

WORCESTER POLYTECHNIC INSTITUTE

March 13, 2024

To: WPI Faculty
From: Mark Richman
Secretary of the Faculty

The seventh Faculty meeting of the 2023-2024 academic year will be held on **Wednesday, March 13, 2024 at 2:30pm in OH 107 and by Zoom at: <https://wpi.zoom.us/j/92203712137>**. Refreshments will be available in OH 107 at 2:15pm.

1. Call to Order M. Richman
 - Approval of the Agenda
 - Consideration of the Consent Agenda - including the minutes from Feb. 14, 2024
2. Opening Announcements M. Richman
3. President's Report G. Wang
4. Committee Business:
 - Committee on Governance (COG) G. Heineman
 - Committee on Tenure and Academic Freedom K. Wobbe
 - **Motion to establish a formal Procedure for Complaints of Academic Freedom Violations** M. Claypool
 - **Motion to modify the Faculty Grievance Procedure based on the new Procedure for Complaints of Academic Freedom Violations**
 - Committee on Appointments and Promotions (COAP) W. Martin
 - Committee on Governance (COG) G. Heineman
 - **Motion to add guidance for promotion to (full) Teaching Professor and Associate Teaching Professor in preparation of the promotion dossier** P. Weathers
 - **Motion to establish Interim Department Head Evaluations and to modify the manner in which the Department Head Evaluation questionnaire is distributed**
 - Committee on Graduate Studies and Research (CGSR) S. Olson
 - **Motion to establish a Ph.D. program in Financial Technology (FinTech) – including a new course FIN 698 Directed Research** J. Zhu
 - **Motion to establish a Collaborative Accelerated Master's Programs Framework between The College of the Holy Cross and WPI** C. Ruiz
5. New Business
6. Provost's Report A. Heinricher
7. Closing Announcements
8. Adjournment

TABLE OF CONTENTS
Faculty Meeting Materials, March 13, 2024

	<u>Page</u>
1. Faculty Meeting Minutes: Feb. 14, 2024	4
2. Committee Business	
<i>COG/CTAF Motions:</i>	
- to establish a formal Procedure for Complaints of Academic Freedom Violations	10
- to modify the Faculty Grievance Procedure based on the new Procedure for Complaints of Academic Freedom Violations	23
<i>COAP/COG Motions:</i>	
- to add guidance for promotion to (full) Teaching Professor and Associate Teaching Professor in preparation of the promotion dossier	27
- to establish Interim Department Head Evaluations and to modify the manner in which the Department Head Evaluation questionnaire is distributed	32
<i>CGSR Motions:</i>	
- to establish a Ph.D. program in Financial Technology (FinTech) - including a new course FIN 698 Directed Research	34
- to establish a Collaborative Accelerated Master's Programs Framework between The College of the Holy Cross and WPI	45
3. Appendix: Consent Agenda Motions	53
<i>CAO Motions:</i>	
- to modify the description of EN2219 Creative Writing	54
- to modify the description of EN 2271 American Literary Histories	55
- to modify the description of EN 2281 World Literatures	56
- to modify the description of EN3219 Advanced Creative Writing	58
- to modify the description of EN 3231 Supernatural Literatures	60
- to modify the description of EN3238 American Authors	61
- to modify the description of EN3257 Topics in African American Literature	63
- to modify the description of EN 3271 American Literary Topics	65
- to modify the description of HI 2921 Topics in Modern European History	67
- to modify the description of HI 3312 Topics in American Social History	68
- to modify the description of HI 3317 Topics in Environmental History	69
- to modify the description of HI 3331 Topics in the History of European Sci. and Technology	70
- to modify the description of HI 3334 Topics in the History of American Sci. and Technology	72
- to modify the description of HI 3335 Topics in the Hist. of Non-Western Sci. & Technology	74
- to modify the description of HI 3341 Topics in Imperial and Postcolonial History	75
- to modify the description of HI 3343 Topics in Asian History	76
- to modify the description of INTL 2210 Popular Culture and Social Change in Asia	77
- to modify the description of INTL 2910 Topics in Global Studies	79

3. Appendix: Consent Agenda Motions (continued)

CAO Motions (continued):

- to modify the description of PY 3711/RE 3711 Topics in Philosophy	80
- to modify the description of PY 3721/RE 3721 Topics in Religion	82
- to modify the description of GN3514 Seminar on Selected Topics in German Literature	83
- to remove RE 2722 Modern Problems of Belief	85
- to remove RE 2725 Religious and Spiritual Traditions	86
- to add RE 2726 Global Religions	87
- to add WR/IMGD 2200 AI in Writing and Communication	89
- to add WR/EN 2410 Screenwriting	91
- to modify the title and description of TH 3300: Special Topics in Performance Studies	95
- to add TH3400: Lighting Design	97
- to add HU 3570 Topics in Film Studies	99
- to modify the title, descr., and rec. background for RBE 2001 Unified Robotics I: Actuation	101
- to modify the title, descr., and rec. background for RBE 2002 Unified Robotics II: Sensing	103
- to add BME 4301 Biomedical Capstone - Design from the Margins	105
- to add CH 3520 Fundamentals of Applying Math. Methods in Chemistry and Biochemistry	107
- to modify the dist. reqs. for the Innov. for Social Change conc. in the BS prog. in Business	110
- to add a Learning Sciences and Education concentration to the Psychological Sci. major	112

CGSR Motions:

- to co-list BB 4260 Synthetic Biology as an added course BB 526	114
- to co-list BB 4050 Cancer Biology as an added course BB 550	115
- to modify title and descript. of BB 590 Capstone Experience in Biology and Biotechnology	116
- to add RBE 535 Printable Robotics	117
- to add RBE 544 Imaging for Medical Robotics	119
- to modify the Engineering Context requirement for the RBE MS degree program	121
- to add BUS 692 Teaching Practicum	123
- to modify the requirements for the B.S./M.S. program in Management	124
- to add CE 550 Community and Environmental Analysis	125
- to replace the minor requirement for the Ph.D.-60 program in ECE	126

WORCESTER POLYTECHNIC INSTITUTE

Faculty Meeting Minutes

February 14, 2024

Summary:

1. Call to Order; Approval of the Consent Agenda including the Minutes of January 17, 2024
2. Secretary of the Faculty's Report and Opening Announcements
3. President's Report
4. Committee Business: CGSR; COAP/COG
5. Committee Report: FAP - Deliberations to eliminate one or retain both of WPI's two retirement fund vendors
6. New Business
7. Provost's Report
8. Closing Announcements
9. Adjournment

Detail:

1. Call to Order

The sixth Faculty Meeting of the 2023-2024 academic year was called to order at 11:00 am both in person and via ZOOM by **Prof. Richman** (AE). Prof. Richman reminded all those in attendance that the meeting was being recorded for the purpose of taking accurate minutes, only. The meeting agenda, the minutes from the Jan. 17 meeting, and the 18 CAO motions and the 6 CGSR motions in the consent agenda were approved as distributed. Prof. Richman thanked all those whose hard work went into developing and reviewing the consent agenda motions.

2. Secretary of the Faculty's Report and Opening Announcements

Prof. Richman pointed out that next month the faculty meeting will be on Wednesday, March 13th from 2:30-4pm.

Jenn Parissi-Forti (Dir. Pres. & Inst. Events) announced that inauguration will be on March 22nd from 2-4pm in the Sports and Recreation Center. The deadline to order regalia is February 15th and RSVPs are due by March 1st. She welcomed everyone to send email either to her or to Co-Chair of the inauguration VPR Vernescu with any questions. (See **Addendum #1** on file with these minutes.)

Dean Snoddy (Dean of Students) announced that the commencements will be held at the DCU Center on May 9th for graduate students and on May 10th for undergraduate students. He reassured everyone that, despite the move to the DCU Center, we will honor all our traditions as we have in the past (such as the Earl Bridge Crossing and the naming of Honorary Marshalls). He welcomed any questions at any time in person or by email.

Prof. Brodeur (CBC; Chair, CTRF) pointed out that by now all full-time faculty members have been invited to participate in the on-line COACHE survey, which is currently active. Prof. Brodeur emphasized the importance of a high response rate. We are highly committed to maintaining transparency, privacy, and anonymity in collecting the data, and we are committed to having ongoing conversations about interpretations of the results. This year's survey results are particularly important because they will send a clear message to the incoming provost about how the faculty views the current campus climate. This year, a working group of two COG members, two CTRF members, and two representatives of the Morgan Center added additional questions about the general sense of campus belonging and how the new teaching path of tenure has been put into practice so far. It will be possible to disaggregate the results of this year's survey by category of the faculty respondents. The intention is to establish a steering committee to suggest actions that could be taken based on the results. (See **Addendum #2** on file with these minutes.)

3. President's Report

President Wang began by pointing out that there are arguments for and against the use of SAT and ACT results in making admissions decisions. One side argues that the SATs and ACTs are accurate predictors of college academic performance that level the playing field of opportunity, while the other view is that the exams can be a barrier of entry for many disadvantaged students. President Wang thanked the Committee of Academic Policy working in

collaboration with the Office of Undergraduate Enrollment, the Office of Institutional Research, and the provost in taking a data-driven approach to this issue. She looked forward to having our faculty colleagues take the leadership and make their recommendations for WPI.

President Wang pointed out that the delay (until at least March) by the US Department of Education in releasing FAFSA information to colleges and universities has created extra challenges for families and for financial aid offices across the country. Our financial aid office is monitoring the situation closely. In the meantime, we are not making any internal changes to deal with the extra workload, and we are supporting our prospective and current students as well as possible. All questions and concerns should be directed to the financial aid office.

President Wang noted that January 2024 marked the first anniversary of the Center for Well-Being (CWB), and she reinforced the message that community mental health and well-being is our topmost priority. She was especially appreciative of the discussion led by Prof. Calli (RBE; Chair, CAP) at the February 14 faculty meeting about providing flexibility to our students while maintaining our academic standards. President Wang encouraged the faculty to work with Charlie Morse (Dean of Student Wellness) and Paula Fitzpatrick (Dir., CWB) on these issues. A persistent and long-term effort on our campus and across the country will be needed to determine how to best support our students, faculty, and staff.

President Wang indicated that a letter will soon be sent to the campus summarizing a WPI AI initiative with four components: AI and the future of work; AI research and innovation; AI pedagogies; and AI technology infrastructure. President Wang welcomed feedback on the letter as part of a collaborative learning process. She also commended CGSR and faculty governance for its agility in establishing a template for Collaborative Accelerated Master's Programs, and indicated the University has a renewed focus on WPI's graduate education, in general, and in recruiting students from India, in particular. President Wang is interested in positioning WPI's graduate education to better serve our students for successful careers. She encouraged faculty members to provide their insights on these matters to Dean Camesano and Provost Heinricher.

President Wang pointed out that after nearly one year, she has completed the first stage of her onboarding process related to learning the facts about WPI, while she continues to learn about WPI's campus culture so she can understand what is important to our community. She encouraged all faculty members to sign up to meet her in one of her faculty listening sessions to share information. She emphasized the importance of setting priorities for tangible change by staying connected.

4. Committee Business

Committee on Graduate Studies and Research (CGSR)

Prof. Olson (MA, CGSR Chair), on behalf of the Committee on Graduate Studies and Research, moved on behalf of CGSR and the Collaborative Accelerated Master's Programs (CAMPs) Frameworks Working Group that a template for future CAMPs Frameworks between partner institutions and WPI be established as described in the meeting materials. (See **Addendum #3** on file with these minutes.)

Prof. Ruiz (CS) explained that this motion establishes a template for developing Collaborative Accelerated Master's Programs (CAMPs) in partnership with other institutions. She noted that these accelerated programs resemble our current BS/MS programs except that students complete their bachelor's degree not at WPI but at another undergraduate institution and then complete their master's degree at WPI. Up to two senior-level undergraduate courses from their undergraduate degree may count toward their master's degree. All WPI other rules for existing BS/MS degrees apply to this framework: credit-counting rules and limits; limits on graduate credit transfers; and credit conversions from undergraduate to graduate courses. She noted the benefits to students and partner institutions and to WPI, whose strategic goals include expanding our graduate programs. Given widespread interest for Collaborative Accelerated Master's Programs, a template that can be modified is more efficient than developing separate agreements with each institution. The proposed template contains general rules about student eligibility, the application and admissions process, counting courses, etc. Any WPI department or program that offers a master's degree may participate in a collaboration using this template, which is meant to facilitate the work of

developing new Collaborative Accelerated Master's Programs and to provide consistency and transparency across these collaborations. The template may be adapted by departments and programs with additional information specific to the master's degree and additional requirements or guidelines, but any new program using an adapted template would need approval from CGSR and the faculty. Prof. Ruiz indicated two changes since the motion was introduced last month: the addition of a catalog description and a clearer explanation of the credit conversion rules.

Prof. El-Korchi (CEAE) asked if the template could be used for international collaborations as well. **Prof. Ruiz** affirmed that they could, most likely with adaptations.

The motion passed.

Prof. Olson, on behalf of CGSR, moved that the Collaborative Accelerated Master's Programs (CAMPs) Framework between Assumption University and WPI be established, as described in the meeting materials. (See **Addendum #3** on file with these minutes.)

Prof. Ruiz explained that this motion instantiates the template that was just approved and establishes a CAMP framework with Assumption University. This motion is a necessary step before establishing these accelerated programs with Assumption University. In this case, the motion also includes a catalog description for the CAMP Framework for a collaboration with Assumption University.

The motion passed.

Prof. Olson, on behalf of the WPI Neuroscience Program and the Committee on Graduate Studies and Research, moved that the Collaborative Accelerated Master's Program (CAMP) in Neuroscience between Assumption University and WPI be established, as described in the meeting materials. (See **Addendum #3** on file with these minutes.)

Prof. Ruiz added that this motion initiates the particular collaboration between the Neuroscience departments at WPI and Assumption University and follows the approved template. She described the general form of the Plan of Study indicating the degree requirements. She also showed the proposed catalog description for the new program, a new addition to the motion since last month.

The motion passed.

Committee on Appointments and Promotions (COAP) and Committee on Governance (COG)

Prof. Richman explained that there are three motions from both COAP and COG. The first is for a relatively minor change and will therefore be brought for a vote with only one week's notice, while the other two are a bit more substantial, so they will be brought for discussion, only, and will be brought back for a vote next month.

Prof. Heineman (CS, COG Chair), on behalf of the Committee on Appointments and Promotions and the Committee on Governance, moved that the language describing the materials collected by Joint Promotion Committees for candidates for promotion to full Professor, full Professor of Teaching, full Teaching Professor, and Associate Teaching Professor (in the Faculty Handbook, Chapter Four, Section 3.a.iv) be slightly modified, as described in the meeting materials. The motion would generalize the description of information collected by Joint Promotion Committees (JPCs) from instructional activity "reports" and sponsored research "reports" to instructional activity "data" and sponsored research "data." The motion would also add that the information would be collected only when available. (See **Addendum #4** on file with these minutes.)

Prof. Heineman clarified that the change in wording was consistent with the transition from BannerWeb to Workday.

The motion passed.

Prof. Heineman explained that the second motion was due in large part because, while Chapter Four, Section 3.b of the Faculty Handbook unifies the procedures that apply to promotion in four cases (i.e. to (full) Professor; to (full) Professor of Teaching, to (full) Teaching Professor, and to Associate Teaching Professor), the section provides no explicit guidance in the latter two promotion cases (to (full) Teaching Professor and to Associate Teaching Professor). The motion would add such guidance to the descriptions of the CV, the personal statement, the teaching portfolios, and the sample artifacts to be submitted by the candidate. In addition, the motion adds two statements related to

the general assessment standard used in the cases of promotion to Associate Teaching Professor and to (full) Teaching Professor and Associate Professor, and it elaborates on what is assessed as “service” in the promotion to (full) Professor and to (full) Professor of Teaching. (See **Addendum #4** on file with these minutes.)

Prof. Hansen (HUA) was in favor of all but one of the proposed changes. He thought that sample artifacts should be required in all four promotion cases covered, rather than just for promotions to (full) Professor and (full) Professor of Teaching. **Prof. Martin** (MA; Co-Chair, COAP) explained that the added language in the motion referred to sample scholarly artifacts, which should not be required for promotion to Associate Teaching Professor and to (full) Teaching Professor. His view was that evidence of excellence in teaching could be provided elsewhere in the documentation submitted by the candidate.

Prof. Wobbe (DIGS) suggested that materials submitted as part of the teaching portfolio, which are required, would be for the purpose of showing evidence of high quality teaching. **Prof. Weathers** (BBT; Co-Chair, COAP) requested that Prof. Hansen send an email to COAP so the committee could better understand his concern.

Prof. Neamtu (CS) suggested that describing materials as “welcome” may not be the best way to send the message that the materials will be considered if submitted.

Dean Sheller (DIGS) pointed out several typos in which “professional” should be replaced by “profession.”

Prof. Heineman presented the third motion, which would establish performance evaluations of interim department heads in the spring of the second year of any interim appointment. The process would provide feedback to the interim department head and could provide information relevant to the choice of a permanent appointment to follow. The motion also clarifies the current accepted practice that COAP works with the Faculty Governance Office to distribute all department head evaluation surveys, which are confidential and anonymous. (See **Addendum #4** on file with these minutes.)

Prof. Shue (CS) thought that the point of the department head evaluations was to obtain input for department head reappointments, and that this consideration was not an issue for interim department heads who would be appointed to the permanent position through a separate appointment process. **Prof. Weathers** (BBT) pointed out that several interim department heads have served far beyond two years. She also thought that all faculty members in the department should have the opportunity to contribute feedback, whether it is for the interim head to evaluate for their own benefit or it is information that may go to the Dean and into the decision about who the next permanent department head will be.

Prof. Ruiz (CS) added that we should be aware of the faculty time required to fill out the evaluation. **Prof. Weathers** pointed out that participation in the survey is optional.

Dean Sheller (DIGS) asked if the survey results were still to be reviewed by the Dean. **Prof. Heineman** explained that, as is currently the case, both COAP and the Deans review the responses.

Prof. Brown (ECE) asked if the review of interim department heads should be different for the review of permanent department heads, and he asked specifically if the survey should include questions related to the suitability of appointing the interim head as the permanent head. **Prof. Weathers** pointed out that the current survey allowed for additional feedback where these questions could be addressed. In the past year, COAP has been aggressive in making sure that the deans receive the results of the surveys and that the department heads under evaluation are informed of the outcome, including receiving a summary of their strengths and weaknesses from the deans. In the past, the process has not been seen through in this manner.

Prof. Neamtu (CS) thought that the survey should include a description of how and to whom the information flows throughout the process. She also suggested that the survey be set up so that it need not be completed in one sitting. **Prof. Weathers** explained that two members of COAP download all the feedback and summarize it for the dean. Faculty members in the department are also given the opportunity to meet with the two COAP members to discuss the case confidentially.

Prof. Richman emphasized that this discussion and other feedback that they may receive will permit COAP and COG to modify the motions, if necessary.

5. Committee Report:

Committee on Financial and Academic Policy (FAP):

Prof. Walker (CEAE; Chair, FAP), on behalf of FAP, provided an overview of WPI's current deliberations to eliminate one or retain both of WPI's retirement fund vendors (TIAA and Fidelity). The Retirement Plan Committee (RPC) has been considering this question since fall 2023, and the committee is committed to future engagement with the faculty before a decision is made. In the last couple of weeks, two open forums have been held to solicit feedback and concerns from faculty and staff members, and additional feedback can be sent to benefits@wpi.edu. (See **Addendum #5** on file with these minutes.)

Prof. Walker gave some reasons to consider eliminating one of our two retirement fund vendors. Doing so makes it easier as the RPC prudently selects and monitors the investment options in the investment plan(s) and might reduce the risk involved. It would also increase the size of the single WPI account, which would reduce annual fees by an average of about \$85 per employee. The process of deciding whether or not to make a change in retirement vendors is good practice even if WPI makes no final change. The trend in higher education is toward a single vendor. And because TIAA and Fidelity now offer nonproprietary investment options within their plans, even with one vendor, we would not necessarily be limited to only TIAA or Fidelity choices.

Prof. Walker pointed out, on the other hand, that maintaining two retirement fund vendors maintains the larger investment choices we currently enjoy and avoids the stress created for employees by requiring that they transition to only one.

Prof. Boudreau (HUA) thought there was strong representation on the RPC from Talent & Inclusion and was concerned about the balance of the committee. She wanted to know whether the RPC and/or T&I were saving time in making this proposed transition. Prof. Boudreau also noted that previous FAP minutes indicated that the idea of eliminating one of our retirement fund vendors originated with the Board of Trustees, so she wanted to understand their concerns. The same set of minutes indicated that WPI's General Counsel indicated that the risk in having two vendors was small. Prof. Boudreau concluded by observing that the status quo should be maintained until we've had all our questions answered and we were ready to vote. **Prof. Walker** encouraged all faculty members to raise their questions with the RPC, which has committed to engage with the faculty on this decision. Prof. Walker also understood that WPI, through its delegation to the RPC, has the legal, administrative, and regulatory responsibility to ensure that our retirement fund vendors are functioning effectively.

Prof. Fehribach (MA) pointed out that if we were to choose TIAA, then the outside funds available to us would not include Fidelity's funds, and vice versa. He also pointed out that to realize the lower fees, we would be asked to work additional hours, which should be included in any calculation of savings. **Prof. Walker** pointed out that the potential costs of litigation should be included, as well.

Prof. Wong (CS) assumed that the TIAA and Fidelity mutual funds matched closely enough to make the transfer across the two possible. With respect to possible hidden fees, Prof. Wong observed that TIAA carries lots of Vanguard funds, so if we were to move to TIAA only, he was interested in finding out if additional fees would be charged for the Vanguard funds, and if those fees would reduce or even exceed the \$85 savings. **Prof. Walker** agreed that it was a worthwhile question.

Prof. Ruiz (CS) also asked who the members of the RPC are, so that we will know where our questions are going. **Prof. Walker** did not know who was on the committee but emphasized that the membership was public information.

Prof. Richman concluded by thanking Prof. Walker and pointing out that the main purpose of his presentation was to make sure that the faculty was aware of the deliberations taking place about our retirement funds. **Prof. Walker** encouraged faculty members to send their comments and questions to FAP, as well.

6. New Business

There was no new business.

7. Provost's Report

Provost Heinricher observed that WPI has been able to use the COACHE survey data effectively in the past because of our very high participation rates. This year the results will send a message to our new provost about our campus

workplace. Provost Heinricher also thanked CAP and Enrollment Management for the work they are doing on our SAT and ACT test-blind/test-optional policy, which is not only important to us but it is also a fascinating national question.

Provost Heinricher encouraged all faculty members to order their regalia for inauguration, the Earle Bridge crossing, student convocation, and both graduation ceremonies. Finally, he suggested that the best thing to do for our mental health and well-being is attend the WPI Talent Show on Saturday night at 4:30pm in Alden Hall.

8. Closing Announcements

Dean Riley (Dean of Student Success) reminded all those in attendance that Academic Advising Day is next Thursday, February 22nd. He thanked the departments and programs that are planning special events and group sessions. The academic schedule for AY 2024-25 will be coming out next week. He encouraged faculty members to utilize the Notes function in Workday so they can keep notes on their advising appointments, which in turn can be shared with the students and other faculty members, as appropriate. He will be sending an email this week with additional instructions.

Prof. Krueger (SSPS) announced that WPI has established a new WPI Press with De Gruyter, and he invited contributions from interested WPI faculty members. Prof. Krueger provided examples of recent WPI Press publications, including the Journal of Integrated Global STEM. On March 20th from 1-2pm in the Gordon Library Conference Room, a launch is scheduled for two books recently published by the press. Prof. Krueger shared a list of the WPI Press Editorial Board and encouraged anyone with an interest in participating to reach out to any of them. (See **Addendum #6** on file with these minutes.)

8. Adjournment

Meeting was adjourned at 12:34pm by **Prof. Richman**.

Respectfully submitted,

Mark Richman
Secretary of the Faculty

Addenda on file with these minutes:

Addendum #1 - Inauguration 2024 Announcement - Minutes Feb 14, 2024

Addendum #2 - COACHE Survey 2024 Announcement - Minutes Feb 14, 2024

Addendum #3 - CGSR Three motions on Collaborative Accelerated Masters Programs - Minutes Feb 14, 2024

Addendum #4 - COAP-COG Three motions on Promotions Process and Dept Head Evaluations - Minutes Feb 14, 2024

Addendum #5 - FAP Presentation on Eliminating or Retaining Retirement Fund Vendors - Minutes Feb 14, 2024

Addendum #6 - WPI Press Editorial Board - Minutes Feb 14, 2024

Date: March 13, 2024

To: WPI Faculty

From: Committee on Governance (Prof. Heineman, Chair)

Committee on Tenure and Academic Freedom (Prof. Wobbe, Chair)

Re: Motion to establish a formal Procedure for Complaints of Academic Freedom Violations

Motion: The Committee on Governance and the Committee on Tenure and Academic Freedom recommend, and we move that a formal procedure to resolve allegations of academic freedom violations be incorporated into the Faculty Handbook by (a) modifying parts of CHAPTER ONE, BYLAW THREE, Section II and CHAPTER THREE, Section 2.c.ii related to academic freedom; and (b) inserting into CHAPTER FIVE a new Section 1: **Procedure for Complaints of Academic Freedom Violations**; as described below.

Description of Proposed Changes:

- (a.1) Revise CHAPTER ONE, BYLAW THREE, Section II - related to CTAF's responsibilities with respect to allegations of academic freedom violations:

(Red text is to be added and ~~striketrough~~ text is to be removed.)

The Committee on Tenure and Academic Freedom

....

CTAF is also concerned with questions relating to academic freedom, and the committee is charged with the responsibility of reviewing problems involving the academic freedom of all faculty members, – whether ~~they are tenured, non-tenured, faculty, whether full-time, or part-time or full-time~~. In these cases ~~where faculty members allege that their academic freedom has been violated~~, the Committee on Tenure and Academic Freedom shall ~~endeavor to verify the facts of the academic freedom case. At the start of any such academic freedom case, CTAF shall consider whether any of its members should be recused due to direct conflict of interest. If a Committee member is recused, the review of the academic freedom case will proceed with the remaining members.~~ **follow the process described in CHAPTER FIVE, Section 1.**

....

- (a.2) Revise CHAPTER THREE, Section 2.c.ii - related to early tenure reviews when academic freedom violations are established:

(Red text is to be added and ~~striketrough~~ text is to be removed.)

Early Tenure Review when the Academic Freedom of the Faculty Member is in Serious Jeopardy:

CTAF has the responsibility of reviewing problems involving the academic freedom of ~~both all faculty members – whether they are tenured, and non-tenured faculty, whether full-time, or part-time or full-time~~. In these cases where ~~faculty members allege that their academic freedom has been violated~~, the Committee on Tenure and Academic Freedom shall ~~endeavor to verify the facts of the academic freedom case. At the start of any such academic freedom case, CTAF shall consider whether any of its members should be recused due to direct~~

~~conflict of interest. If a Committee member is recused, the review of the academic freedom case will proceed with the remaining members.~~ follow the process described in CHAPTER FIVE, Section 1.

In the event that CTAF is unsuccessful in having the individuals reach an informal resolution of the academic freedom allegations and determines that the academic freedom of a tenure-track faculty member has been violated, the committee shall invite the faculty member to apply for tenure and shall recommend tenure (and, in the cases of assistant professors and assistant professors of teaching, promotion to the corresponding associate rank) only when there is evidence that the nominee would eventually be tenured by the normal procedure. If the nominee is not recommended for early submission for tenure, the tenure case is tabled until the regular tenure submission and the faculty member is notified personally by the Chair of CTAF.

At the start of any such tenure case, any CTAF member shall consider whether they should recuse themselves from the case due to direct conflict of interest. If a CTAF or DTC member is recused, that member either will be replaced in a manner determined by CTAF or the review will proceed with the remaining members.

The procedures to be followed in the tenure review and the granting of tenure (and, in the cases of assistant professors and assistant professors of teaching, promotion to the corresponding associate rank) will be, to the extent possible without exposing the faculty member to further jeopardy, those followed in a normal tenure case, including promotion to the associate rank when the faculty member is at the assistant rank.

- (b) Add new Section B. **Procedure for Complaints of Academic Freedom Violations** to CHAPTER FIVE.

(Track-changed text indicates small changes made since the draft was disseminated on March 6.)

(Beginning on the next page...)

CHAPTER FIVE: FACULTY GRIEVANCE PROCEDURES

(Insert new section 1.)

Section 1.

PROCEDURE FOR COMPLAINTS OF ACADEMIC FREEDOM VIOLATIONS

I. Context

All faculty members at WPI – whether tenured, non-tenured, full-time, or part-time – have academic freedom as described in CHAPTER ONE, Section II, Part V of this Handbook. The guarantee of academic freedom requires that any faculty member who believes their academic freedom has been violated must be able to submit and have their complaint adjudicated by the Committee on Tenure and Academic Freedom (CTAF) without incurring any additional risk.

The procedures described below are designed to allow CTAF to ascertain the facts needed to reach a decision with respect to allegations of academic freedom violations, while protecting faculty members from harm during the process. This balance is achieved by having CTAF first reach a *preliminary* finding based on information provided only by those individuals chosen by the faculty member bringing the complaint. And only if a preliminary finding that an academic freedom violation was likely to have occurred, would the complaining faculty member be required to allow CTAF to contact all other relevant individuals if it were to make a *final* determination that an academic freedom violation had occurred. In this manner, no individual may be informed of the complaint without the permission of the faculty member raising the complaint, while all relevant individuals must be interviewed before a violation of academic freedom is finally established.

