



WPI

Biomedical Engineering BS/MS Programs at WPI

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Frequently Asked Questions...

- Should I apply to the BS/MS program?
- What programs does WPI offer?
- Which one is right for me?
- Can I “double count” undergrad courses?
- Can I take grad courses as an undergrad?
- When should I apply?
- What is the application procedure?
- Other???

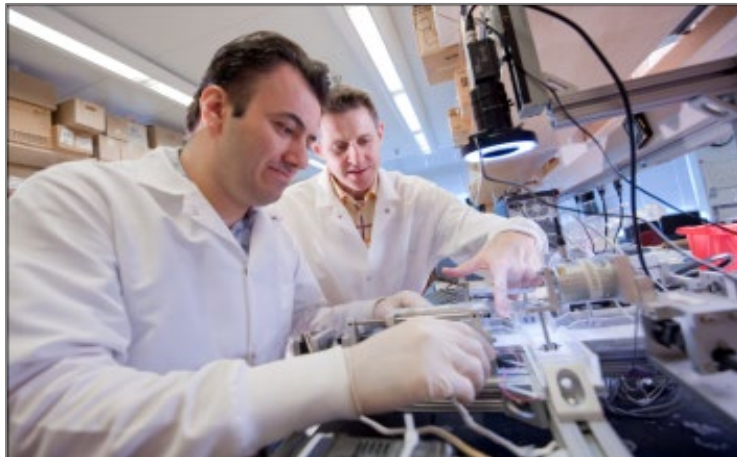
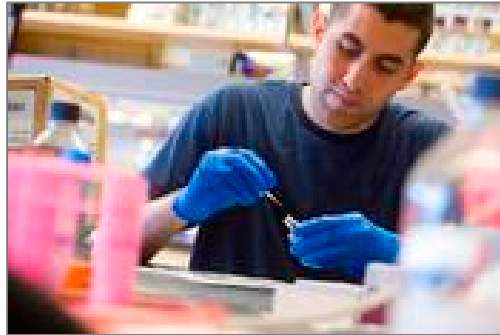
Why apply to the BS/MS program?

- Advanced courses beyond the BME BS degree
 - Business/management
 - FDA regulations
 - Quality control
 - Specialization/engineering depth (material science, robotics, manufacturing)
- Other advantages of Master's degree?
 - Needed for some positions
 - Higher salary?
 - Management opportunities
- Advanced hands-on experience
 - Project-based or thesis-based Master's
 - Integrated co-op or internship

This year specifically:

- Internship, co-op or job plans changed
- Spring athletes – eligibility
- Take advantage of summer courses
- WPI tuition incentives apply
 - Summer 2020 – 50% tuition discount for current WPI undergraduates for graduate and undergraduate courses. NOTE: May 2020 B.S. graduates not eligible
 - WPI alumni (including May 2020 B.S. graduates) receive 20% graduate tuition discount

WPI Master's Degrees



Which program is right for me?

- **M.S. Thesis (30 credits)**
 - Independent research
 - Expected full-time work on thesis research
 - Time to completion varies, ~ 2 years beyond B.S. degree
- **M.S. Project (30 credits)**
 - Independent project (~ individual MQP)
 - Can complete project during co-op or internship
 - Completion based on credits v. research
- **M.Eng. (33 credits)**
 - Course-based Master's
 - Completion based on credits/courses

Which program is right for me?

- **M.S. Project**
 - Since Fall 2018
 - Can be combined with a co-op or internship!
 - Eligible to register after 12 graduate credits completed
 - Short-term independent project
 - Design project (WPI faculty lab or industry)
 - Academic/design project related to co-op or internship
 - Clinical project
 - Continuation of MQP?
 - Can complete a project in one semester or longer
 - Students identify their own project and advisor; notify the BME department

Can I “double count” courses?

