#### 1

# BIOMEDICAL ENGINEERING: ACCELERATED PROGRAM, MS

This is a course-based named option within the Biomedical Engineering MS (http://guide.wisc.edu/graduate/biomedical-engineering/biomedical-engineering-ms/#text).

The Accelerated Program named option in the Biomedical Engineering MS is a non-thesis program with coursework focused on engineering and science to afford further preparation and training for students interested in careers in industry or pursuing advanced academic degrees.

### **ADMISSIONS**

### **ADMISSIONS**

Required

Please consult the table below for key information about this degree program's admissions requirements. The program may have more detailed admissions requirements, which can be found below the table or on the program's website.

Graduate admissions is a two-step process between academic programs and the Graduate School. *Applicants must meet* the minimum requirements (https://grad.wisc.edu/apply/requirements/) of the *Graduate School as well as the program(s)*. Once you have researched the graduate program(s) you are interested in, apply online (https://grad.wisc.edu/apply/).

Requirements	Detail
Fall Deadline	December 15
Spring Deadline	September 1 for international applicants; November 1 for domestic applicants
Summer Deadline	December 15
GRE (Graduate Record Examinations)	Not required.
English Proficiency Test	Every applicant whose native language is not English, or whose undergraduate instruction was not exclusively in English, must provide an English proficiency test score earned within two years of the anticipated term of enrollment. Refer to the Graduate School: Minimum Requirements for Admission policy: https://policy.wisc.edu/library/UW-1241 (https://policy.wisc.edu/library/UW-1241).
Other Test(s) (e.g., GMAT, MCAT)	n/a
Letters of Recommendation	3

Applicants should have a bachelor's degree in engineering (biomedical, chemical, electrical, industrial, mechanical, etc.) or science (biology,

biochemistry, chemistry, genetics, immunology, physics, etc.). Each application is judged on the basis of:

- · Official academic transcripts
- English proficiency test scores (https://grad.wisc.edu/apply/ requirements/#english-proficiency) (if applicable)
- Three letters of recommendation
  - For applicants with a UW-Madison Biomedical Engineering bachelor's degree, these are not required.
- Statement of purpose (https://grad.wisc.edu/apply/prepare/)
- Resume

All applicants must satisfy requirements that are set forth by the Graduate School (https://grad.wisc.edu/). Applicants admitted to the program may be required to make up deficiency course requirements.

To apply to the Biomedical Engineering program, the online application (https://grad.wisc.edu/apply/), including supportive materials, must be submitted as described below and received by the deadline.

Fall application deadline: Rolling admission will begin after October 1, with a final application deadline of April 15 (as space allows).

### OFFICIAL ACADEMIC TRANSCRIPT

Electronically submit one copy of your transcript of all undergraduate and previous graduate work in your online application to the Graduate School. Unofficial copies of transcripts will be accepted for review. Official copies are required after an applicant is recommended for admission. Please do not send transcripts or any other application materials to the Graduate School or the Biomedical Engineering department unless requested. If you have questions, please contact bmegradadmission@engr.wisc.edu.

# ENGLISH PROFICIENCY TEST SCORES (IF APPLICABLE)

International degree-seeking applicants must prove English proficiency. Refer to the Graduate School's requirements (https://grad.wisc.edu/apply/requirements/).

### THREE LETTERS OF RECOMMENDATION

These letters are required from people who can accurately judge the applicant's academic performance. Letters of recommendation are submitted electronically to graduate programs through the online application. Applicants should not send any more than three letters (if more than three are sent, only the first three will be considered). See the Graduate School for FAQs (https://grad.wisc.edu/apply/) regarding letters of recommendation. Recommendation letters are not required for applicants with a UW–Madison Biomedical Engineering bachelor's degree.

#### STATEMENT OF PURPOSE

In this document, applicants should explain why they want to pursue further education in Biomedical Engineering. See the Graduate School for more advice on how to structure a personal statement (https://grad.wisc.edu/apply/prepare/).

### **RESUME**

Upload your resume in your application.

### **APPLICATION FEE**

Submission must be accompanied by the one-time application fee. It is non-refundable and can be paid by credit card (Master Card or Visa). This

fee cannot be waived or deferred. Fee grants are available through the Graduate School under certain conditions.