Any faculty member who believes their academic freedom has been violated may submit a complaint to the Committee on Tenure and Academic Freedom (CTAF), which has responsibility to follow the procedures described below to evaluate whether an individual's academic freedom has been violated. It is not CTAF's responsibility to assign intentionality or to sanction any individual. Instead, if CTAF determines that academic freedom has been violated, CTAF will send a detailed report on the finding with recommendations to the Provost. Based on the report, the Provost will take appropriate administrative actions as necessary.

II. Evaluation of Complaints of Academic Freedom Violation

A violation of academic freedom is any serious interference, restriction, or suppression of the rights and liberties that arise from the definition of academic freedom (provided in Chapter 1, Section II, Part V). These rights enable faculty members as scholars, educators, and citizens of the University to pursue and disseminate knowledge and ideas without undue influence, censorship, or discrimination. Violations of academic freedom can limit these rights in a wide variety of ways, and in certain cases can result in decisions not to renew probationary, tenure-track appointments; decisions not to renew or terminate appointments; negative decisions on tenure; and negative decisions on promotions of tenured, tenure track, and non-tenure track faculty members.

CTAF shall endeavor to ascertain the facts of the academic freedom case using the procedures described below. At all times, case materials will be confidential, shared only among the members of the Academic Freedom Subcommittee (AFS) chosen to evaluate the case and the faculty governance coordinator. To ensure a fair and effective resolution process, cases should be filed in a timely manner. CTAF will endeavor to move through the process in a timely fashion.

If at any time during the process, the complainant or other relevant individuals leave WPI, the complainant can still proceed with the process.

II.a Initial Phase

1. *Optional Informal Consultation*: The Chair of CTAF is available for informal consultation with the complainant at any time before formal procedures are initiated (beginning with step 2, below). At this time, the Chair can review evidence provided, discuss the complaint with the complainant and answer questions about the complaint process. There is no investigation and no involvement of other individuals at this time. Instead, the intent is to provide a mechanism by which the complainant may receive information that may help them to decide whether or not to submit a formal complaint, although the complainant may submit a formal complaint without asking for this consultation. An oral or informal written inquiry from the complainant is not considered a formal complaint for the purposes of these rules. All information shared and discussed during this informal consultative phase must be held in confidence by the Chair of CTAF.

If the complaint involves the Chair of CTAF or if the complainant is in the same department as the Chair of CTAF, then the complainant should consult with the secretary of CTAF, who will serve in the role of the Chair throughout the process.

2. *Submission of a Formal Complaint*: To initiate a formal complaint of academic freedom violation for consideration by CTAF, the complainant must notify the Chair of CTAF (or their replacement) in writing that they intend to submit a complaint. Within two weeks of that notification, the complainant must submit the following: a) a signed, written statement describing the substance and details of the complaint; b) any evidence they wish to have considered to support the allegation that their academic freedom has been violated; c) an initial list of people relevant to the case whom the complainant agrees may be interviewed by CTAF; and d) a statement of any potential conflicts of interest relevant to the case that may exist among current members of CTAF. If the complaint involves the Provost, the Provost's role is replaced by the President everywhere in this procedure.

3. *Selection of the Academic Freedom Subcommittee (AFS)*: The CTAF Chair (or their replacement) and the next longest serving CTAF member (who is not in the same department as the complainant and does not have a conflict of interest) will perform an initial review of the submission in order to select a five-member Academic Freedom Subcommittee (AFS) consisting of themselves and three additional CTAF members. These additional CTAF members must not have departmental overlap or conflict of interest with the complainant nor have conflicts of interest in the case. The five members of the AFS will elect their own Chair.

The AFS will investigate cases of alleged violations of academic freedom as soon as possible, constrained by CTAF's Fall tenure case workload and the availability of CTAF members to serve on the AFS.

4. *No Conflict of Interest*: To the maximum extent practicable, steps should be taken to ensure an impartial and unbiased process, ensuring that members of AFS have no real or perceived unresolved personal, professional, or financial conflicts of interest with those involved in the investigation that could affect their ability to be objective.
5. *Optional Mediation and Possible Informal Resolution*: The AFS will review the materials submitted and interview the complainant in order to determine if the case has merit in that: 1) the complaint pertains to academic freedom, 2) the impact of the alleged violation may be serious.

If the AFS decides the case does not have merit, the complainant will be informed by the AFS Chair in writing of the decision, the case will be closed, and no further action will be required by CTAF.

If the AFS decides the case may have merit, the AFS will provide an option for the complainant to pursue an informal resolution through mediation between the complainant and any individual(s) identified as being potentially responsible for the alleged violation. Only if the complainant agrees, is/are these identified individual(s) notified of the complaint and invited to participate in the mediation process. Because mediation is voluntary, all individuals must agree to participate for mediation to occur with the expectation that an informal resolution will be practical to implement.

Mediation is a voluntary, confidential process through which a neutral mediator assists the complainant with expressing their concerns and helps all parties in developing solutions to the dispute in a safe and structured environment. The Secretary of the Faculty shall serve as the mediator or appoint an appropriate mediator (in consultation with the AFS Chair). The mediator shall be acceptable to the complainant and all individuals. Mediators do not make judgments, determine facts, or mandate resolutions; instead, they facilitate an appropriate exchange between the participants, who identify the solutions best suited to their situation. Mediators do not engage in evaluation of decisions.

If the individuals come to an informal resolution of the dispute through mediation, the mediator produces a document with details of the mediation process and the agreed-upon resolution. No agreement from the mediation process is reached unless and until it is acceptable to all individuals. The mediator, in consultation with the AFS Chair if necessary, decides whether the Provost needs to approve the mediated resolution. Only if the Provost determines that the mediated resolution is administratively infeasible, then the mediator and the Provost and the complainant and other individuals shall jointly devise an agreeable alternative resolution. The final, agreed-upon document is signed by the mediator and all individuals. The fact that a mediated resolution was agreed upon is conveyed to CTAF in writing, but without any other details. The case is closed, and no further action is required by CTAF. The individuals in the dispute are responsible to each other for ensuring that the provisions of the agreement are followed.

6. *Proceeding in the Absence of a Mediated Resolution*: In the event that the individuals do not agree to mediation or are not able to reach a mutual resolution to the dispute through mediation, the AFS will, at the request of the complainant, proceed with the Investigation Phase (**Section II.b**).

II.b Investigation Phase

1. *Review of Submitted Materials*: The AFS shall evaluate the complainant's submitted materials (described in section II.a.2) and interview the complainant. The complainant may ask for an advisor of their choice to be present during the interview and advisors are subject to the same confidentiality obligations applied to others in this process. The AFS may choose to interview some or all of the individuals identified by the complainant in the original materials.
2. *Possible Request for and Review of Additional Materials*: The AFS may also request additional materials, including emails, annual reviews, or other documents *from the complainant* if such materials are necessary to verify the facts.

If at any point in the investigation the AFS decides that additional interviews and/or additional information *from other individuals* not initially provided by the complainant **are necessary** to come to a determination (see Section II.c.1), the AFS will provide the complainant with a list of

the additional individuals and information that are necessary. The AFS cannot contact any individuals without the written approval of the complainant during this stage of the investigation.

If the complainant is not willing to expand the scope of the investigation in this manner, then the AFS will proceed to the preliminary finding part of the decision phase (Section II.c.1) and make a **decision** that the available evidence in the case does not establish that an academic freedom violation occurred (Section II.c.1.c).

If the complainant is willing to expand the scope of the investigation, the AFS conducts additional interviews, reviews the additional information requested, and continues to evaluate the full body of evidence. At all times, all individuals shall cooperate with the process, preserve (and not delete or destroy) evidence, and provide information and materials as requested.

3. **Confidentiality:** The existence of the case must remain confidential to anyone outside the AFS and individuals being interviewed. Case materials must not be shared with any interviewees. Case materials are shared only among members of the AFS.
4. **Option to Request Mediation and Informal Resolution:** The complainant has the option to request an informal resolution at any time during the investigation phase, following the process defined in Section II.a.4.
5. **Option to Withdraw the Complaint:** The complainant has the option to withdraw their complaint at any time during the investigation phase. Should the complainant request to withdraw the case, the AFS will issue no finding and the complainant's case will remain confidential. The case is closed and no further CTAF action is required.
6. **Sufficient Evidence:** Once the AFS has all available evidence or has enough evidence to reach a preliminary finding, the process enters the decision phase.

II.c Decision Phase

1. **Preliminary Finding:** Based on all the evidence obtained in the order and manner described in **Section II.a.2** and **Section II.b**, the AFS deliberates and reaches a *preliminary finding* by majority vote regarding the academic freedom violation. The first vote is whether or not academic freedom was likely violated (preliminary finding a below). If not, the second vote is whether academic freedom has not been violated (preliminary finding b below). Otherwise, there is not enough evidence to make a determination (preliminary finding c below). The committee reaches one of the three possible outcomes regarding the complainant's academic freedom:
 - a. **Likely Was Violated:** If the initial finding is that academic freedom **likely was violated**, the complainant will be informed by the AFS Chair in writing of additional relevant individuals (as determined by the AFS) that need to be interviewed or additional information that needs to be confirmed. Some relevant individuals may not yet have been interviewed in order to protect the complainant. The complainant will have one calendar week to decide whether to withdraw the case or proceed and will inform the AFS Chair in writing of their decision:
 - i. **Withdraw and Request Mediation and Informal Resolution:** The complainant can decide to withdraw the case and request an informal resolution, following the process in Section II.a.4.

- ii. Withdraw the Case: The complainant can decide to withdraw the case, and the case will be closed and will remain confidential; no further CTAF action will be taken.
 - iii. Proceed: If the complainant wishes to proceed, the case cannot be withdrawn after this point.
 - b. Has Not Been Violated: If the initial finding is that academic freedom **has not been violated**, the complainant will be informed by the AFS Chair in writing of the decision and the rationale for the decision. The case is closed and will remain confidential, no additional reports will be filed, and this academic freedom case shall not be resubmitted in the future. The outcome is conveyed to all relevant interviewed individuals by the AFS Chair. No further CTAF action will be taken.
 - c. Not Enough Evidence: If the initial finding is that there is **not enough evidence** to confirm the faculty member's academic freedom has been violated, the complainant will be informed by the AFS Chair in writing and the case will be closed and will remain confidential. This academic freedom case can only be resubmitted with new evidence of the alleged academic freedom violation **that did not exist** during the initial investigation. The outcome is conveyed to all interviewed relevant individuals by the AFS Chair. No further CTAF action will be taken.
2. Confirmation of Preliminary Finding: If there are additional relevant individuals (as determined by the AFS, not the complainant) who have not yet been interviewed (e.g., so as to protect the complainant), the AFS will conduct those interviews and review any relevant materials that are identified through those interviews. The purpose of this additional step is intended for the AFS to help establish **and confirm** that an academic freedom violation occurred or to contradict an earlier finding. The AFS will inform any new interviewees that the existence of the case and all case materials must remain confidential. If any identified relevant individuals choose not to be interviewed by AFS, the process continues to the next step. All relevant individuals will be offered the opportunity to be interviewed and to provide evidence prior to a final decision.
 3. Final Decision: When the AFS has completed interviewing all relevant individuals and reviewing any additional evidence, the AFS takes a final vote and based on a majority vote arrives at either a **positive decision** that an academic freedom violation occurred, or a **negative decision** that the evidence in the case does not establish that an academic freedom violation occurred.
 - a. Negative Decision: If the final vote results in a negative decision that the evidence in the case does not establish that an academic freedom violation occurred, then the complainant will be informed by the AFS Chair in writing of the decision. The case is closed and will remain confidential. The AFS issues a detailed, confidential report providing information on the finding, the procedures followed, the materials considered, and the rationale behind the decision that is shared with the complainant. The outcome is conveyed to all relevant individuals by the AFS Chair. No further CTAF action will be taken.
 - b. Positive Decision: If the final vote results in a positive decision that an academic freedom violation occurred, then the AFS Chair informs the complainant in writing of the decision, produces a detailed report of the finding, and advances the case to the resolution phase.
 4. Confidentiality: The existence of this academic freedom case – as well as the process followed and the outcome of the final decision – must remain confidential. This applies to the complainant, the members of the AFS, and all those interviewed during the process. Any breach in confidentiality by anyone involved in an alleged case of academic freedom violation will be considered a violation of the Faculty Conduct Policy and the AFS will follow the procedures laid out in that section (Chapter 10).

III. Resolution of Confirmed Violations of Academic Freedom

Upon confirmation of an academic freedom violation, the goal of the resolution is to protect the faculty member, provide information about the process and finding to all relevant individuals, and produce a plan that can help prevent academic freedom violations in the future. It is not CTAF's responsibility to assign intentionality or to sanction any individual.

1. *Recommended Actions:* Based on all information from the case, the AFS shall recommend possible corrective actions to rectify the academic freedom violation, if possible; protect the complainant against possible retaliation; and reduce the likelihood of similar academic freedom violations in the future, if possible. Such recommended actions may include but are not limited to changing the complainant's direct supervisor, extending the terms of a contract, and/or providing regular oversight of the complainant and supervisor, as appropriate.
2. *Complete Confidential Report with Recommendations:* The AFS issues a detailed, confidential report ~~and~~ with recommendations to the Provost. If the complaint involves the Provost, the Provost's role is replaced by the President here and for the remainder of this procedure. The report provides, providing information on the finding, the procedures followed, the materials considered, the rationale behind the decision, and recommendations from step 1 of this section. As much as possible, the identities of all interviewees should be anonymized. Upon receiving the report, the Provost must meet with the AFS to discuss the case. All aspects of this discussion are confidential between the AFS and the Provost. If any of the AFS's recommendations are administratively infeasible, the Provost and AFS will jointly devise feasible alternatives that address the AFS's concerns about protective and corrective measures. After this meeting, the AFS may choose to revise the recommendations in the report.
3. *Provost Produces Management Plan:* The Provost produces a management plan consistent with the report and recommendations that addresses the AFS's concerns about protective and corrective measures. The plan details protective actions taken for the complainant, corrective actions taken, if any, to any relevant individuals, and a timeline for implementation, as appropriate. In consultation with the AFS, the management plan will include appropriate oversight and safeguards to ensure non retaliation against the complainant.
4. *Delay when Provost has made positive tenure recommendation for Probationary Faculty:* The Provost shall pause the resolution phase until the Board of Trustees has voted on the Provost's positive tenure recommendations.
5. *Share Part of Management Plan:* The Provost sends the management plan first to the AFS, and then the report and pertinent parts of the plan to the complainant.
6. *Special Case for Probationary Tenure-track Faculty in addition to Recommended Actions:* If the complainant is a probationary faculty member consistent with the minimum time that must be served on a probationary appointment prior to the tenure review (described in Academic Appointments, Section 3.a.i and in Tenure, Section 1), the procedures in Section III.6.a are followed before proceeding with Section III.7. The procedures are intended to help mitigate any damage that might have resulted from the academic freedom violation and to initiate appropriate interventions intended to address conditions that may have led to the violation.

- a) *Procedures for Probationary Tenure-track Faculty*: In cases in which the AFS finds that the academic freedom of a probationary faculty member has been violated, the complainant will be invited to apply for tenure to protect the faculty member from retaliation or ongoing harm from the initial violation. The AFS chair will review the tenure process and all possible outcomes and implications with the candidate before the candidate makes a decision whether or not to accept the invitation. In this tenure process, CTAF shall seek to include and evaluate as many of the components of a normal tenure case as possible, without undue jeopardy to the faculty member's confidentiality in the academic freedom case. CTAF shall recommend for tenure if there is good evidence that the nominee would eventually be tenured by the normal procedure and tenure criteria.

All those involved in the tenure case shall endeavor to maintain the strictest confidentiality regarding the existence of the case and to expedite their role in the case to the maximum extent possible. The procedures otherwise to be followed in the tenure review and the granting of tenure (and, in the cases of assistant professors and assistant professors of teaching, promotion to the corresponding associate rank) will be, to the extent possible without exposing the faculty member to further jeopardy, those followed in a normal tenure case, including promotion to the associate rank when the faculty member is at the assistant rank. **Appendix A** contains details about the revised process.

7. *Share All of Management Plan*: The Provost sends the report and pertinent parts to all relevant individuals.
8. *Enact Plan and Provide Updates until Plan Completed*: The Provost takes appropriate action following the management plan and submits an annual statement to the Chair of CTAF affirming that the management plan's requirements are being met, until the completion of the plan. At that time, the case is closed, and no further action is required by CTAF. If the complainant finds the management plan has not been effective in resolving the initial complaint, they can restart the complaint process (Step II.a). The Provost's office is required to maintain confidential records on management plans.

Appendix A: Details of Revised Tenure Process for Probationary Tenure-track Faculty Members

If the candidate decides to accept the invitation to apply for tenure, a Joint Tenure Committee will be formed according to normal procedure as long as neither elected member of the Department Tenure Committee nor the Department Head is directly involved in the academic freedom complaint. Where one (or more) of the three members of the DTC has been on a complainant's AFS, a modified Joint Tenure Committee will be formed consisting of 5 members of CTAF and 3 departmental colleagues, with the most recent past DTC member substituting for the member that is recused because of involvement with the academic freedom case. Members of the JTC that were not members of the AFS that reviewed the initial academic freedom complaint must be informed of the special nature of the case but shall not be given any details of the academic freedom case. This includes members of the DTC but may also include CTAF members where the CTAF membership of the JTC is different than the AFS. All members of the JTC shall keep the existence of the academic freedom case and the resulting tenure case confidential.

A modified procedure will be used to seek external reviews. Members of the modified DTC will seek commitments from senior faculty members (at the rank of associate professor or above) from outside WPI who are able to evaluate the candidate's tenure dossier. The DTC will specifically seek external reviewers similar to those who would have been chosen in a standard tenure case. Reviewers will be given a general explanation of the unusual situation (without providing any details or naming any individuals involved in the academic freedom case), along with copies of WPI's tenure criteria and an explanation of how early tenure cases should be evaluated in cases of academic freedom violation. Details of the tenure case will only be sent to external reviewers who agree in advance to keep the case in complete confidentiality, including from all members of the WPI community other than the JTC and the faculty governance coordinator. External reviewers will not be given any details about the academic freedom case.

No departmental interviews will be conducted. The candidate may choose to request letters from some departmental colleagues, other than DTC members, as part of their professional associate letters.

The JTC will deliberate and reach a decision to either table the early tenure application or recommend for tenure. If the decision is to table the case, the candidate is notified in writing by the CTAF member who served as the Chair of the JTC and the candidate will be eligible in the future to apply for tenure under the normal tenure process. All details about the academic freedom case shall remain confidential.

If the JTC's decision is to recommend for early tenure, it will provide a unitary recommendation to the AFS, written by the CTAF member who served as the Chair of the JTC and signed by all members of the JTC. Each member of AFS will then sign the recommendation and send it to the Provost. While the Provost can consult with the appropriate Dean and the President, the details of the academic freedom case will remain confidential from the Board of Trustees.

The Provost may ask to meet with the JTC to discuss the recommendation and the Provost must meet with the JTC in the case of a disagreement about a tenure recommendation. Any such discussion between the Provost and the JTC is about the tenure case only, does not involve the AFS, does not include materials or issues regarding the academic freedom violation, and is confidential between the Provost and the JTC only.

Rationale:

The Faculty Handbook clearly states that all members of the WPI faculty, whether they are tenured, are on the tenure track during their probationary period, or hold secured or short-term nontenure-track appointments, have academic freedom as defined in Chapter One, Section 2 of our constitution. This includes full freedom in research and in the publication of the results, freedom in the classroom with relation to the subject being taught, and freedom from institutional censorship or discipline. As such, WPI faculty are guaranteed non-retaliation with respect to appointment decisions and other conditions of employment for exercising the full range of academic freedom in all their contributions to the University including participation in its governance. Their right to express their views without reprisal is secured by access to all procedures described in the Faculty Handbook (Chapter One, Section 2):

All members of the WPI Faculty, whether they are tenured, are on the tenure track during their probationary period, or hold secured or short-term nontenure-track appointments, have academic freedom as defined in this Constitution. As members of the WPI Faculty, they are guaranteed non-retaliation with respect to appointment decisions and other conditions of employment for exercising the full range of academic freedom in all their contributions to the University including participation in its governance. Their right to express their views without reprisal is secured by access to all procedures described in this Faculty Handbook.

The WPI Faculty Handbook clearly states that (Chapter Three, Section 2.c.ii) “CTAF has the responsibility of reviewing problems involving the academic freedom of both tenured and non-tenured faculty, whether part-time or full-time. In these cases, the Committee on Tenure and Academic Freedom shall endeavor to verify the facts of the academic freedom case.”

Nevertheless, procedures for adjudicating cases of potential academic freedom violations are missing. Specific details on academic freedom procedures only appear in the context of grievances (Chapter Five) considered by the Faculty Review Committee (FRC). If the grievance arises from non-renewal of a tenure-track appointment prior to tenure review and alleges infringement of academic freedom (Section IV), either prior to the decision or in the process surrounding the decision, the FRC shall first request a finding on that issue from CTAF.

As for CTAF, the only investigation and resolution of potential academic freedom violations described in the Faculty Handbook are only if the academic freedom of a probationary tenure track faculty is in serious jeopardy (Chapter 3, Section 2.c.ii) and, in this case only, CTAF shall “verify the facts” and may invite the candidate to submit for early tenure review. No other investigation or resolution details are specified. CTAF and COG feel it is important to specify procedures and remedies for all faculty covered by principles of academic freedom.

The Association of Independent Technological Universities (AITU, <https://theaitu.com/about-aitu/>) consists of twenty schools: Carnegie Mellon University, Case Western Reserve University, Clarkson University, Embry-Riddle Aeronautical University, Florida Institute of Technology, Franklin W. Olin College of Engineering, Illinois Institute of Technology, Kettering University, Lawrence Technological University, Massachusetts Institute of Technology, Milwaukee School of Engineering, New York Institute of Technology, NYU Tandon School of Engineering, Rensselaer Polytechnic Institute, Rochester Institute of Technology, Rose-Hulman Institute of Technology, Stevens Institute of Technology, the Cooper Union, and the Webb Institute. A

survey of these schools found that 35% do not have a faculty handbook available and 40% have a faculty handbook but do not specify procedures for investigating alleged cases of academic freedom. The remaining 25% have procedures that are not suitable for WPI.

There is a need, and an opportunity, to rectify the lack of procedural details on investigating alleged cases of academic freedom, while also providing guidance on resolving any confirmed cases. CTAF and COG believe it is important that everyone has advance knowledge of the detailed processes that will be followed in an academic freedom case.

In Spring 2023, CTAF defined Guiding Principles for CTAF Cases Alleging Violation of Academic Freedom, which were affirmed by the WPI administration, the Office of General Counsel and the Board of Trustees. These principles are enumerated below, each tagged with a three-letter code:

- [AFD]** An allegation of a violation of academic freedom shall be based on the definition of academic freedom in the Faculty Handbook.
- [INF]** Before a formal proceeding is initiated, with the permission of the complaining faculty member, CTAF should work with the Provost to encourage and assist the individuals to reach informal, mutually agreeable resolutions of disputes involving alleged violations of academic freedom.
- [ALL]** Before deciding whether there has been a violation of academic freedom, CTAF is encouraged to seek input and evidence from persons CTAF believes may have information relevant to the alleged violation.
- [NRT]** A faculty member alleging a violation of academic freedom is guaranteed nonretaliation in all respects. Any individual who engages in retaliation shall be subject to disciplinary action up to and including termination of employment.
- [REM]** In cases where there has been a finding of a violation of academic freedom, CTAF should consider recommending remedies appropriate for the individual case (e.g., for probationary faculty, tenured faculty, faculty working on a secured contract, and adjunct faculty).
- [CNF]** Throughout the process, confidentiality of all individuals must be protected, and information must be shared only on a need-to-know basis.

In summer 2023, a working group was formed to add procedures for alleged violations of academic freedom to the faculty handbook. The working group was approved by CTAF and included the Provost (Wole Soboyejo), three former chairs of CTAF (Jim Doyle, SSPS) (Lauren Mathews, BBT) (Mark Claypool, CS), the current chair of CTAF (Kris Wobbe, BBT), and the current chair of COG (George Heineman, CS).

During the summer, the working group held listening sessions with different constituencies: the academic deans, department heads, office of general counsel, faculty governance, and a number of non-administrative faculty groups, including “untentured, tenure-track”, “tenured”, “secure contract”, and “any non-administrative.”

Based on what was heard during these sessions, the working group drafted the procedures in this motion. The procedures aim to strike a balance: 1) avoid a procedure that deters complainants with credible cases from coming forward; 2) ensure all evidence is confirmed before a final ruling; and 3) provide remedies that are applicable to all faculty members. The following table

indicates how the guiding principles for cases of alleged violation of academic freedom are met by the four phases proposed in this motion:

	AFD	INF	ALL	NRL	REM	CNF
Initial	✓	✓				✓
Investigation	✓		✓		✓	
Decision	✓		✓		✓	
Resolution				✓	✓	✓

A checkmark (✓) indicates that phase of the proposed procedures specifically addresses the indicated principle.

The initial, investigation and decision phases all refer to the definitions of academic freedom as lens through which to consider any alleged violation of academic freedom. The initial phase provides a method to encourage and assist the individuals to reach informal, mutually agreeable resolutions of disputes involving alleged violations of academic freedom before a formal proceeding is initiated.

The investigation and decision phases both provide an opportunity and necessity to interview all relevant individuals and review all relevant information before a ruling that that an academic freedom violation occurred.

The resolution phase – specifically the Provost’s management plan, based on recommendations by CTAF – provides a mechanism for actions that ensure preventing non-retaliation against the complainant, with appropriate oversight and safeguards (and sanctions, if necessary).

The resolution phase’s management plan also provides possible corrective actions appropriate for the faculty member’s position (i.e., probationary, tenured, secure contract, or adjunct faculty).

All phases provide for confidentiality safeguards similar to those practiced by CTAF and the administration during tenure deliberations.

Date: March 13, 2024
To: WPI Faculty
From: Committee on Governance (Prof. Heineman, Chair)
Re: Motion to modify the Faculty Grievance Procedure based on the new Procedure for Complaints of Academic Freedom Violations

Motion: The Committee on Governance recommends, and I move that CHAPTER FIVE of the Faculty Handbook and the Faculty Grievance Procedure in CHAPTER FIVE be modified, as described below.

Description of Proposed Changes:

Revise CHAPTER FIVE: Faculty Grievance Procedure

(Red text is to be added and ~~striketrough~~ text is to be removed.)

CHAPTER FIVE: FACULTY GRIEVANCE PROCEDURES

Section 2.

PROCEDURE FOR FACULTY GRIEVANCES ~~PROCEDURE~~ NOT RELATED TO ACADEMIC FREEDOM VIOLATIONS:

I. Grounds:

Faculty members may submit specific grievances to the Faculty Review Committee (FRC). For these faculty grievances, the FRC has the power to review and to require reconsideration of:

- A. The Provost's decision not to renew a probationary, tenure-track appointment;
- B. Decisions not to renew or to terminate appointments of secured nontenure-track faculty members on 3-year or 5 (or more)-year contracts;
- C. Negative decisions on tenure; and
- D. Negative decisions on promotions of tenured, tenure track, and non-tenure track faculty members.

where the action, decision, or recommendation is alleged by an aggrieved faculty member to result from:

- ~~i. a violation of academic freedom; or~~
- ~~ii. improper procedure; or~~
- ~~iii. ii.~~ discrimination based on race, sex, age, color, national origin, religion, genetic identity, disability, gender identity or expression, marital or parental status, sexual orientation, transgender status, veteran status, or any other protected status.

II. Submission of Relevant Documentation and Dates for Filing a Grievance:

When a grievance on any one or more of these grounds is submitted, the grievant shall present all factual or other data that they deem pertinent to the case, as well as all the relevant documentation available to them.

For grievances arising from non-renewal of a probationary appointment (see Academic Appointments, Section 3.a.iii) or from nonrenewal or termination of appointments of secured nontenure-track faculty members on 3-year and 5 (or more)-year contracts, the grievance must be filed within ten business days after the applicable latest non-renewal or termination notification date as stipulated in this Faculty Handbook (see Academic Appointments, Sections 4.a.vi, 4.a.vii, 4.a.viii, 4.b.iv, 4.b.v).

For grievances arising from a negative tenure or promotion decision, the grievance must be filed within ten business days after that meeting of the Board of Trustees (usually February) at which the Provost

and President present their tenure and promotion decisions for Board approval, or ten days after the tenure or promotion candidate is notified by the Provost of the negative decision, whichever is later.

III. Formation of an FRC Subcommittee and Recusals:

When a matter regarding a faculty grievance comes before the FRC, a subcommittee of three elected and two appointed members of the FRC are selected by the Chair of FRC to review the grievance. The exercise of the functions of the FRC requires the presence and participation of all five members of the subcommittee as constituted for a particular grievance.

FRC members who have had a significant prior involvement with the matter in question, or who have a personal relationship with any of the parties directly involved in the matter, shall recuse themselves from participating in the proceedings. Recusals may be requested by FRC members, the grievant, or other parties in the action, such as the Provost or the Chair of CTAF or COAP. Additional recusals necessary to create the subcommittee with three elected and two appointed members will be arranged by the Chair of FRC such that recusals are distributed evenly over the FRC membership.

IV. Investigation of the Grievance and Access to Relevant Documentation:

When a grievance is submitted, the FRC subcommittee shall first decide whether the allegations and the evidence submitted by the grievant merit detailed consideration of the matter, and shall inform the grievant and the appropriate administrator(s) promptly of this decision.