- YES!
 - **Up to 30% of course credits double count (*9 credits total)**
 - 6 credits of 4000-level courses (3 courses)
 - 3 credits of 500-level courses (1 course)
 - Additional *2 credits at 4000-level not counted for BS degree
 - Up to 8 credits total 4000-level
 - **9 credits double-counted + 2 credits = *11 credits**
 - No course can be triple counted (major, minor, grad)
 - BME 4300 and MQP do not count for graduate credit
- To “double-count” courses:
 - Fill out the “[Course Designation Form](#)” (Registrar’s website)
- Other grad courses (500-level) not needed for B.S. requirements count directly for graduate degree

NOTE: 1 grad credit = 1/6 unit undergrad; 2 grad credits = 1/3 unit undergrad

Can I take grad courses as an undergrad?

- Yes! BUT...
- Meet B.S. degree requirements first!!!
 - **Some graduate courses DO NOT COUNT toward B.S. degree (e.g., BME 560, BME 562, BME 564)**
 - Best to take graduate courses senior year
- Talk to your Academic Advisor!
 - Am I ready to take graduate courses?
 - How will it affect my schedule / time to graduation?
 - Only one graduate course (500-level) can count toward BME B.S. degree

Master of Engineering (ME) Degree

- *ME (Course-based Master's Degree)*

BME	12 credits
Life Sciences	3 credits
Advanced Math	3 credits
Life Sciences or Advanced Math	3 credits
Electives	12 credits
BME 591: Graduate Seminar (x 2)	
<hr/> <i>TOTAL:</i>	<hr/> <i>33 credits</i>

NOTE: 1 grad credit = 1/6 unit undergrad; 2 grad credits = 1/3 unit undergrad

Master of Science (MS) Degrees

MS (Thesis-based Master's Degree)

BME	12 credits
Electives	12 credits
BME 599 (MS Thesis)	6 credits
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<i>TOTAL:</i>	<i>30 credits</i>

MS (Project-based Master's Degree)

BME	12 credits
Electives	12 credits
BME 597 (MS Project)	6 credits
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<i>TOTAL:</i>	<i>30 credits</i>

In addition, the following requirements must be met for both Master of Science Degrees:

Technical Depth Requirements

15 credits

Seminar (must take BME 591) pass twice

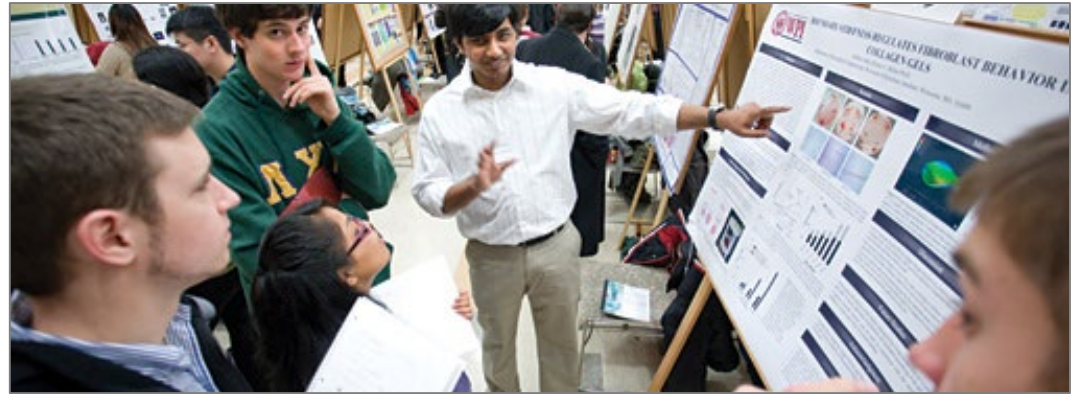
BME Core Competencies (5)

- ✓ mathematics
- ✓ life science
- ✓ clinical needs analysis
- ✓ regulation and controls
- ✓ value creation, innovation, technology, commercialization

How do I register for graduate courses?