### **FUNDING**

# FUNDING GRADUATE SCHOOL RESOURCES

Resources to help you afford graduate study might include assistantships, fellowships, traineeships, and financial aid. Further funding information (https://grad.wisc.edu/funding/) is available from the Graduate School. Be sure to check with your program for individual policies and restrictions related to funding.

### **PROGRAM INFORMATION**

Students enrolled in this program are not eligible to receive tuition remission from graduate assistantship appointments at this institution.

### REQUIREMENTS

# MINIMUM GRADUATE SCHOOL REQUIREMENTS

Review the Graduate School minimum academic progress and degree requirements (http://guide.wisc.edu/graduate/#policiesandrequirementstext), in addition to the program requirements listed below.

# NAMED OPTION REQUIREMENTS MODE OF INSTRUCTION

Face to Face	Evening/ Weekend	Online	Hybrid	Accelerated
Yes	No	No	No	Yes

#### **Mode of Instruction Definitions**

**Accelerated:** Accelerated programs are offered at a fast pace that condenses the time to completion. Students typically take enough credits aimed at completing the program in a year or two.

**Evening/Weekend:** Courses meet on the UW-Madison campus only in evenings and/or on weekends to accommodate typical business schedules. Students have the advantages of face-to-face courses with the flexibility to keep work and other life commitments.

**Face-to-Face:** Courses typically meet during weekdays on the UW-Madison Campus.

**Hybrid:** These programs combine face-to-face and online learning formats. Contact the program for more specific information.

**Online:** These programs are offered 100% online. Some programs may require an on-campus orientation or residency experience, but the courses will be facilitated in an online format.

### **CURRICULAR REQUIREMENTS**

Requirements	Detail
Minimum Credit	30 credits
Requirement	

Minimum Residence Credit Requirement	16 credits
Minimum Graduate Coursework Requirement	15 credits must be graduate-level coursework. Refer to the Graduate School: Minimum Graduate Coursework (50%) Requirement policy: https:// policy.wisc.edu/library/UW-1244 (https:// policy.wisc.edu/library/UW-1244/).
Overall Graduate GPA Requirement	3.00 GPA required. Refer to the Graduate School: Grade Point Average (GPA) Requirement policy: https:// policy.wisc.edu/library/UW-1203 (https:// policy.wisc.edu/library/UW-1203/).
Other Grade Requirements	n/a
Assessments and Examinations	There are no degree-specific assessments and examinations outside of those given in individual courses.
Language Requirements	None.

### **REQUIRED COURSES**

The required coursework is designed to complement each student's interests and background in biomedical engineering.

Code	Title	Credits
General Requireme	ents	
2 semesters of B M E	701	2
Bioscience credits		3
Engineering credits,	numbered 400 and above	12
Elective credits selec	ted in consultation with advisor	7-13
Project or Independe	ent Study (B M E 790 or B M E 799)	0-6
<b>Total Credits</b>		30

Students choose one of the following areas of specialization. Of the credits above, 15 credits must be in one area of specialization.

## Biomaterials and Tissue Engineering <sup>1</sup>

Biomaterials and tissue engineering employ a diverse range of approaches to develop methods to diagnose and treat diseases, create living tissue environments that may be used to restore the function of a damaged organ, and uncover biological mechanisms related to tissue development and disease. Graduate students trained in biomaterials and tissue engineering are expected to gain a detailed understanding of cellular and molecular biology, materials science, and engineering methods.

Code Required courses:	Title	Credits
At least 3 credits of B	ioscience. Relevant options include:	3 or more
BIOCHEM 501	Introduction to Biochemistry	
BIOCHEM/ GENETICS/ MICROBIO 612	Prokaryotic Molecular Biology	
BIOCHEM/ GENETICS/ MD GENET 620	Eukaryotic Molecular Biology	
CRB 640	Fundamentals of Stem Cell and Regenerative Biology	
CRB 650	Molecular and Cellular Organogenesis	