If the FRC subcommittee decides that detailed consideration of a grievance is in order, it shall expeditiously investigate the matter in the manner that it deems appropriate. If the subcommittee finds that there are grounds for formal interviews, it shall conduct such interviews under confidentiality safeguards identical to those practiced by the Faculty Committee on Tenure and Academic Freedom (CTAF) or the Committee on Appointments and Promotions (COAP). Only WPI personnel may participate in such interviews.

At all stages of considering the grievance, the FRC subcommittee shall have access to all the relevant documentation under the control of the University in the same manner and to the same extent as had the administrators and committees or other faculty bodies that participated in the decisions or recommendations to which the grievance refers, and with the same obligation of confidentiality that these administrators, committees or bodies were under with regard to any particular document. The body of documents and files available to the FRC must be identical, without addition, deletion, or embellishment, to that available to those participants.

In carrying out its investigation, the FRC subcommittee may appoint *ad hoc* committees of investigation, reporting to it, and consisting of faculty members with tenure who may, but need not, be members of the FRC. The FRC shall be free to discuss the grievance with the Provost and the President.

The FRC through its subcommittee for each case is charged with reviewing a grievance in a prompt and timely manner, with the intent that it will issue its report prior to the close of the academic year in which the filing was made. Should a grievance be pending at the close of the academic year, its resolution will continue to be the responsibility of the original reviewing subcommittee, notwithstanding the election of a new committee (see Governance, Bylaw Three, Section IX).

Alleged violations of Academic Freedom:

~~If the grievance arises from non-renewal of a tenure-track appointment prior to tenure review or from decisions not to renew or to terminate appointments of secured nontenure-track faculty members on 3-year or 5 (or more)-year contracts, and (in either case) alleges infringement of academic freedom either prior to the decision or in the process surrounding the decision, the FRC subcommittee shall first request~~

~~a finding on that issue from CTAF. The subcommittee may not issue its report until receiving that finding.~~

~~If the grievance arises from denial of tenure or promotion and alleges infringement of academic freedom either prior to the decision or recommendation or in the process surrounding the decision or recommendation, the FRC will not consult CTAF or COAP, but may employ its powers of investigation and authority to conduct interviews in order to assess the merits of the academic freedom issue and the extent to which that issue bears on its ultimate report and recommendations.~~

Allegations of Improper Procedure:

In determining whether a decision or recommendation that is the subject of a grievance was affected by improper procedure, the FRC may examine whether the decision or recommendation by an administrator, committee, or other faculty body was the result of adequate consideration in terms of the relevant standards of the WPI. In no case shall the FRC substitute its judgment for that of the maker(s) of the original decision or recommendation.

V. Resolution of the Grievance, Required Actions, and Final Appeals:

If the FRC subcommittee concludes, after detailed consideration of a grievance, that the allegations in it have been established in full or in part and that the aggrieved matters have affected the decision or recommendation at issue, then the subcommittee has the power to require of the maker(s) of the decision or the maker(s) of the recommendation that they reconsider this decision or recommendation to the extent that it is affected by the established allegations. The conclusion of the Committee, its recommendations, the basis for those recommendations, and, if appropriate, requests for reconsideration shall be recorded in a report, and this report shall be provided to the grievant, the maker(s) of the questioned decision or recommendation, and the President. The outcome of a reconsideration required by the FRC subcommittee shall be promptly reported to the FRC subcommittee.

The filing of a grievance or the granting of a reconsideration as an outcome of that filing in no way extends the period of employment beyond that which would apply if no grievance were filed, nor do filing and reconsideration in any way entitle the grievant to automatic tenure through AAUP rules.

Reconsideration of Tenure or Promotion Cases:

In the event that, for a tenure candidate, the Joint Tenure Committee, or, for a promotion candidate, the Joint Promotion Committee, conducts a reconsideration of a case, it shall use only the body of documents available during the first hearing of the case, without addition, deletion, or embellishment, except for the FRC subcommittee report on the case and any other information the Joint Tenure or Promotion Committee wishes to obtain using its normal procedures, provided such additional information pertains directly to issues raised in the FRC subcommittee report.

Final Appeals:

If the reconsideration(s) required by the FRC subcommittee lead to the same negative decision as that which generated the grievance, the grievant may make a final appeal to the President, who may reverse or uphold the decision.

Rationale:

The existing Faculty Grievance Procedure, described in CHAPTER FIVE of the Faculty Handbook describes how the Faculty Review Committee (FRC) can review and require reconsideration of several decisions where the action, decision, or recommendation is alleged by an aggrieved faculty member to result from **a violation of academic freedom**.

The recently approved procedure for complaints of academic freedom violations (CHAPTER FIVE, Section 1), on the other hand, is the new procedure to be followed for all complaints of academic freedom violations. This motion, therefore, removes from the current Faculty Grievance Procedure any grounds related to academic freedom violations so there are not two committees – CTAF and FRC – with two different procedures to investigate the same allegations.

Specifically, in the current Faculty Grievance Procedure, faculty members could submit allegations of academic freedom violations to the Faculty Review Committee (FRC) in the case of any of the following four decisions:

- A. The Provost's decision not to renew a probationary, tenure-track appointment;
- B. Decisions not to renew or to terminate appointments of secured nontenure-track faculty members on 3-year or 5 (or more)-year contracts;
- C. Negative decisions on tenure; and
- D. Negative decisions on promotions of tenured, tenure track, and non-tenure track faculty members.

In the first two cases (A and B) above, the investigating FRC subcommittee was required to first request a finding on the academic freedom allegation from CTAF before acting. In the second two cases (C and D), the FRC could investigate the issue on its own. In cases A and B, if a violation of academic freedom were found, then the FRC could then require that the maker of the decision reconsider the decision in light of the finding. In cases C and D, the tenure or promotion case could be reconsidered by either the Joint Tenure Committee or the Joint Promotion Committee. In no case, is the procedure for the investigation or the details of the resolution process clearly described.

By contrast, the investigative procedures for complaints of academic freedom as described in the recently approved Procedure For Complaints of Academic Freedom Violations provide a clear description of a full and fair process to be carried out by a subcommittee of CTAF that includes protections for the complainant, possible informal resolutions, guidelines for expanding in stages the scope of the investigation to include all relevant parties, and - upon confirmation of an academic freedom violation – development an administratively feasible management plan that offers corrective and protective actions towards the complainant. In addition, as stated clearly in SECTION TWO, Section V.D of the Faculty Handbook, all WPI faculty members - whether they are tenured, are on the tenure track, or hold secured or short-term appointments, have academic freedom. So they are all entitled to submit an allegation under the new Procedure For Complaints of Academic Freedom Violations.

Date: March 13, 2024
To: WPI Faculty
From: Committee on Appointments and Promotions (Prof. Martin and Prof. Weathers, Co-Chairs)
Committee on Governance (Prof. Heineman, Chair)
Re: Motion to add guidance for candidates for promotion to (full) Teaching Professor and Associate Teaching Professor in preparation of the promotion dossier

Motion: The Committee on Appointments and Promotions (COAP) and the Committee on Governance (COG) recommend, and we move that the language describing the promotion dossier (in the Faculty Handbook, Chapter Four, Section 3.b) be modified to add guidance for candidates for promotion to (full) Teaching Professor and Associate Teaching Professor in preparation of the promotion dossier, and to include page limits for the candidates' personal and reflective statements, as described below.

Description of the Motion:

The current Faculty Handbook provides a general description of the promotion dossier for candidates for promotion to (full) Professor; (full) Professor of Teaching; (full) Teaching Professor; and Associate Teaching Professor. However, it only provides explicit guidance for candidates for (full) Professor and (full) Professor of Teaching. This motion would address that deficiency by adding information specifically for candidates for promotion to both (full) Teaching Professor or Associate Teaching Professor.

Proposed modifications: Faculty Handbook, Chapter Four, Section 3.b

(Text to be removed is ~~struck out~~. Text to be added is highlighted in yellow or green. The green changes have been included since the February 14 faculty meeting.)

3. PROMOTION PROCEDURES: to (full) Professor; (full) Professor of Teaching; (full) Teaching Professor; and Associate Teaching Professor

b. The Promotion Dossier: Documentation and Evaluation

i. Documentation Submitted by the Candidate:

(Approved by the faculty, May 10, 2022)

Candidates for promotion to (full) Professor, (full) Professor of Teaching, Associate Teaching Professor, and (full) Teaching Professor will submit a promotion dossier representative of their overall career. For promotion to (full) Professor, (full) Professor of Teaching, or (full) Teaching Professor, the emphasis will be on work since tenure and/or promotion to the associate rank in the appropriate track. Overall, all candidates included in this Section 3 should use this documentation to present the case that they have achieved the criteria for promotion. All candidates are invited and encouraged to use the promotion dossier to make arguments for the quality and impact of their work using the categories appropriate to their promotion criteria or in other ways if those other ways are appropriate to the form and impact of their contributions.

The candidate's promotion dossier will include the following: a **curriculum vitae (CV)**; a **personal statement**; a **teaching portfolio**; relevant **sample artifacts** 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 professional experience and accomplishments.

- For promotion to full Professor, the emphasis is on accomplishments in teaching, scholarship/creativity, and service.
- For promotion to full Professor of Teaching, the emphasis is on accomplishments in teaching practice, continuing professional growth and currency, and service.

- For promotion to Associate Teaching Professor, the emphasis is on accomplishments in teaching and service.
- For promotion to (full) Teaching Professor, the emphasis is on accomplishments in teaching, professional growth, leadership, and service.

The **personal statement** provides a reflective summary and description of the candidate's professional accomplishments and contributions. 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.

- For promotion to full Professor, the personal statement (10 pages maximum) includes a reflective summary and description of the candidate's scholarly contributions, and it typically will include sections on teaching, scholarship/creativity, service, external impact, and future plans.
- For promotion to full Professor of Teaching, the personal statement (10 pages maximum) includes a reflective summary and typically 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.
- For promotion to Associate Teaching Professor, the personal statement (5 pages maximum) includes a reflective statement and description of the candidate's contributions to teaching, and it typically includes sections on teaching, service, and future plans.
- For promotion to (full) Teaching Professor, the personal statement (10 pages maximum) includes a reflective statement and description of the candidate's contributions to teaching with a focus on professional growth and leadership, and it typically includes sections on teaching, professional growth, leadership, service, and future plans.

The **teaching portfolio** provides documentation of the candidate's teaching. The 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 (4-6 pages maximum), samples of teaching materials and teaching innovations, and measures of teaching effectiveness or materials that demonstrate student learning. The teaching portfolio should not exceed 50 pages (including the 4-6 pages of the reflective statement).

- For promotion to full Professor, the **teaching portfolio** provides documentation of the candidate's high quality teaching.
- For promotion to full Professor of Teaching, the **teaching portfolio** provides documentation of the candidate's high-quality teaching practice with significant impact.
- For promotion to Associate Teaching Professor, the teaching portfolio provides documentation of the candidate's high-quality teaching.
- For promotion to full Teaching Professor, the teaching portfolio provides documentation of the candidate's *high-quality teaching practice, professional growth and leadership in*

teaching.

The **sample artifacts** provide documentation of the high quality and external impact of the candidate's contributions.

- For promotion to full Professor, the **sample scholarly artifacts** provide documentation of the high quality and external impact of the candidate's scholarly contributions. The choice of artifacts should reflect the standard of the discipline and not exceed three examples that have been published during the period of their current rank. Scholarly contributions may be documented and disseminated through a variety of peer-reviewed or other discipline specific critically reviewed artifacts. ~~For most candidates, the sample scholarly artifacts will be three peer reviewed articles that have been published since tenure and/or promotion. However, scholarly contributions may be documented and disseminated through a variety of artifacts besides peer reviewed articles. The continuum of artifacts through which knowledge may be documented and disseminated matches, in its inclusiveness and variety, the continuum of scholarship. Sample scholarly artifacts must be publicly available, amenable to critical appraisal, and in a form that permits exchange and use by other members of the scholarly community.~~
- For promotion to full Professor of Teaching, the **sample artifacts** provide documentation of the high-quality and external impact of the candidate's contributions to teaching practice and their commitment to and successes in professional growth and currency especially as those successes demonstrate innovative teaching and creative pedagogical development, exploration, and experimentation within and/or beyond the context of their discipline. 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.
- For promotion to Associate Teaching Professor or (full) Teaching Professor, sample scholarly artifacts that the candidate has shown provide evidence of excellence of teaching are welcomed but not required.

Candidates for promotion to full Professor must submit a **citation index and any other indicators of external impact** appropriate to their scholarly contributions. The citation index should include all citations of the candidate's publications, presentations or other scholarly contributions. Additional indicators of external impact might include reviews of the candidate's work, press and media coverage, downloads of scholarly materials, awards and recognition, or any other indicators that the candidate's scholarly contributions have had an impact beyond WPI.

Scholarly contributions made by candidates for promotion to full Professor may combine or cut across traditional categories of teaching, scholarship/creativity and service.

Professional contributions made by candidates for promotion to full Professor of Teaching may combine or cut across traditional categories of teaching practice, continuing professional growth and currency, and service.

All candidates are welcome to submit any metric of external impact they wish so long as the context is explained.

ii. *Standards for Evaluation:*

Joint Promotion Committee members, the Provost, and peer reviewers should provide their independent assessments of the candidate's professional activities with respect to quality, impact, and commitment, as appropriate to the rank and track of the candidate. This section provides guidance that will be shared with all those involved in these assessments.

An assessment of the candidate's professional activities may be based on any and all material in the promotion dossier. Traditional measures to assess quality do not necessarily accommodate all areas of professional activity. Nonetheless, the following six standards have been identified to evaluate quality across diverse areas: clear goals, adequate preparation, appropriate methods, significant results, effective presentation, and reflective critique (Glassick, Huber, and Maeroff, *Scholarship Assessed*, 1997). Since the dossier includes the candidate's reflective critique in their personal statement, all reviewers are invited to apply these six standards to assess the candidate's professional activities described in the promotion portfolio.

- For promotion to (full) Professor, the focus should be on an assessment of **high quality teaching, high quality scholarship/creativity, and service to WPI, the field/profession, or community outside of WPI. The assessment** may be based on any and all material in the promotion dossier, including the CV, personal statement, teaching portfolio, peer-reviewed scholarship, peer reviews of sample scholarly artifacts, or indicators of external impact, **and indicators of service.**
- For promotion to (full) Professor of Teaching, the focus should be on an assessment of **high-quality teaching practice with significant impact, commitment to and significant impact of professional growth and currency, and service to WPI, the field/profession, or community outside of WPI. The assessment** 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, **and indicators of service.**
- For promotion to Associate Teaching Professor, the focus should be on an assessment of **high-quality teaching and service to WPI, the field/profession, or community outside of WPI. The assessment** may be based on any and all material in the promotion dossier, including the CV, personal statement, teaching portfolio, and indicators of service.
- For promotion to full Teaching Professor, the focus should be on an assessment of **high-quality teaching, professional growth, leadership, and service to WPI, the field/profession, or community outside of WPI. The assessment** may be based on any and all material in the promotion dossier, including the CV, personal statement, teaching portfolio, and indicators of service.

External impact beyond WPI, when relevant to the criteria for the particular promotion, 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.

- For promotion to (full) Professor, the personal statement should identify the area or areas of the candidate's scholarly contributions across teaching, scholarship and service and indicate examples of external impact beyond WPI. Evidence of external impact beyond WPI might include: funding from multiple sources; peer-reviewed articles or presentations in well-regarded journals or conferences; books; reviews, citations or impact factors; downloadable curriculum; patents; films, broadcasts, software, or computer games; discussion of research in legal cases, policy reports, or the media; keynote addresses; workshops for other institutions, regional, national or international

societies; artistic exhibitions, performances or productions; K-12 outreach and educational programs; journal editorships; leadership of academic programs or centers; or impact on external communities through teaching, scholarship or service.

- For promotion to (full) Professor of Teaching, the personal statement 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.
- In all cases, while quantitative measures will remain important indicators of quality and impact, WPI recognizes that the weight assigned to quantitative measures and documented evidence of impact varies widely between academic fields as well as along the continuum of contributions and accomplishments of candidates. Consequently, candidates are not limited in the relevant evidence they may provide to demonstrate external impact.

Rationale:

The current Faculty Handbook provides a general description of the promotion dossier for candidates for promotion to (full) Professor; (full) Professor of Teaching; (full) Teaching Professor; and Associate Teaching Professor. However, the language regarding the promotion dossier includes specific detailed information for those seeking promotion to full Professor or full Professor of Teaching. This proposal will ensure that the Faculty Handbook clearly articulates what is expected in the promotion dossier and evaluation in all four cases, including promotion to Associate Teaching Professor and full Teaching Professor.

In addition, the proposal includes minor modification/additions clarifying page limits for the personal statement and the reflective statement in the teaching portfolio for all candidates.

Date: February 14, 2024
To: WPI Faculty
From: Committee on Appointments and Promotions (Prof. Martin and Prof. Weathers, Co-Chairs)
Committee on Governance (Prof. Heineman, Chair)
Re: Motion to establish Interim Department Head in Evaluations and to modify the manner in which the Department Head Evaluation questionnaire is distributed

Motion: The Committee on Appointments and Promotions (COAP) and the Committee on Governance (COG) recommend, and we move that the language describing “Performance Evaluations of Department Heads” (in the Faculty Handbook, Chapter Two, Section 5.c, Sub-sections.ii and iii) be modified to include interim department heads who are in their second year and to update the description of the manner in which the Department Head Evaluation questionnaire is distributed, as described below.

Description of the Motion:

This motion would update the process described in the Faculty Handbook for “Performance Evaluations of Department Heads” to include interim department heads who are in their second year and to update the description of the manner in which the questionnaire is distributed to reflect current practice.

Proposed modifications: Faculty Handbook, Chapter Two, Section 5.c, Sub-sections.ii and iii
(Text to be removed is ~~struck out~~. Text to be added is highlighted in **yellow**.)

5. ROLES AND RESPONSIBILITIES, INTIAL APPOINTMENTS, EVALUATIONS, AND REAPPOINTMENTS OF DEPARTMENT HEADS

c. Performance Evaluations of Department Heads:

- i. **Purpose and Responsibility:** Performance evaluations are made of each Department Head in order to determine if the department is accomplishing its goals in an effective, efficient and harmonious way. The Dean has the responsibility for conducting these evaluations and for reporting back to the Department Head being evaluated.
- ii. **Schedule of Evaluations:** Performance evaluations for each Department Head are conducted during the spring of **both** the second and fourth year of the first five-year appointment, **during the spring of only** ~~In the second year of~~ the second five-year appointment, **evaluations will be conducted only in the second year of the appointment and during the spring of the second year of any interim appointment.** In addition, the Dean, the Committee on Appointments and Promotions, or the Department Head may request an evaluation at any time. A list of the regular schedule for Department Head evaluations is maintained by the Committee on Appointments and Promotions.
- iii. **Evaluation Process:** ~~In the first phase of the evaluation, the Dean~~ **The Committee on Appointments and Promotions will work with the Faculty Governance Office to** distribute a **confidential and anonymous** questionnaire to all faculty members in the department. The Committee on Appointments and Promotions has the responsibility for preparing and updating the questionnaire, as appropriate. ~~The department faculty members send their anonymous completed questionnaires to the Faculty Governance Office, where the responses will be confidentially collated and forwarded without attribution to the Dean and to the Committee on Appointments and Promotions.~~ Only the Dean, the Provost, and the Committee on Appointments and Promotions will review the responses.

If either the Committee on Appointments and Promotions, the Dean, or the Provost decides that additional information is needed, then ~~the~~ COAP will make arrangements for its members to meet with each faculty member in the department concerned. The purpose of these individual meetings

is to gain a better understanding of any problem that may have been brought out in the questionnaire. Complete confidentiality will be maintained by the Committee concerning the views of individuals.

The Committee on Appointments and Promotions will discuss all of the information obtained and will prepare a summary describing the perceived strengths and weaknesses of the Department Head being evaluated. ~~The~~ COAP will send the summary letter to the Dean who, after reviewing the contents, will meet with the COAP to discuss the case. Only the Dean, Provost and the President may read the COAP letter.

Whereas collaboration is essential to WPI, Deans are expected to collaborate with other Deans when evaluating Department Heads in departments where collaboration across schools is significant (as defined by the Provost).

The Dean will then meet with the Department Head to discuss the evaluation and also send a letter to the Department Head that summarizes the performance evaluation. A copy of that letter will be sent to the Chair of the Committee on Appointments and Promotions.

Rationale:

For reviewing interim department heads in their second year:

(Changes to Section 5.c, Sub-section.ii)

In the last three years, COAP has seen more interim department heads serving beyond a one-year interim term. Without the proposed change in language, it is unclear if an interim department head in year two should be reviewed. To make the process consistent regardless of title, COAP would like to conduct performance reviews for any department head who serves in the role beyond one year. Moreover, the result of such a second year review might well be useful in assessing the interim department head's qualifications to serve as the permanent department head.

For updating the description of the manner in which the questionnaire is distributed:

(Changes to Section 5.c, Sub-section.iii)

Although the current language in the Faculty Handbook articulates that the Dean's office distributes the department head review questionnaire, in practice, it is the Faculty Governance Office that actually distributes the questionnaire. In addition, the current language in the Faculty Handbook reflects a procedure for paper and pencil reviews. However, the reviews are now conducted electronically, and the proposed updates reflect this practice.

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to establish a Ph.D. program in Financial Technology (FinTech), including a new course FIN 698 Directed Research

Motion: On behalf of the Business School, the Committee on Graduate Studies and Research recommends, and I move that a Ph.D. program in Financial Technology be established (including one new course FIN 698 Directed Research), as described below.

Description of the Proposed Program:

(What follows are the proposed additions to WPI Graduate Catalog.)

Ph.D. Program in Financial Technology (FinTech)

Program Goals and Objectives

There is a growing demand for financial technology researchers capable of operating outside the world of structured financial data. This new financial technology research requires researchers to incorporate unstructured data, predictive analytics, artificial intelligence (A.I.), and machine learning insights to drive new financial thinking and processes that deliver innovative financial products and strategies for long-term productivity improvements and economic growth.

The Business School's financial technology Ph.D. program will prepare a new set of researchers with the appropriate competencies in predictive analytics and programming applications for quantitative risk management, financial forecasting, corporate innovation, and financial modeling. Graduates from the Ph.D. program will possess the financial and applied technical skills to transform business and disrupts business practices through innovations that will undoubtedly shape the nature and boundaries of companies and global economies in the coming years.

The Ph.D. program in Financial Technology (FinTech) strives to educate researchers to:

- Lead in careers requiring educational, research and analytical skills
- Conduct high-quality basic and applied research
- Partner effectively in research initiatives with Business School faculty, and as appropriate, with faculty in other departments
- Disseminate research findings through publication

In our Financial Technology Ph.D. program, students will gain a deep appreciation for advancing knowledge and its practical applications in a technology-driven economy. Whether their goal is to pursue innovative academic research or to take on leadership roles within the rapidly evolving financial technology sector, WPI's Ph.D. program in financial technology provides specialized training for making a direct global impact.

Our students will have the opportunity to collaborate closely with our distinguished faculty members, who possess expertise that extends well beyond the classroom and into the highest echelons of the public and private sectors. Their prolific publishing record includes contributions to some of the most respected research outlets. As a result, our students will develop a robust understanding of **finance theory, information technology, and quantitative research methods.**

Admissions Requirements

No changes from admission requirements for other Business School's PhD programs.

Program Requirements:

Candidates must complete 90 credits beyond the bachelor's degree, including at least 60 credits beyond the equivalent of WPI's MS in Financial Technology. Students entering with a Non-Financial Technology MS degree program will likely need to take the Financial Innovation specialization if their background is MA or CS or take the IS specialization in the case of a traditional finance masters.

For students proceeding from master's (related to WPI's MS in Financial Technology) to the Financial Technology Ph.D. degree, the 60 credits are distributed as follows:

Coursework:	
Courses in Research Methods (including Special Topics and independent studies)	12 credits
Dissertation Research (Bus 699)	12 credits
Other:	18 credits
Additional Dissertation Research (BUS 699)	
Directed Research (FIN 698)	
Additional coursework	
TOTAL	60 credits

The result of the dissertation research must be a completed doctoral dissertation. Only after admission to candidacy may a student receive credit toward dissertation research under BUS 699. Prior to admission to candidacy, a student may receive up to 18 credits of pre-dissertation research under FIN 698. All full-time students are required to register for the zero credit BUS 691 Graduate Seminar every semester. Students formally accepted as a doctoral candidate must select a concentration in which to pursue their dissertation research. The available concentrations are listed below:

Research Methods Courses (All required)

- | | |
|---|-----------|
| 1. BUS 631 Research Methods and the Research Process | 3 credits |
| 2. BUS 633 Quantitative Research Methods | 3 credits |
| 3. Research Method Elective (approved by the advisor) | 3 credits |
| 4. BUS 651 Seminar on Designing and Conducting Research Studies | 3 credits |

Academic Advising

The academic advising process is consistent with our existing PhD process within the WBS. Upon admission to the Doctoral Program, each student is assigned or may select a temporary advisor to arrange an academic Plan of Study covering the first 9 credits of study. This plan should be arranged before the first day of registration. Prior to registering for any additional credits, the student must identify a permanent dissertation advisor who assumes the role of academic advisor and with whom a suitable dissertation topic and the remaining Plan of Study are arranged. Prior to

completing 18 credits, the student must form a dissertation committee that consists of the dissertation advisor, at least two other business administration faculty members, and at least one member from outside the student's area of concentration. These committee members should be selected because of their abilities to assist in the student's dissertation research.

The schedule of advising is as follows:

- Dissertation advisor—selected by student prior to registering for more than 9 credits.
- Program of study—arranged with dissertation advisor prior to registering for more than 9 credits.
- Dissertation committee—formed by student prior to registering for more than 18 credits. Consists of dissertation advisor, at least two B.A. faculty members, and at least one outside member.

This schedule ensures that students are well advised and actively engaged in their research at the early stages of their programs.

Admission to PhD Candidacy

Admission to candidacy will be granted when the student has satisfactorily passed a written exam intended to measure fundamental ability in financial technology and at least one additional business specialization developed by the student under the guidance of their advisor. The area of specialization is selected by the student and accomplished through directed research. The exam is administered in January of each year. For students who enter the program with a bachelor's degree, the exam must be taken after three semesters if they began their studies in the fall, and after two semesters if they began in the spring. For students who enter the program with a master's degree, the exam must be taken after one semester if they began in the fall, and after two semesters if they began in the spring.

Students in a WPI M.S. program who plan to apply for fall admission to the Ph.D. program are strongly advised to take the candidacy exam in January before that fall. The details of the examination procedure can be obtained from the School of Business Research Policy and Curriculum Committee.

Dissertation Proposal

Each student must prepare a brief written proposal and make an oral presentation that demonstrates a sound understanding of the dissertation topic, the relevant literature, the techniques to be employed, the issues to be addressed, and the work done on the topic by the student to date. The proposal must be made within a year of admission to candidacy. Both the written and oral proposals are presented to the dissertation committee and a representative from the School of Business Research Policy and Curriculum Committee. The prepared portion of the oral presentation should not exceed 30 minutes, and up to 90 minutes should be allowed for discussion. If the dissertation committee and the graduate committee representative have concerns about either the substance of the proposal or the student's understanding of the topic, the student will have one month to prepare a second presentation that focuses on the areas of concern. This presentation will last 15 minutes with an additional 45 minutes allowed for discussion. Students can continue their research only if the proposal is approved.

Dissertation Defense

Each doctoral candidate is required to defend the originality, independence, and quality of research during an oral dissertation defense that is administered by an examining committee that consists of the dissertation committee and a representative of the School of Business Graduate Policy and Curriculum Committee who is not on the dissertation committee. The defense is open to public participation and consists of a 45-minute presentation followed by a 45-minute open discussion. At least one week prior to the defense, each member of the examining committee must receive a copy of the dissertation. At the same time, an additional copy must be made available for members of the WPI community wishing to read the dissertation prior to the defense, and public notification of the defense must be given by the School of Business School's Research and PhD Policy and Curriculum Committee (RPCC). The examining committee will determine the acceptability of the student's dissertation and oral performance. The dissertation advisor will determine the student's grade.

Description of the Proposed New Course:

FIN 698 Directed Research (Credits: variable)

FIN 698 is administered by the Director of the financial technology program, with the support of faculty members who possess specialized expertise in their respective research fields. This Directed Research course is specifically designed for Ph.D. students aiming to expand their research skills and specialization along the lines of their dissertation research. It offers an exceptional opportunity for these students to conduct comprehensive, faculty-supervised research in various finance-related areas, thereby enhancing their grasp of advanced financial theories and their practical applications.

Impact on Degree Requirements: This course is offered as one or part of the required courses in the Ph.D. Financial Technology degree program.

Resources and Anticipated Instructors: Prof. Kwamie Dunbar, and Prof. Shane Gao will teach this course. No additional resources are needed.

Rationale:

Ongoing technology innovations are disrupting existing structures of the financial services industry. Technologies such as blockchain, cryptocurrency, peer-to-peer lending, mobile payment systems, robo-advising, and automated insurance underwriting are all redefining how financial services are offered and consumed. As a result, the traditional finance sector is rethinking the way forward. These new paradigms are also changing the skill set that companies are seeking.

