

**Worcester Polytechnic Institute
Committee on Academic Operations
Annual Report 2021-2022**

Membership:

Elected Members: D. Cote (ME, Spring Secretary), M. Ephraim (HUA), J. Srinivasan (BBT), L. Elgert (IGS), P. Musacchio (CBC, Fall Secretary), L. Titova (PH, Chair).

Ex-Officio: S. Miles (Registrar), A. Gericke (CBC, Associate Dean of Undergraduate Studies)

Resource Persons: P. Reilly (Assistant Dean of Student Success), K. McAdams (Director, Academic Programs).

Student Representatives: E. Eroglu, G. Rios

The committee had 19 regular meetings, and two Interim Committee Meetings during the Summer 2021 and Winter 2022 term breaks, during which the following business was conducted.

1. Petitions

The committee reviewed a total of 25 petitions, including 8 during the academic year and 17 over the summer. The petitions, which included requests for readmission after suspension, waiver of suspension, return to full time status, late declaration of a minor, are summarized in the following table

Petitions	Summer 2021				2021/22 Academic Year		
	Number	Approved	Tabled for missing items	Denied	Number	Approved	Denied
Waiver of Suspension	6	2	1	3	6	6	
Readmission after suspension	6	4	1	1	1	1	
PT to FT after return from suspension	1	1		0			
Late Minor	1	1		0			
Waive Probation	2	0		0			
Waive Warning	1	0		1			
Total	17				7		

2. Discussions and Miscellaneous Items

- In light of community losses, the committee discussed the need for a policy for posthumous or in memoriam degrees. Motions for awarding of posthumous degrees to Lorenzo DeSimone, Jeffrey Wu and Liam “Jyn” Godin were approved.
- In September 2021, CAO invited A. Palumbo (AVP for Enrollment Management, the Dean of

- Admissions and Financial Aid) to discuss the factors that contributed to the larger than anticipated enrollment size of the Class of 2025, and specifically, the role that COVID-19 pandemic and WPI's test-blind admissions policy played in this outcome. AVP Palumbo reported that COVID pandemic made it difficult for universities across the country to correctly estimate the 'summer melt', or the number of students who have been accepted by WPI but fail to matriculate. Impacts of test-blind policy or no application fees will be seen incrementally over time.
- CAO recommended early sharing of information regarding projected class size with departments to ensure they have time to react to changes in the class size. In May 2022, AVP Palumbo reported that the operational emails were regularly sent to departments preparing for the incoming class of 2026. He has also shared the preliminary data on class size and waitlist activities that was made available to Academic Affairs and departments, with CAO Chair.
- CAO provided feedback on academic calendar change for B 2021 as requested by Dean Heinricher.
- Upon request from Operational Core Group, CAO provided input regarding academic operations in emergency situations. CAO recommended that faculty specify plans on handling class meetings and assignments on storm or other emergency closure days in syllabi. CAO also recommended implementing asynchronous ways for students to complete missed work and flexibility with deadlines.

3. Regular Business

A. Distribution Requirement Changes Approved by CAO and the WPI Faculty

Aerospace Engineering

- Revised Aerospace Engineering Major requirements (CAO 01/21/2022, the WPI Faculty 02/17/2022)

Actuarial Mathematics

- Revised the Computer Science requirement for Actuarial Mathematics Major (CAO 01/21/2022, the WPI Faculty 02/17/2022)

School of Business

- Revised the requirements for Management Engineering Major (CAO 03/25/2022, the WPI Faculty 04/14/2022)
- Revised Economics requirements for Business (BU), Management Engineering (MGE), and Management Information Systems (MIS) Majors (CAO 03/25/2022, the WPI Faculty 04/14/2022)

Data Science

- Revised Data Science Minor requirements (CAO 01/21/2022, the WPI Faculty 02/17/2022)

- Added MA 4222: *Top Algorithms in Applied Mathematics* as a disciplinary elective for Data Science major (CAO 01/14/2022, the WPI faculty 2/17/2022)

Mathematical Sciences

- Revised the Computer Science requirement for Mathematical Sciences Major (CAO 01/21/2022, the WPI Faculty 02/17/2022)

Social Science & Policy Studies

- Revised catalog description for Minors in Social Science (CAO 4/25/2022, the WPI Faculty 05/10/2022)

B. Additions or Deletions of Majors, Minors, and Concentrations Approved by CAO (including individually designed minors) and approved by the WPI Faculty

School of Business

- Changed concentrations within the MGE (Management Engineering) major to remove Chemistry and Operations Management and add Industrial Engineering and Information Technology (CAO 03/25/2022, the WPI Faculty 04/14/2022).

