McNeill (ENG) explained that the point of the faculty load model project was to assess faculty activities across departments. The subcommittee on budget processes for academic affairs will find \$500k by doing more equitable budgeting to alleviate budget shortfalls that we all are feeling.

Prof. Elmes (BUS) added that the results measuring mental health and morale of the staff could have been much worse had it been possible to include the input of staff members who were let go or had to leave in the past year. We need to recognize that it is hard for staff, especially for those who are no longer at WPI.

Dir. Grant Piccioli (Dir. Manuf. Innov.) suggested that a similar presentation be made to the staff for their information and as a way to enagage the staff in a community-wide discussion.

Prof. Richman thanked Prof. Foo and Dir. Barry for the concise summary of the lengthier task force report and looked forward to getting additional reports at these meetings.

COACHE Survey Steering Committee

Prof. Demetry (MME), as the co-Chair of the COACHE Steering Committee, presented an overview of WPI faculty sentiment as reflected in the 2021 COACHE Survey results. Prof. Dominko served as co-Chair, as well. The survey conducted over a six-week period in spring 2021 is normally used to better understand differences in faculty experiences within our own community and how to make appropriate improvements. Prof. Demetry acknowledged that much has happened to the WPI community since the survey was conducted and it is fair to ask which COACHE results do and do not apply to our current context. The generally positive COACHE 2021 results seem cognitively dissonant with the results just presented by the MHWB task force.

The hope is that this "top level" report will identify: a) priority areas that we as a faculty agree to dive into further for additional inquiry and action; and b) areas to celebrate. In comparing our results to those of other institutions, our "cohort" is a group of 80 COACHE partners who are generally similar to WPI, and our "peers" are the five institutions most like us: Clarkson; Purdue; RIT; UMass Amherst; and VPI&SU. WPI's response rate (64 percent) was

about 20 percentage points higher than our peers and cohort, which may be a result of having put the results of the 2014 and 2017 WPI COACHE survey results to good use in improving our promotion policy and administrative organization.

As a summary of the overall data, **Prof. Demetry** showed 25 benchmark areas related to the nature of work, benefits, family policies, collaboration, mentoring, tenure, promotion, leadership, governance, departmental interactions, and recognition indicating generally that in 2021, WPI faculty had a higher level of satisfaction than its peers, its cohort, and its own 2017 level of satisfaction. The area of retirement benefits was the one in which the WPI faculty was less satisfied in 2021 than in 2017. Our ratings fell within the top 30 percent of the cohort and within the top two among our five peers in 20 out of 25 benchmark areas.

Prof. Demetry indicated that WPI's particular strengths include faculty leadership, productivity of governance, mentoring, and interdisciplinary work, in which we were ranked number one compared to both our five peers and our cohort of 80. Faculty leadership includes such factors as pace of decision making, making stated priorities clear, and ensuring input of the faculty. Productivity of governance includes overall effectiveness, and committee progress and public recognition of progress toward their goals.

Prof. Demetry showed data broken down by school that indicated the lowest level of faculty satisfaction is among the faculty in Arts and Sciences, with departmental dissatisfaction within that School clustered in Chemistry and Biochemistry (CBC), Biology and Biotechnology (BBT), and Humanities and Arts (HUA). In interpreting the data with respect to current department heads, it is important to realize that the heads in CBC and BBT have changed since the COACHE data was collected.

Prof. Demetry showed data broken down by faculty demographics that indicated the lowest satisfaction among: a) associate professors concerning promotion, divisional and departmental leadership, as well as trust, shared sense of purpose, and adaptability of governance; and b) faculty of color, Asian, and underrepresented minorities concerning tenure policies, tenure expectations, and promotion.

The steering committee's recommendations for additional inquiry are as follows: a) have FAP and FBC analyze and make recommendations concerning our retirement benefits; b) explore the departmental dissatisfaction in CBC, BBT, and HUA; c) continue improving our tenure and promotion systems especially for FOC, Asian, and URM faculty; and d) explore dissatisfaction of associate professors with divisional and departmental leadership, as well as with trust, shared sense of purpose, and adaptability of governance. Recommendations to leverage our strengths include lessening barriers for interdisciplinary work, and creating a faculty recruiting strategy emphasizing our strengths in faculty leadership, mentoring, and collaboration.

Prof. Elmes (BUS) asked if COACHE had provided any insight into how to interpret the data collected during extreme circumstances such as the pandemic. **Prof. Demetry** explained that COACHE has not identified any red flags in the data.

Prof. Sakulich (CEAE) asked if we looked at the spread of the data to verify that the changes observed were statistically significant. **Prof. Demetry** explained that T-tests were built into the COACHE analysis and that all changes included in the report are verified as statistically significant.

Prof. Richman thanked Prof. Demetry and the entire steering committee for their hard work in distilling the information into an understandable format for presentation today.

5. <u>President's Report</u>

President Leshin pointed out the obvious contrast between the two reports presented today and was optimistic that the positivity in the COACHE survey was an indication that the community could work together to recover. President Leshin indicated that the new Mental Health Implementation Team will continue to take input, including from faculty governance, and is poised to provide an integrated university-wide response.

President Leshin explained that she is working with Provost Soboyejo to appoint an interim Provost. They are consulting with various groups of faculty and academic staff, and will soon ask for nominations with a goal of announcing the decision at the April 14 faculty meeting.

President Leshin announced that we have officially been re-accredited by NECHE for the next ten years. She thanked Dean Heinricher and Dean Perlow, in particular, and all others who were involved in the effort that included gathering the data and writing the accreditation report. In her view, the NECHE visitors understood WPI's uniqueness well, identified our real strengths, and made a realistic assessment of the weaknesses that we already acknowledged among ourselves. The NECHE report includes recommendations for stronger student and staff influences in university governance, as well as an endorsement of the APG process.

6. Adjournment

Prof. Richman expressed his appreciation to all those who attended today's lengthy meeting despite the many other demands on their time. He expressed his hope that the importance of the issues addressed made the time spent worthwhile.

The meeting was adjourned at 5:05pm.

Respectfully submitted,

Mark W. Richman Secretary of the Faculty

Addenda on file with these minutes:

Addendum #1 - CITP Motion Modifying the AUP - Minutes 3-17-22

Addendum #2 - MHWB Presentation on Faculty Staff and Special Student Populations - Minutes 3-17-22

Addendum #3 - COACHE Steering Committee Presentation - Minutes 3-17-22

From: Committee on Academic Policy (Prof. Pavlov, Chair)

Committee on Academic Operations (Prof. Titova, Chair)

Re: Motion to rename the WPI "Physical Education Graduation Requirement" the "Wellness and

Physical Education Graduation Requirement"

<u>Motion</u>: On behalf of the Department of Physical Education and Recreation and Athletics (PERA), the Committee on Academic Policy and the Committee on Academic Operations recommend, and we move that the WPI "Physical Education Graduation Requirement" be renamed the "Wellness and Physical Education Graduation Requirement."

<u>Description of Proposed Changes to the WPI Undergraduate Catalog:</u>

• Pages 8-9, WPI 2021-2022 Undergraduate Catalog: (With added text in red.)

Academic Policies:

WPI Degree Requirements WPI Degree Requirements (effective for students matriculating after August 1, 2011)

WPI's academic requirements are specifically designed to develop an overall educational experience which meets the goals of the college.

.....

The degree will be awarded upon completion of the following:

DEGREE REQUIREMENTS:

•••••

9. Wellness and Physical Education • Qualification in wellness and physical education shall be established by completing 1/3 unit of course work (four PE classes) or its equivalent. Such an equivalent, for example, may be participation in club or varsity sports.

Rationale:

The Global Wellness Institute (https://globalwellnessinstitute.org/) defines wellness as "the active pursuit of activities, choices and lifestyles that lead to a state of holistic health" with at least six dimensions: physical, mental, emotional, spiritual, social, and environmental. This past year at WPI has made clear the need to redesign our physical education requirement to engage more actively and more broadly in all these areas of individual wellness in order to help our students grow, develop, and lead healthy and productive lives while at WPI and well after they graduate to follow their professional pursuits.

In maintaining our graduation requirement in the area of physical education, the WPI faculty has always recognized that a WPI education is more than just the acquisition of knowledge. At the same time, as "physical education" has evolved through the decades to embrace more than just sports, so has WPI's

Physical Education Graduation Requirement evolved to more broadly encompass the area of Wellness. This has included offering the following two specific courses:

PE 1006: Wellness (1/12 Units) Cat. I

Introductory course designed to acquaint students with knowledge and skills necessary to make choices that foster health and well-being.

PE 1070: Leisure Education: Redefining Social Norms (1/12 Units) Cat. I Introductory course designed to explore various leisure education alternatives.

Even more generally, the broader focus on Wellness has been covered in the following general topics PE course:

PE 1099: Healthy Alternative Physical Education Courses (1/12 Units) Cat. I

In each term, specific PE courses are offered to provide a variety of wellness, dance and healthy alternatives to traditional PE sportbased classes. The specific courses are subject to change on a yearly basis in order to provide flexibility in the PE offerings based upon the latest trends in wellness and dance. The focus of these classes is more on individual fitness, wellness and education, with instruction provided to all students in the classes.

Beyond those alternatives included in the general course description, PE 1099 has included a variety of exposures to yoga, self defense, and martial arts.

It is time to generalize the label of our physical education graduation requirement to reflect our broader focus. Most importantly, the broader label of "Wellness and Physical Education" will reflect our goal to be more intentional in expanding within this larger space. There is the potential to recognize more courses/important activities (ex: Insight Program) in other areas of the university for Wellness and Physical Education credit along with the future development of wellness programming by Academic Advising, the Center for Well-Being and other.

Finally, renaming this graduation requirement will also put front and center the importance placed on wellness by our faculty for our students to help them actively engage in a holistic approach to their well-being now and into the future.

Implementation: Implementation date for this action is the 2022-2023 Academic year.

Resources needed: No additional funding is needed for this name change.

Impact on distribution requirements and other courses: This name change will not affect current distribution requirements.

From: Committee on Tenure and Academic Freedom (Prof. Mathews, Chair)

Committee on Governance (Prof. El-Korchi, Chair)

Re: Motion to extend the probationary periods for faculty members who started on the

tenure track in AY21/22

<u>Motion</u>: The Committee on Tenure and Academic Freedom and the Committee on Governance recommend and we move that the probationary periods for tenure-track faculty members who started on the tenure track at WPI in AY21/22 be extended by one year due to hardships associated with the COVID-19 pandemic, and that each faculty member in this group be given the choice to opt out of the extension by providing written notice to the Provost's Office by no later than May 1, twenty-five months before the date that tenure materials would be scheduled to be submitted on their newly extended tenure clock.

Description of the proposed motion:

Currently, all probationary tenure-track faculty members who started on the tenure track before AY21/22 are given an additional year to their tenure clock, following from motions that the WPI faculty approved in spring of 2020 and 2021. This motion extends that option under the same conditions to tenure-track faculty members who started on the tenure track at WPI in AY21/22.

Rationale:

In April 2020 the WPI faculty approved a motion to extend the probationary period for tenure-track faculty for one year due to hardships associated with COVID-19, with the right to opt out. In April of 2021, the faculty voted to extend this policy to cover faculty whose start date falls in AY20/21. The current motion extends these policies to cover tenure-track faculty members who started on the tenure track at WPI in AY21/22.

With significant COVID-19 pandemic disruptions to scholarship, teaching, professional growth, and other faculty activities continuing throughout AY21/22, CTAF and COG believe our newest tenure-track faculty should have the same opportunity as other tenure-track faculty members to adapt their scholarship and teaching to new realities and to better prepare their tenure cases.