This proposal builds on WBS's recently launched BS and MS Financial Technology programs. Like them, we expect the proposed Ph.D. in Financial Technology to be assigned the [CIP Code of 52.1339](#), which is a STEM-designated code. The proposed program addresses the urgent need for Ph.D. graduates who can develop new research agendas in the field of financial technology that meets the emerging challenges of the financial technology industry for several reasons. First, research in financial technology is essential for greater insights into its impact on the global economy. The WPI Business School's Ph.D. graduates can contribute to this understanding of how financial technology affects the traditional financial industry, its challenges, and what

opportunities it presents. This knowledge can inform policymakers and regulators, who can then make informed decisions about supporting the industry's growth and ensuring its stability. Second, the Business School's Ph.D. graduates can play a critical role in advancing the technology itself. As financial technology continues to evolve and expand, it is important to have individuals equipped with the skills and knowledge necessary to lead the development of new and innovative solutions. Our Ph.D. graduates will be prepared to carry out this research that addresses current challenges in the field, such as security and privacy, and develop new approaches to address these challenges.

The course of study leading to the WPI Business School's Ph.D. degree in Financial Technology requires the completion of 90 credits beyond the bachelor's degree, or 60 credits beyond the master's degree. The degree program will consist of a mix of analytics, technology, and finance courses and research activities. Doctoral students will be expected to demonstrate knowledge of key theoretical finance and economic concepts underpinning financial markets and the financial technology industry and to understand the interaction between technological innovation and financial service disruptions and the technologies appropriate to solve financial problems. We expect to admit 2-3 students per year into the program.

Why now?

Financial technology revenues are expected to grow 600% in the next seven years, from \$245 billion to \$1.5 trillion, according to a report released in May 2023 by Boston Consulting Group (BCG). BCG predicts the financial technology sector, which currently holds 2% of the \$12.5 trillion financial services revenue globally, will grow up to 7% – and colleges and universities are taking note.¹ Consequently, there has been a dramatic increase in the number of colleges and universities now offering bachelor's and master's degrees within the last year. This growth was part of the rationale for WPI to launch its new BS and MS in Financial Technology this year.

With this growth in university Financial Technology programs, there is an associated need for Ph.D. graduates with the skills to teach in Financial Technology programs and do financial technology-related research. There are also industry research opportunities, as firms in the financial industry seek to create innovative operations and products based on emerging financial technologies. For WBS, several students have already contacted us about a Financial Technology Ph.D. program. At the moment, we have several students sponsored by foreign governments ready to apply to such a program starting in the Fall, which contributes to our immediate reason for urgency in launching this program.

Our PhD in Financial Technology benefits from the WBS' presence in the forefront of financial technology in the northeast. This is evident from our biannual financial technology conference on "[Fintech for Inclusivity, Growth, and the Future | Worcester Polytechnic Institute \(wpi.edu\)](#)." Overall, the conference solidified WBS and WPI's standing as regional, national, and global leaders in the field of financial technology. This recognition is further underscored by WPI's unique distinction as the only institution in New England offering both a BA and an MS in Financial Technology and as one of just five schools in the region offering an MS in Financial Technology.

The conference welcomed a remarkable total of 300 attendees, marking it as the largest event ever hosted by the WBS. This impressive turnout included 85 students from WPI and 45 students from regional colleges, all actively participating in at least one session.

¹ [Growth in fintech sector spurs specialty college programs | Banking Dive](#)

One of the most remarkable aspects of the conference was the substantial representation from the business community, with over 50 industry leaders participating in panel discussions or attending the event. This diverse and influential presence greatly enriched the conference's discussions. Furthermore, the conference embraced a truly transdisciplinary approach, bringing together nearly 30 WPI faculty members from various disciplines across WPI. This interdepartmental collaboration added depth and breadth to the academic discussions. Additionally, the conference attracted two dozen scholars from around the world, including distant locations like China and Saudi Arabia. Their participation contributed to the international perspective and global reach of the event.

Opportunity and Market Analysis: As noted in our initial summary, revenues in financial technology firms are expected to grow 600% in the next seven years, from \$245 billion to \$1.5 trillion, according to a report released in May 2023 by Boston Consulting Group (BCG). BCG predicts the financial technology sector, which currently holds 2% of the \$12.5 trillion financial services revenue globally, will grow up to 7%. This large growth has created an increasing demand for expertise at the intersection of finance and information technology, i.e. in financial technology. The result is substantial growth in university offerings to train such professionals, see [Growth in fintech sector spurs specialty college programs | Banking Dive](#), which notes WPI's new BS and MS in Financial Technology launching this year and quotes Professor Dunbar, who is WBS's Financial Technology Program Director.

Both this growth in university offerings and the industry demand for researchers who deeply understand the technology and its potential uses in finance have produced a demand for Ph.D. We are relatively early in this market in the U.S. (Europe is further ahead). With WPI's reputation in technology and its long history with the Wall St. project center (now called the Financial Technology project center), we are ideally positioned to be a leader in financial technology. Furthermore, Massachusetts is the third largest financial technology industry center in the U.S. (behind NYC and San Francisco).

Degree Name: One question that CGSR may ask is why a Ph.D. in Financial Technology as compared to a Ph.D. in Business Administration with a concentration in Financial Technology, as is the case with our other Ph.D. degrees. There are three reasons. First, the students who want to apply to a potential financial technology Ph.D. program have said that their government will only fund a Ph.D. in Finance or Financial Technology and will not fund a Business Administration or Management degree with a concentration. Second, our market analysis shows an increase in Ph.D. programs in Finance vs. the more traditional Ph.D. programs in Business Administration or Management with a concentration in Finance (see Appendix A and B). Essentially, the PhD in Finance is perceived as a stronger degree. Third, our experience with our other Ph.D. degrees that are named as concentrations, which has been traditional in Business Schools, support this conclusion. For our Ph.D. graduates seeking university positions, universities do not have problems with the traditional degree naming. Unfortunately, industry is not familiar with Business School Ph.D. naming traditions. As a result, students seeking industry positions have much more difficulty convincing organizations that they are looking for technical, research jobs, rather than managerial positions. As a result, we intend to change our other Ph.D. programs away from concentrations.

Comparison to Existing Programs at WPI

There is no comparable program at WPI. In particular, we do not have a traditional Finance Ph.D., which could be affected by such a program.

Impact on Existing Programs at WPI

Having a financial technology Ph.D. program is likely to increase interest in related programs and courses at WPI, e.g., the MS in Financial Technology and MS in Information Technology, and perhaps related Mathematics and Data Science programs.

Comparable Programs at other Universities

See Appendix A for a comparison of Ph.D. programs in Finance (or variations, e.g., Financial Engineering) and Ph.D. programs in Management or Business Administration with concentrations in Finance, which provides background for our choice of a Ph.D. in Financial Technology, rather than a concentration. Appendix B adds more detail by comparing Boston College's Ph.D. in Finance with Temple University's PhD in Management with a concentration in Finance.

Appendix C provides links to the four Ph.D. programs we found that are financial technology or financial technology related. We only found two financial technology programs, both outside of the U.S., one at the University of Edinburgh Business School and one at the Hong Kong University of Science and Technology. Both of these are highly regarded schools. The two U.S. programs we found are at Stevens Institute of Technology, which has a Ph.D. in Financial Engineering, and at Boston University, which has a Ph.D. in Financial Mathematics.

The U.S. has a number of high quality, well-established Ph.D. programs in Finance, but they are traditional programs in Finance. We have the opportunity to be the first Ph.D. program in Financial Technology in the U.S. Doing this research helped us understand the requests we are getting about a Financial Technology Ph.D. program, given the publicity about our new BS and MS Financial Technology programs.

Rationale for new course - FIN 698 Directed Research: The research encompasses a diverse range of areas including asset pricing, where students can explore the dynamics of how assets are valued in financial markets; behavioral finance, offering insights into the psychological influences and behavioral biases that affect financial decision-making; price theory, focusing on how prices emerge in markets, influencing the allocation of resources and economic outcomes; and climate finance, a rapidly evolving field addressing the financial aspects of climate change mitigation and adaptation strategies. Students have the flexibility to enroll in FIN 698 multiple times, earning variable credits based on the extent of their research involvement.

Implementation:

Program Management: Oversight of the Financial Technology Ph.D. program is the responsibility of the WBS Research and Ph.D. Policy and Curriculum Committee (RPCC), current chair Professor Joe Zhu. This committee will review changes to the program, student petitions, etc. Professor Kwamie Dunbar, who is program director for our BS and MS in Financial Technology programs, will also be program director for the Ph.D. degree in Financial Technology. He will have primary responsibility for the program and for submitting needed changes to the RPCC for review.

Implementation Date: Implementation date for this new program is the 2024-2025 academic year, pending approval in time to recruit students for Fall 2024, when we hope to admit our first 2 or 3 students.

Resources Required:

Faculty: We have sufficient faculty to advise students on a Ph.D. program in Financial Technology. In particular, we have:

- Two highly qualified financial technology researchers: Associate Professor Kwamie Dunbar, who started at WPI in Fall 2022, and has designed our Financial Technology degrees, and Assistant Professor Shane Guo, who started in Fall 2023.
- Highly qualified Information Technology professors, who have been advising Information Technology Ph.D. students since the WBS Ph.D. program was started in 2014, who can provide assistance.

Computing and Data Resources: In addition to the computing and data resources that WPI has for faculty and student access, e.g., MATLAB and SAS, we have:

- 16 Bloomberg terminals provide real-time financial information including securities quotes, fundamentals, sector and index analysis and technical analysis.
- The Business School's Financial Technology Lab provides students with access to an unrivaled collection of data feeds and analytical tools valued at more than **\$150,000** in annual licensing fees. This investment is expected to position the Business School's Financial Technology Center to be one of the most powerful financial technology research centers in the region. It includes the following databases and software:
 - Bloomberg
 - Morning Star
 - Federal Reserve Bank of St. Louis FRED
 - WRDS (selected high frequency market data), which includes data feeds from COMPUSTAT and CRSP

APPENDIX A

PhD programs in Finance/Financial Technology vs PhD programs in Management with Concentrations in Finance/Financial Technology

PhD programs in finance/financial technology and PhD programs in management with concentrations in finance/financial technology are both advanced doctoral programs that prepare students for careers in academia, research, and specialized roles in the business world. However, there are key differences between these two types of programs:

Focus and Specialization:

PhD in Finance/Financial Technology: These programs have a primary and exclusive focus on finance. Students delve deeply into financial theory, quantitative methods, asset pricing, risk management, and related topics. The curriculum is highly specialized and geared towards producing experts in the field of finance.

PhD in Management with Concentrations in Finance/Financial Technology: In contrast, these programs are broader in scope. While they offer a concentration in finance, students also study

management and organizational theory. The finance/Financial Technology concentration typically covers a range of financial topics but may not go as in-depth as a standalone finance/finance technology PhD program.

Curriculum:

PhD in Finance/Financial Technology: The curriculum is tailored to finance-specific subjects. Courses might include advanced topics in **corporate finance**, **investments**, **financial econometrics**, and **financial derivatives**. The research focuses primarily on finance-related issues.

PhD in Management with Concentrations in Finance/Financial Technology: These programs include core management courses alongside finance courses. Students may study topics like organizational behavior, strategy, and leadership in addition to finance-related subjects. The research agenda may encompass both finance and management topics.

Research Orientation:

PhD in Finance/Financial Technology: The research in these programs is typically finance-centric, with a strong emphasis on developing a deep understanding of financial markets, instruments, and practices. Graduates are often prepared for careers in academia and research institutions or as quantitative analysts in the financial industry.

PhD in Management with Concentrations in Finance: While research in these programs can still be finance-related, it may also include management-focused research. Graduates from these programs may pursue careers in academia, but they could also be well-suited for management roles in organizations with a strong need for financial expertise.

Career Opportunities:

PhD in Finance/Financial Technology: Graduates often pursue careers as finance/financial technology professors, researchers, or financial analysts in the corporate world. They are experts in finance and are sought after for specialized roles.

PhD in Management with Concentrations in Finance/Financial Technology: Graduates have more flexibility in terms of career choices. They can teach finance but are also equipped to handle management and leadership roles in various industries, especially those where a combination of finance and management expertise is valued.

Admissions Criteria:

PhD in Finance/Financial Technology: Admissions may be highly competitive, with a strong emphasis on quantitative skills and prior finance-related experience or coursework.

PhD in Management with Concentrations in Finance: These programs may have slightly broader admission criteria, as they expect a mix of management and finance interests.

APPENDIX B

Boston College's Carroll School of Business PhD in Finance

vs.

Temple University Fox School of Business PhD in Management with Concentration in Finance.

The key distinction between these two programs lies in their focus and specialization. Boston College's Finance PhD program is highly specialized and primarily geared toward finance research and quantitative analysis. In contrast, Temple University's PhD in Management with Concentrations in Finance takes a broader, interdisciplinary approach, combining management and finance to prepare graduates for various career paths. The choice between these programs would depend on your career goals, research interests, and whether you prefer a more specialized or interdisciplinary educational experience. It's advisable to reach out to both schools for the latest program details and to evaluate which aligns better with your objectives.

Boston College's Carroll School of Business PhD in Finance Program:

Specialization in Finance: Boston College's Finance PhD program provides a highly specialized curriculum that focuses exclusively on finance. This specialization means that students receive deep exposure to topics related to finance, such as **asset pricing, corporate finance, financial markets, and financial econometrics**.

Research-Oriented: As a finance-specific program, the program has a strong research orientation, preparing students for careers in academia and research institutions or quantitative roles in the financial industry.

Admissions Criteria: Admission to a finance-specific program like BC's is highly competitive, with a focus on strong quantitative skills and a background in finance or related fields.

Career Outcomes: Graduates from Boston College's Finance PhD program is well-suited for academic positions as finance professors, researchers, or quantitative analysts in the financial industry.

Temple University Fox School of Business PhD in Management with a Concentration in Finance:

Interdisciplinary Approach: Temple University's program combines management studies with a concentration in finance. This approach offers students a broader perspective that includes management theory and practice in addition to finance topics.

Flexibility: Students in this program have the flexibility to explore both management and finance topics, allowing them to pursue careers in academia, management roles, or finance-related positions.

Career Paths: Graduates may be prepared for a wider range of career paths, including teaching, research, and management roles in various industries.

Admissions Criteria: The admissions criteria for this program is/could be somewhat broader, as they may seek candidates with a mix of interests in both management and finance.

Research Opportunities: While research is certainly part of the program, students may have the opportunity to explore research topics that span both management and finance, providing a more interdisciplinary perspective.

APPENDIX C

Financial Technology and Financial Technology related Ph.D. Programs

1. University of Edinburgh Business School
<https://www.business-school.ed.ac.uk/phd/financial-technology>
2. The Hong Kong University of Science and Technology
<https://prog-crs.hkust.edu.hk/pgprog/2021-22/mphil-phd-fintech>
3. Stevens Institute of Technology – Ph.D. Financial Engineering
<https://www.stevens.edu/phd-in-financial-engineering>
4. Boston University – Ph.D. Mathematical Finance
<https://www.bu.edu/academics/questrom/programs/mathematical-finance/phd/>

Date: March 13, 2024
To: WPI Faculty
From: Committee on Graduate Studies and Research (Prof. Olson, Chair)
Re: Motion to establish a Collaborative Accelerated Master's Programs Framework between The College of the Holy Cross and WPI

Motion: On behalf of the Collaborative Accelerated Master's Programs (CAMPs) Framework between Holy Cross and WPI Working Group, the Committee on Graduate Studies and Research recommends, and I move, that the Collaborative Accelerated Master's Programs Framework between The College of the Holy Cross and WPI be established, as described below.

Description of the Motion:

Summary:

This motion consists of two parts:

- **Part I: Collaborative Accelerated Master's Programs (CAMPs) Framework between Holy Cross and WPI**
Part I establishes a Collaborative Accelerated Master's Programs (CAMPs) Framework between Holy Cross and WPI, in which undergraduate students at Holy Cross, after graduating with their bachelor's degree, may pursue a master's degree at WPI in an accelerated manner.
- **Part II: Collaborative Accelerated Master's Programs between Holy Cross and WPI**
Any department or program at WPI that confers a master's degree may opt-in to participate in this Collaborative Framework. Part II provides a template for the creation of a Master's-specific (e.g., M.S. degree in Computer Science) Program within this Collaborative Accelerated Master's Programs Framework between Holy Cross and WPI, in which additional information and rules specified by the opting-in, accelerated master's program (e.g., M.S. in Computer Science) at WPI are provided.

Part I: Collaborative Accelerated Master's Programs (CAMPs) Framework between Holy Cross and WPI

Proposed Catalog Description: *To be included in a new section of the WPI Graduate Catalog that describes CAMPs that WPI has established with partner institutions:*

Collaborative Accelerated Master's Programs Framework between The College of the Holy Cross and WPI.

The Collaborative Accelerated Master's Programs Framework between The College of the Holy Cross and WPI allows undergraduate students from Holy Cross to apply to and, after graduating with their bachelor's degree from Holy Cross, pursue a master's degree at WPI in an accelerated manner. This may include B.A., B.S., and other bachelor's degrees at Holy Cross, and any opting-in master's degree programs at WPI (including but not limited to M.S. degrees).

Students in this Collaborative Accelerated Master's Programs Framework must satisfy all the requirements of their respective bachelor's degree at Holy Cross and all the requirements of their master's degree at WPI. WPI allows these students to count toward their master's degree up-to two of their advanced senior-level undergraduate courses, from a list of eligible Holy Cross courses that satisfy specific criteria.

General information about student eligibility, application process, and credit double-counting rules is available at <https://www.wpi.edu/academics/graduate/camps>. This webpage also contains the list of collaborative accelerated master's degrees that are available to Holy Cross students, together with specific program-specific eligibility and degree requirements.

Summary Description: This part establishes a Collaborative Accelerated Master's Programs Framework between Holy Cross and WPI, in which undergraduate students at Holy Cross can apply to and, after graduating with their bachelor's degree from Holy Cross, pursue a master's degree at WPI in an accelerated manner.

This motion specifies general rules for this cross-institution collaboration. This collaboration may include B.A., B.S., and other bachelor's degrees at Holy Cross and any opting-in master's degree programs at WPI (including but not limited to M.S. degrees).

Part II describes a template for WPI master's programs (e.g., M.S in Computer Science) to opt-in to participate in this Collaborative Accelerated Master's Programs Framework between Holy Cross and WPI. The template for a collaborative accelerated master's program provides structure for additional requirements from the specific WPI master's degree program for students to be admitted to and fulfill said master's degree requirements at WPI.

Collaborative Accelerated Master's Programs Framework between Holy Cross and WPI.

1. Framework Description

This Collaborative Accelerated Master's Programs Framework between Holy Cross and WPI allows undergraduate students from Holy Cross to apply to and, after graduating with their bachelor's degree from Holy Cross, pursue a master's degree at WPI in an accelerated manner. This may include B.A., B.S., and other bachelor's degrees at Holy Cross, and any opting-in master's degree programs at WPI (including but not limited to M.S. degrees).

Students in this Collaborative Accelerated Master's Programs Framework must satisfy all the requirements of their respective bachelor's degree at Holy Cross and all the requirements of their master's degree at WPI. WPI allows these students to count toward their master's degree up-to two of their advanced senior-level undergraduate courses, from a list of eligible Holy Cross courses that satisfy the rules specified in the following sections.

The administration of this Collaborative Accelerated Master's Programs Framework will be led by two *Collaborative Framework Coordinators*, one at Holy Cross and one at WPI, who will oversee the implementation and administration of this Collaborative Accelerated Master's Programs Framework.

2. Participating Master's Degree Programs at WPI

Any master's degree program at WPI may opt-in to participate in this Collaborative Accelerated Master's Programs Framework between Holy Cross and WPI. For simplicity, this specific master's degree program will be denoted by "Y" from now on.

In order to opt-in, a WPI master's program Y shall, in consultation with the *Collaborative Framework Coordinators* at Holy Cross and at WPI, prepare a motion for consideration and approval by the WPI Committee on Graduate Studies and Research (CGSR) and subsequently by the WPI Faculty. Said motion must comply with the general rules in the Collaborative Accelerated Master's Programs Framework between Holy Cross and WPI; must provide any additional requirements from the specific WPI master's degree program for students to be admitted to and fulfill the master's degree in Y at WPI; and must identify a *WPI Y-Program Coordinator*, a faculty or staff member who will serve as the point-of-contact for the master's degree program in Y as it relates to this Collaborative Accelerated Master's Programs Framework. This motion shall come endorsed by the faculty in the department or program that offers the master's degree at WPI. A template for a master's program to opt-in is provided in Part II.

3. Student Admissions Requirements and Application Process

Eligibility:

Students from Holy Cross in majors relevant to the WPI master's degree program in Y or who otherwise have the necessary coursework are eligible to apply to the Collaborative Accelerated Master's Program in Y. A minimum overall GPA of 3.0 is required; however, students with a GPA lower than 3.0 may petition to the *Collaborative Framework Coordinators* at Holy Cross and at WPI for special eligibility consideration. Interested students should seek academic advice from the *Collaborative Framework Coordinators* at Holy Cross and at WPI, their academic advisor at Holy Cross, and the *WPI Y-Program Coordinator*, no later than during their junior year so that they have sufficient time to plan their course selection. Additional information specific to the Y-Program and possibly additional eligibility criteria are provided in the specific Y-Program description (see Part II).

Admissions Process and Deadlines:

The application, application review and admissions processes into a participating Y-Program within this Collaborative Accelerated Master's Programs Framework are the same as those of the internal B.S./M.S. programs at WPI, which are described in what follows. The application consists of a statement of purpose, academic transcript(s) and two letters of recommendation. GRE, applicable ESL test, and application fees are waived. Applications must be submitted through the WPI Graduate Admissions Office's application system. Application review and admission decisions are handled by the participating WPI master's program in Y that the student wishes to pursue. Applications are received and reviewed on a rolling basis.

Eligible students are expected to apply officially for admission to a Y-Program within this Collaborative Accelerated Master's Programs Framework during their junior year at Holy Cross. This allows students to best plan their senior year courses. However, applications will be accepted during the students' senior year or up to three years after graduating with their bachelor's degree from Holy Cross. In addition, students accepted into a Y-Program are allowed to defer the beginning of their master's studies at WPI for up to one year after graduating with their bachelor's degree from Holy Cross. In any case, students are expected to start their master's degree in Y at WPI no later than three academic years after graduating with their bachelor's degree from Holy Cross.

Becoming a Graduate Student at WPI:

Students accepted into a Y-Program within this Collaborative Accelerated Master's Programs Framework will become graduate students at WPI only after they have completed their undergraduate degree at Holy Cross and register for graduate courses at WPI.

4. Course Registration

Consistent with the Higher Education Consortium of Central Massachusetts (HECCMA) rules, full-time, matriculated, undergraduate students at Holy Cross are eligible to cross-register for fall and spring courses at WPI. Only two cross-registration courses per academic year are permitted. Undergraduate courses taken through cross-registration require no additional tuition. For students admitted to a Collaborative Accelerated Master's Program in Y as part of this Collaborative Accelerated Master's Programs Framework between Holy Cross and WPI, this tuition benefit is extended to include up to two graduate courses taken at WPI while they are still undergraduate students at Holy Cross.

Undergraduate students from Holy Cross planning to register for WPI courses should consult with their academic advisors and with the *WPI Y-Program Coordinator* to make sure that they have the necessary course prerequisites and/or recommended background before registering for a WPI course.

5. Requirements for the Collaborative Accelerated Master's Programs Framework

- Students enrolled in a Collaborative Accelerated Master's Program in Y as part of this Collaborative Framework must satisfy all the program requirements of their bachelor's degree at Holy Cross and all the program requirements of their master's degree in Y at WPI.

- Detailed rules about course counting are provided in the next section.
- In consultation with the student's major academic advisor at Holy Cross, the *WPI Y-Program Coordinator* of the specific master's program being pursued by the student, the *Collaborative Framework Coordinators* at Holy Cross and at WPI, and both Institutions' catalogs, the student will fill out their "*Plan of Study Form for the Collaborative Accelerated Master's Program in Y*" outlining the selections made to satisfy the master's degree requirements, including the courses that will be double-counted. This Plan of Study must comply with all the regulations of the Collaborative Accelerated Master's Programs Framework described here. This Plan of Study must be approved by the *WPI Y-Program Coordinator*.

6. Course-Counting Rules

- Students enrolled in a Y-Program of this Collaborative Accelerated Master's Programs Framework will be allowed to count toward their master's degree in Y at WPI up-to two advanced, senior level courses from Holy Cross that satisfy all of the following conditions:
 - The course is included on the list of eligible courses from Holy Cross provided in the *Plan of Study Form for the Collaborative Accelerated Master's Program in Y*; this form also provides the equivalent number of graduate credits carried by each eligible course.
 - The student receives a grade of "B-" or higher on the course.
 - The student takes the course while still being an undergraduate at Holy Cross.
- If applicable, eligible 4000-level or graduate level courses taken at WPI while the student is still an undergraduate at Holy Cross may also count toward the student's master's degree in Y. Eligible 4000-level WPI courses are listed on the internal BS/MS program in Y entry of the WPI Graduate Catalog, and eligible WPI graduate courses are listed on the master's degree in Y entry of the WPI Graduate Catalog. These eligible courses also appear on the "*Plan of Study Form for the Collaborative Accelerated Master's Program in Y*".
- Courses not on the aforementioned lists of eligible courses may also count if approved by the *WPI Y-Program Coordinator*, the *Collaborative Framework Coordinator* at WPI, and, if applicable, the *Collaborative Framework Coordinator* at Holy Cross.
- All other existing WPI credit transfer and double-counting rules apply to students in this collaborative framework. In particular, no more than 40% of the credit hours required for the master's degree in Y may come from the total aggregate of graduate-equivalent credit hours from the two Holy Cross eligible courses, and when applicable from undergraduate and/or graduate WPI courses, taken while the student was still an undergraduate at Holy Cross. A typical master's degree at WPI requires 30-33 graduate credits, so up to 12 graduate credits or equivalent undergraduate credits that meet the requirements for the master's degree in Y can be counted. Some master's degree programs at WPI may have a more restrictive limit (e.g., 30%); in that case the limit is specified in the "*Plan of Study Form for the Collaborative Accelerated Master's Program in Y*."
- Unless otherwise noted, Holy Cross undergraduate courses carry 3 undergraduate credits at WPI and are subject to the same internal credit conversion rule used at WPI, namely 3 undergraduate credits are equivalent to 2 graduate credits.

7. Program Administration

This Collaborative Accelerated Master's Programs Framework between Holy Cross and WPI will be jointly administered by a *Collaborative Framework Coordinator* at Holy Cross and a *Collaborative Framework Coordinator* at WPI who will oversee all administrative aspects of this Collaborative Accelerated Master's Programs Framework. They will coordinate academic advising aspects of the specific bachelor's and

master's degrees being pursued by a student in a Y-Program with the student's undergraduate academic advisor and the *WPI Y-Program Coordinator*.

Part II: Collaborative Accelerated Master's Programs between Holy Cross and WPI

Summary Description: Any WPI department or program that confers a master's degree may opt-in to participate in the Collaborative Accelerated Master's Programs Framework between Holy Cross and WPI. To opt-in, the department or program shall, in consultation with the *Collaborative Framework Coordinators* at Holy Cross and at WPI, prepare a motion for consideration and approval by the WPI Committee on Graduate Studies and Research (CGSR) and subsequently by the WPI Faculty, which must comply with the general rules in this Collaborative Accelerated Master's Programs Framework between Holy Cross and WPI, and must provide the information listed in the template below.

Template: Collaborative Accelerated Master's Program in Y between Holy Cross and WPI

This document must include:

1. Additional eligibility criteria, if any, for students from Holy Cross to apply to the Collaborative Accelerated Master's Program in Y. Typically, the disciplines of the bachelor's degree and of the master's degree are thematically-related but are not required to be so.
2. Recommended background, prerequisites, and/or additional guidelines for students who wish to pursue the Y-Program.
3. A "*Plan of Study Form for the Collaborative Accelerated Master's Program in Y between Holy Cross and WPI*", listing:
 - a. The degree requirements that a student in this Y-Program needs to satisfy to graduate with a master's degree in Y from WPI.
 - b. The list of advanced, senior-level courses from Holy Cross that may count toward the master's degree in Y at WPI, the number of equivalent graduate credits carried by each of these courses, and the specific master's degree requirement(s) that each of these courses may satisfy. Note that the maximum number of undergraduate courses from Holy Cross that may be counted toward the master's degree at WPI is two, as per the New England Commission of Higher Education (NECHE) rules.
 - c. If applicable, the list of WPI 4000-level courses that a student in the Y-Program may take to fulfill master's degree requirements, whether there is a minimum grade requirement, and whether these courses count toward the master's degree only when they are taken while the student is still an undergraduate at Holy Cross.
 - d. The list of WPI graduate courses that a student in the Y-Program may take to fulfill master's degree requirements.
 - e. The list of pairs of courses at Holy Cross and at WPI with significant overlap, if any, such that credit toward the master's degree at WPI will be awarded for at most one of the two courses.
 - f. If lower than the typical WPI 40% upper limit, the maximum total percentage of the graduate credit hours required for the master's degree in Y that the Y-Program allows students to double-count between their undergraduate and graduate degrees. This upper limit applies to the total aggregate of graduate-equivalent credit hours from the two Holy Cross eligible courses, and when applicable from undergraduate and/or graduate WPI courses, taken while the student was still an undergraduate at Holy Cross.
4. The name of a WPI faculty or staff member, hereby called "*WPI Y-Program Coordinator*" who will serve as the point of contact for the master's program in Y within this Collaborative Framework with Holy Cross. This master's-specific coordinator will work in collaboration with the *WPI Collaborative Framework Coordinator* on the academic aspects of the Collaborative

Accelerated Master's Program in Y, and on providing academic advising to students in this Y-Program.