CRB/B M E 670	Biology of Heart Disease and Regeneration	
M M & I/PATH- BIO 528	Immunology	
ONCOLOGY 401	Introduction to Experimental Oncology	
PATH 750	Cellular and Molecular Biology/ Pathology	
PATH 752	Cellular and Molecular Biology/ Pathology Seminar	
ZOOLOGY 570	Cell Biology	
At least 12 credits of E	ngineering. Relevant options include:	12 or more
B M E/ PHM SCI 430	Biological Interactions with Materials	
B M E 510	Introduction to Tissue Engineering	
B M E 511	Tissue Engineering Laboratory	
B M E 520	Stem Cell Bioengineering	
B M E 545	Engineering Extracellular Matrices	
B M E 550	Introduction to Biological and Medical Microsystems	
B M E 602	Special Topics in Biomedical Engineering (Advanced Stem Cell Engineering)	
B M E 602	Special Topics in Biomedical Engineering (CRISPR Genome Editing and Engineering Laboratory)	
CBE 540	Polymer Science and Technology	
CBE 648	Synthetic Organic Materials in Biology and Medicine	
CBE 781	Biological Engineering: Molecules, Cells & Systems	
CHEM 654	Materials Chemistry of Polymers	
M S & E 521	Advanced Polymeric Materials	
Electives (taken in	consultation with your faculty	
advisor):		
B M E 556	Systems Biology: Mammalian Signaling Networks	
BME/CBE 560	Biochemical Engineering	
B M E/ MED PHYS/ PHMCOL- M/PHYSICS/ RADIOL 619	Microscopy of Life	
B M E 740	Biomanufacturing Entrepreneurship	
B M E/CHEM/ MED PHYS 750	Biological Optical Microscopy	
B M E/CBE 782	Modeling Biological Systems	
B M E/CBE 783	Design of Biological Molecules	
BMI/STAT 541	Introduction to Biostatistics	
BMI/ COMPSCI 776	Advanced Bioinformatics	
COMP SCI 765	Data Visualization	
STAT/F&W ECOL/ HORT 571	Statistical Methods for Bioscience I	

STAT/BMI877	Statistical Methods for Molecular
	Biology

## Biomechanics 1

E M A 630

Biomechanists use experiments and computational tools to investigate the mechanical aspects of biological systems, at levels ranging from whole organisms to organs, tissues, and cells. Graduate students trained in biomechanics are expected to gain a detailed understanding of mechanics, mathematics, biology, and engineering.

Code	Credits	
Required courses:	Title	Credits
•	Bioscience. Relevant options include:	3 or more
ANAT&PHY 335	Physiology	
ANAT&PHY 435	Fundamentals of Human Physiology	
BIOCHEM/ GENETICS/ MD GENET 620	Eukaryotic Molecular Biology	
CRB/B M E 670	Biology of Heart Disease and Regeneration	
KINES 773	Cardiorespiratory Adaptions to Environment and Exercise	
ZOOLOGY 570	Cell Biology	
At least 12 credits of E	ngineering. Relevant options include:	12 or more
B M E/M E 414	Orthopaedic Biomechanics - Design of Orthopaedic Implants	
B M E/M E 415	Biomechanics of Human Movement	
B M E/M E 505	Biofluidics	
B M E/M E 516	Finite Elements for Biological and Other Soft Materials	
BME/ISYE 564	Occupational Ergonomics and Biomechanics	
B M E 603	Special Topics in Bioinstrumentation and Medical Devices (Image-Based Biomechanics)	
B M E/M E 615	Tissue Mechanics	
B M E/I SY E 662	Design and Human Disability and Aging	
B M E/M E 715	Advanced Tissue Mechanics	
Electives (taken in advisor):	consultation with your faculty	
B M E/ MED PHYS/ PHMCOL- M/PHYSICS/ RADIOL 619	Microscopy of Life	
BMI/STAT 541	Introduction to Biostatistics	
COMP SCI 368	Learning a Programming Language	
E M A 506	Advanced Mechanics of Materials I	
E M A 519	Fracture Mechanics	
EMA/ MS&E 541	Heterogeneous and Multiphase Materials	
E M A 545	Mechanical Vibrations	
E M A 605	Introduction to Finite Elements	
EMA/EP 615	Micro- and Nanoscale Mechanics	
E N A C C C C	\C	

Viscoelastic Solids

	E M A 710	Mechanics of Continua
	MATH 443	Applied Linear Algebra
	MATH 519	Ordinary Differential Equations
	MATH 619	Analysis of Partial Differential Equations
	M E/STAT 424	Statistical Experimental Design
	M E/E C E 439	Introduction to Robotics
	M E/CIV ENGR/ E M A 508	Composite Materials
	M E/COMP SCI/ E C E 532	Matrix Methods in Machine Learning
	ME/EMA 540	Experimental Vibration and Dynamic System Analysis
	M E 563	Intermediate Fluid Dynamics
	M E/E M A 570	Experimental Mechanics
	M E 573	Computational Fluid Dynamics

### Biomedical Imaging and Optics 1

Biomedical imaging and optics research develops and utilizes new experimental and computational tools to characterize tissue structure across multiple size scales. A particular focus is on human health, especially with respect to achieving superior diagnostic/prognostic tools for a spectrum of diseased states. Graduate students trained in this track are expected to gain a detailed understanding of mathematics, biology and engineering as well as optical and/or physical methods.