- There are two sections (CRNs) for each graduate course – one for undergraduates, one for graduate students (to preserve “seats” for incoming students)
- BME 562 – Laboratory Animal Surgery requires special permission
 - Must contact Ina Gjencaj(igjencaj@wpi.edu)
 - Email your name, student number and class year
- See BME section of the WPI Graduate Catalog for:
 - Course descriptions
 - List of courses that count toward competencies and Technical Depth
- Technical Depth lists are not exhaustive – new technical courses in Neuroscience (new program), Data Science, Robotics, etc. will be considered even if not on the catalog list
- NOTE: Summer courses are all online in 2020

Application and Admissions



What is the application procedure?

- Apply online through WPI Graduate Admissions
 - <http://www.wpi.edu/admissions/graduate.html>
 - “Apply Now”
 - By **July 1, 2020 (or ASAP)**
- Required materials:
 - Transcript (automatically linked to application)
 - Personal statement
 - Three letters of recommendation
- GRE scores not required for WPI students/alumni
- Application fee waived for WPI students/alumni

Personal Statement

- Why are you applying to graduate school?
- Do you have any independent research or project experience? Tell us about it!
- Is there a specific faculty member or company you plan to work with for your M.S. thesis or project?
- What are your career goals/plans beyond graduate school?

Recommendation Letters

- WPI faculty, MQP advisor, internship supervisors
 - People who can tell us about your aptitude for independent research and advanced study
 - People who know you well
- Ask faculty who have written letters for you before – they are likely to one have ready and just need to update it
- WAIVE your right to access the review
- Give plenty of notice (at least two weeks)
 - Letter writer may want to meet with you or request a resume, other information
- Send a gentle reminder (if needed) before the due date

What are my chances of admission?

- Admitted M.S. and M.E. students typically have:
 - Strong letters of recommendation
 - Strong letters from MQP advisors and other BME faculty
 - Overall GPA ≥ 3.0
 - \geq “B” grades in BME and engineering courses
 - Strong personal statement
 - Research or industry experience

Grades aren't everything, but...

- Grades in advanced courses and MQP are indicators of your potential to succeed in graduate school
- Only courses with “B” grades or higher can “double count”
- We typically do not admit students w/ GPA <3.0
- Graduate students must maintain ≥ 3.0 GPA
- Can have up to 2 courses with a C grade as long as cumulative Master's GPA ≥ 3.0
- WPI academic probation and warning rules apply
- Courses with “P” grades from D term / Spring semester count for credit and do not factor in GPA

How many graduate courses should I take senior year?

- Most graduate courses (500-level) are:
 - 3 credits (some are 1 credit; e.g., journal club or BME 592: Healthcare Systems)
 - Semester-long (14 weeks)
 - Meet 1-2x / week (v. 4-5 times/week for 7 week classes)
 - Advanced – more independent learning expected
 - Usually meet evenings or online to accommodate students working full-time, or on co-op or internship

How many graduate courses should I take senior year?

- Example senior year schedule (if you only have 4000-level + courses and MQP left to finish B.S. degree):
 - One 3-credit graduate course summer before senior year
 - + Two 3-credit graduate courses/semester during senior year (12 credits; equivalent to six 1/3-unit courses, or two terms)
 - + Three 4000-level courses senior year + MQP (equivalent to six 1/3-unit courses, or two terms; 6 credits at 4000-level)
 - = 21 credits earned toward MS degree; no overloading
 - Take BME 591 each semester senior year
 - Take remaining 9-12 credits in one additional semester, or over summers (one 3 credit course summer after senior year, + 6 credits project w/ internship in fall semester = 30 credits = Project-based M.S. completed!). OR 12 credits course work summer and fall semester = M.Eng. completed!
 - Note – students report that taking a class in addition to full-time co-op and 6 credits of project is A LOT – recommend not taking more than 6 credits at most w/ internship or co-op

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BME Undergraduate Advising Canvas Site

- “Graduate Program Information” module (scroll down)
 - Slides of this presentation
 - FAQs re: BME BS/MS Program Application
 - BME graduate program site:
wp.wpi.edu/bme/grad
- Check back for example BS/MS tracking documents and plans of study!

Questions?

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