5. Endorsement from the faculty in the department or program that offers the master's degree in Y.

It is the responsibility of the *Collaborative Framework Coordinators* at WPI and at Holy Cross, in communication with the *WPI Y-Program Coordinator*, to keep all the information about the Collaborative Accelerated Master's Program in Y up-to-date, and to inform the counterparts at Holy Cross or at WPI promptly when a change occurs (e.g., a change in a course description or a change in degree requirements).

Rationale:

Benefits to Holy Cross and to WPI of this Collaborative Accelerated Master's Programs Framework:

This Collaborative Accelerated Master's Programs Framework strengthens collaborations between Holy Cross and WPI, and is beneficial for students, WPI, and Holy Cross.

This Collaborative Accelerated Master's Programs Framework helps highlight graduate options for Holy Cross undergraduate students. Students from Holy Cross can benefit from this Collaborative Accelerated Master's Programs Framework as it allows them to pursue their master's degrees at WPI in an accelerated manner. A master's degree will poise these students well for future employment and/or for entry into Ph.D. programs. Having a local option for a graduate degree can be attractive to students.

This Collaborative Accelerated Master's Programs Framework benefits Holy Cross by allowing it to attract and nurture students who are interested in pursuing their bachelor's and master's programs in a synergistic manner, and in disciplines that may not be available at Holy Cross at the undergraduate level.

This Collaborative Accelerated Master's Programs Framework benefits WPI by attracting external students with strong undergraduate training (and who are familiar with Worcester) to pursue their master's degree at WPI.

WPI has a long tradition of offering the B.S./M.S. option to its students, either in the same department/program or in different departments/programs. This Collaborative Accelerated Master's Programs Framework between Holy Cross and WPI is inspired by WPI's internal B.S./M.S. option and will create a new type of collaboration between these two institutions and a pathway for students to obtain a bachelor's and a master's degrees in an accelerated and synergistic manner.

Design choices of the Collaborative Accelerated Master's Programs Framework:

The Collaborative Accelerated Master's Programs Framework described here follows all the internal WPI B.S./M.S. rules; it has been informed by the B.S./M.S. program descriptions in the WPI Graduate Catalog.

There are numerous examples of B.S./M.S. students at WPI who have completed their B.S degree in a department or program (e.g., Physics) and their M.S. degree in a different department or program (e.g., Computer Science). WPI departments and programs that offer the B.S./M.S. option do regulate the M.S. portion of the degree (e.g., what undergraduate courses can be double-counted toward the M.S. degree). Same applies to this Collaborative Accelerated Master's Programs Framework. With a few exceptions (e.g., the B.S./M.S. options in Fire Protection Engineering and in Systems Engineering, which are mainly available to engineering undergraduate majors only), departments/programs' B.S./M.S. options at WPI are available to any WPI undergraduate major (see for example the B.S./M.S. option in Data Science in the Graduate Catalog). In that spirit, the proposed Collaborative Accelerated Master's Programs Framework allows students to pursue a master's degree at WPI in a discipline related to, but not necessarily the same as, the discipline of their undergraduate major at Holy Cross.

The rules described here for students to register for courses at WPI while they are still undergraduate students at Holy Cross are consistent with the cross-registration policies established by the Higher Education Consortium of Central Massachusetts (HECCMA). This Collaborative Accelerated Master's Programs Framework extends these policies by (1) allowing students from Holy Cross to cross-register for up to two WPI courses per academic year, which is more flexible than the standard HECCMA policy of up to one course per semester; and (2) allowing students from Holy Cross admitted to a Y-Program within this Collaborative Accelerated Master's Programs Framework to take up to two WPI graduate courses while they are still undergraduate students at Holy Cross without paying additional tuition. These extended benefits were approved by the WPI Provost and agreed upon with the WPI Registrar.

The limit of at most two undergraduate courses from Holy Cross to count for the master's degree at WPI has been adopted to satisfy requirements from the New England Commission of Higher Education (NECHE), as per conversations with NECHE's Senior Vice-President in the spring of 2023.

No special considerations are needed for this Collaborative Accelerated Master's Programs Framework regarding ABET accreditation as engineering master's degrees at WPI are not constrained by ABET accreditation rules.

Allowing students to take three "gap" years between completing their bachelor's degree at Holy Cross and starting their master's degree at WPI is consistent with WPI's own internal B.S./M.S. rules (which allow a 5-year gap). It accommodates potential changes of circumstances in students' lives and incentivizes students to come back for a graduate degree after spending time in industry or other endeavors, making the program more flexible and attractive.

Impact on Degree Requirements: None.

Resources Needed: At WPI, resources are needed to appoint and incentivize a *WPI Collaborative Framework Coordinator* to administer and oversee this Collaborative Accelerated Master's Programs Framework between Holy Cross and WPI, and to serve as the general WPI advisor for students in any of the Collaborative Accelerated Master's Program in Y within this Framework.

Implementation Date: Implementation date for this action is AY2024-2025.

Contacts for this Collaborative Accelerated Master's Programs Framework between Holy Cross and WPI:

Contacts at WPI:

Collaborative Accelerated Master's Programs Framework Coordinator at WPI:

- Carolina Ruiz, Professor of Computer Science and Associate Dean of Arts and Sciences

Faculty, Staff, and Administrators who have provided input for this Collaborative Accelerated Master's Programs Framework:

- Faculty from all Schools, and numerous Department and Programs
- Committee on Graduate Studies and Research (CGSR)
- Mark Richman, Secretary of the Faculty
- Art Heinricher, Provost
- Terri Camesano, Dean of Graduate Studies
- Jean A. King, Dean of Arts and Sciences
- John McNeill, Dean of Engineering

- Debora Jackson, Dean of The Business School
- Mimi Sheller, Dean of The Global School
- Arne Gericke, Dean of Undergraduate Studies
- Alexander Wyglinski, Associate Dean Graduate Studies
- Sarah Miles, Registrar
- Melissa Terrio, Executive Director of Graduate Recruitment and Admissions
- Scott Butler, Executive Director of Program Delivery and Strategic Partnerships
- Amy Fabiano, Associate General Counsel

Contacts at The College of the Holy Cross:

Collaborative Accelerated Master's Programs Framework Coordinator at Holy Cross:

- Elisabeth Hiles, Interim Director of Strategic Initiatives and Planning

Other Faculty, Staff, and Administrators at Holy Cross:

- Elliott Visconsi, Provost and Dean of the College
- Heather Hayes, Vice President and Chief of Staff
- Loren Cass, Dean of Experiential Learning and Student Success
- Paul Oxley, Chair, Physics Department
- Tom Narita, Associate Professor, Physics Department
- Ed Soares, Chair, Mathematics and Computer Science Department
- Kevin Walsh, Associate Professor, Computer Science

Contacts at NECHE:

The Senior Vice President of the New England Commission of Higher Education (NECHE), Patricia O'Brien, SNDdeN.

Appendix
Consent Agenda Motions

(see next page)

Date: March 13, 2024
To: WPI Faculty
From: Committee on Academic Operations (Prof. Van Dessel, Chair)
Re: Motion to modify the description of EN2219 Creative Writing

Motion: On behalf of the Department of Humanities and Arts, the Committee on Academic Operation recommends, and I move that the description of EN2219 Creative Writing be modified, as described below.

Description of the Proposed Modifications:

Current course title, description and course offering schedule:

EN2219 Creative Writing (Cat. I)

This foundational course in creative writing aims to help students develop or improve the skills of written expression, emphasizing presentation and discussion of original work. Offerings may include generally themed courses covering multiple genres of interest or more specialized workshops in single genres of focus such as fiction, poetry, playwriting, nonfiction, memoir, or short prose forms.

Proposed course title, description and course offering schedule:

EN2219 Creative Writing (Cat. I)

This writing workshop aims to help students develop or improve the skills of written expression, emphasizing presentation and discussion of original work. Offerings may include themed courses covering multiple genres or specialized workshops in single genres of focus such as fiction, poetry, or creative nonfiction. This course may be repeated for different genres.

Recommended Background: Introductory level creative writing (EN1219: Introduction to Creative Writing)

Rationale:

This new description more accurately captures how the course is taught. The additions of the suggested introductory level creative writing course and the information that the course can be completed in different genres for credit offer students a clearer path through the creative writing curriculum, which, due to two new creative writing faculty hires in 2018, has expanded to include the EN1219 introductory course and a creative writing minor.

Logistics: We will work with the Office of the Registrar to ensure that each offering of EN3219 and EN2219 includes a genre tag (fiction, creative nonfiction, poetry, multi-genre) so students know if a particular offering of the course is different from one they might have already taken. The fiction, creative nonfiction, multi-genre, and poetry offerings of the course are completely different, with no overlap in course content.

Impacts on distribution requirements and students: None

Resources Needed: None

Implementation Date: 2024-2025

Date: March 13, 2024
To: WPI Faculty
From: Committee on Academic Operations (Prof. Van Dessel, Chair)
Re: Motion to modify the description of EN 2271 American Literary Histories

Motion: On behalf of the Department of Humanities and Arts, the Committee on Academic Operation recommends, and I move that the description of EN 2271 American Literary Histories be modified, as described below.

Description of the Proposed Modifications:

Current course title, description and course offering schedule:

EN 2271 American Literary Histories (Cat. I)

An investigation into one or more major movements or periods in American literature, focusing on aesthetic formations such as sentimentalism, realism, modernism, or postmodernism, on cultural formations from Transcendentalism and Regionalism through the Lost Generation and the Harlem Renaissance to the Beat Generation and the Native American Renaissance, or delivered through chronological engagements by century, by decade, or by other suitable framings attending to specific communities or sets of writers.

Recommended Background: None, though coursework in English (e.g. EN 1251, Introduction to Literature) or any subsequent EN offering will be helpful.

Proposed course title, description and course offering schedule:

EN 2271 American Literary Histories (Cat. I)

An investigation into one or more major movements or periods in American literature, focusing on aesthetic formations such as sentimentalism, realism, modernism, or postmodernism, on cultural formations from Transcendentalism and Regionalism through the Lost Generation and the Harlem Renaissance to the Beat Generation and the Native American Renaissance, or delivered through chronological engagements by century, by decade, or by other suitable framings attending to specific communities or sets of writers. This course may be repeated for different topics.

Recommended Background: None, though coursework in English (e.g. EN 1251, Introduction to Literature) or any subsequent EN offering will be helpful.

Rationale:

This new description more accurately captures how the course is taught as a topics class that rotates between offerings.

Logistics: We will work with the Office of the Registrar to ensure that each offering of EN 2271 has a topics subtitle so students will know if a particular offering of the course is different from one they might have already taken.

Impacts on distribution requirements and students: None

Resources Needed: None

Implementation Date: 2024-2025

Date: March 13, 2024
To: WPI Faculty
From: Committee on Academic Operations (Prof. Van Dessel, Chair)
Re: Motion to modify the description of EN 2281 World Literatures

Motion: On behalf of the Department of Humanities and Arts, the Committee on Academic Operation recommends, and I move that the description of EN 2281 World Literatures be modified, as described below.

Description of the Proposed Modifications:

Current course title, description and course offering schedule:

EN 2281 World Literatures (Cat. I)

This course will examine literary works from two or more languages, modes, and/or traditions, often connecting these works to other works of expressive culture in the visual and performing arts. Some iterations may turn on a broader survey, others on more particular engagements with wider inflections. Material introduced beyond English will rely on translations but may also include attention to work in the original language. Attention to drama, poetry, and prose from various periods and places will encourage students to connect themes across cultural, formal, and historical divides, utilizing interdisciplinary and theoretical methods in the process of their reading and writing. Students who have previously taken EN 230X cannot take this course for credit.

Recommended Background: None, though coursework in English (e.g. EN 1231, Introduction to Literature) or any subsequent EN offering will be helpful, as will courses emphasizing literature and culture offered in AB, CN, GN, and/or SP.

Current course title, description and course offering schedule:

EN 2281 World Literatures (Cat. I)

This course will examine literary works from two or more languages, modes, and/or traditions, often connecting these works to other works of expressive culture in the visual and performing arts. Some iterations may turn on a broader survey, others on more particular engagements with wider inflections. Material introduced beyond English will rely on translations but may also include attention to work in the original language. Attention to drama, poetry, and prose from various periods and places will encourage students to connect themes across cultural, formal, and historical divides, utilizing interdisciplinary and theoretical methods in the process of their reading and writing. Students who have previously taken EN 230X cannot take this course for credit. This course may be repeatable for different topics.

Recommended Background: None, though coursework in English (e.g. EN 1231, Introduction to Literature) or any subsequent EN offering will be helpful, as will courses emphasizing literature and culture offered in AB, CN, GN, and/or SP.

Rationale:

This new description more accurately captures how the course is taught as a topics class that rotates between offerings.

Logistics: We will work with the Office of the Registrar to ensure that each offering of EN 2281 has a topics subtitle so students will know if a particular offering of the course is different from one they might have already taken.

Impacts on distribution requirements and students: None

Resources Needed: None

Implementation Date: 2024-2025

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to modify the description of EN3219 Advanced Creative Writing

Motion: On behalf of the Department of Humanities and Arts, the Committee on Academic Operation recommends, and I move that the description of EN3219 Advanced Creative Writing be modified, as described below.

Description of the Proposed Modifications:

Current course title, description and course offering schedule:

EN3219 Advanced Creative Writing (Cat. II)

This advanced seminar in creative writing includes sustained attention to the writing of fiction, poetry, and short prose forms among other genres, culminating in final projects (essay, play, poem, story, or some combination thereof) determined by individual interest and in consultation with the instructor. Investigation will also focus on the reading and discussion of exemplary works across genres, with an emphasis on contemporary practice. In the process, regular writing exercises and class visits from established authors will help to create a community of writers grounded in diverse methods. This course will be offered in 2021-22, and in alternating years thereafter.

Suggested: Introductory level creative writing (EN 2219 (formerly EN 3217) or equivalent).

Proposed course title, description and course offering schedule:

EN3219 Advanced Creative Writing (Cat. I)

This advanced workshop in creative writing allows for sustained attention to the writing of fiction, poetry, creative nonfiction, or multiple genres. Investigation will also focus on the reading and discussion of exemplary literary works, with an emphasis on contemporary practice. Regular writing exercises and class visits from established authors will help to create a community of writers grounded in diverse methods. This course may be repeated for different genres.

Recommended Background: Introductory level creative writing (EN1219: Introduction to Creative Writing) and creative writing in the course genre (EN2219: Creative Writing: Fiction, Creative Nonfiction, Poetry, or Multi-Genre.)

Rationale:

This new description more accurately captures how the course is taught. The course is taught at least twice a year, in at least two genres. The additions of the suggested introductory level creative writing course and the information that the course can be completed in different genres for credit offer students a clearer path through the creative writing curriculum, which, due to two new creative writing faculty hires in 2018, has expanded to include the EN1219 introductory course and a creative writing minor.

Logistics: We have worked with the office of the registrar to ensure that each offering of EN3219 and EN2219 includes a genre tag (fiction, creative nonfiction, poetry, multi-genre) so students know if a particular offering of the course is different from one they might have already taken.

The fiction, creative nonfiction, multi-genre, and poetry offerings of the course are completely different, with no overlap in course content.

Impacts on distribution requirements and students: None

Resources Needed: No additional resources are needed. The course is already being taught as a category I course. Two new creative writing hires have offered the course at least yearly since their arrival in 2018, and at least twice yearly since the creative writing minor (for which this course is a requirement) began in 2021.

Implementation Date: 2024-2025

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to modify the description of EN 3231 Supernatural Literatures

Motion: On behalf of the Department of Humanities and Arts, the Committee on Academic Operation recommends, and I move that the description of EN 3231 Supernatural Literatures be modified, as described below.

Description of the Proposed Modifications:

Current course title, description and course offering schedule:

EN 3231 Supernatural Literatures (Cat. II)

Take a vacation from the rational, quantifiable, and verifiable, and dip your toes into the ineffable. Unbridled, boundary-bending, and binary-busting, supernatural literature makes space for lived (and undead) experiences outside the mainstream. This course will examine the following questions: How are supernatural stories culturally situated? How is language used in supernatural texts, and when and why does it break down? What can learn about the “real” through studying the fantastic? Course content will vary with each offering. Potential areas of focus might include magical realism, the supernatural and folklore, the gothic and gender, the gothic and race, the contemporary ghost story worldwide, and monstrosity and the grotesque. This course will be offered in 2022-23, and in alternating years thereafter.

Proposed course title, description and course offering schedule:

EN 3231 Supernatural Literatures (Cat. II)

Take a vacation from the rational, quantifiable, and verifiable, and dip your toes into the ineffable. Unbridled, boundary-bending, and binary-busting, supernatural literature makes space for lived (and undead) experiences outside the mainstream. This course will examine the following questions: How are supernatural stories culturally situated? How is language used in supernatural texts, and when and why does it break down? What can learn about the “real” through studying the fantastic? Course content will vary with each offering. Potential areas of focus might include magical realism, the supernatural and folklore, the gothic and gender, the gothic and race, the contemporary ghost story worldwide, and monstrosity and the grotesque. This course may be repeated for different topics. This course will be offered in 2022-23, and in alternating years thereafter.

Rationale:

This new description more accurately captures how the course is taught as a topics class that rotates between offerings.

Logistics: We will work with the Office of the Registrar to ensure that each offering of EN 3231 has a topics subtitle so students will know if a particular offering of the course is different from one they might have already taken.

Impacts on distribution requirements and students: None

Resources Needed: None

Implementation Date: 2024-2025

Date: March 13, 2024
To: WPI Faculty
From: Committee on Academic Operations (Prof. Van Dessel, Chair)
Re: Motion to modify the description of EN3238 American Authors

Motion: On behalf of the Department of Humanities and Arts, the Committee on Academic Operation recommends, and I move that the description of EN3238 American Authors be modified, as described below.

Description of the Proposed Modifications:

Current course title, description and course offering schedule:

EN3238 American Authors (Cat. II)

EN faculty with expertise in American literature will select one or more authors to focus on in this course. Examples of such authors are James Baldwin, Octavia Butler, William Faulkner, Anne Sexton, and August Wilson. These authors often criticize the political and social status quo, addressing inequities in matters of class, gender, race, and sexuality. The intention is for students to focus on such authors in depth, in preparation for their final seminar or practicum. Faculty offering the course will indicate which authors they intend to present on the HUA website well before student signups, to permit efficient program planning. *This course will be offered in 2022-23, and in alternating years thereafter.*

Recommended Background: None, though coursework in English (e.g. EN 1251, Introduction to Literature) or any subsequent EN offering will be helpful.

Proposed course title, description and course offering schedule:

EN3238 American Authors (Cat. II)

EN faculty with expertise in American literature will select one or more authors to focus on in this course. Examples of such authors are James Baldwin, Octavia Butler, William Faulkner, Anne Sexton, and August Wilson. These authors often criticize the political and social status quo, addressing inequities in matters of class, gender, race, and sexuality. The intention is for students to focus on such authors in depth, in preparation for their final seminar or practicum. Faculty offering the course will indicate which authors they intend to present on the HUA website well before student signups, to permit efficient program planning. This course will be offered in 2022-23, and in alternating years thereafter. This course may be repeated for different topics.

Recommended Background: None, though coursework in English (e.g. EN 1251, Introduction to Literature) or any subsequent EN offering will be helpful.

Rationale:

This new description more accurately captures how the course is taught as a topics class that rotates between offerings.

Logistics: We will work with the Office of the Registrar to ensure that each offering of EN 3238 has a topics subtitle so students will know if a particular offering of the course is different from one they might have already taken.

Impacts on distribution requirements and students: None

Resources Needed: None

Implementation Date: 2024-2025

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to modify the description of EN3257 Topics in African American Literature

Motion: On behalf of the Department of Humanities and Arts, the Committee on Academic Operation recommends, and I move that the description of EN3257 Topics in African American Literature be modified, as described below.

Description of the Proposed Modifications:

Current course title, description and course offering schedule:

EN3257 Topics in African American Literature (Cat. II)

This course offers a deep exploration of the vibrancy of Black American life and thought through the lens of African American literature. Students will actively and critically read selected African American texts considering the historical contexts in which they were produced as well as analyzing their formal elements. While the course will focus on Black American experience in the United States, it will do so in dialogue with the larger diasporic Black experience. The topics will rotate regularly, alternating between close examination of different authors, genres, themes, or movements while preparing students for the HUA capstone experience. Examples of authors are Langston Hughes, Richard Wright, James Baldwin, Zora Neale Hurston, Alice Walker, Toni Morrison, Lorraine Hansberry and August Wilson. Examples of genres are slave narratives, sermons, autobiographies, dramas, spirituals, blues, and drama. Examples of themes are race and the law, freedom struggles, and intersections between race and class, gender, and sexuality. Examples of movements are the Black Arts Movement, the Civil Rights Movement, and the Black Lives Matter Movement. Faculty offering the course will indicate which authors, genres or themes they intend to present on the HUA website well before student signups. This course may be repeated for different topics.

Proposed course title, description and course offering schedule:

EN3257 Topics in African American Literature (Cat. II)

This course offers a deep exploration of the vibrancy of Black American life and thought through the lens of African American literature. Students will actively and critically read selected African American texts considering the historical contexts in which they were produced as well as analyzing their formal elements. While the course will focus on Black American experience in the United States, it will do so in dialogue with the larger diasporic Black experience. The topics will rotate regularly, alternating between close examination of different authors, genres, themes, or movements while preparing students for the HUA capstone experience. Examples of authors are Langston Hughes, Richard Wright, James Baldwin, Zora Neale Hurston, Alice Walker, Toni Morrison, Lorraine Hansberry and August Wilson. Examples of genres are slave narratives, sermons, autobiographies, dramas, spirituals, blues, and drama. Examples of themes are race and the law, freedom struggles, and intersections between race and class, gender, and sexuality. Examples of movements are the Black Arts Movement, the Civil Rights Movement, and the Black Lives Matter Movement. This course may be repeated for different topics.

Rationale:

This new description more accurately captures how the course is taught as a topics class that rotates between offerings. We will work with the Office of the Registrar to ensure that each offering of

EN3257 has a topics subtitle so students will know if a particular offering of the course is different from one they might have already taken.

Impacts on distribution requirements and students: None

Resources Needed: None

Implementation Date: 2024-2025

Date: March 13, 2024
To: WPI Faculty
From: Committee on Academic Operations (Prof. Van Dessel, Chair)
Re: Motion to modify the description of EN 3271 American Literary Topics

Motion: On behalf of the Department of Humanities and Arts, the Committee on Academic Operation recommends, and I move that the description of EN 3271 American Literary Topics be modified, as described below.

Description of the Proposed Modifications:

Current course title, description and course offering schedule:

EN 3271 American Literary Topics (Cat. I)

This course investigates American literature as it relates to a specific theme, issue, controversy, or question. Attention might center upon topics from childhood and friendship to captivity and freedom, and from immigration and labor to law and war, drawing on or even focusing more decidedly upon aspects of identity including but not limited to class, ethnicity, gender, race, religion, and sexuality Authors might extend from nineteenth century exemplars including Emily Dickinson, Herman Melville, Henry David Thoreau, and Walt Whitman to twentieth and twenty-first century figures such as Philip K. Dick, Toni Morrison, Thomas Pynchon, Leslie Marmon Silko, and Richard Wright.

Recommended Background: None, though coursework in English (e.g. EN 1251, Introduction to Literature) or any subsequent EN offering will be helpful.

Proposed course title, description and course offering schedule:

EN 3271 American Literary Topics (Cat. I)

This course investigates American literature as it relates to a specific theme, issue, controversy, or question. Attention might center upon topics from childhood and friendship to captivity and freedom, and from immigration and labor to law and war, drawing on or even focusing more decidedly upon aspects of identity including but not limited to class, ethnicity, gender, race, religion, and sexuality Authors might extend from nineteenth century exemplars including Emily Dickinson, Herman Melville, Henry David Thoreau, and Walt Whitman to twentieth and twenty-first century figures such as Philip K. Dick, Toni Morrison, Thomas Pynchon, Leslie Marmon Silko, and Richard Wright. This course may be repeated for different topics.

Recommended Background: None, though coursework in English (e.g. EN 1251, Introduction to Literature) or any subsequent EN offering will be helpful.

Rationale:

This new description more accurately captures how the course is taught as a topics class that rotates between offerings.

Logistics: We will work with the Office of the Registrar to ensure that each offering of EN3271 has a topics subtitle so students will know if a particular offering of the course is different from one they might have already taken.

Impacts on distribution requirements and students: None

Resources Needed: None

Implementation Date: 2024-2025

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to modify the description of HI 2921 Topics in Modern European History

Motion: On behalf of the Department of Humanities and Arts, the Committee on Academic Operation recommends, and I move that the description of HI 2921 Topics in Modern European History be modified, as described below.

Description of the Proposed Modifications:

Current course title, description and course offering schedule:

HI 2921 Topics in Modern European History (Cat. II)

This seminar course examines topics in the cultural, socio-economic and political history of modern Europe. Topics may vary each year among the following: sport and society, film and history, nationalism, gender and class, political economy, environmental history Readings will include primary and secondary sources. No prior background is required. Students may not receive credit for both HI 3321 and HI 2921. This course will be offered in 2021-22 and in alternating years thereafter.

Proposed course title, description and course offering schedule:

HI 2921 Topics in Modern European History (Cat. II)

This seminar course examines topics in the cultural, socio-economic and political history of modern Europe. Topics may vary each year among the following: sport and society, film and history, nationalism, gender and class, political economy, environmental history Readings will include primary and secondary sources. This course may be repeated for different topics. No prior background is required. Students may not receive credit for both HI 3321 and HI 2921. This course will be offered in 2024-25 and in alternating years thereafter.

Rationale:

This new description more accurately captures how the course is taught as a topics class that rotates between offerings.

Logistics: We will work with the Office of the Registrar to ensure that each offering of HI 2921 has a topics subtitle so students will know if a particular offering of the course is different from one they might have already taken.

Impacts on distribution requirements and students: None

Resources Needed: None

Implementation Date: 2024-2025

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to modify the description of HI 3312 Topics in American Social History

Motion: On behalf of the Department of Humanities and Arts, the Committee on Academic Operation recommends, and I move that the description of HI 3312 Topics in American Social History be modified, as described below.

Description of the Proposed Modifications:

Current course title, description and course offering schedule:

HI 3312 Topics in American Social History (Cat. II)

A seminar course on analysis of selected aspects of social organization in American history, with emphasis on the composition and changing societal character of various groups over time, and their relationship to larger social, economic, and political developments. Typical topics include: communities, families, minorities, and women.

Recommended Background: Some college-level American history.

Proposed course title, description and course offering schedule:

HI 3312 Topics in American Social History (Cat. II)

A seminar course on analysis of selected aspects of social organization in American history, with emphasis on the composition and changing societal character of various groups over time, and their relationship to larger social, economic, and political developments. Typical topics include: communities, families, minorities, and women. This course may be repeated for different topics.

Recommended Background: Some college-level American history.

Rationale:

This new description more accurately captures how the course is taught as a topics class that rotates between offerings.

Logistics: We will work with the Office of the Registrar to ensure that each offering of HI 3312 has a topics subtitle so students will know if a particular offering of the course is different from one they might have already taken.

Impacts on distribution requirements and students: None

Resources Needed: None

Implementation Date: 2024-2025

Date: March 13, 2024
To: WPI Faculty
From: Committee on Academic Operations (Prof. Van Dessel, Chair)
Re: Motion to modify the description of HI 3317 Topics in Environmental History

Motion: On behalf of the Department of Humanities and Arts, the Committee on Academic Operation recommends, and I move that the description of HI 3317 Topics in Environmental History be modified, as described below.

Description of the Proposed Modifications:

Current course title, description and course offering schedule:

HI 3317 Topics in Environmental History (Cat. II)

In this seminar course, students will explore one aspect of U.S. or global environmental history in more depth. Topics vary each year but may include environmental thought, environmental reform movements, comparative environmental movements, natural disasters, the history of ecology, built environments, environmental justice, New England environmental history, or the environmental history of South Asia or another region of the world. The course will require substantial reading and writing. This course will be offered in 2022-23, and in alternating years thereafter.

Suggested: HI 2401 U.S. Environmental History.

Proposed course title, description and course offering schedule:

HI 3317 Topics in Environmental History (Cat. II)

In this seminar course, students will explore one aspect of U.S. or global environmental history in more depth. Topics vary each year but may include environmental thought, environmental reform movements, comparative environmental movements, natural disasters, the history of ecology, built environments, environmental justice, New England environmental history, or the environmental history of South Asia or another region of the world. The course will require substantial reading and writing. This course may be repeated for different topics. This course will be offered in 2022-23, and in alternating years thereafter.

Recommended Background: HI 2400 Topics in Environmental History.

Rationale:

This new description more accurately captures how the course is taught as a topics class that rotates between offerings.

Logistics: We will work with the Office of the Registrar to ensure that each offering of HI 3317 has a topics subtitle so students will know if a particular offering of the course is different from one they might have already taken.

Impacts on distribution requirements and students: None

Resources Needed: None

Implementation Date: 2024-2025

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to modify the description of HI 3331 Topics in the History of European Science and Technology

Motion: On behalf of the Department of Humanities and Arts, the Committee on Academic Operation recommends, and I move that the description of HI 3331 Topics in the History of European Science and Technology be modified, as described below.

Description of the Proposed Modifications:

Current course title, description and course offering schedule:

HI 3331 Topics in the History of European Science and Technology (Cat. II)

A seminar course on the relationships among science, technology, and society in European culture, examined through a series of case studies. Topics from which the case studies might be drawn include: global scientific expeditions, mapmaking, and European imperialism; the harnessing of science for industrial purposes; the role of the physical sciences in war and international relations; the function of the science advisor in government; the political views and activities of major scientists such as Einstein. Students will use primary sources and recently published historical scholarship to analyze the case studies. This course will be offered in 2022-23, and in alternating years thereafter.