Code	Title	Credits
Required courses:		
At least 3 credits of Bi	oscience. Relevant options include:	3 or more
ANAT&PHY 335	Physiology	
BIOCHEM 501	Introduction to Biochemistry	
ZOOLOGY 570	Cell Biology	
At least 12 credits of E	ngineering. Relevant options include:	12 or more
B M E/H ONCOL/ MED PHYS/ PHYSICS 501	Radiation Physics and Dosimetry	
B M E/ MED PHYS 573	Mathematical Methods in Medical Physics	
B M E/ MED PHYS 574	Data Science in Medical Physics	
B M E/ MED PHYS 575	Diagnostic Ultrasound Imaging	
B M E/ MED PHYS 578	Non-Ionizing Diagnostic Imaging	
B M E/ MED PHYS 580	The Physics of Medical Imaging with Ionizing Radiation	
B M E/ MED PHYS/ PHMCOL- M/PHYSICS/ RADIOL 619	Microscopy of Life	
B M E/ MED PHYS 710	Advances in Medical Magnetic Resonance	
B M E/CHEM/ MED PHYS 750	Biological Optical Microscopy	
B M E 751	Biomedical Optics and Biophotonics	

B M E/E C E/ MED PHYS 778	Machine Learning in Ultrasound Imaging
B M E 780	Methods in Quantitative Biology
MED PHYS 777	Principles of X-ray Computed Tomography
Electives (taken in d advisor):	consultation with your faculty
BMI/ COMPSCI 567	Medical Image Analysis
COMP SCI 300	Programming II
COMP SCI 320	Data Science Programming II
COMP SCI 368	Learning a Programming Language
COMP SCI/ E C E 766	Computer Vision
COMP SCI/ B M I 767	Computational Methods for Medical Image Analysis
E C E/ COMP SCI 533	Image Processing
E C E/COMP SCI/ M E 539	Introduction to Artificial Neural Networks
MATH 443	Applied Linear Algebra
M E/COMP SCI/ E C E 532	Matrix Methods in Machine Learning

### Medical and Microdevices<sup>1</sup>

Medical and microdevices involve the use of electronic and computational tools to develop devices used in diagnosis and treatment of disease ranging from the systemic to the cellular and molecular levels.

Code		Title	Credits
Required courses:			
At least 3	credits of Bi	oscience. Relevant options include:	3 or more
ANAT8	PHY 335	Physiology	
BIOCH	IEM 501	Introduction to Biochemistry	
BIOCH GENET MICRO	,	Prokaryotic Molecular Biology	
BIOCH GENET MD GE	,	Eukaryotic Molecular Biology	
PATH 7	750	Cellular and Molecular Biology/ Pathology	
PATH 7	752	Cellular and Molecular Biology/ Pathology Seminar	
ZOOL( PSYCH	,	Neurobiology	
ZOOLO	OGY 570	Cell Biology	
At least 12	credits of E	ngineering. Relevant options include:	12 or more
BME/	ECE 462	Medical Instrumentation	
B M E/ MED P	HYS 535	Introduction to Energy-Tissue Interactions	
BME!	550	Introduction to Biological and Medical Microsystems	
BME	602	Special Topics in Biomedical Engineering (Introduction to Neuroengineering)	

B M E 640	Medical Devices Ecosystem: The Path to Product
B M E 651	Biophotonics Laboratory
B M E/CHEM/ MED PHYS 750	Biological Optical Microscopy

# Electives (taken in consultation with your faculty advisor):

COMP SCI 300	Programming II
COMP SCI 320	Data Science Programming II
COMP SCI 368	Learning a Programming Language (multiple 1-credit options, including R, C++, and Matlab)
MATH 443	Applied Linear Algebra
MATH 519	Ordinary Differential Equations
MATH 619	Analysis of Partial Differential Equations

## Neuroengineering 1

Neuroengineering is the convergence of neuroscience, computation, device development, and mathematics to improve human health. Neuroengineering brings together state-of-the-art technologies for the development of devices and algorithms to assist those with neural disorders. It is also used to reverse engineer living neural systems via new algorithms, technologies and robotics. Students pursing this track are involved in all of these endeavors so that as the next generation of engineers, they will transcend the traditional boundaries of neuroscience, technology, engineering and mathematics.