Under this proposal the tenure year for candidates who started on the tenure track at WPI during AY21/22 under a standard 6-year tenure clock will be AY27/28 and their tenure materials would submitted by June 1, 2027, unless and until they decide to opt out of the COVID extension. If they opt out, their tenure year would be AY26/27. The deadline for opting out would be May 1, 2025, which is at the end of their fourth year on the tenure track at WPI and 25 months before June 1, 2027.

From: Committee on Appointments and Promotions (Prof. Iannacchione, Chair)

Committee on Governance (Prof. El-Korchi, Chair)

Re: Motion to explicitly require professional associate letters for promotion to Associate

Teaching Professor

<u>Motion</u>: The Committee on Appointments and Promotions and the Committee on Governance recommend, and we move that the Faculty Handbook, (PART TWO: Policies and Operating Procedures; Section 10: Promotion Procedures and Criteria for Nontenure-Track Faculty; Subsection B. Promotion to Associate Teaching Professor) be modified to add language requiring the submission of Professional Associate letters in applications for promotion to Associate Teaching Professor, as described below.

Description of the proposed changes to the Faculty Handbook:

(Added text denoted in vellow and underlined)

PART TWO: Policies and Operating Procedures

Section 10: Promotion Procedures and Criteria for Nontenure-Track Faculty

B. Promotion to Associate Teaching Professor:

<u>Procedures</u>: Recommendations for promotion to the Associate Teaching Professor level will be made by the Department Head and/or Program Director (with input from departmental and/or program faculty members) and the appropriate Dean, reviewed by COAP, and then passed to the Provost for action.

Criteria for Promotion to Associate Teaching Professor: The candidate for promotion to associate teaching professor must have completed at least three years as an assistant teaching professor and will normally have completed at least five years. The candidate must have exhibited high quality teaching (undergraduate and/or graduate). Professional associate letters of support are required. High quality teaching can be evidenced in many ways, including (but not limited to): course evaluations; faculty peer evaluations; evaluations by alumni; the quality of the Major Qualifying Projects, Interactive Qualifying Projects, the Humanities Inquiry Seminar or Practicum, and graduate student work; freshman advising, academic advising; teaching innovations; new course introductions; and redesign of existing courses. Service is valued and considered in the promotion review. Service can be evidenced in many ways, including (but not limited to): service to WPI (committee work, assistance to administrative offices); service to the candidate's department (curriculum committees, MQP area coordinators, faculty recruitment, seminar series participation and coordination); and service to the profession (participation in national and international committees and panels, in local chapters of professional societies, in conference organization).

Rationale:

COAP encountered a gap in the language for the promotion from the Assistant to Associate rank for Teaching Professors that did not explicitly require submission of letters from Professional Associates as part of the application. In reviewing the faculty minutes establishing this track and receiving feedback from those faculty involved in the establishing this language, it was found that

the exclusion of Professional Associate letters was never the intention and is at odds with the criteria for this promotion to associate rank for the other tracks at WPI. To be consistent and close this gap, the addition of language reflecting the requirement of having Professional Associate letters is needed. This does not change any other aspects of the promotion criteria.

(Draft - for discussion, only.)

Date: April 14, 2022 **To:** WPI Faculty

From: Committee on Appointments and Promotions (Prof. Iannacchione, Chair)

Committee on Governance (Prof. El-Korchi, Chair)

Re: Motion to add criteria for promotions in the Professor of Teaching track

<u>Motion</u>: The Committee on Appointments and Promotions and the Committee on Governance recommend, and we move that the Faculty Handbook, (PART TWO, Policies and Operating Procedures; Section 1, Policies Regarding the Status of Faculty; Section D, Promotion) be modified to add language describing the criteria for promotions in the Professor of Teaching track, as described below.

Description of the proposed changes to the Faculty Handbook:

(new text denoted below, numbering changes denoted in yellow)

(To be inserted between the D.1 and old D.2 sections to be renumbered D.3 and so on)

D.2.1 Criteria for Promotion in the Professor of Teaching Track

The tenure-track faculty in the Professor of Teaching track make a variety of contributions as educators, innovators, and leaders that advance WPI's educational mission and visibility.

The criteria for promotion to Associate Professor of Teaching are the same as the tenure criteria for the Professor of Teaching track (Part Two, Section 1.A). The candidate should have demonstrated high-quality teaching practice with significant impact, maintained a commitment to professional growth and currency that has significant impact, developed creative pedagogical approaches within the context of their discipline or beyond, and showed the promise for continued high-quality performance in these areas. Evidence of quality service to the program/department/school, the WPI community, the field/profession, and/or the local/regional community is also expected.

The specific standards of performance in the (full) Professor of Teaching rank are teaching practice; continuing professional growth and currency; and service. The candidate for promotion to full Professor of Teaching should demonstrate continuing high-quality teaching practice with significant impact on students as well as a record of contributions and professional growth and currency that includes creative pedagogical approaches within the context of their discipline or beyond and that demonstrates a positive external impact beyond WPI as appropriate to the candidate's area of expertise. The standards for promotion to full Professor of Teaching are similar to those for promotion to Associate Professor of Teaching, with the added expectation of contributions that demonstrate a positive external impact beyond WPI. Contributions to WPI may demonstrate an external impact if they are disseminated and/or recognized externally. In most cases, the high-quality and positive external impact of contributions must be recognized by peers within WPI and by knowledgeable experts external to WPI.

Because service and citizenship are an integral part of being a tenured faculty member at WPI, a candidate for promotion must also have established a significant record of performance in service and citizenship contributions to the program/department/school, the WPI community, the field/profession, and/or the local/regional community. WPI values both individual and collaborative work within and across the domains of teaching practice, professional growth and currency, and service.

While it is expected that these criteria describe the great majority of cases, there may be exceptional candidates whose unique contributions, while not conforming to these guidelines, are deserving of promotion.

Candidates who switched into the Associate Professor of Teaching rank from a non-tenure track should first achieve tenure before seeking promotion to full Professor of Teaching.

D.2.1. Definition of Teaching Practice, Professional Growth, and Currency

The definitions of the primary areas of teaching practice and continuing professional growth and currency along with guidelines for documenting these are detailed in the Tenure Criteria for the Associate and (full) Professor of Teaching (Part Two, Section 1.A) and in the Guidance for Documenting and Assessing Activities Toward Tenure for Professors of Teaching (Part Two, Section 1.A).

The Professor of Teaching track emphasizes the professional growth and currency of each faculty member, especially when it advances the candidate's teaching and/or discipline more broadly and contributes to WPI's educational mission and visibility. Professional growth and currency include but is not limited to experimenting and exploring for the purpose of innovative teaching (as described in the Tenure Criteria for the Associate and (full) Professor of Teaching, Part Two, Section 1.A) and/or remaining continually active as scholars through the scholarship of discovery, teaching and learning, integration, application and practice, or engagement (as defined in Definition of Scholarship, Part Two, Section D.1.2).

Rationale:

COAP proposes to include language for the criteria for promotion in rank in the Professor of Teaching track. No such language exists and there is a critical need to have language that reflects the language used for the tenure process as well as the Assistant to Associate rank promotion for the Professor of Teaching track outlined by CTAF. The criteria described for promotion from Associate to Full rank in the Professor of Teaching track incorporates the language developed for teaching practice, and professional growth and currency, as well as language developed by the ADVANCE group to provide clearer description of Service.

(Draft – for discussion, only.)

Date: April 14, 2022 **To:** WPI Faculty

From: Committee on Appointments and Promotions (Prof. Iannacchione, Chair)

Committee on Governance (Prof. El-Korchi, Chair)

Re: Motion to add procedures for promotion to (full) Professor of Teaching

<u>Motion</u>: The Committee on Appointments and Promotions and the Committee on Governance recommend, and we move that the Faculty Handbook, (PART TWO, Policies and Operating Procedures; Section 1, Policies Regarding the Status of Faculty; Section D, Promotion) be modified to add language describing the procedure for promotion to (full) Professor of Teaching.

Description of the proposed changes to the Faculty Handbook:

(new text denoted below, numbering changes denoted in yellow)

(To be inserted between the D.1 and old D.2 sections to be renumbered D.3 and so on)

D.2.3. Documentation in the Promotion Dossier

The candidate for promotion to full Professor of Teaching will submit a promotion dossier representative of their overall career, with an emphasis on work since tenure and/or promotion to Associate Professor of Teaching. The candidate's promotion dossier will include the following: a curriculum vitae (CV); a personal statement of teaching practice, professional growth and currency, service, and impact; a teaching portfolio to document high-quality teaching delivery with significant impact; sample artifacts demonstrating commitment and significant impact of continuous professional growth and currency – especially as it demonstrates innovative teaching and creative pedagogical experimentation within and/or beyond the context of their discipline, and other indicators to demonstrate the high quality and external impact of the candidate's contributions.

- The CV provides comprehensive documentation of the candidate's experience and accomplishments in teaching practice, continuing professional growth and currency, and service.
- The **personal statement** provides a reflective summary and description of the candidate's professional accomplishments and contributions. Typically, the personal statement will include sections on teaching practice, professional growth and currency, service, external impact, and future plans. The statement should provide a narrative arc that helps the committee and the Provost understand the candidate's activities to date, how those activities benefit the candidate and enhance WPI's educational mission and visibility, and how they will lead to the next stage of the candidate's career.
- The **teaching portfolio** provides documentation of the candidate's high-quality teaching practice with significant impact. A teaching portfolio presents representative teaching materials and evidence of their effectiveness. Typical elements in a teaching portfolio include a reflective statement of the candidate's approach to teaching and learning, samples

of teaching materials and teaching innovations, and measures of teaching effectiveness or materials that demonstrate student learning.

- The **sample artifacts** provide documentation of the high-quality and external impact of the candidate's contributions to teaching practice and their successes in professional growth and currency especially as those successes demonstrate creative pedagogical development and exploration. Contributions may be documented and disseminated through a variety of artifacts. The continuum of artifacts through which successful contributions may be documented and disseminated matches, in its inclusiveness and variety, the continuum of ways one may demonstrate impact and quality of teaching practice and impact and commitment to professional growth and currency.
- The candidate is welcome to submit any metric of external impact they wish so long as the context is explained.

Overall, the candidate should use this documentation to present the case that they have achieved the criteria for promotion. Contributions may combine or cut across traditional categories of teaching practice, continuing professional growth and currency, and service. The candidate is invited and encouraged to use the promotion dossier to make arguments for the quality and impact of their work using these categories or in other ways if those other ways are appropriate to the form and impact of their teaching and other professional contributions.

In addition to the above materials submitted by the candidate, the Joint Promotion Committee (JPC) will add four other sources of information to the complete promotion review dossier: 1) Summary student ratings for all courses and projects taught at WPI in the last five years. 2) Responses to a teaching evaluation sent to a random selection of former students and alumni whom the candidate has taught in the last five years. 3) Letters of appraisal solicited by the committee from internal and external peers for a confidential evaluation of the materials submitted by the candidate for the promotion dossier.

D.2.4. Standards for Evaluation of the Promotion Dossier: Quality, Commitment, Impact and Peer Review

The candidate's promotion dossier and the criteria for promotion (sections D2.1 - D.2.3) will be sent to peers within WPI and to knowledgeable people external to WPI for an independent assessment of the candidate's teaching practice, professional growth and currency, and service – with respect to quality, impact, and commitment, as appropriate. These letters of appraisal will be read only by people who are directly involved in the evaluation of the nomination for promotion and they will not be shown to the candidate or to anyone else. This section provides additional guidance to reviewers for this assessment.

An assessment of high quality teaching practice with significant impact, commitment to and significant impact of professional growth and currency, and service may be based on any and all material in the promotion dossier, including the CV, personal statement, teaching portfolio, sample artifacts, or indicators of external impact. Traditional measures to assess quality do not necessarily accommodate all areas of teaching practice, professional growth and currency, and service. Nonetheless, the following six standards have been identified to evaluate quality across

diverse areas: clear goals, adequate preparation, appropriate methods, significant impact, effective presentation, and reflective critique. Since the dossier includes the candidate's reflective critique in their personal statement, peer reviewers are invited to apply these six standards to assess the candidate's teaching practice, professional growth and currency, and service in the promotion portfolio.