Suggested: Courses in European history and the history of science and technology.

Proposed course title, description and course offering schedule:

HI 3331 Topics in the History of European Science and Technology (Cat. II)

A seminar course on the relationships among science, technology, and society in European culture, examined through a series of case studies. Topics from which the case studies might be drawn include: global scientific expeditions, mapmaking, and European imperialism; the harnessing of science for industrial purposes; the role of the physical sciences in war and international relations; the function of the science advisor in government; the political views and activities of major scientists such as Einstein. Students will use primary sources and recently published historical scholarship to analyze the case studies. This course may be repeated for different topics. This course will be offered in 2022-23, and in alternating years thereafter.

Recommended Background: Courses in European history and the history of science and technology.

Rationale:

This new description more accurately captures how the course is taught as a topics class that rotates between offerings.

Logistics: We will work with the Office of the Registrar to ensure that each offering of HI 3331 has a topics subtitle so students will know if a particular offering of the course is different from one they might have already taken.

Impacts on distribution requirements and students: None

Resources Needed: None

Implementation Date: 2024-2025

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to modify the description of HI 3334 Topics in the History of American Science and Technology

Motion: On behalf of the Department of Humanities and Arts, the Committee on Academic Operation recommends, and I move that the description of HI 3334 Topics in the History of American Science and Technology be modified, as described below.

Description of the Proposed Modifications:

Current course title, description and course offering schedule:

HI 3334 Topics in the History of American Science and Technology (Cat. I)

This seminar will examine a particular issue or theme in the history of American science and technology. Topics will vary from year to year, but may include: technology and the built environment; science, technology and the arts; communications of science and scientific issues with the larger public; technology and scientific illustration; science in popular culture; science and the law; or close examination of episodes in the history of American science and technology such as the American Industrial Revolution; science and technology in the years between the world wars; the Manhattan Project; science and the culture of the Cold War; or science, technology and war in American history. This course will require significant reading and writing.

Suggested: Some familiarity with history of science or history of technology, and with United States history.

Proposed course title, description and course offering schedule:

HI 3334 Topics in the History of American Science and Technology (Cat. I)

This seminar will examine a particular issue or theme in the history of American science and technology. Topics will vary from year to year, but may include: technology and the built environment; science, technology and the arts; communications of science and scientific issues with the larger public; technology and scientific illustration; science in popular culture; science and the law; or close examination of episodes in the history of American science and technology such as the American Industrial Revolution; science and technology in the years between the world wars; the Manhattan Project; science and the culture of the Cold War; or science, technology and war in American history. This course will require significant reading and writing. This course may be repeated for different topics.

Recommended Background: Some familiarity with history of science or history of technology, and with United States history.

Rationale:

This new description more accurately captures how the course is taught as a topics class that rotates between offerings.

Logistics: We will work with the Office of the Registrar to ensure that each offering of HI 3334 has a topics subtitle so students will know if a particular offering of the course is different from one they might have already taken.

Impacts on distribution requirements and students: None

Resources Needed: None

Implementation Date: 2024-2025

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to modify the description of HI 3335 Topics in the History of Non-Western Science and Technology

Motion: On behalf of the Department of Humanities and Arts, the Committee on Academic Operation recommends, and I move that the description of HI 3335 Topics in the History of Non-Western Science and Technology be modified, as described below.

Description of the Proposed Modifications:

Current course title, description and course offering schedule:

HI 3335 Topics in the History of Non-Western Science and Technology (Cat. II)

A seminar course on the relationships among science, technology, and society from cultures outside Europe and North America, examined through a series of case studies. Topics from which the case studies might be drawn include: Chinese medicine and technology; Arabic mathematics, medicine, and astronomy; Indian science and technology (including, for example, metalworking and textile production); Mayan mathematics and astronomy; Polynesian navigation; various indigenous peoples' sustainable subsistence technologies (e.g. African agriculture, Native American land management, aboriginal Australian dreamtime). This course will be offered in 2021-22, and in alternating years thereafter.

Suggested: Courses in global history and the history of science and technology.

Proposed course title, description and course offering schedule:

HI 3335 Topics in the History of Non-Western Science and Technology (Cat. II)

A seminar course on the relationships among science, technology, and society from cultures outside Europe and North America, examined through a series of case studies. Topics from which the case studies might be drawn include: Chinese medicine and technology; Arabic mathematics, medicine, and astronomy; Indian science and technology (including, for example, metalworking and textile production); Mayan mathematics and astronomy; Polynesian navigation; various indigenous peoples' sustainable subsistence technologies (e.g. African agriculture, Native American land management, aboriginal Australian dreamtime). This course may be repeated for different topics. This course will be offered in 2021-22, and in alternating years thereafter.

Recommended Background: Courses in global history and the history of science and technology.

Rationale:

This new description more accurately captures how the course is taught as a topics class that rotates between offerings.

Logistics: We will work with the Office of the Registrar to ensure that each offering of HI 3335 has a topics subtitle so students will know if a particular offering of the course is different from one they might have already taken.

Impacts on distribution requirements and students: None

Resources Needed: None

Implementation Date: 2024-2025

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to modify the description of HI 3341 Topics in Imperial and Postcolonial History

Motion: On behalf of the Department of Humanities and Arts, the Committee on Academic Operation recommends, and I move that the description of HI 3341 Topics in Imperial and Postcolonial History be modified, as described below.

Description of the Proposed Modifications:

Current course title, description and course offering schedule:

HI 3341 Topics in Imperial and Postcolonial History (Cat. II)

This seminar course examines topics in the history of European imperialism, colonialism, and the postcolonial aftermath. Topics vary each year among the following: culture and imperialism, the expansion of Europe, the economics of empire, travel and exploration narratives, imperialism in literature and anthropology, decolonization in Asia and Africa, postcolonial studies. Readings will include primary and secondary sources. This course will be offered in 2022-23, and in alternating years thereafter.

Proposed course title, description and course offering schedule:

HI 3341 Topics in Imperial and Postcolonial History (Cat. II)

This seminar course examines topics in the history of European imperialism, colonialism, and the postcolonial aftermath. Topics vary each year among the following: culture and imperialism, the expansion of Europe, the economics of empire, travel and exploration narratives, imperialism in literature and anthropology, decolonization in Asia and Africa, postcolonial studies. Readings will include primary and secondary sources. This course may be repeated for different topics. This course will be offered in 2022-23, and in alternating years thereafter.

Rationale:

This new description more accurately captures how the course is taught as a topics class that rotates between offerings.

Logistics: We will work with the Office of the Registrar to ensure that each offering of HI 3341 has a topics subtitle so students will know if a particular offering of the course is different from one they might have already taken.

Impacts on distribution requirements and students: None

Resources Needed: None

Implementation Date: 2024-2025

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to modify the description of HI 3343 Topics in Asian History

Motion: On behalf of the Department of Humanities and Arts, the Committee on Academic Operation recommends, and I move that the description of HI 3343 Topics in Asian History be modified, as described below.

Description of the Proposed Modifications:

Current course title, description and course offering schedule:

HI 3341 Topics in Imperial and Postcolonial History (Cat. I)

This seminar course examines topics in the cultural, socio-economic, religious and political history of East Asia. Topics vary each year and may include the following: nationalism and the writing of history, travel and exploration narratives, cross-cultural contact, the role of religion and ideology in political history, development and the environment in Asia, film and history, and the place of minorities and women in Asian societies. Suggested background: previous courses on Asia such as HU 1412, HI 2328, HI 2343, or RE 2724. Some sections of this course may be offered as Writing Intensive (WI).

Proposed course title, description and course offering schedule:

HI 3341 Topics in Imperial and Postcolonial History (Cat. I)

This seminar course examines topics in the cultural, socio-economic, religious and political history of East Asia. Topics vary each year and may include the following: nationalism and the writing of history, travel and exploration narratives, cross-cultural contact, the role of religion and ideology in political history, development and the environment in Asia, film and history, and the place of minorities and women in Asian societies. This course may be repeated for different topics.

Suggested background: previous courses on Asia such as HU 1412, HI 2328, HI 2343, or RE 2724. Some sections of this course may be offered as Writing Intensive (WI).

Rationale:

This new description more accurately captures how the course is taught as a topics class that rotates between offerings.

Logistics: We will work with the Office of the Registrar to ensure that each offering of HI 3343 has a topics subtitle so students will know if a particular offering of the course is different from one they might have already taken.

Impacts on distribution requirements and students: None

Resources Needed: None

Implementation Date: 2024-2025

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to modify the description of INTL 2210 Popular Culture and Social Change in Asia

Motion: On behalf of the Department of Humanities and Arts, the Committee on Academic Operation recommends, and I move that the description of INTL 2210 Popular Culture and Social Change in Asia be modified, as described below.

Description of the Proposed Modifications:

Current course title, description and course offering schedule:

INTL 2210 Popular Culture and Social Change in Asia (Cat. II)

Godzilla, kung-fu, anime, sushi, Hello Kitty, yin and yang, Pokémon, manga. All of these have become part of our American lives, but where did they come from and what meaning do they hold as cultural phenomena? In this class we will explore the popular cultures of East Asia to better understand the influences that have shaped the region's contemporary societies. Focus country will be either Japan or China, depending on term offered. Students will study various media of popular culture, such as films, songs, advertisements, video games, manga, anime, to explore the changing society of these countries. We will link the individual cultural phenomena studied to both internal and external influences, situating popular culture within transnational currents and exchanges when appropriate. No prior knowledge of Asian history is required for this class. This course will be offered in 2021-22, and in alternating years thereafter. Students may not receive credit for HU 2340 and INTL 2210.

Proposed course title, description and course offering schedule:

INTL 2210 Popular Culture and Social Change in Asia (Cat. II)

Godzilla, kung-fu, anime, sushi, Hello Kitty, yin and yang, Pokémon, manga. All of these have become part of our American lives, but where did they come from and what meaning do they hold as cultural phenomena? In this class we will explore topics in the popular cultures of East Asia to better understand the influences that have shaped the region's contemporary societies. Focus country will be either Japan or China, depending on term offered. Students will study various media of popular culture, such as films, songs, advertisements, video games, manga, anime, to explore the changing society of these countries. We will link the individual cultural phenomena studied to both internal and external influences, situating popular culture within transnational currents and exchanges when appropriate. This course may be repeated for different topics. No prior knowledge of Asian history is required for this class. This course will be offered in 2025-26, and in alternating years thereafter. Students may not receive credit for HU 2340 and INTL 2210.

Rationale:

This new description more accurately captures how the course is taught as a topics class that rotates between offerings focused on either China or Japan.

Logistics: We will work with the Office of the Registrar to ensure that each offering of INTL 2210 has a topics subtitle so students will know if a particular offering of the course is different from one they might have already taken.

Impacts on distribution requirements and students: None

Resources Needed: None

Implementation Date: 2024-2025

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to modify the description of INTL 2910 Topics in Global Studies

Motion: On behalf of the Department of Humanities and Arts, the Committee on Academic Operation recommends, and I move that the description of INTL 2910 Topics in Global Studies be modified, as described below.

Description of the Proposed Modifications:

Current course title, description and course offering schedule:

INTL 2910: Topics in Global Studies (Cat. I)

This seminar course takes an interdisciplinary approach to historical and contemporary topics in global studies. Topics vary each year and may include international development, global inequality and justice, global public health, war and terrorism, international organizations and governance, humanitarianism and human rights, travel and tourism, the Anthropocene, climate change. No prior background is required. Especially appropriate for students interested in any of WPI's global Project Centers.

Proposed course title, description and course offering schedule:

INTL 2910: Topics in Global Studies (Cat. I)

This seminar course takes an interdisciplinary approach to historical and contemporary topics in global studies. Topics vary each year and may include international development, global inequality and justice, global public health, war and terrorism, international organizations and governance, humanitarianism and human rights, travel and tourism, the Anthropocene, climate change. This course may be repeated for different topics. No prior background is required. Especially appropriate for students interested in any of WPI's global Project Centers.

Rationale:

This new description more accurately captures how the course is taught as a topics class that rotates between offerings.

Logistics: We will work with the Office of the Registrar to ensure that each offering of INTL 2910 has a topics subtitle so students will know if a particular offering of the course is different from one they might have already taken.

Impacts on distribution requirements and students: None

Resources Needed: None

Implementation Date: 2024-2025

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to modify the description of PY 3711/RE 3711 Topics in Philosophy

Motion: On behalf of the Department of Humanities and Arts, the Committee on Academic Operation recommends, and I move that the description of PY 3711/RE 3711 Topics in Philosophy be modified, as described below.

Description of the Proposed Modifications:

Current course title, description and course offering schedule:

PY 3711/RE 3711 Topics in Philosophy (Cat. I)

This course is organized around an advanced or specialized topic in philosophy and provides preparation for HU 3900 Inquiry Seminars in philosophy and religion. Emphasis on topics and authors will vary with instructor, but will typically involve the study of: a particular philosopher (e.g., Plato, Marx, Dewey, Arendt); a particular philosophical tradition (e.g., Pragmatism, Analytic Philosophy, Buddhism, Feminism); a particular philosophical problem or topic (free will, globalization, consciousness, social movement, justice); or a particular philosophical classic (Aristotle's Ethics, Hobbes's The Leviathan, Beauvoir's The Second Sex). The topical theme of the course will be provided as a modified course title in the course description posted online.

Recommended Background: None.

Proposed course title, description and course offering schedule:

PY 3711/RE 3711 Topics in Philosophy (Cat. I)

This course is organized around an advanced or specialized topic in philosophy and provides preparation for HU 3900 Inquiry Seminars in philosophy and religion. Emphasis on topics and authors will vary with instructor, but will typically involve the study of: a particular philosopher (e.g., Plato, Marx, Dewey, Arendt); a particular philosophical tradition (e.g., Pragmatism, Analytic Philosophy, Buddhism, Feminism); a particular philosophical problem or topic (free will, globalization, consciousness, social movement, justice); or a particular philosophical classic (Aristotle's Ethics, Hobbes's The Leviathan, Beauvoir's The Second Sex). The topical theme of the course will be provided as a modified course title in the course description posted online. This course may be repeated for different topics.

Recommended Background: None.

Rationale:

This new description more accurately captures how the course is taught as a topics class that rotates between offerings.

Logistics: We will work with the Office of the Registrar to ensure that each offering of PY 3711/RE 3711 has a topics subtitle so students will know if a particular offering of the course is different from one they might have already taken.

Impacts on distribution requirements and students: None

Resources Needed: None

Implementation Date: 2024-2025

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to modify the description of PY 3721/RE 3721 Topics in Religion

Motion: On behalf of the Department of Humanities and Arts, the Committee on Academic Operation recommends, and I move that the description of PY 3721/RE 3721 Topics in Religion be modified, as described below.

Description of the Proposed Modifications:

Current course title, description and course offering schedule:

PY 3711/RE 3711 Topics in Philosophy (Cat. I)

This course is organized around an advanced or specialized topic in religion and provides preparation for HU 3900 Inquiry Seminars in philosophy and religion. The focus will vary, but the material will be drawn from a particular religious thinker, a particular religious tradition or a particular historical or contemporary problem. The topical theme of the class will be provided as a modified course title in the course description posted online.

Recommended Background: None.

Proposed course title, description and course offering schedule:

PY 3711/RE 3711 Topics in Philosophy (Cat. I)

This course is organized around an advanced or specialized topic in religion and provides preparation for HU 3900 Inquiry Seminars in philosophy and religion. The focus will vary, but the material will be drawn from a particular religious thinker, a particular religious tradition or a particular historical or contemporary problem. The topical theme of the class will be provided as a modified course title in the course description posted online. This course may be repeated for different topics.

Recommended Background: None.

Rationale:

This new description more accurately captures how the course is taught as a topics class that rotates between offerings.

Logistics: We will work with the Office of the Registrar to ensure that each offering of PY 3721/RE 3721 has a topics subtitle so students will know if a particular offering of the course is different from one they might have already taken.

Impacts on distribution requirements and students: None

Resources Needed: None

Implementation Date: 2024-2025

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to modify the description of GN3514 Seminar on Selected Topics in German Literature

Motion: On behalf of the Department of Humanities and Arts, the Committee on Academic Operation recommends, and I move that the description of GN3514 Seminar on Selected Topics in German Literature be modified, as described below.

Description of the Proposed Modifications:

Current course title, description and course offering schedule:

GN3514: Seminar on Selected Topics in German Literature (Units: 1/3; Cat. II)

The content of the seminar will change from time to time. The course will focus either on an author (e.g., Goethe, Heine, Kafka, Gunter Grass, Christa Wolf), a genre (e.g., lyric poetry, drama, narrative prose), a literary movement (e.g., Romanticism, expressionism), or a particular literary problem (e.g., literature and technology, writing and the Holocaust, writing and the city). The seminar will be conducted entirely in German. This course satisfies the Inquiry Practicum requirement. This course will be offered in 2019-20, and in alternating years thereafter.

Recommended background: GN 3511 (Advanced German I) and GN 3512 (Advanced German II) or equivalent.

Proposed course title, description and course offering schedule:

GN3514: Seminar on Selected Topics in German Literature (Units: 1/3; Cat. II)

The content of the seminar will change from year to year. The course will focus either on a single author, a form (e.g., lyric poetry, fairy tales, graphic novels), a literary movement (e.g., Romanticism, New Objectivity, Pop), or a particular literary problem (e.g., translation, writing and genocide, exile). This course may be repeated for different topics. This course satisfies the Inquiry Practicum requirement. This course will be offered in 2025-26, and in alternating years thereafter.

Recommended background: GN 3511 (Advanced German I) and GN 3512 (Advanced German II) or equivalent.

Rationale:

The proposed changes to the course [name/number/description] are as follows:

1. New description includes notice that the course is repeatable.
2. New description has modified examples of possible topics under discussion in the course.
3. New description has eliminated the line that “The seminar will be conducted entirely in German.”

The need for the change is due to the necessity of indicating that the course is repeatable. Sometimes, students who arrive at WPI and test into an advanced German course require more curricular options to complete either the HUA sequence in German or a minor in German. Because the topics in GN3514 are always changing, it is sensible for these students to be permitted to repeat the course. The description has likewise been modified to reflect a greater breadth of potential

topics. The note regarding course language has been dropped, in part to reflect that English is sometimes used in the course, as well as to prepare for the eventuality that the course might be opened to a broader audience in the future.

Impacts on students: The modification of the course GN3514 will impact current and future students by making it easier for them to complete their HUA requirement in German or their minor in German. There are no expected changes in student learning outcomes, skills development, or other aspects.

Resources Needed: The change requires no new resources.

Implementation Date: The proposed changes are expected to be implemented starting from term C-2026, when the course is next offered.

Contact: Esther Boucher-Yip, Assoc Dept Head

Date: March 13, 2024
To: WPI Faculty
From: Committee on Academic Operations (Prof. Van Dessel, Chair)
Re: Motion to remove RE 2722 Modern Problems of Belief

Motion: On behalf of the Department of Humanities and Arts, the Committee on Academic Operation recommends, and I move that RE 2722 Modern Problems of Belief be removed.

Description of course to be removed:

RE 2722, Modern Problems of Belief (Cat. I)

This course examines the ways in which religious problems of meaning have been encountered in the context of the eclipse of religion in Western culture from the Enlightenment to the present. The class emphasizes challenges presented to traditional belief systems by modern thought in areas such as the sciences, psychology, textual criticism, and historical events, as well as some religious responses to those challenges. How do religions respond to the limits of human intellectual capacity, limits of human endurance, and limits of moral comprehension?

Rationale:

The faculty member who designed and taught this course retired in 2018. Given the way the course description was designed (i.e., at the intersection of theodicy and modernity), neither Rebecca Moody nor Adrien Stoloff, the current religion faculty, has the expertise to facilitate it in the way it was originally intended, nor does it support the intended curricular goals of the religion course sequence.

Since the 2017-2018 academic year, the course has not been offered consistently. It has remained listed as a Cat. I course.

We are not proposing a replacement at this time; instead, given faculty changes in the last few years, we would like to undertake a more deliberate conversation with the Philosophy and Religion faculty about our curricular goals. In place of RE 2722, we will offer another cat II course (such as RE 2721, Religion & Culture, or RE 2725, Religious and Spiritual Traditions) such that we will continue to offer the same number of 2000-level courses each year.

Resources Needed: There are no changes to resource requirements.

Implementation Date: Academic Year 2024-2025

Contact: Prof. Rebecca Moody

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to remove RE 2725 Religious and Spiritual Traditions

Motion: On behalf of the Department of Humanities and Arts, the Committee on Academic Operation recommends, and I move that RE 2725 Religious and Spiritual Traditions be removed.

Description of course to be removed:

RE 2725 Religious and Spiritual Traditions (Cat. I)

The primary aim of this course would be student literacy in global traditions. The course examines, from historical, doctrinal, spiritual and/or philosophical perspectives, major world religious and spiritual traditions. Attention will be given to the social context in which these religious traditions developed and will example their continuing influence. Students taking RE 2725 should not receive credit for RE 2723 or RE 2724, since RE 2725 replaces them.

Recommended background: None

Rationale:

This course will be replaced by RE 2726 Global Religions (Cat. II).

The course – a Cat I course - has not been consistently offered in one academic term.

Resources Needed: No changes to resource requirements

Implementation Date: Academic Year 2024-2025.

Contact: Rebecca Moody

Date: March 13, 2024
To: WPI Faculty
From: Committee on Academic Operations (Prof. Van Dessel, Chair)
Re: Motion to add RE 2726 Global Religions

Motion: On behalf of the Department of Humanities and Arts, the Committee on Academic Operation recommends, and I move that RE 2726 Global Religions, as described below, be added.

Description of course to be added:

RE 2726 Global Religions (Cat. II)

This course will consider, from historical, doctrinal, spiritual and/or philosophical perspectives, *either* one religious tradition (Islam, Daoism or indigenous traditions, for example) *or* a constellation of traditions in the same time period or place. Attention will be given to the social context in which these traditions developed and their continuing influence. This course may be repeated for different topics.

Recommended background: None.

Expected enrollment: The expected enrollment is 35

Course Type: Lecture/Discussion.

Anticipated Instructors: Rebecca Moody, Adrien Stoloff

Rationale:

Students find the existing course title and description (currently RE 2725, Religious and Spiritual Traditions) complicated and opaque; we intend this change to simplify both.

The rationale for this course is fourfold. First, it will provide a pedagogical vehicle to facilitate WPI students' awareness of complex beliefs and practices in global religions. Second, Rebecca Moody and Adrien Stoloff, WPI's religion faculty, utilize global pedagogical approaches in the classroom that help them bridge their respective focus in ancient and modern traditions to similarly engage students; this course title will help codify that common approach. Third, the critical study of religious beliefs, practices, and social contexts requires a deeper reflection on the part of students than PY/RE 1731, an introductory course, can facilitate; this 2000-level course will connect introductory courses and 3000-level (including capstone) courses, such as RE 3721, Topics in Religion, and RE 3723, Religion, Gender & Sexuality. Finally, the course's global focus can offer students the cultural tools necessary to engage responsibly and ethically in their global project experience.

Whether teaching about religion in North Africa and the Middle East, China, the United States or elsewhere, WPI's religion faculty situate its academic study in a global context while approaching it as a manifestation of a specific cultural context: a religious tradition will almost certainly look different, sometimes considerably so, in different times and places. For example, the practice of yoga in the US today looks much different than it did on the subcontinent of India during the Vedic period; similarly, Islam in post-revolutionary Iran looks much different than it does in the US. To study religion means being attentive to these shifts and, thus, the religion faculty helps students conceive of religion as fluid lived contexts rather than static states.

The intended audience for this course includes:

- Students completing the HUA Requirement and / or a minor in Religion or International and Global Studies
- Students seeking to incorporate more global nuance into their STEM training
- Students departing for or returning from HUA or IQP global project experiences

Impact on Distribution Requirements and Other Courses: No impact on existing distribution requirements.

Resources Needed: No new resources are required.

Implementation Date: Academic year 2024-2025

Contact: Rebecca Moody

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to add WR/IMGD 2200 AI in Writing and Communication

Motion: On behalf of the Humanities and Arts Department and the Interactive Media and Game Development Program, the Committee on Academic Operation recommends, and I move that WR/IMGD 2200 AI in Writing and Communication, as described below, be added.

Description of course to be added:

WR 2200/IMGD 2200: AI in Writing and Communication (Cat. II)

Generative AI is transforming the practices of writing and communication. It also generates new questions about authorship, responsibility, creativity, authenticity, and other rhetorical constructs that affect us equally as citizens and professionals. This course offers the foundations of critical AI literacy. It aims to help students develop a robust understanding of what this transformation means, and what kind of new sensibilities and skills are needed in response to an AI-led transformation. The course focuses on: 1) technological and cultural trends that shape the perception of generative AI, 2) ethical concerns emerging from the use of generative AI in professional and nonprofessional contexts, and 3) effective and responsible practices of using generative AI in writing and other forms of communication. In addition to reading assignments, students will have the opportunity to experiment with generative AI and assess its limits and possibilities. The assignments include critical annotations, fact-checking procedures, creative workflow processes, ethical analyses, and interaction design inquiries.

Recommended Background: None

Expected enrollment: 20

Anticipated Instructors: Yunus Doğan Telli

Rationale:

The potential of generative artificial intelligence (GAI) to automate previously un-automated writing and other communication processes is disrupting professional practices across a range of industries. This course aims to help students develop a robust understanding of what this transformation means, what kind of new sensibilities and skills are needed in response to a GAI-led transformation, and what spaces of intellectual imagination are enabled and foreclosed by such a transformation. This course primarily focuses on professional writing (from scientific writing to journalism to proposal writing for nonprofits) and the design of communication (from voice or graphic interface design to data visualization to chatbots). Because AI writing is essentially a technologically-mediated form of writing, it is accessed through and on various digital mediums. User interfaces are indeed central to AI writing practices. It thus becomes essential to capture the embeddedness of AI writing in media technologies. The Professional Writing (PW) Program focuses on institutionalized and contextualized practices of writing in professional settings, and is thus able to address this challenge. The Interactive Media and Game Development (IMGD) Program trains students in the design and study of generative computational media technologies, and offers a media studies framework for a range of writing and other communicative practices.

Furthermore, by connecting writing and communication to broader social concerns, this course will help students develop a critical AI/media literacy lens.

In addition, this course situates ethics as an essential component of any writing and communication inquiry related to GAI. By its focus on issues of structural power, exploitation, and inequity, the course provides students with examples of responsible uses of GAI that respond to ongoing critiques of mainstream discourses.

The intended audience for this course will be Professional Writing majors, Writing and Rhetoric minors, undergraduate students with a Writing and Rhetoric depth, IMGD majors and minors, and undergraduate students in fields with a special emphasis on digital technologies including Computer Science majors, Data Science majors, Robotics Engineering majors, and Business School majors.

Impact on Distribution Requirements and Other Courses: This course will have no impact on current distribution requirements. Students can choose to use this course to fulfill depth in the HUA sequence (with WR courses) or breadth.

Resources Needed: No new resources are required.

Implementation Date: Implementation date for this action is the 2024-2025 academic year.

Date: March 13, 2024
To: WPI Faculty
From: Committee on Academic Operations (Prof. Van Dessel, Chair)
Re: Motion to add WR/EN 2410 Screenwriting

Motion: On behalf of the Humanities and Arts Department, the Committee on Academic Operation recommends, and I move, that WR/EN 2410 Screenwriting, as described below, be added.

Description of course to be added:

WR/EN 2410 Screenwriting (Cat. II)

Feature films are at the heart of a motion picture industry that requires a partnership of multiple disciplines working in unison: acting, directing, filming, and producing. But none of this can happen without the first step—screenwriting. In this course, students will learn to write for mainstream feature and short films, from ideation to synopses and beat sheets to the pages of an original screenplay. While this course will focus on short and feature film screenplays, the knowledge can also apply to other screenwriting forms such as documentaries and web series. Students will combine the creative with the technical, not only studying storytelling through film but also applying the structured authoring required by film producers and screenplay competitions for a feature or short film script. This course will be offered in 2024-25, and in alternating years thereafter. Students may not receive credit for both EN/WR 2410 and EN/WR 241X.

Recommended background: No prior coursework is required. However, previous coursework in storytelling (such as EN 121X: Intro to Creative Writing or film courses) or structured authoring (such as WR 3210: Technical Writing) is useful.

Sample Class Titles/Topics:

1: Ideation and storytelling through film

- An interactive lecture/discussion on storytelling basics and how they are accomplished through film followed by formulating and testing ideas for feature film stories, including logline construction.

Assignment: Invent and discuss two original story ideas, exploring plots, characters, and appropriateness for feature film. Write and discuss loglines for those ideas.

2: Synopsis and exploring beginning, middle, and end

- An interactive lecture/discussion on writing a feature film's synopsis and incorporating the beginning, middle, and end of the story.

Assignment: Write and discuss synopses for the two loglines from previous assignment.

3: Beat sheets and reverse engineering a film

- An interactive lecture/discussion on feature film structure based on popular screenplay beats from structuralists such as Blake Snyder and Syd Field.

Assignments: After watching an assigned feature film, identify and discuss its beats based on popular screenwriting structures from structuralists such as Blake Snyder and Syd Field. Write a beat sheet for one of the synopses from previous assignment.

4: Screenwriting for short films

- An interactive lecture/discussion on applying feature film storytelling and structure to short film screenplays.

Assignments: After watching example short films, identify and discuss how ideation, story development, and screenplay structure for feature films translate to screenplays for short films. Write a logline, synopsis, and beat sheet for an original 10-minute short film.