Code Required courses:	Title	Credits
At least 3 credits of Bi	oscience. Relevant options include:	3 or more
ANAT&PHY 335	Physiology	
KINES 721	Neural Basis for Movement	
KINES 861	Principles of Motor Control and Learning	
NTP/ NEURODPT 610	Cellular and Molecular Neuroscience	
NTP/NEURODPT/ PSYCH 611	Systems Neuroscience	
NTP 735	Neurobiology of Disease	
PSYCH 610	Design and Analysis of Psychological Experiments I	
PSYCH 733	Perceptual and Cognitive Sciences	
ZOOLOGY 625	Development of the Nervous System	
At least 12 credits of E	ngineering. Relevant options include:	12 or more
B M E/E C E 462	Medical Instrumentation	
B M E/E C E 463	Computers in Medicine	
B M E 520	Stem Cell Bioengineering	
B M E 550	Introduction to Biological and Medical Microsystems	
B M E 602	Special Topics in Biomedical Engineering (Introduction to Neuroengineering)	
B M E 640	Medical Devices Ecosystem: The Path to Product	

E C E/COMP SCI/	Introduction to	Optimization
ISY F 524		

E C E/	Image Processing
COMP SCI 533	
E C E/COMP SCI/ M E 539	Introduction to Artificial Neural Networks
NTP/ MED PHYS 651	Methods for Neuroimaging

# Electives (taken in consultation with your faculty advisor):

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	COMP SCI 320	Data Science Programming II
	COMP SCI 368	Learning a Programming Language (multiple 1-credit options, including R, C++, and Matlab)
	COMP SCI/ B M I 567	Medical Image Analysis
	COMP SCI/ E C E 766	Computer Vision
	COMP SCI/ B M I 767	Computational Methods for Medical Image Analysis
	MATH 443	Applied Linear Algebra

## Systems and Synthetic Biology 1

Systems and synthetic biology utilizes experimental and computational tools in an iterative fashion to analyze and regulate biological systems.

Code	Title	Credits
Required courses:		
At least 3 credits of B	ioscience. Relevant options include:	3 or more
BIOCHEM 570	Computational Modeling of Biological Systems	
BIOCHEM 919	Synthetic Biology Seminar	
BIOCHEM 501	Introduction to Biochemistry	
BIOCHEM/ GENETICS/ MICROBIO 612	Prokaryotic Molecular Biology	
BIOCHEM/ GENETICS/ MD GENET 620	Eukaryotic Molecular Biology	
BIOCHEM 729	Advanced Topics	
M M & I/PATH- BIO 528	Immunology	
ZOOLOGY 570	Cell Biology	
At least 12 credits of E	Engineering. Relevant options include:	12 or more
B M E 550	Introduction to Biological and Medical Microsystems	
B M E 556	Systems Biology: Mammalian Signaling Networks	
B M E 780	Methods in Quantitative Biology	
B M E/CBE 560	Biochemical Engineering	
B M E 602	Special Topics in Biomedical Engineering (CRISPR Genome Editing and Engineering Laboratory)	
CBE 781	Biological Engineering: Molecules, Cells & Systems	
CBE/B M E 782	Modeling Biological Systems	

CBE 660 Intermediate Problems in Chemical

Engineering

# Electives (taken in consultation with your faculty advisor):

· · · · · · · · · · · · · · · · · · ·	
BMI/STAT 541	Introduction to Biostatistics
BMI/ COMP SCI 576	Introduction to Bioinformatics
BMI/ COMPSCI 775	Computational Network Biology
BMI/ COMPSCI 776	Advanced Bioinformatics
BMI826	Special Topics in Biostatistics and Biomedical Informatics
COMP SCI 368	Learning a Programming Language (multiple 1-credit options available, including R, C++, and Matlab)
MATH 443	Applied Linear Algebra
MATH 519	Ordinary Differential Equations
MATH 619	Analysis of Partial Differential Equations

#### **Footnotes**

These pathways are internal to the program and represent different curricular paths a student can follow to earn this degree. Pathway names do not appear in the Graduate School admissions application, and they will not appear on the transcript.