External impact beyond WPI should be assessed based on the relevant standards in the areas of the candidate's contributions. Thus, the starting point to assess external impact is the candidate's personal statement, which should identify the area or areas of their contributions across teaching practice, professional growth and currency, and service and indicate examples of external impact beyond WPI. WPI recognizes that the weight assigned to quantitative measures and documented evidence of impact varies widely along the continuum of contributions and accomplishments of candidates for Professor of Teaching. Consequently, candidates are not limited in the relevant evidence they may provide to demonstrate external impact.

Peer reviewers should be experts in or experienced practitioners of, and therefore appropriate evaluators of, the area or areas of the candidate's contributions. Where appropriate, external reviewers may include experts whose institutional affiliation is beyond the academy if they are well-placed to testify to or evaluate the quality and impact of the candidate's contributions.

All reviewers—internal and external peers, members of promotion committees, or academic decision-makers—are reminded that **implicit and explicit bias** has been shown to occur in every aspect of a faculty career that is evaluated. Empirical studies have shown that letters of recommendation for women and men differ in gendered ways: letters for women are often shorter, less detailed, and reinforce gender stereotypes. Women faculty and faculty of color also may face bias in student ratings of teaching or in mentoring and sponsorship. The choice of area or areas for professional contributions (e.g. interdisciplinary, qualitative, community-engaged, theoretical, or digital) may result in comparatively traditional recognition but nevertheless demonstrate high quality and impact in forms appropriate to those contirbutions. The Committee on Appointments and Promotions highlights potential sources of bias in this description of the standards for evaluation of the promotion dossier so that all reviewers at every stage of the review process will be aware of potential implicit and explicit bias and take care to limit opportunities for such bias to influence the consideration of each nomination for promotion.

Rationale:

COAP proposes to include language for the procedures for promotion in rank in the Professor of Teaching track. No such language exists and there is a critical need to have language that reflects the language used for the tenure process as well as the Assistant to Associate rank promotion for the Professor of Teaching track outlined by CTAF. The procedure described for promotion from Associate to Full rank in the Professor of Teaching mirrors those used for all other procedures for promotion but details the specific elements needed for the Professor of Teaching track.

(Draft – for discussion, only.)

Date: April 14, 2022 **To:** WPI Faculty

From: Committee on Appointments and Promotions (Prof. Iannacchione, Chair)

Committee on Governance (Prof. El-Korchi, Chair)

Re: Motion to modify eligibility and time in rank guidelines for promotion of tenured and

tenure-track faculty

<u>Motion</u>: The Committee on Appointments and Promotions and the Committee on Governance recommend, and we move that the language regarding eligibility and time-in-rank for the tenured and tenure-track faculty members in the Faculty Handbook, (PART TWO: Policies and Operating Procedures; Section 1. POLICIES REGARDING THE STATUS OF FACULTY; Subsection D. Promotion) be modified, as described below.

Description of the proposed changes to the Faculty Handbook:

PART TWO: Policies and Operating Procedures

Section D: Promotion

(Text to be deleted strikethrough)

D.2. Procedures for Promotion Nomination and Review

D.2.1. Eligibility and Time in Rank

A candidate for promotion to **Associate Professor** normally will have completed five years as an Assistant Professor before a promotion review in the sixth year. Probationary faculty with initial appointment as Assistant Professor normally receive a combined review for tenure and promotion to Associate Professor from a Joint Tenure Committee, as described in Part Two, Section 1.A. Only in exceptional circumstances should an Assistant Professor be nominated for promotion to Associate Professor earlier than the scheduled tenure review.

To be considered for promotion to professor, an associate professor must have demonstrated considerable professional growth. A candidate for promotion to **Professor** normally will have completed at least five years as Associate Professor and at least three years as an Associate Professor at WPI before the year of the promotion review. Only in exceptional circumstances should an Associate Professor be nominated for promotion to Professor at an earlier date.

(Added text denoted in <u>yellow</u>)

D.3. Procedures for Promotion Nomination and Review

D.3.1. Eligibility and Time in Rank for Tenure-Track Faculty A candidate for promotion to the associate rank in any track must have completed at least three years and normally will have completed five years at the Assistant rank in the same track before a promotion review in the sixth year. Probationary faculty members with initial tenure-track appointments at the Assistant rank in any particular track normally receives a

combined review for tenure and promotion to the Associate rank in the same track from a Joint Tenure Committee, as described in Part Two, Section 1.A. Only in exceptional circumstances should a faculty at the Assistant rank be nominated for promotion to the Associate rank earlier than the scheduled tenure review. These exceptional circumstances must be explicitly documented in the nominator's letter. In these cases, the promotion criteria used will be the same as the tenure criteria for that particular track.

To be considered for promotion to professor in any track, an associate ranked faculty member must have demonstrated considerable professional growth. A candidate for promotion to the Full rank in a particular track normally will have completed at least five years at the associate rank in the same track and at least three years at the associate rank in that track at WPI before the year of the promotion review. Only in exceptional circumstances should a candidate at the Associate rank be nominated for promotion to Full rank at an earlier date. These exceptional circumstances must be explicitly documented in the nominator's letter.

Faculty switching from the Teaching Professor track to the Professor of Teaching track usually take on the equivalent rank in their new track, starting their time-in-rank clock unless their appointment letter at the time of the switch in tracks specifies years credited toward time in rank on the new track.

Rationale:

Because of the introduction of a new tenure-track line of Professor of Teaching, wording for the eligibility and time-in-rank needs to be modified in order to apply to this new line. In addition, because this new tenure-track is a teaching path to tenure, the shift in track can occur at nearly any time during the Teaching Professors career that decouples the traditional timeline and tenure decisions thus, specific language is needed to deal with articulating minimal requirements, especially time-in-rank.

Appendix Consent Agenda Motions

From: Committee on Academic Operations (Prof. Titova, Chair)

Re: Motion to add HU 2901: Topics in Sexuality and LGBTQ+ Studies

<u>Motion</u>: On behalf of the Department of Humanities and Arts, the Committee on Academic Operations recommends and I move that HU 2901: Topics in Sexuality and LGBTQ+ Studies as described below be added.

Proposed Course Description:

HU 2901: Topics in Sexuality and LGBTQ+ Studies, Cat. II

This course uses interdisciplinary, thematic, and case study approaches to explore sexuality in the modern world. It takes as its starting point the understanding that sex and power are interrelated and that they manifest differently in different social and cultural contexts (including spaces and places to which WPI students may travel as part of their global projects experience). Further, this course recognizes that the categorization, experiences, and treatment of queer persons and bodies and non-normative sexuality have changed over time and space, as have sexual mores and conceptualizations of "purity" and "deviance," which are linked to class, race, dis/ability, and power relations within and between states. This course may include the study of the history of sexuality in the United States and globally; national and international activism around sexual liberation and LGBTQ+ pride; religion and sexuality; the relationship of LGBTQ+ activism to other civil rights movements; sex work; sexual violence; cultural representations of queer and non-normative sexualities, and "anti-genderism" and authoritarian populism. The expected enrollment is 20, and the course type is Lecture/Discussion. This course may be repeated for different topics.

Recommended background: None

Anticipated Instructors: Emily Gioielli, Lindsay Davis, Rebecca Moody

Rationale:

WPI currently offers few classes that focus on topics and scholarship related to LGBTQ+ studies and non-normative sexualities. The recent creation of the Gender, Sexuality & Women's Studies minor has provided an opportunity for students to delve into topics related especially to gender and women's studies, but there is a clear need and demand for courses that can go more deeply into issues of queer and non-binary identity and history, LGBTQ+ activism, and globally situated understandings of sexuality. Students have voiced their desire to delve more deeply into the study of sexuality in class discussions and in more informal venues, and this course would enable instructors to address the topic from multiple perspectives and complement the existing core courses in the GSWS minor.

The intended audience for this course includes:

- Students with an interest in gender, sexuality, and women's studies
- Students completing the HUA Requirement
- Students interested in the Gender, Sexuality, and Women's Studies minor
- Students departing for or returning from HUA or IQP global project experiences

In addition, this course is an important step toward providing an academic space for WPI's growing population of queer, non-binary students as well as broadening the educational offerings for other students.

Finally, this course supports WPI's commitment in its Strategic Plan to develop a "strong, inclusive community" and cultivates classroom experiences that practice and prioritize a "diversity of thought, culture, and perspective."

Resource Needs: No new resources are required. The department already has several full-time faculty with teaching and research interests appropriate for this course. Classroom needs are typical for HUA courses. No special information technology is required. Library resources are adequate to offer this introductory course.

Impact on Distribution Requirements and Other Courses: This course will provide additional options for students completing the Humanities and Arts Requirements, the Humanities and Arts (History) Major, and the Gender, Sexuality, and Women's Studies Minor.

Implementation: This course will be first offered in A Term 2022.

Contact: Prof. Joseph Cullon, Associate Head for the Humanities, Department of Humanities and Arts, jcullon@wpi.edu

From: Committee on Academic Operations (Prof. Titova, Chair)

Re: Motion to add MU 2642: Jazz Combo

<u>Motion</u>: On behalf of the Department of Humanities and Arts, the Committee on Academic Operations recommends and I move that *MU 2642: Jazz Combo* as described below, be added as a Music Ensemble.

Proposed Course Description:

MU 2642: Jazz Combo (Cat. I)

The Jazz Combo is a small ensemble that performs frequently on campus and on tour, playing jazz arrangements written for a small ensemble with major emphasis on improvisation. Rehearsals are held weekly. Students are expected to perform with the ensemble, know how to read music, and have experience with improvisation. This is an auditioned group. Permission of the instructor is necessary to register.

Recommended background: n/a

Anticipated Instructor: Douglas Olsen

Rationale:

Increased student numbers necessitated the creation of a third jazz group three years ago. These additional students have been enrolling in a second section of "Stage Band" when participating in jazz. Adding the course Jazz Combo will allow each jazz group (Stage Band, Jazz Ensemble, and Jazz Combo) to have its own unique name and course number.

Resource Needs: No new resources are required. The course will be held in Alden Hall. No laboratory or special information technology is required. No additional library support or resources are needed outside of standard required reading.

Impact on Distribution Requirements and Other Courses: There will be no impact on distribution requirements or other courses.

Implementation Date: Academic year 2022-2023.

Contact: Prof. Scott Barton

From: Committee on Academic Operations (Prof. Titova, Chair)

Re: Motion to change description and course number for MU 2635: Stage Band to MU 2644

<u>Motion</u>: On behalf of the Humanities and Arts Department, the Committee on Academic Operation recommends, and I move, that the description and course number for MU 2635: Stage Band be changed as described below.

Description of Proposed Changes:

Current course number, title, description, and offering schedule:

MU 2635 Stage Band (Cat. I)

The Stage Band performs traditional and contemporary big band literature with an emphasis on stylistically appropriate interpretation and performance practice. The ensemble performs frequently on campus and on tour. Rehearsals are held weekly. Students are expected to perform with the ensemble and to know how to read music. Permission of the instructor is necessary to register.

Proposed course number, title, description, and offering schedule:

MU 2644 Stage Band (Cat. I)

The Stage Band is an advanced level ensemble that performs traditional and contemporary big band literature with an emphasis on stylistically appropriate interpretation and performance practice. The ensemble performs frequently on campus and on tour. Rehearsals are held weekly. Students are expected to perform with the ensemble and to know how to read music. This is an auditionedgroup. Permission of the instructor is necessary to register.

Rationale:

This proposal is to change the description of Stage Band and its course number from 2635 to 2644. The number change ensures that all three jazz groups will have consecutive catalog numbers. The updated description clearly states that Stage Band is an Advanced Level big band. No other changes will be made to this course, such as the course offering or scheduling.