Social Science & Policy Studies

- Introduced a Minor in Psychological Science (CAO 4/25/2022, the WPI Faculty 05/10/2022)

C. Experimental Courses Approved by CAO

Biology and Biotechnology

- *BB 294X: Ecology, Behavior and Environmental History* (09/21/2021)

Interactive Media & Game Development (IMGD)

- *IMGD 444X: Advanced Topics in Interactive Media, Production* (04/01/2022)
- *IMGD/TH 341X: Sound Design and Foley* (cross-listed with HUA, 04/01/2022)

Chemistry and Biochemistry

- *CH 100X: Exploring Chemistry Majors* (11/11/2021)

Computer Science

- CS 480X: *Data Visualization*. Additional offering as an experimental course approved (08/31/2021)

Electrical and Computer Engineering

- ECE 340X: *Foundations and Trends in Machine Learning for Engineering* (02/25/2022)
- ECE 490X: *CMOS Fundamentals* (04/01/2022)

Humanities and Arts

- HU 140X: *Introduction to Africana Studies* (09/07/2021)
- TH 340X: *Lighting Design* (09/07/2021)
- WR/EN 241X *Screenwriting* (01/14/2022)
- TH 111X: *Fundamentals of Theater Design*. Additional offering as an experimental course approved (02/04/2022)
- TH 320X: *Scenic Design and Fabrication*. Additional offering as an experimental course approved (01/21/2022)
- TH 360X: *Stage Management* (01/28/2022)
- TH 323X: *Dramaturgy* (01/28/2022)

Mathematical Sciences

- MA 103X: *Theoretical Calculus II* (11/11/2021) – one offering approved in summer 2022, before course becomes permanent as MA1032
- MA 321X: *Introduction to Actuarial Ratemaking* (03/18/2022)
- MA 322X: *Actuarial Estimation of Unpaid Claims* (03/18/2022)
- MA 464X: *Introduction to Time Series Analysis* (04/01/2022)

Physics

- PH 115X: *Introductory Physics of Living Systems*. Additional offering as an experimental course approved (11/01/2021)
- PH444X: *Quantum Optics Laboratory* (02/25/2022)
- PH352X: *Particle Physics* (04/25/2022)

Robotic Engineering

- RBE 470X: *Artificial Intelligence for Robotics* (09/21/2021)
- RBE 460X: *Human Factors and Human-Robot Interfaces*(09/21/2021)

Social Science and Policy Studies

- GOV 210X: *Engineering and Public Policy 1* (01/21/2022)
- DEV 300X: *Africa and Globalization: Roots and Routes* (03/04/2022)
- SOC 210X: *Swing in Society: How Music and Art Shape Us* (03/04/2022)
- STS 200X: *Plants and Human Affairs* (03/25/2022)
- ECON 220X: *Ecological Systems and Economic Policy* (03/25/2022)
- DEV 210X: *The Elusive Triangle in Sub-Saharan Africa: Economics, Politics, and Peace* (03/25/2022)
- SS 100X: *The Grand Challenges and the Social Sciences* (03/25/2022)

A. Course Changes Approved by CAO (and approved by the WPI Faculty)

Aerospace Engineering

Changed course numbers and names (CAO 01//2022, the WPI Faculty 02/17/2022)