5: Screenplay structure, syntax, and software

- An interactive lecture/discussion on the structure and syntax of a completed screenplay, including shot headings, direction, dialog, and conventions for feature and short films. Demonstration and practice of screenwriting software that makes it all manageable.

Assignment: Write the first 5 minutes of a favorite film in screenplay format using the software selected for the course.

6: Storytelling techniques in screenplays

- An interactive lecture/discussion to drill down into techniques for writing action, introducing and establishing characters, and showing vs. telling.

Assignment: Analyze one or more screenplays for storytelling techniques. Write a 10-minute short film screenplay (10 pages) for the short film beat sheet from previous assignment.

7: Workshop

- A live reading of selections of student short film screenplays followed by feedback and discussion.

Assignment: Apply workshop feedback and update the 10-minute short film screenplay from previous coursework.

Anticipated Instructor: Professor Kevin Lewis

Expected Enrollment: The course will be capped at 20 students. Based on enrollment of the experimental offerings, anticipated enrollment is 20 students (100% enrollment).

Course type: Lecture/discussion/active learning

Preferred Terms: C or D terms

Rationale:

There is growing interest in drama and cinematic studies as an option for professional, media, and creative writing students. The Professional Writing program would like to add such a writing course to its offering of multidisciplinary writing courses. Additionally, the Creative Writing minor consistently sees waitlists for creative writing courses and has demand to offer more. Cross-listed with English, this writing course will help meet these creative writing needs.

The experimental course *WR/EN 241X Screenwriting* was first offered in D-term 2023 with an enrollment of 18 students (90% enrollment). There are 20 students enrolled (100% enrollment) for the offering in C-term 2024.

Resources Needed: No additional resources are necessary. Once permanent, the course will become part of Prof. Kevin Lewis's regular teaching load and the course will be offered every or every other year (Category II). The course will be taught on campus and requires audio/video equipment, including Blu-ray and Internet to access and stream movies and film clips on a classroom screen (standard classroom technology). The room must accommodate 20 students. If necessary, it could be taught online.

Library resources: Screenwriting reference books, including *The Hollywood Standard*: 3rd Edition (ISBN: 978-1615933228) and *The Screenwriter's Bible*: 7th Edition (ISBN: 978-1935247210).

Support from Academic Technology: Canvas, Zoom (as needed), screenwriting software (e.g., academic licenses of Final Draft or Fade In)

Impact on Distribution Requirements and Other Programs: This course will count toward the Professional Writing major, Creative Writing minor, and Writing and Rhetoric minor. It will also serve to meet the Humanities and Arts requirement (either depth or breadth, depending on the student). IMGD students taking the experimental course in D-term 2023 found it complemented their studies for their IMGD major. Finally, it can also serve as a WPI free elective for any student interested in the topic.

Implementation Date: The anticipated implementation date for the course is D-term 2025, with it being offered every or every other year thereafter. The experimental offering ran in D-term 2023 and will run again in C-term 2024.

Contact: Kevin Lewis, Director Professional Writing Program (kmlewis@wpi.edu)

Appendix: Assessment of Experimental Offering of the Course in D-term 2023

Student feedback was gathered by using WPI's course evaluation for D-term 2023, with particular attention to questions 1, 2, 3, 7, and 19. Of the 18 students enrolled, 16 students completed the evaluation. The result indicates students' overall satisfaction for the course and the instructor. Detailed breakdown of the evaluation as follows:

	D-term 2023 (n=16)
Q1: My overall rating of the quality of this course is	4.3
Q2: My overall rating of the instructor's teaching is	4.2
Q3: The educational value of the assigned work was	4.3
Q7: The amount I learned from the course was	3.8
Q19: Average hours per week worked outside of class	3.1*

* 1-5 hr/wk = 4 students; 6-10 hr/wk = 8 students; 11-15 hr/wk = 3 students; 16-20 hr/wk = 1 student.

Qualitative feedback from this evaluation includes:

- I enjoyed reading other students work and having conversations about them.
- I enjoyed the creative freedom presented.

- I liked how much the story focused on the application of the elements we were learning. Everything we learned felt practical in that we could directly apply it to our own screenplays.
- I liked how we got to see real examples of films and their screenwriting.
- I took this course for fun (didn't need it to graduate) and it was that. It was a good creative outlet that balanced out the rather stiff workload of my MQP.
- Interesting assignments and very well paced. The readings were also very informative.

Constructive feedback to be addressed in the next course offering includes:

- Feedback about pacing and sequencing:
 - The beginning felt very compressed and the end felt very spaced out. The pacing was just difficult at the start but eased up a little too much toward the end.
 - Allow more time for assignments, readings, and class plans in the beginning of the term as there is time toward the end to make space for it.
- Feedback about class discussions:
 - I liked the idea of the table read and was thinking if it was possible to do more workshops such as the table reads for other steps in the short screenplay process, such as the ideation.
 - I think having feedback on the table reads would be really helpful.

Given this evaluation, I believe the experimental offering of the course was a success, and I have already incorporated the constructive feedback into the next offering of the course.

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to modify the course title and description of TH 3300: Special Topics in Performance Studies

Motion: On behalf of the Humanities and Arts Department, the Committee on Academic Operation recommends, and I move that the course title and description for TH3300: Special Topics in Performance Studies be modified, as described below.

Description of the Proposed Modifications:

Current course title, description:

TH 3300: Special Topics in Performance Studies (Units: 1/3; Cat. III)

This course will use the multidisciplinary approach of performance studies to examine specific theatrical traditions, movements, or approaches. Through reading/viewing, discussion, and practical exercises, students will explore the interactions of various theatrical sub-disciplines (such as directing, design, playwriting, acting, etc.) as well as the relationship of performance to adjacent fields such as sociology, geography, history, and politics. Each offering will focus on a specific type of performance, such as: Documentary Theatre, AudienceDriven/Interactive Performance, Theatre for Social Change, Religious & Ritual Performance, Puppetry, or Physical Theatre. *Students may repeat this course for credit with different topics.*

Recommended background: (none)

Proposed course title, description: (with changes highlighted in yellow)

TH 3300: Special Topics in Theater Studies (Units: 1/3; Cat. III)

This course will use the multidisciplinary approach of theatre studies to examine specific theatrical traditions, movements, or approaches. Through reading/viewing, discussion, and practical exercises, students will explore the interactions of various theatrical sub-disciplines (such as directing, design, playwriting, acting, etc.) as well as the relationship of performance to adjacent fields such as sociology, geography, history, and politics. Each offering will focus on a specific type of performance, such as: Documentary Theatre, AudienceDriven/Interactive Performance, Theatre for Social Change, Religious & Ritual Performance, Puppetry, or Physical Theatre. *Students may repeat this course for credit with different topics.*

Recommended background: (none)

Rationale:

This name change is intended to prevent confusion around the myriad ways “performance” is used across different fields—in particular to distinguish that this is not an acting course—as well as to avoid conflation with the academic field of “performance studies,” which uses performance as a critical lens to study social and cultural phenomena (without necessarily retaining a foundation in theatrical performance). The name “theatre studies” more accurately describes the topics covered

in this course, which focuses on the holistic examination of performance & production within theatre and adjacent fields (dance, opera, circus, etc.).

This course's main description, content, instruction, and scheduling will all remain unchanged, making it unnecessary to replace it with a new course.

Impacts on students: (none)

Resources Needed: (no resource impact)

Implementation Date: 2023-24 Academic Year

Date: March 13, 2024
To: WPI Faculty
From: Committee on Academic Operations (Prof. Van Dessel, Chair)
Re: Motion to add TH3400: Lighting Design

Motion: On behalf of the Humanities and Arts Department, the Committee on Academic Operation recommends, and I move that TH3400: Lighting Design, as described below, be added.

Description of course to be added:

TH 3400: Lighting Design (Units: 1/3; Cat. II)

This course examines the principles and practice of theatrical lighting design. Students will develop skills in all parts of the design process, from play analysis and visual research to system design and cueing. Through class discussion, hands-on activities, and creative design projects, students will develop their abilities to recognize, develop, communicate, and execute lighting design ideas. Though primarily focused on live performance (theatre, dance, opera, music, etc.), this course will also teach ideas and skills applicable to other mediums (architecture, film/TV, animation, etc.). *Students may not receive credit for TH 3400 and TH340X.*

Recommended background: This course is suitable for anyone interested in environmental/performance design. TH 2400: Fundamentals of Theatrical Production Design provides useful (though not essential) preparation for this course.

Anticipated Instructor: Prof. Laura Eckelman

Expected Enrollment: Despite the 3000-level number, this course must keep its current cap of 12 students per section, since that's the maximum capacity of the Design Lab.

Rationale:

This course (which has already been offered in experimental form) serves a significant and growing interest in theatrical design & technology, as well as a persistent demand for courses in the Humanities & Arts. See the Appendix to this motion for student response to the experimental offering of the course.

Rationale from Experimental Course Proposal (TH 340X: Lighting Design; C-Term 2022): This course serves a robust and growing student interest in Drama/Theatre, particularly in theatrical design. It provides valuable depth for students focusing on Drama/Theatre, as well as relevant and engaging breadth for students focusing on Music, Studio Art, and other design areas. This course expands Drama/Theatre's offerings in design and technology, which are key areas of intended growth within the discipline, thanks to both widespread professional opportunity and tremendous student interest. This course complements existing Drama/Theatre offerings, including TH 111X: Introduction to Theatrical Production; TH 2222: Introduction to Technical Theatre; and TH 320X: Scenic Design and Fabrication.

Resources Needed:

- **Instructor:** This course is part of Prof. Eckelman's load. She will offer it on alternate years, in rotation with another design/management course.
- **Classroom:** The lecture component of this course is best taught in Riley Commons, due to its proximity to the two lab spaces (Little Theatre & Design Lab).

- Laboratory: For the class to work, lab activities must be conducted in the Little Theatre and Design Studio, both of which are controlled by the Theatre faculty.
- Library Resources: This course requires no additional library resources.
- Information Technology: This course requires no additional IT resources.

Impact on Distribution Requirements and Other Courses: This course will serve students studying theatre for their HUA Requirement (breadth or depth), for an HUA major/minor, or simply as a free elective.

Implementation Date: 2024-25 Academic Year

Appendix: Student Feedback on the Experiment Offerings of the Proposed Course

(The first offering of this course was in 22C, during the height of the Omicron surge & WPI's mental health crisis. For that offering, the course was built to be fully remote, if needed. Subsequently, the course was overhauled to be more hands-on & modular, with less focus on software & paperwork.)

1. Overall, the response to this course was very positive. Students report high levels of interest & engagement in the course, and lighting work on campus events & productions began to improve markedly after its first offering.
2. Course Evaluation Comments from 23C (n=4):
 - "I really enjoyed learning about light and Professor Laura's passion for the topic. Overall it really changed my view on light and how I see the world."
 - "I like how hands-on it is."
 - "It is well structured and fun."
3. Course Evaluation Data from 23C:
 - Question 1 (Overall Quality) = 5
 - Question 2 (Instructor's Teaching) = 5
 - Question 7 (Amount Learned) = 4.5
 - Question 19 (Total Hours) = 2.5, a.k.a. 2.5-7.5 hours/week average
4. This course has evolved significantly over its experimental offerings, but in all iterations has met its goals of teaching both the concepts & skills of theatrical lighting design.
5. Both experimental offerings enrolled full to (or beyond) capacity (12+ students).

Date: March 13, 2024
To: WPI Faculty
From: Committee on Academic Operations (Prof. Van Dessel, Chair)
Re: Motion to add HU 3570 Topics in Film Studies

Motion: On behalf of the Humanities and Arts Department, the Committee on Academic Operation recommends, and I move that HU 3570 Topics in Film Studies, as described below, be added.

Description of course to be added:

HU 3570: Topics in Film Studies (Cat. II)

Investigations into film studies that address specific directors, genres, national/regional traditions, periods, theories, and/or theorists. Attention might center upon Hitchcock, Kurosawa, or Varda; on the documentary, the romantic comedy, the science fiction film, or the western; on Cuban, Italian, Korean, or West African film, on the silent-to-sound transition of a century ago, or the traditionally- to digitally-animated transition of this century; on apparatus, or auteur, or feminist, or psychoanalytic film theory; or via the work of Cavell, Deleuze, Mulvey, or Žižek, for example. This course may be repeated for different topics. This course will be offered in 2024-25, and in alternating years thereafter.

List of Potential Topics:

HU 3570: Topics in Film Studies: Science Fiction Film
HU 3570: Topics in Film Studies: The Short Film
HU 3570: Topics in Film Studies: Project Centers on Screen
HU 3570: Topics in Film Studies: Fossil Films: Cinema of the Climate Crisis

Expected Enrollment: 12-20 students per section

Intended Audience: HUA Majors/Minors; HUA Requirement (Breadth/Depth); Free Electives

Anticipated Instructors: Jim Cocola, Dan DiMassa

Rationale:

In terms of film appreciation, criticism, and theory (as opposed to production) the current offerings in film studies are confined to a pair of HU-designated courses at the 2000-level: HU 2251: Introduction to Film Studies, and HU 2258: World Cinemas. Otherwise, course offerings are scattered piecemeal over a range of disciplinary designations, from philosophy and religion to a range of foreign languages. As we move toward the possibility of a film studies minor, a third course with the HU designation, this one flexibly designed as a topics-level course at the 3000-level, can accommodate the work of instructors from across these disciplines, accommodating various iterations that might focus, in turn, on a particular, director, genre, national/regional tradition, period, or theory.

Impact on Distribution Requirements and Other Courses: Further offerings in film studies may attract further enrollments as free electives, but shouldn't do much to impact depth-area work toward the HUA requirement, since such HU-designated courses tend to be taken toward breadth rather than depth in most cases.

Resources Needed:

- *Classroom:* Continuing support via HUA budget for digital and print acquisitions
- *Library:* Continuing support
- *Information Technology:* Continuing support

Implementation Date: AY 2024-2025

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to modify the title, description, and recommended background for RBE 2001 Unified Robotics I: Actuation

Motion: On behalf of the Robotics Engineering Department, the Committee on Academic Operations recommends, and I move that the course title, description, and recommended background of RBE 2001 Unified Robotics I: Actuation be modified, as described below.

Description of the Proposed Modifications to RBE 2001:

Current course title, description, and recommended background:

RBE 2001: Unified Robotics I: Actuation (Units: 1/3, Cat. I)

First of a four-course sequence introducing foundational theory and practice of robotics engineering and the application of concepts from the fields of computer science, electrical engineering and mechanical engineering to the design of robots. The focus of this course is the effective conversion of electrical power to mechanical power, and power transmission for purposes of locomotion, and of payload manipulation and delivery. Concepts of energy, power and kinematics will be applied. Concepts from statics such as force, moments and friction will be applied to determine power system requirements and structural requirements. Simple dynamics relating to inertia and the equations of motion of rigid bodies will be considered. Power control and modulation methods will be introduced through software control of existing embedded processors and power electronics. The necessary programming concepts and interaction with simulators and Integrated Development Environments will be introduced. Laboratory sessions consist of hands-on exercises and team projects where students design and build robots and related sub-systems.

Recommended Background: RBE 1001, ES 2501, and any of CS 2119 or CS 2102 or CS 2103.

Proposed course title, description, and recommended background:

RBE 2001: Unified Robotics I: Mechanical Applications in Robotics (Units: 1/3, Cat. I)

This course focuses on mechanical concepts in the design, construction, and actuation of a robot. Topics include the effective conversion of electrical power to mechanical power, power transmission and control for locomotion and payload manipulation, and the application of kinematic principles for the design of planar manipulators. The course will present the physical operation and common robotic applications of different types of actuators, including solenoids, electrical motors, and pneumatic, hydraulic, and soft actuators. The course will address the design of mechanical systems for a robot to meet requirements including chassis strength, durability, reliability, and robustness. gripper Laboratory sessions consist of hands-on exercises and team projects where students design and test mechanical systems for specific tasks.

Recommended background: Knowledge of Embedded Systems, such as covered in ECE 2049. Knowledge of statics, such as covered in ES 2501. Ability to use CAD to design parts, such as found in ES 1310.

Rationale:

This motion is second of the three motions aimed at reorganizing the second-year RBE undergraduate curriculum. The primary objective of the RBE second-year curriculum is to enable

students to develop and construct purpose-driven robots through the integration of perception and actuation. To achieve this goal, there are three courses in the second year: RBE 2001, RBE 2002, and ECE 2049.

The current structure of the curriculum presents challenges. RBE 2001 and RBE 2002 suffer from inefficient topic sequencing, and ECE 2049 is not tailored for RBE students, nor is it typically taken by RBE students before RBE 2001 and RBE 2002. As it stands, RBE 2001 necessitates a grasp of fundamental concepts in sensing, perception, and control, making it a recommended background for RBE 2002. Furthermore, there is overlap between RBE 2002 and ECE 2049 in terms of communication and I/O concepts.

To address these issues, RBE 200X is proposed as a core course (first of the three motions), covering fundamental robotics-related concepts in sensing, actuation, and control. This course will also be recommended as a background for RBE 2001 and RBE 2002. This reorganization allows for the removal of the dependency between RBE 2001 and RBE 2002. Consequently, RBE 2001 can focus on "mechanical applications in robotics," while RBE 2002 can delve into "sensing and perception in robotics" without either being a recommended background for the other. This adjustment grants students the flexibility to choose the order in which they take RBE 2001 and RBE 2002, effectively addressing the sequencing issue. Moreover, it addresses concerns raised by students who struggle to complete the second-year courses. This restructuring also aligns with the concept of a spiral curriculum, facilitating a more progressive and integrated learning experience.

Impacts on students: (no impact on students)

Resources Needed: (no resource impact)

Implementation: 2024-25 Academic Year

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to modify the title, description, and recommended background for RBE 2002 Unified Robotics II: Sensing

Motion: On behalf of the Robotics Engineering Department, the Committee on Academic Operations recommends, and I move that the course title, description, and recommended background for RBE 2002 Unified Robotics II: Sensing be modified, as described below.

Description of the Proposed Modifications to RBE 2002:

Current course title, description and recommended background:

RBE 2002: Unified Robotics II: Sensing (Units: 1/3, Cat. I)

Second of a four-course sequence introducing foundational theory and practice of robotics engineering and the application of concepts from the fields of computer science, electrical engineering and mechanical engineering to the design of robots. The focus of this course is the interactions between a robot and the environment through sensors, feedback and decision processes. Principles of electronic transducers, including performance, selection, and application of sensors will be presented. Interfaces between microcontrollers and sensors are introduced, including conditioning circuits, filters, analog-to-digital conversion, digitization, and sampling. Basic feedback mechanisms for mechanical systems will be implemented via electronic circuits and software mechanisms. The necessary software concepts will be introduced for modular design and implementation of decision algorithms and finite state machines. Laboratory sessions consist of hands-on exercises and team projects where students design and build robots and related sub-systems.

Recommended Background: RBE 2001, ECE 2010, and either CS 1101 or CS 1102.

Proposed course title, description, and recommended background:

RBE 2002: Unified Robotics II: Sensing and Perception in Robotics (Units: 1/3, Cat. I)

This course focuses on how robot control and decision processes are informed through sensors. The course covers the operation and integration of simple and complex sensors, including signal transduction, interface circuitry, and physical integration. Themes include how functionality guides sensor selection; how decision-making is affected by uncertainty, and how performance can be improved through signal conditioning, digital filtering, calibration, parameter selection, and sensor fusion. The course will address how sensor inputs can be used to generate representations of the environment, and how a robot uses information to achieve goals within its environment. Laboratory sessions consist of hands-on exercises and team projects where students specify and test a variety of sensors to accomplish specific tasks.

Recommended background: Knowledge of Embedded Systems, such as covered in ECE 2049.

Rationale:

This motion is third of the three motions aimed at reorganizing the second-year RBE undergraduate curriculum. The primary objective of the RBE second-year curriculum is to enable students to develop and construct purpose-driven robots through the integration of perception and

actuation. To achieve this goal, there are three courses in the second year: RBE 2001, RBE 2002, and ECE 2049.

The current structure of the curriculum presents challenges. RBE 2001 and RBE 2002 suffer from inefficient topic sequencing, and ECE 2049 is not tailored for RBE students, nor is it typically taken by RBE students before RBE 2001 and RBE 2002. As it stands, RBE 2001 necessitates a grasp of fundamental concepts in sensing, perception, and control, making it a recommended background for RBE 2002. Furthermore, there is overlap between RBE 2002 and ECE 2049 in terms of communication and I/O concepts.

To address these issues, RBE 200X is proposed as a core course (first of the three motions), covering fundamental robotics-related concepts in sensing, actuation, and control. This course will also be recommended as a background for RBE 2001 and RBE 2002. This reorganization allows for the removal of the dependency between RBE 2001 and RBE 2002. Consequently, RBE 2001 can focus on "mechanical applications in robotics," while RBE 2002 can delve into "sensing and perception in robotics" without either being a recommended background for the other. This adjustment grants students the flexibility to choose the order in which they take RBE 2001 and RBE 2002, effectively addressing the sequencing issue. Moreover, it addresses concerns raised by students who struggle to complete the second-year courses. This restructuring also aligns with the concept of a spiral curriculum, facilitating a more progressive and integrated learning experience.

Impacts on students: (no impact on students)

Resources Needed: (no resource impact)

Implementation: 2024-25 Academic Year

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to add BME 4301 Biomedical Capstone - Design from the Margins

Motion: On behalf of the Department of Biomedical Engineering, the Committee on Academic Operation recommends, and I move that BME4301 Biomedical Capstone - Design from the Margins, as described below, be added.

Description of course to be added:

BME4301 Biomedical Capstone - Design from the Margins (Units: 1/3; Cat. I)

This course will explore open-ended problems at the intersections of engineering, biology, and social responsibility. This course challenges students to thoughtfully and consciously apply the engineering design process to develop innovative and accessible solutions for healthcare issues affecting marginalized communities. This course aims to empower students to become socially conscious engineers, equipped with the skills and knowledge to make a meaningful difference in the healthcare outcomes of marginalized communities. By the end of the course, students will have a deep understanding of the ethical and practical dimensions of engineering solutions in biomedical applications, particularly for those who are most vulnerable in society. This class can be counted toward the BME capstone design requirement.

Recommended Background: Proficiency in applying the engineering design process to open ended problems (BME 3300 or equivalent)

Rationale:

The purpose of this course is to provide Biomedical Engineering students with an alternative to meeting their capstone design requirement in their MQP (allowing a non-design based MQP) and to explore open ended problems at the intersections of engineering, biology, and social responsibility. In order to continue to meet ABET requirements while also expanding the potential scope of the MQP, students need an opportunity to meet the capstone design requirement set forth by ABET.

The rationale for this course lies in the urgent need to address healthcare disparities through the application of biomedical engineering principles, with a focus on the unique challenges faced by marginalized communities. By fostering a holistic understanding of the ethical, cultural, and social dimensions of engineering, the course aims to prepare students to contribute to a more equitable and accessible healthcare future.

This course aims to empower students to become socially conscious engineers, equipped with the skills and knowledge to make a meaningful difference in the healthcare outcomes of marginalized communities. By the end of the course, students will have a deep understanding of the ethical and practical dimensions of engineering solutions in biomedical applications, particularly for those who are most vulnerable in society.

Learning outcomes:

- To provide a comprehensive understanding of the engineering design process and its application in biomedical contexts using knowledge and skills acquired in previous course work.

- To incorporate appropriate engineering standards and multiple constraints in the design process.
- To explore the unique healthcare challenges faced by marginalized communities, including socioeconomic, cultural, and geographical factors.
- To encourage students to think critically about the ethical and social implications of engineering solutions in healthcare.
- To promote the development of innovative, sustainable, and culturally sensitive biomedical technologies for marginalized communities

Resources Needed:

- Instructor: Part of the regular teaching load for Prof. Zoe Reidinger
- Classroom: A classroom for 40 students
- Laboratory: The course will be taught in AK014
- Information Technology: SolidWorks Licenses for students
- Other: TA and PLA support for grading and student consultation

Implementation Date: The new course is expected to be implemented starting in the fall of the 2024-25 academic year.

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to add CH 3520 Fundamentals of Applying Mathematical Methods in Chemistry and Biochemistry

Motion: On behalf of the Department of Chemistry and Biochemistry, the Committee on Academic Operations recommends, and I move, that CH 3520 Fundamentals of Applying Mathematical Methods in Chemistry and Biochemistry, as described below, be added.

Description of course to be added:

CH 3520 Fundamentals of Applying Mathematical Methods in Chemistry and Biochemistry (Units: 1/3; Cat. II)

In this course, selected mathematical methods (such as group theory, Fourier transform, and integration techniques) are used to solve problems in chemistry and biochemistry. The emphasis is not on complete coverage of any specific traditional teaching subject, but rather on the ways each technique can be applied in more than one direction. The main focus is placed on problems relevant in such generally important areas as kinetics and spectroscopy.

Students who received credit for the experimental course CH352X are not eligible to receive credit for the permanent course CH 3520.

Recommended background: Chemical Thermodynamics and Calculus I – IV or equivalent courses.

Anticipated Instructor: Prof. George Kaminski

Rationale:

The original rationale for introducing CH 352X was as follows. Both chemistry and biochemistry research and chemistry and biochemistry classes require application of a variety of mathematical techniques, including integration, full and partial derivatives, Fourier transform, and group theory. The Department of Mathematical Sciences offers a number of relevant courses. However, these classes provide understanding of the mathematical methods as such and not an extensive training in applying them in chemistry and biochemistry. As a result, the training in applying the mathematical techniques to relevant problems had to be provided in courses taught by the CBC department and by the departmental faculty members serving as advisors to WPI students. We wanted to consolidate some of this training by offering one class that would bridge the gap between teaching of the fundamental mathematical techniques and actually applying them in chemical and biochemical research and advanced coursework. The proposed course was also viewed as potentially useful for students from other departments.

At this time, the course has been offered twice, in the D-terms of 2021 and 2023 as an experimental course CH 352X. See the Appendix to this motion for student response to the experimental offering of the course.

We believe that the deployment of this course has achieved its goal, therefore we would like to make it a regularly/permanently offered class.

Furthermore, we strongly believe that listing CH 352X as a regular CH 3520 course in the

undergraduate catalogue will attract a greater student enrollment, which will benefit the students, the Department, and the university as a whole.

Resources Needed: None.

Impact on Distribution Requirements and Other Courses: CH 352X, reclassified as CH 3520, will continue to be an option for fulfilling the CBC Department requirements in the Physical Chemistry sequence.

Implementation Date: The newly classified CH 3520 will be offered in AY 24-25 in D term and will continue to be offered every other year.

Contact: Professor George Kaminski (gkaminski@wpi.edu)

Appendix: Student Feedback on the Experimental Offerings of the Proposed Course

The course has been offered twice, in the D-terms of 2021 and 2023 as an experimental course CH 352X.

The responses from the students who took the class have been overwhelmingly positive. Here is one example, from an email:

<< I just wanted to reiterate what I said in my last email that I truly loved this course. ... I felt this class was a great capstone for both the general chem sequence and the calc I-IV sequence. ... I also loved how you included what I was working on in lab into the course. It made interpreting my cyclic voltammetry data more entertaining and thorough. >>

Additional student comments:

<< I really enjoyed the way this course was taught. It connected a lot of dots with past topics other professors kind of skimmed over and it gave me a whole new different appreciation for the math and theory behind certain topics. >>

<< This class was one of my favorites, very interesting topics covered. You definitely need a background in calculus before taking this course. The professor was prepared to teach each day and very helpful if questions needed to be asked. I liked the assignment set up: homeworks after each topic and exams that took the students' learning into consideration. The professor was very good at explaining new topics and briefly going over topics we should have known before coming into the class. I liked how math oriented the class was - a lot more than I expected. >>

<< the amount of knowledge and tools learned is definitely essential for whatever career in science one might be seeking. >>

<< it was fun, interesting, and challenged me to think about chemistry in a different way. >>

<< it's great to learn math stuff in the science way. >>

<< I liked the lecture and class format since it made it easier to follow along and the resources were recorded to go back and review information. I also like the context and examples used that relate the material to the real world which made the class more engaging. >>

<< I really liked the content of the class. It was very applicable to my other courses and future career in chemistry. It also connected topics from calculus and chemistry. >>

<< I thought this class was very practical. It was a great way to brush up on calculus skills I hadn't used in a while and learn new ways to use them in relation to my major. The organization of the class was very straightforward, and I always knew what was expected. Professor Kaminski explained things very clearly and always offered quick help when we needed it. >>

<< I would encourage any chemistry major take this course it was super important for my overall understanding of several courses I've taken here. The content was very interesting and Professor Kaminski is so nice. >>

<< Well organized, gives timely feedback, and approachable with questions. >>

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to modify the distribution requirements for the Innovation for Social Change concentration in the BS degree program in Business

Motion: On behalf of the Business Department, the Committee on Academic Operation recommends, and I move that the distribution requirements for the Innovation for Social Change concentration in the BS degree program in Business be modified, as described below.