### **Other Policy**

Students in this program may not take courses outside the prescribed curriculum without faculty advisor and program director approval. Students in this program cannot enroll concurrently in other undergraduate or graduate degree programs.

### **POLICIES**

# **GRADUATE SCHOOL POLICIES**

The Graduate School's Academic Policies and Procedures (https://grad.wisc.edu/acadpolicy/) provide essential information regarding general university policies. Program authority to set degree policies beyond the minimum required by the Graduate School lies with the degree program faculty. Policies set by the academic degree program can be found below.

# NAMED OPTION-SPECIFIC POLICIES

#### PRIOR COURSEWORK

### **Graduate Credits Earned at Other Institutions**

Refer to the Graduate School: Transfer Credits for Prior Coursework (https://policy.wisc.edu/library/UW-1216/) policy. Contact the Graduate Coordinator for more information.

# Undergraduate Credits Earned at Other Institutions or UW-Madison

A student who has completed their bachelor's degree at UW-Madison may transfer 6 credits of coursework with program approval. These courses must be engineering or advanced biological sciences coursework

numbered 400 or above. Credits earned at other institutions are not allowed to transfer. Coursework earned ten or more years prior to admission to a master's degree is not allowed to satisfy requirements. These courses may not be used to satisfy the Graduate School's minimum residence credit requirement.

# Credits Earned as a Professional Student at UW-Madison (Law, Medicine, Pharmacy, and Veterinary careers)

Refer to the Graduate School: Transfer Credits for Prior Coursework (https://policy.wisc.edu/library/UW-1216/) policy.

# Credits Earned as a University Special Student at UW–Madison

Refer to the Graduate School: Transfer Credits for Prior Coursework (https://policy.wisc.edu/library/UW-1216/) policy. Contact the Graduate Coordinator for more information.

### **PROBATION**

Refer to the Graduate School: Probation (https://policy.wisc.edu/library/UW-1217/) policy.

## ADVISOR / COMMITTEE

Refer to the Graduate School: Advisor (https://policy.wisc.edu/library/UW-1232/) policy.

### **CREDITS PER TERM ALLOWED**

15 credits

### **TIME LIMITS**

The Biomedical Engineering: Accelerated MS program is typically completed in less than 18 months.

Refer to the Graduate School: Time Limits (https://policy.wisc.edu/library/UW-1221/) policy.

#### **GRIEVANCES AND APPEALS**

These resources may be helpful in addressing your concerns:

- Bias or Hate Reporting (https://doso.students.wisc.edu/bias-or-hate-reporting/)
- Graduate Assistantship Policies and Procedures (https://hr.wisc.edu/ policies/gapp/#grievance-procedure)
- Hostile and Intimidating Behavior Policies and Procedures (https:// hr.wisc.edu/hib/)
  - Office of the Provost for Faculty and Staff Affairs (https://facstaff.provost.wisc.edu/)
- Dean of Students Office (https://doso.students.wisc.edu/) (for all students to seek grievance assistance and support)
- Employee Assistance (http://www.eao.wisc.edu/) (for personal counseling and workplace consultation around communication and conflict involving graduate assistants and other employees, postdoctoral students, faculty and staff)
- Employee Disability Resource Office (https:// employeedisabilities.wisc.edu/) (for qualified employees or applicants with disabilities to have equal employment opportunities)
- Graduate School (https://grad.wisc.edu/) (for informal advice at any level of review and for official appeals of program/departmental or school/college grievance decisions)

- Office of Compliance (https://compliance.wisc.edu/) (for class harassment and discrimination, including sexual harassment and sexual violence)
- Office of Student Conduct and Community Standards (https://conduct.students.wisc.edu/) (for conflicts involving students)
- Ombuds Office for Faculty and Staff (http://www.ombuds.wisc.edu/) (for employed graduate students and post-docs, as well as faculty and staff)
- Title IX (https://compliance.wisc.edu/titleix/) (for concerns about discrimination)

### **BME Grievance Procedures**

If a student feels unfairly treated or aggrieved by faculty, staff, or another student, the University offers several avenues to resolve the grievance.