- *AE 3602: Incompressible Fluid Dynamics to AE 2110: Introduction to Incompressible Fluid Dynamics*
- *AE 3410: Compressible Fluid Dynamics to AE 3110: Fundamentals of Compressible Fluid Dynamics*
- *AE 3711: Aerodynamics to AE 3120: Fundamentals of Aerodynamics Propulsion and Energy*
- *AE 4711: Fundamentals of Air-breathing Propulsion to AE 4210: Fundamentals of Air-breathing Propulsion*
- *AE 4719: Rocket Propulsion to AE 4220: Fundamentals of Rocket Propulsion*
- *AE 2713: Astronautics to AE 2320: Introduction to Orbital Mechanics*
- *AE 3713: Introduction to Aerospace Control Systems to AE 2310: Introduction to Aerospace Control Systems*
- *AE 4733: Guidance, Navigation, and Communication to AE 3310: Fundamentals of Navigation and Communication*
- *AE 4723: Aircraft Dynamics and Control to AE 4310: Fundamentals of Aircraft Dynamics and Control*
- *AE 4713: Spacecraft Dynamics and Control to AE 4320: Fundamentals of Spacecraft Dynamics and Control*
- *AE 2712: Introduction to Aerospace Structures to AE 2410: Introduction to Aerospace Structures*
- *AE 3712: Aerospace Structures to AE 3420: Fundamentals of Aerospace Structures*
- *AE 4717: Fundamental of Composites to AE 3430: Fundamentals of Composite Materials*
- *AE 4712: Structural Dynamics to AE 4410: Fundamentals of Structural Dynamics*
- *AE 4770: Aircraft Design to AE 4510: Aircraft Design*
- *AE 4771: Spacecraft and Mission Design to AE 4520: Spacecraft and Mission Design*

Air Force Aerospace Studies (AFROTC)

Changed course numbers (CAO 03/04/2022, the WPI Faculty 03/17/2022)

- *AS 4101: National Security/Commissioning Preparation I to AS 4001: National Security/Commissioning Preparation I*
- *AS 4102: National Security/Commissioning Preparation II to AS 4002: National Security/Commissioning Preparation II*
- *AS 4103: National Security/Commissioning Preparation III to AS 4003: National Security/Commissioning Preparation III*
- *AS 4104: National Security/Commissioning Preparation IV to AS 4004: National Security/Commissioning Preparation IV*

Biology and Biotechnology

- Suspended *BB 3525: Plant Physiology* for one year (11/12/2011)

Civil, Environmental and Architectural Engineering

- Updated the course description for *CE 4060: Environmental Engineering Laboratory* (CAO 01/14/2022, the WPI faculty 2/17/2022)

Electrical and Computer Engineering

- Changed course title, description and offering schedule for *ECE 3500: Introduction to Contemporary Electrical Power Systems*. New title *ECE 3500: Electrical Power and Renewable Energy Systems* (CAO 11/12/2021, the WPI faculty 12/02/2021).
- Changed course title, description and offering schedule for *ECE 3501: Electrical Energy conversion*. New Title *ECE 3501: Electromechanical Energy Systems* (CAO 11/12/2021, the WPI faculty 12/02/2021).
- Changed course title, description and offering schedule for *ECE 4503: Power Electronics*. New title: *ECE 4503: Power Electronics and Power Management* (CAO 11/12/2021, the WPI faculty 12/02/2021).

School of Business

Changed the course prefixes, titles, and/or descriptions for several business (BUS) department courses (CAO 03/25/2022, the WPI faculty 04/14/2022, to be implemented in AY 2023/24):

- *BUS 1010 Leadership Practice* to *OBC 1010 Leadership Practice*
- *BUS 2060 Financial Statements for Decision Making* to *ACC 2060 Financial Statements for Decision Making*
- *BUS 3020 Achieving Effective Operations* to *OIE 3020 Achieving Effective Operations*
- *BUS 2070 Risk Analysis for Decision Making* to *FIN 2070 Fundamentals of Finance*
- *BUS 3010 Creating Value Through Innovation* to *BUS 3010 Creating Value Through Innovation*
- *BUS 4030 Achieving Strategic Effectiveness* to *MKT 4030 Achieving Strategic Effectiveness*

Changed the course titles, and/or descriptions for two business (BUS) department courses (CAO 03/25/2022, the WPI faculty 04/14/2022):

- *FIN 3300 Finance, Risk Analytics & Technology* to *FIN 3300 Finance & Technology*
- *OIE 3420 Quality Planning, Design and Control* (*revised description*)