Resource Needs: No new resources are required.

Impact on Distribution Requirements and Other Courses: There will be no impact on distribution requirements or other courses.

Implementation: Academic year 2022-2023.

Contact: Prof. Scott Barton

From: Committee on Academic Operations (Prof. Titova, Chair)

Re: Motion to change description and course number for MU 2634: Jazz Ensemble

to MU 2643

<u>Motion</u>: On behalf of the Humanities and Arts Department, the Committee on Academic Operation recommends, and I move that the course description and course number for MU 2634: Jazz Ensemble be changed, as described below.

Description of Proposed Changes:

Current course number, title, description, and offering schedule:

MU 2634 Jazz Ensemble (Cat. I)

The Jazz Ensemble performs frequently on campus and on tour and plays jazz arrangements written for a small ensemble with major emphasis on improvisation. Rehearsals are held weekly. Students are expected to perform with the ensemble and to know how to read music. Permission of the instructor is necessary to register.

Proposed course number, title, description, and offering schedule:

MU 2643 Jazz Ensemble (Cat. I)

The Jazz Ensemble is an intermediate level ensemble that performs traditional and contemporary big band literature with an emphasis on stylistically appropriate interpretation and performance practice. The ensemble performs frequently on campus and on tour. Rehearsals are held weekly. Students are expected to perform with the ensemble and to know how to read music. This is an auditioned group. Permission of the instructor is necessary to register.

Rationale:

This proposal is to change the description of Jazz Ensemble and its course number from 2634 to 2643. No other changes will be made to this course, such as the course offering or scheduling. Therefore, it is not necessary to propose dropping this course and adding a new one.

This updated description clearly states that Jazz Ensemble is an Intermediate Level big band. The number change ensures that all three jazz groups will have consecutive catalog numbers.

Resource Needs: No new resources are needed.

Impact on Distribution Requirements and Other Courses: There will be no impact on distribution requirements or other courses.

Implementation: Academic year 2022-2023.

Contact: Prof. Scott Barton

From: Committee on Academic Operations (Prof. Titova, Chair)

Re: Motion to change the concentrations and the concentration courses within the

Management Engineering (MGE) degree program

<u>Motion</u>: On behalf of the Business School, the Committee on Academic Operation recommends, and I move that the concentrations and Concentration Courses within the Management Engineering (MGE) degree program be changed, as described below.

Description of Proposed Changes:

I. Changes to MGE Concentration Options

Current MGE Concentration Options

- Biomedical Engineering
- Chemistry
- Civil Engineering
- Electrical and Computer Engineering
- Manufacturing Engineering
- Mechanical Engineering
- Operations Management
- Custom

Revised MGE Concentration Options

(Eliminate Chemistry and Operations Management, Add Industrial Engineering and Information Technology)

- Biomedical Engineering
- Civil Engineering
- Electrical and Computer Engineering
- Industrial Engineering
- Information Technology
- Manufacturing Engineering
- Mechanical Engineering
- Custom

II. Changes to MGE Concentration Courses:

All concentrations are six courses (6/3 units).

Current Concentration Course Structure:

Most concentrations were structured as:

- 1. Take 1 or 2 Managerial courses from a defined list
- 2. Take 5 or 4 Technical courses mostly in the department of the concentration

Revised Concentration Course Structure:

All revised concentrations will be structured as:

- 1. Take either ETR 1100 Engineering Innovation and Entrepreneurship or MKT 3640 Management of Process and Product Innovation
- 2. Take five STEM courses defined for the concentration

<u>List of all Concentrations and their Revised requirements:</u>

Biomedical Engineering

- 1. ETR 1100 or MKT 3640
- Select five courses from: BME 1001, BME 2001, BME 2210, BME 2211, BME 2502, BME 3300, BME 3111, BME 3610, BB 3101, BB 3102

Civil Engineering

- 1. ETR 1100 or MKT 3640
- 2. Select five courses from: AREN 2023, CE 1030, CE 2000, CE 2001, CE 2020, CE 3020, CE 3022, CE 3025, CE 3030, CE 3031, CE 3041, ES 3004

Electrical and Computer Engineering

- 1. ETR 1100 or MKT 3640
- 2. Select five courses from: ECE 2010, ECE 2019, ECE 2029, ECE 2049, ECE 2112, ECE 2311, ECE 2312, ECE 2799

Industrial Engineering

- 1. ETR 1100 or MKT 3640
- 2. Select five courses from: MIS 3720, OIE 2081, OIE 3405, OIE 3410, OIE 3460, OIE 3510, OIE 3600, OIE 4410, OIE 4430

Information Technology

- 1. ETR 1100 or MKT 3640
- 2. MIS 3720
- 3. MIS 4720
- Select three courses from: MIS 3787, MIS 4084, MIS 4741, CS 2119, CS 2102/2103, CS 2301/2303, CS 3041, DS 1010

Manufacturing Engineering

- 1. ETR 1100 or MKT 3640
- 2. Select five courses from: ES 2001, ME 1800, ME 2820, ME 3320, ME 3820, ME 4718, ME 4810, ME 4813, ME 4814, ME 4815, ME 4821, ME 4875

Mechanical Engineering

- 1. ETR 1100 or MKT 3640
- Select five courses from: ES 2001, ES 2501, ES 2502, ES 2503, ES 3001, ES 3003, ES 3004, ME 1800, ME 2300, ME 2820, ME 3820, ME 3901 or 3902, ME 4320, ME 4429, ME 4430

Custom

- 1. ETR 1100 or MKT 3640
- Students with their advisor select a name for the custom concentration and five relevant STEM courses (typically selected from courses that satisfy the technical or analytical electives of the MGE degree). All custom concentrations must be approved by the Undergraduate Committee (UPCC) of the Business School.

Rationale:

For changes to the MGE Concentration Options:

We are eliminating Chemistry as a concentration because no one selects it (and if needed it can be done as a custom concentration). We are eliminating Operations Management as a concentration because all concentrations must be STEM, not management, so that the degree can be STEM certified. We are adding Industrial Engineering and Information Technology because they are the two technical, STEM-related degrees in the Business School and all the courses for these two concentrations are already available.

For changes to the MGE Concentration Courses:

The revision to the first requirement is to focus students on engineering innovation around products and/or processes, in either small firms (ETR 1100) or in large firms (MKT 3640). Revisions to the second (technical/STEM) requirement of each concentration are primarily updating those concentrations. As such, we have worked with the responsible department in any revisions to the concentration.

Implementation: Academic year 2022-2023.

Contact: Prof. Adrienne Hall-Phillips

From: Committee on Academic Operations (Prof. Titova, Chair)

Re: Motion to change the distribution requirements for the Management Engineering (MGE)

degree

<u>Motion</u>: On behalf of the Business School, the Committee on Academic Operation recommends, and I move that the distribution requirements for the Management Engineering (MGE) degree be modified as described below.

Description of Proposed Changes:

Current MGE Distribution Requirements (30/3 units):

Business Foundation 9/3* units

Breadth electives 3/3 units

Mathematics 4/3 units Basic science 2/3 units

Computer science 1/3 units

MGE concentration 6/3 units MQP 3/3 units

Free electives 2/3 units (plus 3/3 units which are part of WPI requirements)

Proposed MGE Distribution Requirements:

MGE Foundation 13/3 units: The new MGE Foundation units replace the Business Foundation units (9/3), the Breadth Electives (3/3), and 1/3 unit from the extra 2/3 of free electives that MGE students have beyond the 3/3 required by WPI.

Core management engineering - Financial courses 3/3 units

- 1. BUS 2060 Financial Statements for Decision Making
- 2. Any finance course (BUS 2070 Risk Analysis for Decision Making, FIN 1250 Personal Finance, FIN 3300 Finance & Technology (Fintech)
- 3. OIE 2850 Engineering Economics

Core management engineering - Managerial courses 3/3 units

- Select any organizational behavior course (Recommended BUS 1010)
- 2. Select any marketing course (Recommended BUS 4030)
- 3. Select any course from: BUS 2020, MIS 3010, any course with an ETR, MKT, or OBC prefix.

^{*}MGE students must also take 2/3 units of Economics (ECON 1110 and ECON 1120), which fulfills their WPI social science requirement. In a related motion, the economics requirement for MGE, MIS, and BU degree programs is being reduced to 1/3 unit chosen from three courses.

Technical Courses* 3/3 units

- 1. BUS 3020
- 2. Select any two courses with the following prefixes: AE, BB, BME, CE (except 3022), CH, CHE, CS (except 3043), DS, ECE, ES (except 1000), GE, OIE, MA, ME, PH, RBE (except 3100)
- * Students should work with their advisor to assure that their choice of technical courses aligns well with their chosen concentration.

Analytical Courses 3/3 units

- 1. OIE 3420
- 2. One course from: MIS 3720, MIS 3787, MIS 4084
- 3. One course from: OIE 2081 or BUS 2080, OIE 3460, OIE 3510, OIE 4430

Technical* or Analytical Course 1/3 units

- 1. One course that meets the technical or analytic course requirements
- * Students should work with their advisor to assure that their choice of technical courses aligns well with their chosen concentration.

Breadth electives 3/3 units – eliminated, essentially replaced by Technical courses

Mathematics 4/3 units – no change Basic science 2/3 units – no change Computer science 1/3 units – no change

MGE concentration 6/3 units – some changes in the concentrations

(see Related Motion)

MQP 3/3 units – no change Free electives 4/3 units – was 5/3

Note: No double counting is allowed within the degree. That is, some courses may fulfill multiple requirements, but in any student's program, a course can only fulfill one requirement.

Rationale:

The MGE degree is a popular degree in the business school, yet there are complaints about it from both students and faculty. The general concerns are that the degree is not well defined, being a (somewhat random) collection of business and engineering courses, making it more difficult for students to articulate their skills in job interviews. Furthermore, students have complained that as an engineering/technical degree it should be STEM certified.

To address these concerns, we have modeled the proposed changes above on a CIP code that is STEM, specifically, <u>CIP code: 15.1501 Engineering/Industrial Management</u>. The description for a degree under this code is:

A program that focuses on the application of engineering principles to the planning and operational management of industrial and manufacturing operations and prepares individuals to plan and manage such operations. Includes instruction in accounting, engineering economy, financial management, industrial and human resources management, industrial psychology, management information systems, mathematical

modeling and optimization, quality control, operations research, safety and health issues, and environmental program management.

This description is similar to our current MGE degree. It captures the long-established and continuing intent of the MGE degree to combine Engineering/STEM with Management/Business.

As a result of the similarity of CIP code 15.1501 to the current MGE degree and our intentions for that degree, the distribution changes articulated above require no new courses. We only revised two courses, BUS 3020 and OIE 3420, (see related motion) to be sure we covered safety and health issues and environmental program management. We changed the distribution requirements to focus on the technical courses within the Business School and WPI with fewer general management courses. Furthermore, we added a focus on analytics, which is a growing need in businesses and a growing focus within the Business School. With these changes, the program falls under CIP code 15.1501; we intend to seek STEM certification for it this summer.

Resource Needs: No new resources are required.

Impact on Distribution Requirements and Other Courses: Change in distribution requirements described in the motion.

Implementation: Academic year 2022-2023.