Description of the Proposed Modifications:

Modifications are to be made to the Innovation for Social Change (ISC) section of the:

Summary Table
Business Concentration Courses 2023-24 (6/3 Units)
(2023-24 WPI Undergraduate Catalog, page 394)

Current ISC Concentration Distribution Requirements:

- Required (1):
 - ETR 2900 (Social Entrepreneurship)
- Select 3 from:
 - ETR 3633 (Entrepreneurial Selling)
 - ETR 3915 (Entrepreneurial Business Models)
 - ETR 4930 (Growing and Managing New Ventures)
- Select 2 from:
 - BUS 210X (WPI Means Business)
 - EN 2251 (Moral Issues in the Modern Novel)
 - ENV 2201 (Planning for Sustainable Communities)
 - ENV 2310 (Environmental Governance and Innovation)
 - ENV 2400 (Environmental Problems and Human Behavior)
 - ENV 2600 (Environmental Problems in the Developing World)
 - GOV 2311 (Environmental Policy and Law)
 - GOV 2312 (International Environmental Policy)
 - GOV 2319 (Global Environmental Politics)
 - HI 2341 (Contemporary World Issues in Historical Perspective)
 - HI 2403 (Governmental Decision Making and Administrative Law)
 - INTL 2100 (Approaches to Global Studies)
 - PSY 1402 (Social Psychology)
 - PY/RE 2731 (Ethics)
 - PY/RE 2732 (Suffering, Healing & Values)
 - SD 1510 (Introduction to System Dynamics Modeling)
 - SD 1520 (System dynamics Modeling)
 - SOC 1202 (Introduction to Sociology and Cultural Diversity)

Proposed ISC Concentration Distribution:

- Required (2):
 - ETR 2900 (Social Entrepreneurship)
 - OBC 4367 (Leadership, Ethics, and Social Responsibility)
- Select four (4) from the following list, with at least two (2) having an ETR prefix:
 - ETR 1100 (Engineering Innovation & Entrepreneurship)
 - ETR 2910/ECON 2910 (Economics and Entrepreneurship)
 - ETR 4930 (Growing and Managing New Ventures)
 - ENV 2201 (Planning for Sustainable Communities)
 - ENV 2310 (Environmental Governance and Innovation)
 - ENV 2400 (Environmental Problems and Human Behavior)
 - ENV 2600 (Environmental Problems in the Developing World)
 - GOV 2311 (Environmental Policy and Law)
 - GOV 2312 (International Environmental Policy)
 - GOV 2319 (Global Environmental Politics)

Rationale:

The Innovation for Social Change (ISC) concentration for the Business degree has been popular with students, especially those students interested in social change, social entrepreneurship, environmental studies, the non-profit sector, and B-corporations. However, some students and faculty felt that, in the previous program, there were too many courses from too many disciplines not relevant to this area. Additionally, several of the courses in the previous program are no longer being taught. To address these concerns, we have drawn on the faculty who do research in the fields of social change and entrepreneurship to propose a new and more focused set of courses for this concentration. It will provide students with the background they need and the flexibility they want in choosing the coursework for their concentration.

Resources Needed: No new resources are required.

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

Implementation Date: Academic year 2024-2025.

Contact: Prof. Adrienne Hall-Phillips

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to add a Learning Sciences and Education concentration to the Psychological Science Major

Motion: On behalf of the Department of Social Science & Policy Studies and the Psychological & Cognitive Sciences Program, the Committee on Academic Operations recommends and I move that a concentration in Learning Sciences and Education, as described below, be added.

Description of the Proposed Concentration:

Overview: The current distribution requirements for the Psychological Science Major (on pages 332-333 of the 2023-24 WPI Undergraduate Catalog) are as follows:

<u>Psychological Science Requirements</u>	<u>Minimum Units</u>
1. Psychological Science	4
2. Psych Science and/or Related Courses	4/3
3. Basic Science, CS, and/or Engineering	5/3
4. Mathematics	1
5. Electives	1
6. MQP	1

The proposed concentration in Learning Sciences and Education **described below** fits within the Distribution Requirements for the Psychological Science Major in the following manner:

- The concentration's 4/3 Psychological Science requirement will fit under the Psychological Science 4-unit (12/3) distribution requirement.
- The concentration's 2/3 Other Disciplines requirement will fit under the (4/3) Psych Science and Related Courses requirement and/or the 1 unit (3/3) of free electives.

Proposed Concentration in Learning Sciences and Education: The following concentration in Learning Sciences and Education will be added to the Psychological Science Major description (added on page 336 of the 2023-24 WPI Undergraduate Catalog):

Psychological Science Major with a Concentration in Learning Sciences and Education:

1. Psychological Science Majors who are interested in psychological approaches to understanding learning sciences and education from multiple perspectives can choose to complete a concentration in Learning Sciences and Education. To complete the concentration, students must complete 2 units of coursework from the approved list of courses related to the learning sciences, technology, and education.
2. All students completing this concentration will need to complete an MQP that relates to learning sciences and education.
3. 4/3 units should come from the Psychological Science catalog and may include:

PSY 1504: Strategies for Improving Cognitive Skills

PSY 2401: The Psychology of Education

PSY 2403: Cognitive Psychology
 PSY 2404: Developmental Psychology
 PSY 2406: Cross-Cultural Psychology: Human Behavior in Global Perspective
 PSY 2412: Mental Health
 PSY 4100: School Psychology
 PSY 4800: Special Topics in Psychological Science (Motivation Metacognition & Affect; Embodied Cognition; Creativity)
 PSY 501: Foundations of the Learning Sciences (grad)
 PSY 502: Learning Environments in Education (grad)
 PSY 504: Metacognition, Motivation, and Affect (grad)
 PSY 506: Learning and Creativity (grad)

4. 2/3 units should come from related courses from other disciplines and may include:

EDU 2200: Early Fieldwork in STEM Education (1/6)
 EDU 3200: Sheltered English Immersion
 EDU 2300: Teaching K-12 STEM in the Community (1/6)
 EDU 4100: Teaching Methods in Mathematics & Science
 PY/RE 2716: Gender, Race, and Class
 CS 3041: Human-Computer Interaction
 CS 4241: Introduction of Artificial Intelligence
 CS 4342: Machine Learning
 MIS 4741: User Experience and Design
 SOC 1500: The Sociology of Race

Rationale:

We propose to add a concentration in Learning Sciences and Education to the Psychological Science Major. Promoting high quality STEM teaching and learning (PreK-16) is a core tenet of the broader mission of our program, WPI, and the broader scientific and academic communities. Additionally, in recent years, we have seen an increase in the number of students interested in pursuing research projects, including IQPs and MQPs, focused on understanding and promoting learning sciences and STEM education. We have also seen an interest in the Learning Sciences and Teacher Preparation Programs at the undergraduate level, leading to the addition of the BS/MS program in Learning Sciences and Technologies. The new concentration will facilitate the progress of students interested in this BS/MS pathway. Thus, this concentration will help better meet the demand and needs of students interested in issues surrounding PreK-16 STEM education and situate our program within the current academic and scientific climate. This will also confer an advantage when seeking extramural funding that prioritizes educational opportunities.

Impact on Students: The concentration takes advantage of existing courses to create an opportunity for psychology majors interested in the learning sciences and education to gain recognition for their achievements.

Resources Needed: None

Implementation Date: 2024-2025 Academic Year

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to co-list BB 4260 Synthetic Biology as an added course BB 526

Motion: On behalf of the Biology and Biotechnology Department, the Committee on Graduate Studies and Research recommends, and I move that BB 4260 Synthetic Biology be cross listed with an added course BB 526 Synthetic Biology with the same and description as BB 4260.

Description of the Motion:

Proposed Course Title and Description:

BB 4260 Synthetic Biology (Units: 1/3)

BB 526 Synthetic Biology (2 credits)

Do we yet have the technology to engineer life? Can we control gene expression to create organisms that function in useful ways? Do we understand the tenets of genetic regulation as well as we think we do? These important questions and more are investigated by the emerging field of Synthetic Biology. In this course, students will explore this exciting new realm of biology through in-depth analysis and discussion of primary literature. Topics to be covered include the design and construction of synthetic gene circuits, synthesis of new genes and genomes, logic gate regulation of gene expression, and the latest applications of synthetic biology to advances in medicine, information processing, and the environment.

Rationale:

This course is relevant to our graduate curriculum and would be of interest to graduate students in BBT and related life science programs. Although graduate students are welcome to register for the 4000-level version of this course, workday filters to select 'graduate' curriculum exclude 4000 levels courses, leading students to believe that they are not eligible to take them. Co-locating this course as BB 526 will make it visible and accessible to its intended audiences in both our upper level undergraduate and graduate student populations.

Impact on Degree Requirements: none

Needed Resources: No additional resources are required.

Implementation Date: Implementation date for this action is the 2024-2025 academic year, fall semester.

Date: March 13, 2024
To: WPI Faculty
From: Committee on Graduate Studies and Research (Prof. Olson, Chair)
Re: Motion to co-list BB 4050 Cancer Biology as an added course BB 550

Motion: On behalf of the Biology and Biotechnology Department, the Committee on Graduate Studies and Research recommends, and I move that BB 4050 Cancer Biology be co-listed with an added course BB 526 Cancer Biology with the same and description as BB 4050.

Description of the Motion:

Proposed Course Title and Description:

BB 4050 Cancer Biology (Units: 1/3)

BB 550 Cancer Biology (2 credits)

In this course, students will learn and apply advanced cellular and molecular biology concepts to understand causes and consequences of cancer cell transformation. Through an integration of primary literature and lecture material students will explore how research into basic mechanisms of cancer biology is used to identify therapeutic targets and inform drug design. This course will cover discussion of the hallmarks of cancer including the deregulation of cell growth, cell death, and metabolism; corruption of genome stability; evasion of immune response; and metastatic potential. Students may not earn credit for both BB 4050 and BB 550.

Rationale:

This course is relevant to our graduate curriculum and would be of interest to graduate students in BBT and related life science programs. Although graduate students are welcome to register for the 4000-level version of this course, workday filters to select 'graduate' curriculum exclude 4000 levels courses, leading students to believe that they are not eligible to take them. Co-locating this course as BB 550 will make it visible and accessible to its intended audiences in both our upper level undergraduate and graduate student populations.

Impact on Degree Requirements: none

Resources and Anticipated Instructors: No additional resources are required.

Implementation Date: Implementation date for this action is the 2024-2025 academic year, fall semester.

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to modify course title and description of BB 590 Capstone Experience in Biology and Biotechnology

Motion: On behalf of the Biology and Biotechnology Department, the Committee on Graduate Studies and Research recommends, and I move that course name and description for BB 590 be modified, as described below.

Description of the Proposed Modifications:

Current Course Title and Description: (see page 388 of 2023-24 Graduate Catalog)

BB 590 Capstone Experience in Biology and Biotechnology (2 credits)

These classes will serve as integrative experiences for graduate students who are early in their doctoral training. The course will help students integrate concepts from other courses in the curriculum, practice skills of critical analysis, and evaluate and communicate scientific information effectively. The specific theme of each offering will center around a current topic of biological interest, and may include such areas as genomics, cancer, environmental problems, and synthetic biology. Topics will be announced prior to registration in the year preceding the course offering.

NOTE: Students may not earn credit for both BB 4900 and BB 590 that bear the same section number and course description.

Proposed Course Title and Description:

BB 590 Advanced Topics in Biology and Biotechnology (2 credits)

These classes will serve as integrative experiences for graduate students who are early in their doctoral training. The course will help students integrate concepts from other courses in the curriculum, practice skills of critical analysis, and evaluate and communicate scientific information effectively. The specific theme of each offering will center around a current topic of biological interest, and may include such areas as genomics, cancer, environmental problems, and synthetic biology.

NOTE: Students may not earn credit for both BB 4900 and BB 590 that bear the same course description.

Rationale:

This course is co-listed with BB 4900. The proposed changes to the course title and description reflect changes recently made to BB 4900.

Impact on Degree Requirements: none

Resources and Anticipated Instructors: No additional resources are required.

Implementation Date: Implementation date for this action is the 2024-2025 academic year, fall semester.

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to add RBE 535 Printable Robotics

Motion: On behalf of the Robotics Engineering Department, the Committee on Graduate Studies and Research recommends, and I move that RBE 535 Printable Robotics, as described below, be added.

Description of course to be added:

RBE 535: Printable Robotics (Term-based; Credits: 2)

This graduate-level course provides an in-depth examination of 3D printing technologies tailored for the creation of fluidically-driven robotic systems with a focus on design, fabrication, modeling, and control mechanisms. The curriculum encompasses a range of topics, such as fused deposition modeling using thermoplastic polyurethanes, advanced multi-material printing techniques, the engineering of impermeable material systems, and the design of fluidic actuators. The course also covers the fabrication of printable fluidic transistors, the integration of volatile and non-volatile memory elements, and the development of both combinational and sequential fluidic logic circuits, including fluidic state machines. Instruction in COMSOL multi-physics simulation will equip students to correlate empirical observations with numerical data. The course structure includes weekly lectures complemented by hands-on laboratory assignments, where student groups will gain practical experience using cost-effective FDM printers. The course is particularly well-suited for students seeking to deepen their understanding of 3D printing, those interested in constructing their own robotic systems, or individuals aiming to conduct research in the fields of soft robotics, robotic materials, or printable robotics.

Prerequisites: None

Expected enrollment: 30 students

Intended audience: Graduate students in Robotics Engineering, Mechanical and Materials Engineering, Electrical and Computer Engineering

Anticipated Instructor: Prof. Markus Nemitz

Rationale:

3D printing has proven its societal impact, notably during the COVID-19 pandemic by rapidly addressing medical equipment shortages. The technology is especially resilient against supply chain disruptions, making it increasingly vital in today's world. This course extends the utility of 3D printing to robotics, democratizing the field by enabling remote design and deployment via digital files. The focus is on creating robots that can "walk off the print bed," opening avenues for education, emergency response, and specialized applications. Given these transformative potentials, the course is a timely addition to the permanent curriculum, preparing students for a future where 3D printing and robotics converge for societal benefits.

This course complements and extends the existing academic offering of the RBE department. Among existing courses, the most closely related is RBE 530 (Soft Robotics). RBE530 primarily concentrates on the exploration of soft robotic actuators. While both Soft Robotics and Printable

Robotics delve into the realm of robotic actuators, their focal points diverge significantly. Soft Robotics emphasizes the material compliance as a safety mechanism for human interaction and delicate systems. In contrast, Printable Robotics is centered on the utilization of additive manufacturing techniques to create sensors, actuators, and control circuits. The ultimate goal of Printable Robotics is to develop robots capable of autonomously walking off the print bed post-manufacturing. *Printable Robotics* has been designed assuming that students have no prior knowledge of Soft Robotics, therefore RBE530 will not be a prerequisite.

The proposed course was previously offered by Prof. Nemitz in B-term 2021 and A-term 2023 **as a special topics RBE course entitled “Robotic Materials”**. Course enrollments and evaluations are listed below:

- [B-term 2021], enrollment: 15
Average student course evaluation: 4.42/5; Average instructor evaluation: 4.67/5
- [A-term 2023], enrollment: 13
Average student course evaluation: 4.8/5; Average instructor evaluation: 4.9/5

The course is now being re-titled “Printable Robotics” and its scope is being expanded to attract a broader audience of students. A tentative outline of topics to be covered is provided in the additional information below.

Impact on Degree Requirements: None.

Resources Needed and Anticipated Instructors: This course is included in the regular teaching load of Prof. Markus Nemitz. A classroom with a capacity of 30 seats, a projector, and screen capture is required. A laboratory that can house up to six 3D printers is required; the printers will be supplied by Prof. Nemitz.

Implementation Date: Implementation date for this action is the 2024-2025 academic year.

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to add RBE 544 Imaging for Medical Robotics

Motion: On behalf of the Robotics Engineering Department, the Committee on Graduate Studies and Research recommends, and I move that RBE 544 Imaging for Medical Robotics, as described below, be added.

Description of course to be added:

RBE 544: Imaging for Medical Robotics (Term-based; Credits: 2)

This course aims to introduce the physical principles behind modern medical imaging, including radiography, X-ray computed tomography, nuclear medicine, ultrasound imaging, and magnetic resonance imaging, and their adaptation for image-guided interventions. In robotics, vision and perception play a crucial role, but the optical camera provides only surface information, which limits its usefulness in medical robotics for surgical guidance and diagnosis. To perceive the structural and functional information inside the body, medical imaging is a critical component. Topics include mathematical and physical foundations of each modality, including their interactions with biological tissue. Additionally, the course will present advanced imaging solutions that combine with robotic instrumentation to enable robotic-assisted imaging and image-guided robotic interventions. In the team project, students will tackle real clinical challenges using novel imaging and instrumentation methods.

Recommended Background: Linear algebra, Basic skills in programming

Expected enrollment: 30 students

Intended audience: Graduate students in Robotics Engineering, Mechanical and Materials Engineering, Computer Science, and Biomedical Engineering

Anticipated Instructor: Prof. Haichong Zhang

Rationale:

Medical imaging is a critical component for robots to obtain structural and functional information within the body. The class covers radiography, X-ray computed tomography, nuclear medicine, ultrasound imaging, and magnetic resonance imaging, which are used for image-guided interventions. This course is expected to align well with other medical robotics courses offered at RBE. Students may take “Biomedical Robotics” and/or “Continuous Robotics” before or after, giving introductory information to be deepened in other medical robotics courses or complement the understanding of imaging foundations. The introduction of this course will provide students of the RBE MS program with a new depth option for their degree, especially in the medical robotics track. This course will also provide foundational knowledge to doctoral students interested in image-guided medical robotics research.

The proposed course was previously offered by Prof. Zhang in 2020 and 2022 **as a special topics RBE course entitled “Medical Imaging and Robotic Instrumentation.”** Course enrollments and evaluations are listed below:

- D term 2020, enrollment: 7 (Responses: 7)

Average student course evaluation: 4.4/5; Average instructor evaluation: 4.4/5

- C term 2022, enrollment: 11 (Responses: 8)

Average student course evaluation: 4.6/5; Average instructor evaluation: 4.8/5

The course is now being re-titled “Imaging for Medical Robotics” and its scope is being clarified to attract a targeted audience of students, who are interested in medical robotics. A tentative outline of topics to be covered is provided in the additional information below.

This course complements and extends the existing academic offering of the RBE department. Among existing courses, the most closely related is RBE 580 (Biomedical Robotics), whose main focus is on the study of techniques and materials to create robotic systems. Medical imaging is a core enabling element. Learning medical imaging provides the necessary knowledge and skills to understand the principles and applications of medical imaging technologies, particularly in medical robotics. In addition, medical imaging involves processing and analyzing large volumes of medical images, which requires specialized software and algorithms. Learning medical imaging provides the necessary skills to extract useful information for developing and testing robotic systems. *Imaging for Medical Robotics* has been designed assuming that students have no prior knowledge of medical imaging or medical robotics.

Impact on Degree Requirements: None.

Resources and Anticipated Instructors: This course is included in the regular teaching load of Prof. Haichong Zhang. A classroom with a capacity of 30 seats, a projector, and screen capture is required.

Implementation Date: Implementation date for this action is the 2024-2025 academic year.

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to modify the Engineering Context requirement for the RBE MS degree program

Motion: On behalf of the Robotics Engineering Department, the Committee on Graduate Studies and Research recommends, and I move that WR 513 Ethical Impact and Communication in Robotics and AI Research be added to the list of courses satisfying the Engineering Context requirement for the RBE MS degree, as described below.

Description of the Proposed Modifications:

Current list of courses satisfying the Engineering Context requirement for the RBE MS degree (see page 74 of the 2023-2024 WPI Graduate Catalog):

2. Engineering Context (3 credits):

3 credits hours selected from the following courses or any SYS course at the 500 level or above:

Item #	Title	Credits
ETR 500	Entrepreneurship and Innovation	3
ETR 593	Technology Commercialization	3
MIS 576	Project Management	3
OBC 506	Leadership	3
BUS 546	Managing Technological Innovation	3

Proposed list of courses satisfying the Engineering Context requirement for the RBE MS degree (with added text highlighted in yellow):

2. Engineering Context (3 credits):

3 credits hours selected from the following courses or any SYS course at the 500 level or above:

Item #	Title	Credits
ETR 500	Entrepreneurship and Innovation	3
ETR 593	Technology Commercialization	3
MIS 576	Project Management	3
OBC 506	Leadership	3
BUS 546	Managing Technological Innovation	3
WR 513	Ethical Impact and Communication in Robotics and AI Research	3

Rationale

The description of the added course is as follows:

WR 513 - Ethical Impact and Communication in Robotics and AI Research

Engineers and other technologists are increasingly more aware of the ethical, legal, and social impacts of robotics and artificial intelligence. Some of them actively contribute to the creation and communication of new sets of ethical standards, such as the work done by IEEE's Global Initiative on Ethics of Autonomous and Intelligent Systems. What are the ethical principles that underpin these new standards? Since robots and AI systems are designed to work with or alongside humans, do people have a right to understand what autonomous systems are doing and why? How can roboticists and AI designers ensure that these systems are transparent and explainable? This course focuses on the communication of ethical and social impacts of scientific research and technology development. After learning about major

debates in robot/AI/data ethics, students will cultivate skills to (1) conceptualize ethical inquiries in technology design and (2) articulate them in writing and other forms of scholarly communication. As part of this course, students will learn to apply the National Science Foundation's (NSF) broader impacts framework to their writing projects (dissertation, thesis, journal publication, grant application, etc.)

The course was developed within the scope of the FORWARD NRT program. It provides an important basis for the leadership skills of our graduate students and a great opportunity for them to discuss the social impacts of robotics. It is crucial for the future leaders in robotics to be well-versed in the topics discussed in this course. Adding this course to the engineering context requirements will help students integrate this course to their graduate study plan.

Impact on Degree Requirements: As addressed above, this course will allow an additional course to satisfy the Engineering Context requirement.

Resources and Anticipated Instructors: No additional resources are required.

Implementation Date: Implementation date for this action is the 2024-2025 academic year.

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to add BUS 692 Teaching Practicum

Motion: On behalf of the Business School, the Committee on Graduate Studies and Research recommends, and I move that BUS 692 Teaching Practicum, as described below, be added.

Description of course to be added:

BUS 692 Teaching Practicum (Term-based; Credits: 1-3)

The objective of the teaching practicum is to provide students with practical teaching exposure within an actual classroom environment. This practicum requires students to closely collaborate with a faculty member to observe teaching methodologies and gain practical teaching exposure. The configuration of experiences and the scope of supervisory duties will be determined by the student and the advisor. Given WBS's mentorship-based doctoral program, this practicum is typically completed as an independent study under the supervision of the PhD student's advisor. During these practica, students are guided and assessed by their faculty supervisors. The nature of students' practicum experiences will differ, spanning factors such as the degree of focus on actual teaching sessions, the creation of course materials (e.g., syllabi, assignments, and discussions, etc.), grading assignments, as well as engaging in curriculum evaluation and planning. Enrollment in this course is not a teaching assistant assignment.

Rationale:

Numerous doctoral candidates opt for teaching within higher education or pursue professional roles in various industries upon completing their PhDs. Proficiency in teaching is invaluable for leadership roles involving effective communication, presentations, supervision, evaluation, training, and mentoring. Given WBS's mentorship-based doctoral program, it is important that our PhD program incorporates a teaching preparation element, i.e., a teaching practicum, by students registering as an Independent Study typically under their PhD supervisors. This practicum involves closely collaborating with a faculty member to observe teaching methodologies and gain practical teaching exposure. The configuration of experiences and the scope of supervisory duties will be determined by the student and the advisor.

Impact on Degree Requirements: NA

Resources and Anticipated Instructors: BUS 692 is essentially an independent study that will be advised typically by the students' PhD advisors.

Implementation Date: 2024-2025 academic year.

Date: March 13, 2024
To: WPI Faculty
From: Committee on Graduate Studies and Research (Prof. Olson, Chair)
Re: Motion to modify the requirements for the B.S./M.S. program in Management

Motion: On behalf of the Business School, the Committee on Graduate Studies and Research recommends, and I move that the requirements for the B.S./M.S. program in Management (MSMG) be modified, as described below.

Description of the Proposed Modifications:

Current Eight (8) Required Core Courses in the B.S./M.S. in Management (MSMG):
(See page 161 of the 2023-24 WPI Graduate Catalog)

Required Core Courses (8 courses)

Item #	Title	Credits
BUS 500	Business Law, Ethics and Social Responsibility	3
ETR 593	Technology Commercialization	3
FIN 500	Financial Management	3
MIS 584	Business Intelligence	3
MKT 500	Marketing Strategy	3
OBC 505	Teaming and Organizing for Innovation	3
OBC 506	Leadership	3
OIE 501	Operations Management	3

Proposed Modifications to the Eight (8) Required Core Courses in the B.S./M.S. in Management:

(With text to be deleted ~~struck through~~, and text to be added highlighted in **yellow**.):

In the table (above) of required core courses in the B.S./M.S. in Management, two modifications will be made:

Line 2: ~~ETR 593 Technology Commercialization~~ **ETR 500 Entrepreneurship OR ETR 593 Technology Commercialization**

Line 7: ~~OBC 506 Leadership~~ **BUS 546 Managing Technological Innovation**

Rationale:

These course changes are done keeping in mind the career needs of MSMG students, WPI BS/MS students from STEM majors.

Impact on Degree Requirements: None.

Resources Needed and Anticipated Instructors: No additional resources are needed.

Implementation Date: The implementation date for this action is the 2024-25 academic year.

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to add CE 550: Community and Environmental Analysis

Motion: On behalf of the Department of Civil, Environmental, and Architectural Engineering, the Committee on Graduate Studies and Research recommends, and I move that CE 550: Community and Environmental Analysis, as described below, be added.

Description of course to be added:

CE 550: Community and Environmental Analysis (Credits: 2)

This course provides background in the analysis of communities and the natural environment to support students conducting research in community resilience and adaptation. A breadth of topics range between assessing aspects of the environment that constrain development to exploring forms of community governance that enable planning for future resilience. Students work in teams to study the governing mechanisms and planning-related data associated with their Community Climate Adaptation (CCA) Program research. Introductory training in Geographic Information Systems (GIS) is also included. Students may not receive credit for this course if they have previously received credit for CE 3070 or CE 3074.

Rationale

This course was developed to provide background in community planning and environmental analysis for students enrolled in the interdisciplinary Community Climate Adaptation (CCA) Program. With the continued growth of the CCA program, there is a need to have a permanent course listing and description in the graduate catalog.

The course has been offered three times as a Special Topics course, CE 590: Community and Environmental Planning, in B-Terms 2021, 2022, and 2023. Enrollments increased from 2 in 2021, to 4 in 2022, and 7 in 2023. Course evaluations from B23 were favorable (Q2 rating = 5). No course evaluations were completed in the prior, low-enrollment years.

Resources Needed: There are no changes to resource requirements.

Impact on Distribution Requirements and Other Courses: There are no impacts to other courses or change distribution requirements.

Implementation Date: Academic Year 2024-2025

Contact: Suzanne LePage

Date: March 13, 2024

To: WPI Faculty

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

Re: Motion to replace the minor requirement for the Ph.D.-60 program in ECE

Motion: On behalf of the Electrical and Computer Engineering Department, the Committee on Graduate Studies and Research recommends, and I move that the minor requirement for the Ph.D.-60 program be replaced, as described below.

Description of the Proposed Modifications:

Current Graduate Catalog Description:

(On page 47 of the 2023-24 WPI Graduate Catalog)

Students must complete 60 or more credits of graduate work beyond the credit required for the Master of Science degree in Electrical and Computer Engineering. Of the 60 credits, at least 30 credits must be research registered under the designation ECE 699. The doctoral student must also establish two minors in fields outside of electrical engineering. Physics, mathematics and/or computer science are usually recommended. Each student selects the minors in consultation with their Research Advisor. At least 6 credits of graduate work is required in each minor area.

Proposed Graduate Catalog Description:

(with text to be deleted ~~struck through~~, and text to be added highlighted in yellow)

Students must complete 60 or more credits of graduate work beyond the credit required for the Master of Science degree in Electrical and Computer Engineering. Of the 60 credits, at least 30 credits must be research registered under the designation ECE 699. The doctoral student must ~~also~~ establish two minors in fields outside of electrical engineering. Physics, mathematics and/or computer science are usually recommended. Each student selects the minors in consultation with their Research Advisor. At least 6 credits of graduate work is required in each minor area. complete at least 6 credits in ECE graduate-level courses. The doctoral student must also complete at least 6 credits in out-of-department electives, which must not include courses cross-listed with ECE. Each student selects the ECE courses and the out-of-department electives in consultation with the student's Research Advisor.

Rationale:

This change was approved by ECE faculty vote on 13 December 2023.

Background: Several factors motivate this motion.

- The use of minors is uncommon in current graduate-level WPI engineering programs. Most departments on campus work with a combination of core courses and electives, and only one other engineering department has a minor-area requirement (Table 1).
- The current formulation of the minor requirement for ECE ('Physics, mathematics, and/or computer science') no longer matches the reality of the cross-disciplinary programs that have emerged on campus, including for example machine learning, systems engineering, data science, and robotics. Further, the ECE department has recently developed several new courses, that often contribute to these cross-disciplinary programs.

Allowing ECE students to take coursework from both inside and outside of the department will enable students to fully participate in these cross-disciplinary programs. Indeed, forcing students to exclusively take courses that are not cross-listed with ECE greatly reduces their participation in the novel graduate courses developed within the ECE department. Therefore, the ECE graduate program would like to adopt the core-course + elective-course strategy adopted by many other departments on campus.

Table 1: Ph.D. Course Requirements Across WPI departments

DEPARTMENT	PHD 60 COURSE CREDITS	SPECIFIC COURSEWORK REQUIREMENTS FOR PHD 60
RBE	30	1 course Management + 1 course Systems Engineering
DS	30	7 core courses (CS/DS/MA/MIS) + 3 electives (from a list of 74)
CS	30	6 core courses (CS) + 6 electives
CHE	30	4 core courses (CHE) + 3 electives
CE	30	3 courses in a minor area
ME	30	12 core courses (ME)
ECE (current)	30	4 courses in two minor (non-ECE) areas
ECE (proposed)	30	2 core courses in ECE + 2 courses in a non-ECE area

Implementation Date: 2024-2025 Academic Year.