Humanities and Arts

- Added *INTL 2320: Environmental Justice in the Global Caribbean and Latin America* (CAO 11/19/2021, the WPI faculty 12/02/2021)

- Changed course number *HU 1412: Introduction to Asia* to *INTL 1200: Introduction to Asia* (CAO 11/19/2021, the WPI faculty 12/02/2021)
- Changed course number *HU 2340: Popular Culture and Social Change in Asia* to *INTL 2210: Popular Culture and Social Change in Asia* (CAO 11/19/2021, the WPI faculty 12/02/2021)
- Added *HI 2345: Welcome to Paradise: The U.S. and the Caribbean* (CAO 11/19/2021, the WPI faculty 12/02/2021)
- Added *HU 2901: Topics in Sexuality and LGBTQ+ Studies* (CAO 11/19/2021, the WPI faculty 04/14/2022)
- Revised course description for *HI 1313: The US and the World* (CAO 11/19/2021, the WPI faculty 12/02/2021)
- Added *MU 2640: African Drumming Ensemble* (CAO 01/14/2022, the WPI faculty 02/17/2022)
- Added *MU 2641: Percussion Ensemble* (CAO 01/14/2022, the WPI faculty 02/17/2022)
- Changed course number *MU 2510: Music in the Time of Conflict* to *MU 3510: Music in the time of conflict* (CAO 01/28/2022, the WPI faculty 02/17/2022)
- Changed course number *MU 2730: Jazz Theory* to *MU 3730: Jazz Theory* (CAO 01/28/2022, the WPI faculty 02/17/2022)
- Added *RE 3723: Religion, Gender, and Sexuality* (CAO 01/28/2022, the WPI faculty 02/17/2022)
- Removed *PY/RE 2731: Suffering, Healing, Values* (CAO 02/04/2022, the WPI faculty 02/17/2022)
- Changed course number and description *MU 2634: Jazz Ensemble* to *MU 2643: Jazz Ensemble* (CAO 03/18/2022, the WPI faculty 04/14/2022)
- Added *MU 2642: Jazz Combo* (CAO 03/18/2022, the WPI faculty 04/14/2022)
- Changed course number and description *MU 2635: Stage Band* to *MU 2644: Stage Band* (CAO 03/18/2022, the WPI faculty 04/14/2022)

Interactive Media and Game Design

- Removed *IMGD 2001: Philosophy and Ethics of Computer Games* (CAO 11/12/2021, the WPI faculty 12/02/2021)

Mathematical Sciences

- Re-listed *MA1032: Theoretical Calculus II* (CAO 10/12/2021, the WPI faculty 12/02/2021)
- Changed *MA 4213: Loss Models 1, Risk Theory* from Category I to Category II (CAO 03/18/2022)
Changed *MA 4214: Loss Models 2, Survival Models* from Category I courses to Category II (CAO 03/18/2022)

Mechanical engineering

- Added *ME 4503: Computational Biomechanics*, as a cross-listed course with existing *BME 4503: Computational Biomechanics* (CAO 11/12/2021, the WPI faculty 12/02/2021)

Physical Education and Recreation and Athletics (PERA)

- Renamed the WPI Physical Education Graduation Requirement to be Wellness and Physical Education Graduation Requirement (CAO 03/25/2022, the WPI Faculty 04/14/2022)
- Created WPE designation as a designation for Wellness and Physical Education Graduation Requirement, and changed the prefixes of all existing courses PE courses to WPE prefix

(CAO 03/25/2022, the WPI Faculty 04/14/2022, to be implemented in AY 2023/24)

- Added club sports to be list of club sports recognized for academic credit (CAO 03/25/2022, the WPI Faculty 04/14/2022):

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

Physics

- Added *PH 1150: Introductory Physics of Living Systems* (CAO 11/19/2021, the WPI faculty 12/02/2021)

Robotics Engineering

- Revised course description for *RBE 3001: Unified Robotics III* (CAO 02/04/2022, the WPI faculty 02/17/2022)

Social Science and Policy Studies

- Removed *GOV 2318: Comparative Healthcare: Policy, Politics, and Advocacy* (CAO 10/12/2021, the WPI faculty 12/02/2021)