Contact: Prof. Adrienne Hall-Phillips

Appendix:

i. Overview of MGE degree requirements with changes shown in red

Appendix:

Management Engineering: Overview of Degree Requirements (with changes shown in red)

UNIVERSITY REQUIREMENTS (12/3 Units)

HUMANITIES AND ARTS (6/3 Units): 6 courses including Inquiry Seminar/Practicum **SOCIAL SCIENCE (2/3 Units): Must include at least one of the following:** ECON 1110, ECON 1120, or ECON 2910

PHYSICAL EDUCATION (1/3 Units)
INTERACTIVE QUALIFYING PROJECT (3/3 Unit)-3rd Year

MATHEMATICS AND SCIENCE REQUIREMENTS (7/3 Units)

BASIC SCIENCE (2/3 Units)

Any Course with prefix: BB, CH, GE, PH MATHEMATICS (4/3 Units)

Calculus - MA 1021; MA 1022; Statistics - MA 2611; MA 2612

COMPUTER SCIENCE (1/3 Units):

CS 1004 (recommended) or CS 1101 or CS 1102

CORE Management Engineering CURRICULUM (6/3 Units)

3 courses from financial courses and 3 from managerial courses and at least 2 courses are 3000 or higher level

Financial Courses

- BUS 2060 Financial Statements for Decision Making
- Any finance course: BUS 2070 Risk Analysis for Decision Making, FIN 1250 Personal Finance, FIN 3300 Fintech
- 3. OIE 2850 Engineering Economics

Managerial Courses

- Select any organizational behavior course (Recommended BUS 1010)
- Select any marketing course (Recommended BUS 4030)
- Select any course from: BUS 2020, MIS 3010, any course with an ETR, MKT, or OBC prefix.

TECHNICAL AND ANALYTICS COURSES (7/3 Units)* Minimum 3 courses from each type

Technical Courses

- 1. BUS 3020
- Select any two from the following: AE, BB, BME, CE (except 3022), CH, CHE, CS (except 3043), DS, ECE, ES (except 1000), GE, IE, MA, ME, PH, RBE (except 3100)

Analytics Courses

- 1. OIE 3420
- One course from: MIS 3720, MIS 3787, MIS 4084
- One course from: OIE 2081 or BUS 2080, OIE 3460, OIE 3510, OIE 4430

^{*}Select one additional course from remaining Technical or Analytics courses (1/3 unit)

^{*}Students should work with their advisor to assure that their choice of technical courses aligns well with their chosen concentration.

MANAGEMENT ENGINEERING CONCENTRATION COURSES (6/3 Units) Select 5 courses from the concentration below + 1 from ETR 1100 or MKT 3640								
Biomedical Engineering		Civil Engineering		Electrical and Computer Engineering				
1. ETR 1100 or MKT 3640 2. Select five courses from: BME 1001, BME 2001, BME 2210, BME 2211, BME 2502, BME 3300, BME 3111, BME 3610, BB 3101, BB 3102		1. ETR 1100 or MKT 3640 2. Select five courses from: AREN 2023, CE 1030, CE 2000, CE 2001, CE 2020, CE 3020, CE 3022, CE 3025, CE 3030, CE 3031, CE 3041, ES 3004		 ETR 1100 or MKT 3640 Select five courses from: ECE 2010, ECE 2019, ECE 2029, ECE 2049, ECE 2112, ECE 2311, ECE 2312, ECE 2799 				
Industrial Engineering Inform		mation Technology	Manufacturing Engineering		Mechanical Engineering			
1. ETR 1100 or MKT 3640 2. Select five courses from: MIS 3720, OIE 2081, OIE 3405, OIE 3460, OIE 3510, OIE 3600, OIE 4410, OIE 4430 3. ETR 1100 or MKT 3640 2. MIS 3720 3. MIS 4720 4. Select three courses from: MIS 3787, MIS 4084, MIS 4741, CS 2119, CS 2102/2103, CS 2301/2303, CS 3041, DS 1010		1. ETR 1100 or MKT 3640 2. Select five courses from: ES 2001, ME 1800, ME 2820, ME 3320, ME 3320, ME 4718, ME 4810, ME 4813, ME 4814, ME 4815, ME 4821, ME 4875		1. ETR 1100 or MKT 3640 2. Select five courses from: ES 2001, ES 2501, ES 2502, ES 2503, ES 3001, ES 3003, ES 3004, ME 1800, ME 2300, ME 2820, ME 3820, ME 3901 or 3902, ME 4320, ME 4429, ME 4430				
MAJOR QUALIFYING PROJECT (3/3 Units) The MQP must have a focus in the concentration area with an MQP advisor from the Business School.								
FREE ELECTIVES (4/3 Units)								

From: Committee on Academic Operations (Prof. Titova, Chair)

Re: Motion to change the course titles and/or descriptions for FIN 3300 and OIE 3420

<u>Motion</u>: On behalf of the Business School, the Committee on Academic Operation recommends and I move that the course title and description of FIN 3300 and the course description of OIE 3420 be changed, as described below.

Description of the proposed changes:

Current course titles and descriptions:

FIN 3300 Finance, Risk Analytics & Technology (Cat. I)

This course provides an in-depth overview of finance, methods in risk analytics, and the importance of financial technology in today's global and interconnected marketplace. In this course, students learn the most up-to-date methods and tools that are used globally within the financial services industry. Topics covered include portfolio formation based on personal and risk preferences, the formation and backtesting of trading strategies, fundamental and technical analysis, the mutual fund and hedge fund industries, and cryptocurrencies. These topics are explored using big data and risk analytics methods such as time series modeling, prediction models, volatility risk forecasting, and the identification and distinction between market-wide and industry-specific risks. Throughout the course, students will learn how to use Bloomberg to analyze data across market sectors to make financial decisions. This course is especially suited to those seeking careers where data analytics and information technologies play critical roles in finance or the management of risks. Topics covered in this course appear regularly in examinations required for professional certifications, such as the Chartered Financial Analyst (CFA) certification. The risk analytics portion of this course also covers topics that appear regularly in the financial mathematics examination by the Society of Actuaries (SOA). Recommended Background: Introductory business and finance topics such as those found in BUS 2060.

OIE 3420 Quality Planning, Design and Control (Cat. I)

This course provides students with the analytical and management tools necessary to solve manufacturing and service quality problems. Topics include customer needs and quality, quality and cost relationships, process capability analysis, statistical process control, control charts for variables and attributes, design of experiments, and other Six Sigma problem solving methodology.

Proposed course titles and descriptions:

FIN 3300 Finance & Technology (FinTech) (Cat. I)

This course develops expertise in Finance, Technology, Innovation, leadership, and decision-making by focusing on real-world challenges in the field of FinTech. We will be actively discussing and learning how to analyze, identify, and manage/innovate FinTech across many functional disciplines including Financial, Insurance, Banking, Trading, Information Technology, Regulation, and Budgeting. Students are introduced to the Financial industry and the FinTech ecosystem. The course adopts a decision-maker and leadership perspective (business, operational, functional, and technical leadership) by emphasizing the relationships among financial data, their underlying economic events, risk profiles, challenges/opportunities, and the responses by all stakeholders in a business/corporation. Recommended Background: Introductory business and finance topics such as those found in ACC courses or BUS 2060.

OIE 3420 Quality Planning, Design and Control (Cat. I)

This course provides students with the analytical and management tools necessary to solve manufacturing and service quality problems. Topics include customer needs and quality, quality and cost relationships, process capability analysis, statistical process control, control charts for variables and attributes, design of experiments, and other Six Sigma problem solving methods. Health and safety outcomes and the ethical responsibility that quality assurance leadership owes to the organization's stakeholders is discussed in detail. Textbook problems and business school case studies form the foundation of the course as well as a hands-on project experience. Recommended background: Knowledge equivalent to that in BUS 3020 or OIE 3020 and MA 2612 or consent of the instructor.

Rationale:

The FIN course description and title is no longer an accurate representation of what is being taught given changes in instructor over the last few years. For the OIE offering, it is being updated to be consistent with the revised focus of the MGE degree (see the related motion) and to include some topics ABET asked for in their last review of the IE degree program. For these two courses with a description change, the new descriptions do a better job at conveying the topics to be discussed and appealing to student interest. To minimize impact on students, we request that the course numbers not change. While titles and descriptions have changed, these courses each serve the same function in the curriculum and facilitate tracking of distribution requirements.

Resource Needs: No new resources are required.

Impact on Distribution Requirements and Other Courses: No change on distribution requirements. Students, both business and non-business majors, will now be able to clearly identify various business topics when choosing courses to take.

Implementation: Academic year 2022-2023.

Contact: Prof. Adrienne Hall-Phillips

From: Committee on Academic Operations (Prof. Titova, Chair)

Re: Motion to change the course prefixes, titles, and/or descriptions for BUS 1010, BUS 2060, BUS

2070, BUS 3010, BUS 3020, and BUS 4030

<u>Motion</u>: On behalf of the Business School, the Committee on Academic Operation recommends and I move that the course prefixes, titles, and descriptions for BUS 1010, BUS 2060, BUS 2070, BUS 3010, BUS 3020, and BUS 4030, as described in current/proposed pairs below.

Description of the proposed changes:

Current course prefix, title, and description:

BUS 1010 Leadership Practice (Cat. I)

Leadership is a critical role in any global, technological organization. This course explores how the concepts of creativity, entrepreneurial and critical thinking, emotional and self-awareness, passion, diversity, communication, and ethics inform and affect leadership practice. The course considers a variety of contemporary leadership challenges including how leaders work effectively across cultural, technological, and disciplinary boundaries, how leaders foster new ideas and bring them to fruition, how they communicate effectively and persuasively to diverse stakeholders, and how they make decisions that are both ethical and effective. The course is designed to 1) increase students' awareness of their own leadership styles, 2) examine the responsibilities of leadership, and 3) determine best practices in leadership.

Proposed course prefix, title, and description:

OBC 1010 Leadership Practice (Cat. I)

Leadership is a critical role in any global, technological organization. This course explores how the concepts of creativity, entrepreneurial and critical thinking, emotional and self-awareness, passion, diversity, communication, and ethics inform and affect leadership practice. The course considers a variety of contemporary leadership challenges including how leaders work effectively across cultural, technological, and disciplinary boundaries, how leaders foster new ideas and bring them to fruition, how they communicate effectively and persuasively to diverse stakeholders, and how they make decisions that are both ethical and effective. The course is designed to 1) increase students' awareness of their own leadership styles, 2) examine the responsibilities of leadership, and 3) determine best practices in leadership. Students cannot receive credit for both BUS 1010 and OBC 1010.

Current course prefix, title, and description:

BUS 2060 Financial Statements for Decision Making (Cat. I)

This course provides students with an understanding of the primary financial statements used for internal and external business decision- making in start-up firms and large corporations. It emphasizes underlying accounting concepts captured in financial statements, while highlighting the interdependence among these statements. The course will cover analytical techniques, such as ratio analyses and sensitivity analyses to assess the impact of changes in strategy and outcomes on efficiency and effectiveness measures. It also describes the various users of internal and external financial statements, and the potential conflicts between these various stakeholders.

Proposed course prefix, title, and description:

ACC 2060 Financial Statements for Decision Making (Cat. I)

This course provides students with an understanding of the primary financial statements used for internal and external business decision- making in start-up firms and large corporations. It emphasizes underlying accounting concepts captured in financial statements, while highlighting the interdependence among these statements. The course will cover analytical techniques, such as ratio analyses and sensitivity analyses to assess the impact of changes in strategy and outcomes on efficiency and effectiveness measures. It also describes the various users of internal and external financial statements, and the potential conflicts between these various stakeholders. Students cannot receive credit for both BUS 2060 and ACC 2060.

Current course prefix, title, and description:

BUS 2070 Risk Analysis for Decision Making (Cat. I)

Financial and operational risks are omnipresent in small entrepreneurial enterprises and in the corporate world. All firms, large and small, must be able to manage risk to create value. This course introduces students to enterprise risk and prepares them to act in the presence of risk. The course will sensitize students to two significant types of risk (namely, financial and operational risk), provide students with tools for assessing risk and minimizing risk exposure, and prepare students to take risk into account when making decisions as leaders, managers, and individuals.