### Step 1

The student is encouraged to speak first with the person toward whom the grievance is directed to see if a situation can be resolved at this level. Students are also encouraged to talk with their faculty advisors regarding concerns or difficulties, or reach out to the Graduate Student Services Coordinator or Associate Chair of BME Graduate Advising for additional assistance. These activities do not rise to the level of a formal grievance; however, the student is encouraged to keep documentation of these interactions as they may be useful if a formal grievance is pursued.

### Step 2

Should a satisfactory resolution not be achieved, a formal grievance can be filed with the BME Grievance Committee. To do so, the student contacts the Department Administrator, who will provide the student with the name of the current chair of the Grievance Committee. The student will then contact the Chair of the Grievance Committee, who will reply within seven calendar days. If the grievance is with the current Chair of the Grievance Committee, please let the Department Administrator know and they will identify an alternate committee member to contact. It is advised that grievances are filed within 60 calendar days of the alleged unfair treatment to enable a thorough investigation.

### Step 3

If the student does not feel comfortable working through the departmental process, they are encouraged to seek out other campus resources including:

- The Assistant Dean for Graduate Affairs in the College of Engineering
- · The Graduate School
- UW Division of Diversity, Equity & Educational Achievement (DDEEA)
- McBurney Disability Resource Center
- Employee Assistance Office
- · Ombuds Office
- · University Health Services

### Step 4

At this point, if either party (the student or the person toward whom the grievance is directed) is unsatisfied with the decision of the faculty committee, the party may file a written appeal. Either party has ten working days to file a written appeal to the School/College. For more information, students should consult the College of Engineering Academic Advising Policies and Procedures.

#### Step 5

Documentation of the grievance will be stored for at least seven years. Significant grievances that set a precedent will be stored indefinitely. The Graduate School has procedures for students wishing to appeal a grievance decision made at the school/college level. These policies are described in the Graduate School's Academic Policies and Procedures.

### **OTHER**

Students are strongly discouraged to pursue positions as Project Assistants, Teaching Assistants or Research Assistants during their time in this program, as the rigor and accelerated nature of this program may not accommodate those work time commitments. Students in this program will not receive the tuition remission that is typically part of the compensation package for a graduate assistantship.

## PROFESSIONAL DEVELOPMENT

# PROFESSIONAL DEVELOPMENT GRADUATE SCHOOL RESOURCES

Take advantage of the Graduate School's professional development resources (https://grad.wisc.edu/pd/) to build skills, thrive academically, and launch your career.

### **PROGRAM RESOURCES**

### The Individual Development Plan (IDP)

An Individual Development Plan (IDP) (https://grad.wisc.edu/pd/idp/) helps graduate students and postdoctoral researchers:

- · assess current skills, interests, and strengths;
- make a plan for developing skills to meet academic and professional goals; and
- communicate with supervisors, advisors, and mentors about evolving goals and related skills.

The IDP is a document to be revisited again and again, to update and refine as goals change and/or come into focus, and to record progress and accomplishments.

The university **recommends** IDPs for all postdoctoral researchers and graduate students, and **requires** IDPs for all postdoctoral researchers and graduate students supported by National Institutes of Health (NIH) funding. See the Graduate School for more information and IDP resources (https://grad.wisc.edu/pd/idp/).

### **Engineering Career Services**

The Engineering Career Services (https://ecs.wisc.edu/) staff offers assistance to students searching or preparing for internships, coops, and jobs with well-recognized organizations.

### The Writing Center

The Writing Center (https://writing.wisc.edu/) is a campus-wide organization that provides free of charge, face-to-face and online consultations for students writing papers, reports, resumes, and applications.

# PEOPLE

## **PEOPLE**

### **FACULTY**

Paul Campagnola (Chair)

Randolph Ashton

Randy Bartels

David Beebe

Walter Block

Christopher Brace

Joshua Brockman

Kevin Eliceiri

Shaoqin 'Sarah' Gong

Aviad Hai

Pamela Kreeger

Wan-ju Li

Kip Ludwig

Megan McClean

Beth Meyerand

William Murphy

Krishanu Saha

Melissa Skala

Darryl Thelen

Pallavi Tiwari

Justin Williams

Colleen Witzenburg

Filiz Yesilkoy

# INSTRUCTIONAL STAFF AND TEACHING FACULTY

Amit Nimunkar

John Puccinelli

Tracy Jane Puccinelli

Darilis Suarez-Gonzalez

Chris Wille

See also Biomedical Engineering Faculty Directory (http://directory.engr.wisc.edu/bme/).