

FAQ - BSMS PROGRAM

I. General Information on the MS Plan of Study

Q: What happens if a BS/MS student chooses to study in another institution's graduate program after finishing his undergraduate work at Tech? Is s/he even allowed to apply to other graduate schools after getting into BS/MS program?

A: You are allowed to apply for another institution's graduate program. You are also allowed to apply for other graduate programs and departments here at Georgia Tech. If you choose to do so, you will not be able to double count the 6 hours of course work at the undergraduate and graduate level, and most likely you will have to take the GRE exam. Your commitment to join our BSMS program is not binding.

Q: Is there some sort of program curriculum (for the MS)?

A: There is no such thing as a set curriculum for the MS degree. That's the whole point of the degree, in that you deepen your knowledge in a couple areas of YOUR choosing (your major and minor) instead of taking a bunch of pre-determined classes like for your BS. YOU get to choose whatever class you want, it's all electives. There are some guidelines you need to follow, of course (for example, you need a math class, etc) which are given in the BSMS presentation (http://www.me.gatech.edu/docs/bsms_slideshow.pdf) but mostly it's your call.

In terms of what's offered, your best bet is to look at the research brochure (<http://www.me.gatech.edu/research/index.shtml>) which provides details on every research area in ME and the various professors conducting that research. Or just think of the BS classes you most enjoy and see if you want to deepen your knowledge in those areas. Once you have selected your minor and major, you can get more info on the classes offered in those areas from the graduate handbook (<http://www.me.gatech.edu/graduate/handbooks.shtml>) especially appendices A & B.

Of course, you're always welcome to set up meetings with me if you have more questions.

Q: Can I take one graduate course online and have it count towards my MS, even if the rest of the MS courses are taken on campus?

A: Yes, you can switch to being a temporary distance learning student, but you will need to be changed in BANNER. You will need to see Glenda Johnson http://www.me.gatech.edu/faculty/g_johnson.shtml. Also, note that you will have to pay full distance learning tuition and fees for any course you take by distance learning. There is no such thing as "in-state" tuition and fees for distance learning students. In addition, you will be required to pay a technology fee for each semester that you're enrolled. More information on the cost of Distance Learning can be found on the Center for Distance Learning website (<http://www.cdl.gatech.edu/dl/servlet/DLHome>).

Q: How do I select my ME electives so they can count towards my MS? Is there a website with detailed information about the courses I should choose with regard to the BS/MS program for ME? In addition, is registering for a graduate class any different from registering for an undergraduate class?

A: Appendix A in the Graduate Handbook (<http://www.me.gatech.edu/graduate/handbooks.shtml>) has a list of all graduate-level courses offered in ME per semester (Fall or Spring). You can also see a list of grad courses per research area in the Appendix B of the Grad Handbook. Based on what you plan your MS major and minor to be, you should pick a class from those areas. Also obviously check Oscar to make sure whatever class you pick is indeed offered when you plan to take it - the Grad Handbook is not always 100% accurate since there can be changes if not enough people register for a class, or the usual instructor leaves GT, etc.

Once you have done that, you should email the instructor to warn him/her that you're an undergraduate student planning to take a grad class and get his/her ok. There is more info on the advisement website on how to request overloads and Level Restriction overrides:

http://www.me.gatech.edu/undergraduate/registration.shtml#level_restr
<http://www.me.gatech.edu/undergraduate/registration.shtml>

Q: Can the courses that I wish to double-count towards my MS degree be part of the required BS degree curriculum?

A: No. Only ME electives or free electives can double count. You can not double count required BSME courses.

Q: How many 4xxx level courses TOTAL can I have counted towards my MS?

A: You can take at most two 4xxx level courses for your MS, and that's regardless of whether you do thesis or non thesis. Students can double count 2 classes with their BS. In ME, this can be either free electives or ME electives (at the 4000 or 6000-level). If your math course is at the 4000 level and one of your free electives, you will be able to also double count one ME elective at the 4000 level (but not both). If your math course does not count towards your BS(i.e. is not a free elective) and is at the 4000 level, you can count both ME electives towards your MS, but one of them will have to be at the 6000 level.

Q: Can I have ME 6753, ME 6789 and/or ME 6799 count towards my minor?

A: Yes, they are allowed for your minor, but not your major.

Q: By how long can I defer my MS program?

A: Generally, a semester or 2 (say, for a co-op) is no problem. Just let Terri Keita in the ME Academic Office know (<http://www.me.gatech.edu/faculty/keita.shtml>). For longer durations or specific issues (say, military service in a foreign country) please contact Gail Potts, director of graduate admissions. There needs to be a reason for the delay. Students are not allowed to take a semester off between their MS and their BS, except for a summer semester.