Proposed course prefix, title, and description:

FIN 2070 Fundamentals of Finance (Cat. I)

This course provides a broad introduction to finance and financial logic, with emphasis on principles, applications and criteria used in decision-making. Core topics to be covered include interest rates, time value of money, bond valuation, yield curves, stock valuation, and risk and return analysis. The course is designed to help build students' financial literacy and provide a solid foundation for later courses in financial management, investments, and financial technology. Prior exposure to business accounting (equivalent to BUS 2060) is beneficial, as well as being comfortable with manipulating and computing financial formulas using mathematics at the level of Calculus I (MA 1020 or MA 1021). Students cannot receive credit for both BUS 2070 and FIN 2070.

Current course prefix, title, and description:

BUS 3010 Creating Value Through Innovation (Cat. I)

This course focuses on the ways value can be created and captured through innovation. Focusing on the assessment of customers, organizational capabilities, and competition, students will consider a variety of different types of innovations and their associated ethical and financial value propositions. Students will learn analytic tools to successfully assess and commercialize technology, product, and service innovations in a variety of contexts.

Proposed course prefix, title, and description:

MIS 3010 Creating Value Through Innovation (Cat. I)

This course focuses on the ways value can be created and captured through innovation. Focusing on the assessment of customers, organizational capabilities, and competition, students will consider a variety of different types of innovations and their associated ethical and financial value propositions. Students will

learn analytic tools to successfully assess and commercialize technology, product, and service innovations in a variety of contexts. Students cannot receive credit for both BUS 3010 and MIS 3010.

Current course prefix, title, and description:

BUS 3020 Achieving Effective Operations (Cat. I)

Operations are embedded in a constantly changing network of relationships with various stakeholders including customers and suppliers. Within the organization, scarce resources (including financial, human, and technological) need to be ethically allocated and aligned with strategic goals. This course focuses on process analysis, design, and implementation within the constraints of stakeholder networks and available resources.

Proposed course prefix, title, and description:

OIE 3020 Achieving Effective Operations (Cat. I) Operations are embedded in a constantly changing network of relationships with various stakeholders including customers and suppliers. Within the organization, scarce resources (including financial, human, and technological) need to be allocated and aligned with strategic goals. External to the organization, consideration is given to sustainability and environmentally responsible use of resources. This course focuses on process analysis, engineering design thinking and process implementation within the constraints of stakeholder networks. Professional engineering ethics and the consequences of management decision making are discussed in detail. The course includes a process analysis project and a one-piece-flow hands on laboratory experience. Course assignments follow one-piece-flow principles in education, allowing individual students to complete the course at their own pace. Students cannot receive credit for both BUS 3020 and OIE 3020.

Current course prefix, title, and description:

BUS 4030 Achieving Strategic Effectiveness (Cat. I)

Every successful business has a strategy for how it provides value and earns profit within its particular industry. Focusing on the contexts of technology, innovation and entrepreneurship, this course develops analytic approaches for assessing the various aspects of strategy such as the competitive environment, the network of stakeholders, ethical implications, investor motivation, operational execution, and financial projections that are necessary to create a complete business plan.

Proposed course prefix, title, and description:

MKT 4030 Achieving Strategic Effectiveness (Cat. I)

Every successful business has a strategy for how it provides value and earns profit within its particular industry. Focusing on the contexts of technology, innovation and entrepreneurship, this course develops analytic approaches for assessing the various aspects of strategy such as the competitive environment, the network of stakeholders, ethical implications, investor motivation, operational execution, and financial projections that are necessary to create a complete business plan. Students cannot receive credit for both BUS 4030 and MKT 4030.

Rationale:

In our last major undergraduate curriculum revision, we used the BUS prefix for the business core courses required of all those seeking BUS, MGE, and MIS degrees. As a result, students do not know the discipline of each course, which they may want to consider as they arrange their schedules. This common prefix causes even more confusion for non-business majors who want to select a few business courses.

Furthermore, the revised MGE core we are proposing in the related motion allows more flexibility in the core, making the concept of the BUS prefix for the core no longer needed. We are also now using the BUS prefix for courses that are general business rather than indicating core courses. For all these reasons, we propose changing the prefix of BUS courses that are disciplinary courses to the correct disciplinary prefix (ACC, FIN, ETR, MIS, MKT, OBC, OIE).

Resource Needs: No new resources are required.

Impact on Distribution Requirements and Other Courses: No change on distribution requirements. Students, both business and non-business majors, will now be able to clearly identify various business topics when choosing courses to take.

Implementation: Academic year 2023-2024.

Contact: Prof. Adrienne Hall-Phillips

From: Committee on Academic Operations (Prof. Titova, Chair)

Re: Motion to change the economics requirement for the Business (BU), Management Engineering

(MGE), and Management Information Systems (MIS) degrees

<u>Motion</u>: On behalf of the Business School, the Committee on Academic Operation recommends, and I move, that the economics requirement in the Business core common to these three degrees be changed, as described below.

Description of Proposed Changes:

Current Economics requirement (2/3 units):

- 1. ECON 1110 Introductory Microeconomics
- 2. ECON 1120 Introductory Macroeconomics

Proposed Economics requirement (1/3 unit):

1. ECON 1110, ECON 1120, or ECON 2910/ETR 2910 Economics and Entrepreneurship.

Rationale:

Reducing the economics requirement to 1/3 (from 2/3) not only provides more flexibility to students, but also provides more flexibility in designing our business degree programs. Allowing students to choose either of the two previously required courses (or their equivalent) and adding another course choice, ECON 2910/ETR 2910, further provides student flexibility in fulfilling their economics requirement. ECON 2910/ETR 2910, which is co-taught by business and social science and policy studies faculty, is appealing to students who are more interested in the economics of entrepreneurial firms.

The revised economics requirement, like the current economics requirement, will continue to count toward the WPI social science requirement. Students have more flexibility because they can use the other 1/3 social science requirement to take a second economics course, or any other SSPS course, or ID 2050.

Resource Needs: No new resources are required.

Impact on Distribution Requirements and Other Courses: Because business students usually count their two economics courses toward their WPI social science requirement, the impact on business students is to provide more flexibility in how they fulfill both their economics requirement and their WPI social science requirement. SSPS may see fewer students in ECON 1110 and 1120, which should have minimal impact because these courses are already large and oversubscribed.

Implementation: Academic year 2022-2023.

Contact: Prof. Adrienne Hall-Phillips

From: Committee on Academic Operations (Prof. Titova, Chair) **Re:** Motion to add thirteen club sports for academic credit

<u>Motion</u>: On behalf of the Department of Physical Education and Recreation and Athletics (PERA), the Committee on Academic Operations recommends, and I move that thirteen additional club sport activities be recognized for academic credit, as listed below.

Description of the proposed changes:

The list proposed additional club sports for academic credit are as follows:

```
PE 1200. Club Sport - Miscellaneous Units: 1/12
PE 1222. Club Sport - Men's Soccer Units: 1/12
PE 1223. Club Sport - Women's Soccer Units: 1/12
PE 1224. Club Sport - Cheerleading Co-Ed Units: 1/12
PE 1225. Club Sport - Scuba Co-Ed Units: 1/12
PE 1226. Club Sport - Water Polo Co-Ed Units: 1/12
PE 1227. Club Sport - Tennis Co-Ed Units: 1/12
PE 1228. Club Sport - Cycling Co-Ed Units: 1/12
PE 1229. Club Sport - Men's Rugby Units: 1/12
PE 1230. Club Sport - Competitive Climbing Co-Ed Units: 1/12
PE 1231. Club Sport - Freestyle Wrestling Co-Ed Units: 1/12
PE 1232. Club Sport - Equestrian Co-Ed Units: 1/12
PE 1233. Club Sport - Men's Basketball Units: 1/12
```

Course/Catalog Description: For club sports, we have a general statement within the catalog for these activities and then just list the corresponding activity course. For example:

Club Sports are activities in various sports and wellness that are organized and recognized by SGA as Class II organizations and open to any undergraduate student. Students who are properly registered in advance for the club activity in their interest area (more information regarding Club Sports can be found at wpi.edu/+techsync) and meet the established criteria for participation by the club as well as by PERA department policy, may be eligible for PE course credit. Practice and/or competition times vary but are generally in the evenings and weekends. Participating students may incur additional fees for equipment, travel, and/or uniforms.

Preferred term: Various terms depending on the sport

Expected enrollment: Unlimited

Course type: Category I

Intended audience: Any undergraduate student

Anticipated Instructor: To receive academic credit for the club activity, the PE Department will hire a coach (non-student) for each club sport. Ann McCarron, WPI Associate Athletic Director, oversees the Club Sport function including the hiring of qualified coaches as well as the grading.

Rationale:

WPI students are actively engage in sport activity at the club level where they practice 2-3 times a week along with weekly competitions when in season. We currently have over 45 club sport activities with over 1,000 students participating. These additional clubs have been sustained well (good participation and commitment from students) that also have coaches hired to manage the activities. Adding these as courses will recognized that these club students have been active and participating at a level that is worthy of receiving PE credit toward their graduation requirement like other club sport participants. The Club Sport – Miscellaneous course allows us to recognize those clubs that are new/emerging but don't yet have a PE course number.

Resource Needs: No other resources are needed as the funding is provided by SGA.

Implementation: Academic year 2022-2023.

From: Committee on Academic Operations (Prof. Titova, Chair)

Re: Motion to add WPE designation for Wellness and Physical Education credit and change

designation of existing PE courses to WPE

<u>Motion</u>: On behalf of the Department of Physical Education and Recreation and Athletics (PERA), the Committee on Academic Operation recommends and I move that – pending the change of the WPI "Physical Education Graduation Requirement" to the "Wellness and Physical Education Graduation Requirement" - the WPE designation be added to the course catalogue as a designation for Wellness and Physical Education courses, and that the existing courses PE courses listed below be designated with WPE prefix.

Description of Proposed Changes to the WPI Undergraduate Catalog:

(With added text in red. All course prefixes changed from PE to WPE)

Pages 8-9, WPI 2021-2022 Undergraduate Catalog:
 (With newly added text in red, and with <u>underlined red already changed by previous motion.</u>)

Academic Policies:

WPI Degree Requirements WPI Degree Requirements (effective for students matriculating after August 1, 2011)

WPI's academic requirements are specifically designed to develop an overall educational experience which meets the goals of the college.

......

The degree will be awarded upon completion of the following:

DEGREE REQUIREMENTS:

.....

- 9. Wellness and Physical Education Qualification in wellness and physical education shall be established by completing 1/3 unit of course work (four WPE classes) or its equivalent. Such an equivalent, for example, may be participation in club or varsity sports.
- Changes in all course prefixes:

WPE 1002: Intro to Volleyball & Squash

Introduction to the sports through skill development and play. Units: 1/12 Category: Category I

WPE 1003: Introduction to Badminton

Introduction to the sport through skill development and play. Units: 1/12 Category: Category I

WPE 1006: Wellness

Introductory course designed to acquaint students with knowledge and skills necessary to make choices that foster health and well-being. Units: 1/12 Category: Category I

WPE 1007: Basic Water Safety

For the intermediate to advanced swimmer only. Students will learn about water recreational activities and how to remain safe while participating in them. Opportunity to learn the necessary means for safety in/near water and basic rescue techniques. Units: 1/12 Category: Category I

WPE 1008: Rowing for Fitness

This course will teach basic rowing training techniques and principles with the goal for students to develop and implement an individualized conditioning program for themselves. All classes will be conducted on-campus through the use of rowing machines located in the Sports and Recreation Center. Units: 1/12 Category: Category I

WPE 1009: Walking for Fitness

This course will teach basic walking techniques and principles with the goal for students to develop and implement an individualized conditioning program for themselves. Units: 1/12 Category: Category I

WPE 1011: Touch Football

Introduction to basic rules and individual/team skill development with practical application through game competition. Units: 1/12 Category: Category I

WPE 1012: Basketball

Introduction to basic rules and individual/team skill development with practical application through game competition. Units: 1/12 Category: Category I

WPE 1013: Softball

Introduction to basic rules and individual/team skill development with practical application through game competition. Units: 1/12 Category: Category I

WPE 1015: Badminton & Table Tennis

Instruction will focus on basic strokes and techniques. Rules, strategy and play will be integrated as students' skills develop. Units: 1/12 Category: Category I

WPE 1016: Squash & Racquetball

Instruction will focus on basic strokes and techniques. Rules, strategy and play will be integrated as students' skills develop. Units: 1/12 Category: Category I

WPE 1017: Beginning Swimming

For the non-swimmer. Students will receive instruction in basic survival skills and the primary techniques to learn to swim safely. Units: 1/12 Category: Category I

WPE 1018: Co-Ed Volleyball

Introduction to basic rules and individual/team skill development with practical application through game competition. Units: 1/12 Category: Category I

WPE 1019: Soccer

Introduction to basic rules and individual/team skill development with practical application through game competition. Units: 1/12 Category: Category I

WPE 1054: Plyometrics

This course will teach the use of body weight to develop personal strength and conditioning.

