

Johns Hopkins

Center for Bioengineering Innovation & Design

MSE Program - FAQs

General Questions

What is the difference between the CBID MSE program and the BME MSE program?

The CBID MSE program is a one-year degree focused on design, clinical rotations, prototype development, and global health projects. The BME MSE program offers a one-year course-based degree, as well as a two-year thesis option.

How has COVID-19 affected the program this year?

We front-loaded the courses in the summer to ensure the program could begin fully online. Students started doing clinical rotations in August. Due to national and JHU travel advisories, so far this year students have not been able to conduct the global health immersion. The current class is, however, pursuing their global health projects and are successfully working remotely with our collaborators around the globe.

Do you offer the CBID program as a completely online course?

No, the program cannot be taken completely online due to the hands-on nature of the program, including clinical rotations at the Johns Hopkins Hospital, as well as prototype development and testing at on-site locations.

As an outside student, can I apply to the program for a dual degree between JHU and another university?

This is not recommended as the CBID MSE program is an intense, full-time commitment, and students need to be able to devote all of their time to the program.

When does the program start?

The first semester begins the last week of May with an intense boot camp, followed by clinical rotations. Graduation is in May of the following year.

How many students does the CBID MSE program accept each year?

Each year the class size is limited to 25 students.



Application | Admission | Enrollment

Does CBID look for applicants with a specific background?

CBID uses a holistic, multidisciplinary approach and is looking for students with diverse expertise, including a background in any of these areas: engineering, medicine, science, industry, entrepreneurship, healthcare design, consulting, medical device development, and many more. Most of the CBID students come from an engineering, medical, or other scientific background. CBID looks at the overall application including background, academic performance, recommendation letters, statement of purpose, and sample of work. Prior work experience is not a prerequisite. Applicants should have a strong background and a passion for medical device innovation.

What application materials are required?

The following application materials are required before an application can be submitted via Slate:

- Statement of purpose
- Personal statement
- Three (3) letters of recommendation
- Resume
- Official undergraduate transcripts
- Sample of work

What should applicants include as a sample of work?

Applicants can submit any design work they have done, e.g., a report or presentation showing a solution of which they are proud, or a technical report describing something they have created. Additionally, students can include PDF samples of papers published, or a design portfolio showing their past projects and innovations. Alternatively, they could write an abstract for a project – even if it has not been published anywhere – describing the project and the result. Other examples include internships, work and research experience, medical device experience, etc.

What are the formatting requirements for the personal statement and statement of purpose?

The formatting requirements for the statements are: maximum two (2) pages, single-spaced, 12 point font size, and 1-inch margins.

Where can the applicant's recommenders submit their letters of recommendation?

Applicants will need to enter the name and email address of their recommenders in Slate as part of their application. Slate will then send an email to the recommenders with instructions to upload their letters.



Are TOEFL/IELTS scores from international students required for the program?

For international students, TOEFL/IELTS is more of a visa requirement. CBID sometimes waives the requirement depending on where students have studied previously. International students who received their B.S. degree from the U.S. and other English speaking countries (including Canada, UK, and Australia) are not required to submit TOEFL scores.

What are the prerequisites for the program?

There are no course prerequisites for the CBID MSE program, and prior work experience or a background in engineering are not prerequisites either.

Is it possible to extend the application submission deadline?

The deadline to submit an application to the CBID MSE program is December 31st. Due to the tight timeline of the admissions process and the early program start date in late May, CBID usually does not extend the deadline. Upon request, and with sufficient reason, CBID might be able to extend the deadline by one week.

Is it possible to defer admission to the CBID program?

Typically, CBID does not accept deferrals. For applicants who wish to defer, we suggest they reapply during the next cycle the following year.

When does the enrollment process begin?

The enrollment process begins once the offer has been accepted by the student. This can take several weeks to complete. Most details, including your Johns Hopkins student account and insurance information, will be sent to you once you are an “enrolled student.”

Tuition | Financial Aid

How much is the tuition fee for the CBID MSE program, or is it a fellowship program?

The current tuition fee is \$57,000 plus \$22,000 for room & board for the first year (i.e., the full length of the program). Official tuition rates will not be announced until April. Occasionally students are awarded a fellowship for the second year to extend their CBID experience and to continue the work on their project, in which case the fellowship will cover all expenses (tuition and student health care plan).

Does CBID offer any financial aid, tuition waivers, or scholarships?

There are several Teaching Assistant positions available to CBID students. On average, these jobs pay \$720/month for a 10-hour work week. CBID does not recommend more than 10 work hours outside of the program due to the significant workload of the program. CBID offers a 50% tuition waiver for

JHU undergraduates who have completed eight full-time semesters and/or have been an alumnus for at least one year by the start of the CBID program (end of May). Additionally, there are some partial tuition waivers available through the Smirnow Fellowship which are announced in the spring based on the program budget. CBID does not offer any full tuition waivers.

Does CBID cover travel expenses for the global health trips?

Yes, CBID will arrange and pay for travel and accommodation during the global health trips. Additional travel related expenses, such as public transportation, taxi/Uber/Lyft, need to be paid out of pocket by the student and then submitted for reimbursement through JHU. Students are responsible for incidentals and meals. Additionally, CBID students will receive appropriate training and ensure that medical requirements are met based on the country/countries they will be visiting. CBID will also cover travel-related expenses for other potential domestic and international trips pertaining to the students' CBID projects (conferences, meetings, etc.), however prior approval by the PI/supervisor is required.

Student Teams | Projects

How are teams assembled?

Teams are formed based on student interest and preference for projects, their technical expertise, and our internal assessment. There are usually four teams of four to six students, and each of the teams work simultaneously on two projects (one U.S. project and one global health project).

How are the projects chosen?

Project areas vary, and are open for the teams to navigate within large domains of health care needs. They are chosen before the formation of teams. The interest of the team is crucial in deciding what to work on within project areas.

How many projects are usually chosen?

There are usually four teams of four to six students, and each team works simultaneously on two projects: one U.S. advanced health project, and one global health project. In total, there are usually eight projects for each cohort of students.

What is the average weekly time requirement for this program?

Students should consider the CBID MSE program like a full-time job. In the summer, students will be taking classes and doing clinical rotations. In August, they will be traveling for their global immersion. In the fall, students are also taking engineering electives. Finally, in the spring the students have time for prototyping, testing, business plan competitions, etc. Students are not expected to work weekends or university holidays.



What resources and facilities are available to CBID students?

CBID offers tremendous facilities and infrastructure to support students, including a dedicated design studio, machine shop, and wet lab. The studio is equipped with the latest 3D printers and machine tools. For more advanced tools and larger equipment, there are other avenues to develop prototypes. The Wyman machine shop on campus offers students the opportunity to work with technicians to develop precision equipment. There are also numerous research labs in which students are able to work with their clinical partners based on project domain and equipment needed.

What do students usually do after graduating from the CBID program?

Most CBID students who graduate from the program go into the medical device industry. Some of the major recruiters are Medtronic, Johnson & Johnson, Stryker, Boston Scientific, BD, and Edwards Life Sciences. A smaller number of students pursue a PhD and/or MD degree, or work for consulting companies, the government, or the global health sector.

Questions?

Feel free to reach out to us at cbid@jhu.edu with your questions or concerns.