Units: 1/12 Category: Category I

This course will teach basic strength training principles and techniques. Students will develop and implement an individualized conditioning program. Units: 1/12 Category: Category I

WPE 1059: Weight Training for Beginners

The goal of course is to provide students with the knowledge and skills in basic weight training. This course is designed to educate students about the proper use of weight training equipment and how to create their own weight training exercise program. The basic essentials for starting a weight training routine. Units: 1/12 Category: Category I

WPE 1070: Leisure Education: Redefining Social Norms

Introductory course designed to explore various leisure education alternatives. Units: 1/12

Category: Category I

WPE 1077: Swimming for Fitness

For the intermediate to advanced swimmer. This class is geared toward swimming for fitness purposes. Workouts will be administered each class period with students developing the knowledge to create workouts for themselves. Units: 1/12 Category: Category I

WPE 1078: Aquatic Conditioning

This course will teach aquatic conditioning (aerobics, walking, strength and interval training) with the goal for students to develop and implement an individualized aquatic conditioning program for themselves. For the intermediate and advanced swimmer. All classes will be conducted oncampus through the use of the pool located in the Sports and Recreation Center. Units: 1/12 Category: Category I

WPE 1080: Aquatic Games

Students will develop an understanding and appreciation of a variety of aquatic games through skill development and game play. Units: 1/12 Category: Category I

WPE 1099: Healthy Alternative Physical Education Courses

In each term, specific PE courses are offered to provide a variety of wellness, dance and healthy alternatives to traditional PE sportbased classes. The specific courses are subject to change on a yearly basis in order to provide flexibility in the PE offerings based upon the latest trends in wellness and dance. The focus of these classes is more on individual fitness, wellness and education, with instruction provided to all students in the classes. Units: 1/12 Category: Category I

WPE 1200. Club Sport - Miscellaneous

WPE 1201: Club Sport - Alpine Ski Team Units: 1/12

WPE 1202: Club Sport - Badminton Units: 1/12

WPE 1203: Club Sport - Ballroom Dancing Units: 1/12

WPE 1204: Club Sport - Dance Team Units: 1/12 PE 1205: Club Sport - Fencing Team Units: 1/12

WPE 1206: Club Sport - Ice Hockey Team Units: 1/12 PE

WPE 1207: Club Sport - Karate Units: 1/12

WPE 1208: Club Sport - Men's Rugby Team Units: 1/12

WPE 1209: Club Sport - Women's Rugby Team Units: 1/12

WPE 1210: Club Sport - Men's Ultimate Frisbee Team Units: 1/12

```
WPE 1211: Club Sport - Women's Ultimate Frisbee Team Units: 1/12
```

WPE 1212: Club Sport - Men's Lacrosse Team Units: 1/12

WPE 1213: Club Sport - Women's Lacrosse Team Units: 1/12

WPE 1214: Club Sport - Men's Volleyball Team Units: 1/12

WPE 1215: Club Sport - Outing: Bouldering Units: 1/12

WPE 1216: Club Sport - Pep Band Units: 1/12

WPE 1217: Club Sport - Sailing Units: 1/12

WPE 1218: Club Sport - Social Dance Units: 1/12

WPE 1219: Club Sport - SOMA: Capoeira Units: 1/12

WPE 1220: Club Sport - SMAS: Boffer Games Units: 1/12

WPE 1221: Club Sport - Running Units: 1/12 PE 2001: Varsity Football Team Units: 1/12

WPE 1222. Club Sport – Men's Soccer

WPE 1223. Club Sport – Women's Soccer

WPE 1224. Club Sport – Cheerleading Co-Ed

WPE 1225. Club Sport - Scuba Co-Ed

WPE 1226. Club Sport – Water Polo Co-Ed

WPE 1227. Club Sport – Tennis Co-Ed

WPE 1228. Club Sport – Cycling Co-Ed

WPE 1229. Club Sport – Men's Rugby

WPE 1230. Club Sport – Competitive Climbing Co-Ed

WPE 1231. Club Sport – Freestyle Wrestling Co-Ed

WPE 1232. Club Sport – Equestrian Co-Ed

WPE 1233. Club Sport – Men's Basketball

WPE 2002: Varsity Men's Soccer Team Units: 1/12

WPE 2003: Varsity Women's Soccer Team Units: 1/12

WPE 2004: Varsity Field Hockey Team Units: 1/12

WPE 2005: Varsity Women's Volleyball Team Units: 1/12

WPE 2006: Varsity Men's & Women' Cross Country Team Units: 1/12

WPE 2007: Varsity Wrestling Team Units: 1/12

WPE 2008: Varsity Men's Basketball Team Units: 1/12

WPE 2009: Varsity Women's Basketball Team Units: 1/12

WPE 2010: Varsity Men's & Women's Swim Team Units: 1/12

WPE 2011: Varsity Men's & Women's Indoor Track Team Units: 1/12

WPE 2012: Varsity Baseball Team Units: 1/12

WPE 2013: Varsity Softball Team Units: 1/12

WPE 2014: Varsity Men's & Women's Outdoor Track Team Units: 1/12

WPE 2015: Varsity Men's Crew Team Units: 1/12

WPE 2016: Varsity Women's Crew Team Units: 1/12

Rationale:

The Global Wellness Institute (https://globalwellnessinstitute.org/) defines wellness as "the active pursuit of activities, choices and lifestyles that lead to a state of holistic health" with at least six dimensions: physical, mental, emotional, spiritual, social, and environmental. This past year at WPI has made clear the need to redesign our physical education requirement to engage more actively and more broadly in all these areas of individual wellness in order to help our students grow, develop, and lead healthy and productive lives while at WPI and well after they graduate to follow their professional pursuits.

This change in course prefix will be consistent with the change in name of the WPI "Physical Education Graduation Requirement" to the "Wellness and Physical Education Graduation Requirement".

Implementation: Implementation date for this action is the 2023-2024 Academic year.

Resources needed: No additional funding is needed for this name change.

Impact on distribution requirements and other courses: This name change will not affect current distribution requirements.

From: Committee on Graduate Studies and Research (Prof. Korkin, Chair)

Re: Motion to add a new graduate course: ID 510 Undergraduate Research Mentoring

<u>Motion</u>: On behalf of *the Offices of Undergraduate and Graduate Studies*, the Committee on Graduate Studies and Research recommends, and I move that ID 510 Undergraduate Research Mentoring, as described below, be added as a permanent course under the Interdisciplinary Programs. (currently on p. 260 of 2021/2022 WPI Graduate Catalog).

Description of the Proposed Course:

Proposed Course Description:

ID 510: Undergraduate Research Mentoring

The purpose of this zero-credit course is to improve student research mentoring proficiency for pre-doctoral and postdoctoral trainees. The course includes interactive, seminar style sessions on topics such as establishing expectations, maintaining effective communication, assessing understanding, fostering independence, using inclusive practices dealing with ethics and mentoring groups of students. The seminar emphasizes experiential learning and the integration of knowledge – drawn from reflection, discussion, readings and seminar activities – with practice. The seminar is graded based upon attendance, doing the assignments, and participating in the activities.

Prerequisites:

No previous mentoring knowledge is assumed. Participants need to be either graduate students or postdoctoral associates.

Grading: Pass/Fail

Curricular Details:

While the course material will be drawn from several sources, the core material will follow the curriculum developed by the Center for the Improvement of Mentored Experiences in Research (https://cimerproject.org/entering-mentoring/).

The Themes and Concepts (as detailed by CIMER) are as follows:

"All themes are designed with the acknowledgement that mentorship occurs within a cultural context and is influenced by the cultural diversity and social identities of the individuals engaged in mentorship activities. Consistent with national data and evidence highlighting the value of culturally responsive mentoring, all CIMER products are designed and delivered with cultural diversity content included"

- Aligning Expectations
- Addressing Equity and Inclusion
- Articulating Your Mentoring Philosophy and Plan
- Assessing Understanding
- Cultivating Ethical Behavior
- Enhancing Work-Life Integration

- Fostering Independence
- Maintaining Effective Communication
- Promoting Mentee Research Self-Efficacy
- Promoting Professional Development
- Fostering Wellbeing

Intended Audience:

The intended audience for the course includes graduate students and postdoctoral associates from all WPI schools.

Preferred Term:

This course is expected to be taught in D-term each year.

Expected enrollment:

15 – 30 participants

Anticipated Instructor(s):

The lead instructor for this course will be Arne Gericke, with contributions from Rory Flinn and Chrysanthe Demetry.

Rationale:

Effective mentoring is an important skill for graduate students and postdoctoral associates while they are at WPI and beyond. In terms of their time at WPI, graduate students and postdoctoral associates often assist in or even lead the mentoring of undergraduate student research efforts, including major qualifying projects. Postdoctoral associates are often additionally involved in graduate student mentoring. Beyond WPI, former graduate students and postdoctoral associates find themselves often in research leadership positions – being it in academia or a corporate environment – that require effective mentor and research leadership skills. Research mentor training gives participants the space to reflect on their mentoring approach and provides them with concrete tools to support a successful mentor/mentee relationship. It is expected that this course will provide important mentoring skills for the participants and significantly improve mentoring of WPI's undergraduate student population. In addition, this course will meet the mentor training requirements of NSF REU and NSF/NIH training grants. The course will follow a curriculum developed by the NSF-funded "Center for the Improvement of Mentored Research Experiences in Research" (University of Wisconsin). This course material has been used previously successfully used for 7 sessions of the CBC CH571 graduate seminar series and BME offered four times ½ day workshop style training using this approach. In both cases the training was well received by the participants.

Resource Requirements

- a) The instructors Gericke, Flinn and Demetry will teach this course as part of their respective administrative assignments.
- b) A classroom with a capacity of 30 students (preferably active learning).

Implementation Date:

Implementation date for this action is the 2022/2023 academic year.

From: Committee on Graduate Studies and Research (Prof. Korkin, Chair)

Re: Motion to change term-long course ME 5000 to semester-long course ME 500

<u>Motion</u>: On behalf of *MME department*, the Committee on Graduate Studies and Research recommends, and I move that the term-long (7-week) 2-credit course ME 5000 Applied Analytical Methods in Engineering be changed to a semester-long (14-weeks) 3-credit course, and that the course number be changed to ME 500, as described below.

Proposed Course Number and Description:

(Deletions are struck through; additions are italicized

ME 5000 ME 500. Applied Analytical Methods in Engineering (2 credits 3 credits)

The emphasis of this course is on the modeling of physical phenomena encountered in typical engineering problems, and on interpreting solutions in terms of the governing physics. In this manner, the course will expose students to a range of techniques that are useful to practicing engineers and researchers. Physical examples will be drawn from fluid mechanics, dynamics, stability problems, and structural mechanics. The course will introduce analytical techniques as they are required to study such phenomena. Depending on the examples chosen, the techniques covered may include partial differential equations, power series, Fourier series, Fourier integrals, including cases of sustained nonperiodic processes which require incorporating probabilistic approach into dynamics, Green's Functions, Sturm-Liouville theory and linear algebra. (Prerequisites: differential equations at the undergraduate level.) Students cannot receive credit for this course if they have taken either the Special Topics (ME 593A) version of the same course or ME 500 ME 5000.

Rationale:

- This course was previously taught as a semester-long (14 week) course ME 500 until 2012. It has been taught as a term-long (7 week) course ME 5000 since then. Based on the input of the course instructors and ME faculty, the program would like to go back to teaching it as a semester-long course.
- The course-numbering convention in the ME program calls for 4-digit numbers for term-long courses and 3-digit numbers for semester-long courses. Therefore, the course number should be changed from ME 5000 (term-long) to ME 500 (semester-long). ME 500 was used as the course number for the previous semester-long version of this course (last offered in 2012).
- The students in ME 5000 range from undergraduate Juniors to PhD students, and come with a wide range of preparation. Therefore, it is pedagogically desirable to do a review of undergraduate-level differential equations before proceeding to more advanced topics such as partial differential equations (PDEs). While students are generally in favor of this review, it significantly reduces the instructors' ability to cover graduate-level analytical techniques (given that there are only 7 weeks). It is also cognitively more challenging for undergraduate (i.e., BS/MS) students to show mastery in advanced topics in such a short time, compared to PhD students.
- A change to a semester-long course ensures more rigorous preparation of our students for later graduate courses and research. The increased time will allow the instructor to cover addition analytical methods besides PDEs at the graduate level (such as optimization, probability, and statistics), which justifies the increase of credits from 2 (term-long course) to 3 (semester-long course). These topics are useful and applicable to many problems in engineering.

• The change to a semester-long course could enable the instructor to use Project Based Learning. In a 7-week term, projects that involve solution of a partial differential equation have their challenges. A major challenge is that students need support and guidance to choose and solve an engineering problem in which analytical methods are useful. In a semester-long course, more guidance could be provided on the applications of the analytical techniques to engineering problems of interest to the students.

Impact on Degree Requirements:

ME 5000 is used to satisfy the mathematics requirement for MS students in ME. Students in the ME MS program are currently required to take 30 graduate credits, distributed as follows:

19 credits of ME courses 2 credits of ME 5000 9 credits of electives

or

18 credits of ME courses

3 credits in mathematics (i.e. a course from mathematical sciences MA)

9 credits of electives

Approval of the present motion will change the requirement to the following:

18 credits of ME courses

3 credits in mathematics (ME 500 or a course from mathematical sciences MA)

9 credits of electives

Resources and Anticipated Instructors: The current instructor is Prof. Ahmet Can Sabuncu (ME). However, this course can be taught by any faculty member of the ME program.

Implementation: Implementation date for this action is the 2022-2023 academic year.

From: Committee on Graduate Studies and Research (Prof. Korkin, Chair)

Re: Motion to remove BUS 545 *Introduction to Health Systems* and OIE 556 *Health Systems*

Modeling and Improvement

<u>Motion</u>: On behalf of the School of Business, the Committee on Graduate Studies and Research recommends, and I move that BUS 545 *Introduction to Health Systems* and OIE 556 *Health Systems Modeling and Improvement* be removed.

Description of Proposed Changes:

The following two course descriptions (struckthrough) will be removed from the WPI Graduate Catalog:

BUS 545. INTRODUCTION TO HEALTH SYSTEMS

This course introduces students to the structure of health systems (suppliers, providers, and payers), exploring processes, structure, and infrastructure elements. Topics include an overview of care models and processes, health information technologies, privacy and other regulations, and payment mechanisms. The course also explores future visions of health systems, focused around wellness, patient centeredness, and value, supported by new technologies and care models.

OIE 556. HEALTH SYSTEMS MODELING AND IMPROVEMENT

This course is organized around problem solving frameworks for designing and improving health systems, exploring specific methodologies and their role in organizational change. Tools and techniques from operations management, industrial engineering, statistics, and management sciences, are used to explore common health systems design and management issues, focusing on data requirements and decision-making. Issues that may be explored include demand forecasting, process design, product design, and staffing and scheduling.

Rationale:

We do not have the student interest or the faculty resources to continue to offer these two courses.

Impact on Degree Requirements: Removing BUS 545 and OIE 556 will have no impact on any students' degree requirements.

Implementation: Implementation date for this action is the 2022-2023 academic year.

From: Committee on Graduate Studies and Research (Prof. Korkin, Chair)

Re: Motion to remove MKT 564 Global Technology Marketing and MKT 567 Integrated

Marketing Communications

<u>Motion</u>: On behalf of the School of Business, the Committee on Graduate Studies and Research recommends, and I move that MKT 564 *Global Technology Marketing* and MKT 567 *Integrated Marketing Communications* course titles be removed.

Description of Proposed Changes:

The following two course descriptions (struckthrough) will be removed from the WPI Graduate Catalog:

MKT 564. GLOBAL TECHNOLOGY MARKETING (3 Credits)

Extending technology to global markets requires an understanding of consumer behavior in different cultures, and effective management of risk and overseas infrastructures. This course addresses the issues associated with technology application in new markets and includes the following topics: consumer behavior differences in international markets and the implications for the marketing mix, cultural differences that affect business practices in new markets, managing exchange rate fluctuation, factors that affect manufacturing and research location, the impact of local government on marketing decision making, and the use of strategic alliances to acquire expertise and manage risk in global market development. Knowledge of marketing management is assumed.

MKT 567. INTEGRATED MARKETING COMMUNICATIONS (3 credits)

This course provides students with an understanding of the role of integrated marketing communications in the overall marketing program and its contribution to marketing strategy. The tools of marketing communications include advertising, sales promotion, publicity, personal selling, public relations, trade shows, direct, and online marketing. Understanding the concepts and processes that organizations use in developing effective and synergistic marketing communications is useful for managers across functional disciplines. This course will also consider ethical issues of IMC.

Rationale:

These courses have not been offered for some time due to lack of student interest and teaching resources.

Impact on Degree Requirements: Removing MKT 564 and MKT 567 will have no impact on any students' degree requirements.

Implementation: Implementation date for this action is the 2022-23 academic year.

From: Committee on Graduate Studies and Research (Prof. Korkin, Chair)

Re: Motion to add BUS546 Managing Technological Innovation as an option within five

graduate business specialties

<u>Motion</u>: On behalf of the Business School, the Committee on Graduate Studies and Research recommends, and I move that BUS546 *Managing Technological Innovation* be added as an option within the following five existing graduate business specialties: Entrepreneurship; Operational Excellence; Organizing and Managing Innovation; Product Management; Project Management, as described below.

Proposed Modifications to Graduate Catalog: (changes in red):

Entrepreneurship MBA	 ETR 500 Entrepreneurship and Innovation Select two of the following: BUS 500 Business Law, Ethics and Social Responsibility BUS 546 Managing Technological Innovation ETR 593 Technology Commercialization: Theory, Strategy, and Practice ETR 596 Selling and Sales
Operational Excellence	 Select one of the following: OIE 554 Global Operations Strategy OIE 558 Designing and Managing Lean Six
OSCA, MBA	Sigma Processes Select two of the following: BUS 546 Managing Technological Innovation FIN 500 Financial Management MIS 576 Project Management OBC 537 Leading Change OIE 554 Global Operations Strategy OIE 558 Designing and Managing Lean Six Sigma Processes
Organizing and Managing Innovation IUX, MBA	 BUS 546 Managing Technological Innovation ETR 500 Entrepreneurship and Innovation ETR 593 Technology Commercialization: Theory, Strategy, and Practice FIN 500 Financial Management MIS 576 Project Management OBC 505 Teaming and Organizing for Innovation OBC 533 Negotiations OBC 537 Leading Change

Product Management	MKT 569 Product and Brand Management
	 Select two of the following:
	 BUS 546 Managing Technological Innovation
MBA	 ETR 593 Technology Commercialization: Theory,
	Strategy, and Practice
	 MIS 576 Project Management
	 MIS 583 User Experience Applications
	 MIS 585 User Experience Design
	 MKT 565 Digital Marketing
	 OBC 505 Teaming and Organizing for Innovation
	 OBC 533 Negotiations
	o OBC 535 Managing Creativity in Knowledge
	Intensive Organizations
Project Management	MIS 576 Project Management
	Select two of the following:
	 BUS 546 Managing Technological Innovation
MBA	 OBC 505 Teaming and Organizing for Innovation
IVIDA	 OBC 533 Negotiations
	 OBC 535 Managing Creativity in Knowledge
	Intensive Organizations
	 OBC 537 Leading Change

Rationale:

BUS546 *Managing Technological Innovation* has been added back into our regular rotation of graduate course offerings effective Fall 2022 and provides students with an additional logical option within the 5 existing graduate specialties cited in the motion.

Impact on Degree Requirements: This motion will have no impact on degree requirements. It simply adds another option within five specialties for additional customization and flexibility.

Resources and Anticipated Instructors: BUS546 is part of one of our full-time instructor's regular teaching load. No new resources required.

Implementation: Implementation date for this action is the 2022-2023 academic year.

From: Committee on Graduate Studies and Research (Prof. Korkin, Chair)

Re: Motion to modify the Combined Bachelor's/Master's Degree Program Course Designation

Form

<u>Motion</u>: The Committee on Graduate Studies and Research recommends and I move that the Combined Bachelor's/Master's Degree Program Course Designation Form be modified, as described below.

<u>Description of the Proposed Modifications to Combined Bachelor's/ Master's Degree Program Course Designation Form:</u>

The modification simplifies the form by not requiring Instructor's signature for double-counting courses. Part II of the form should not include Instructor's Signature.

See attached modified form.

Rationale:

All course records are already on Workday and there is no need to include additional delays by requiring Instructor's signatures. The proposed change will positively impact the submission process.

Impact on Degree Requirements: The form simplification will have no impact on undergraduate students.

Resources required: No new resources are required.

Implementation: Implementation date for this action is the 2022-2023 academic year.



Combined Bachelor's/ Master's Degree Program Course Designation Form

Office of the Registrar 100 Institute Road, Worcester, MA 01609 Ph: (508)-831-5211 Fax: (508)-831-5931

Part I Please Print:				
Student Name:		Student ID:		
Undergraduate Dept:		Undergraduate Advisor:		
Anticipated BS Graduation Date: Proposed Graduate Department:				
Student Signature:		Date:		
Part II Please Print:	_			
	C	ourse(s) to ADD		
1. Course Number: _	Title:			
Instructor's Name: _		Term:		
Year:	Instructor's Signature:			
• • • • • •	TENA AT			
	Title:	Т		
Instructor's Name: _	Instructor's Signatures	Term:		
rear:	Instructor's Signature:			
3. Course Number:	Title:			
Instructor's Name: _		Term:		
Year:	Instructor's Signature:			
		,		
	Title:			
Instructor's Name: _		Term:		
Year:	Instructor's Signature:			
Part III Please Print:				
Status of course(s) ALREADY APPROVED				
1. Course Number:		Status (Retain or Remove):		
2. Course Number:		Status (Retain or Remove):		
3. Course Number:		Status (Retain or Remove):		
4. Course Number:		Status (Retain or Remove):		
Approval of Department Graduate Coordinator or Department Chairman:				
Signature:		Date:		

This form must be approved no later than the last day of registration for any undergraduate or graduate course to be used for graduate credit and then submitted to the Registrar's Office. Students are responsible for giving copies to the Registrar's Office, the Academic Advisor, and the Head of the desired graduate program.

Submission of this form does not guarantee admission to the graduate program. For undergraduate courses: 1) extra work may be required, 2) the courses must be approved by the graduate program faculty, and 3) the student's performance must meet graduate standards. For further requirements, the student should consult the Graduate Catalog. For any additions or changes to selected course(s), an additional Course Designation for should be completed and submitted.