Q: I've come up with my MS plan of study, based on the graduate handbook guidelines and course predictions in its Appendix A. I need to start registering for my ME electives and want to make sure they will count properly towards my MS. How do I do that?

A: You are welcome to meet with your advisor (Dr. Valle) to review your plan, but ultimately, to make sure you get those courses counted properly towards your MS, you should go to the following link:

https://www2.me.gatech.edu/graddb/forms/STUDENT/pos_stu/MSME.asp

where you'll enter your MS program of study (exactly what you wrote in the spreadsheet). This is sent to Dr. Whiteman (<http://www.me.gatech.edu/faculty/whiteman.shtml>) who will review and approve it.

You should do this pretty soon (definitely before you graduate with your BS) to make sure the ME electives you selected work, so you can go and register for them on time.

If something comes up (i.e. some ME grad course you had planned to take in the 2nd semester of your MS isn't offered) you can always go back to that previous website and revise your plan of study so it meets approval again. People can revise it as often as they want based on actual course offerings. The key is you want to file your MS Program of Study asap so you get your choices confirmed in time for registration.

Q: I can't get into the MSME Program of Study link. When I type in my GT login, the window just asks me to login again and again, and finally when I close the window, I get a blank page with a message that says "You are not authorized to view this page."

A: Please contact Computer Support at computer.support@me.gatech.edu. They should be able to assist you.

Q: Should I take the Thesis, or the Non Thesis, route for my MS? What are the advantages and disadvantages of them?

A: The Non Thesis (NT) route is very similar to a BS degree: classes, homework, exams, and after 2 semesters of this or so, you can graduate, get a job and move on. Grad courses typically require more work than undergraduate courses (a full load in grad school is 4 courses per semester) but are run very much like undergraduate courses. This is best suited for students who are in a hurry and don't mind taking yet more classes. The main disadvantage is you'll have to pay the tuition yourself, unless you have some sort of fellowship that will cover that for you (which is extremely rare). If you're an out-of-state student, you'll pay out-of-state tuition (unless you do your MS at GTL, which only requires in-state tuition). Another disadvantage is, well, you miss the opportunity of doing a thesis - in case you were at all curious about it.

If you are curious about it: you should know that people disagree as to whether it's preferable to go to grad school right after your BS (or MS NT), or if you're better off postponing until after you've graduated and worked in industry a while. Some say it's harder to postpone because the financial sacrifices one makes pursuing a thesis are that much more difficult to bear once you're used to a "real world" salary - especially if you are also responsible for a family. Others say industrial experience is best, because you know more clearly what to do your thesis on, and also you're extra motivated to succeed at it since you've already experienced the "real world" first hand. Ultimately, this is very much a personal decision that depends on your individual circumstances and goals.

The Thesis (T) route involves taking fewer classes than you would in the NT option (3 less). What replaces these courses is the thesis, although the thesis will generally take longer (at least 1 extra semester) than the courses would have taken. A thesis means you work on an engineering project under the close supervision of a faculty member, who, typically, will pay you as a Graduate Research Assistant (GRA). This GRA will pay the majority of your tuition and a stipend (currently \$1900/month). This money comes out of the faculty member's research funds, in exchange for your work. You get to experience research, which is a fundamentally different experience from just taking classes. The problems you work on for your thesis are cutting edge

and you get to participate in tomorrow's technological advances, which can be extremely rewarding. There is more intellectual depth in a thesis than can ever be in a course, no matter how challenging, due to its limited duration. You get to write a thesis, which is substantially more ambitious than a capstone design report. The chance to work closely with a faculty member, who then becomes your mentor, can change your life (in a good way!). And, the majority of your tuition is paid from your GRA tuition waiver (You are still required to pay reduced tuition and fees. These are currently \$542/semester.) You may also receive additional fellowships. The main disadvantage is that you'll graduate slightly later than if you had gone the NT route. How much later varies based on your research project and advisor, but generally you should count on an extra semester to graduate.

Q: What kind of financial aid can I get for my MS?

A: The basic rule of thumb is that (almost) nobody will pay you to just take courses, so whenever you get money, you should count on having to work in some way, in addition to your classes, so graduation will take longer than 1 year. There are a few exceptions where you get money for course work (for example, the Gates Millennium award) but they are extremely rare.

1. Fellowship:

Most fellowships (a fellowship is a scholarship for grad students) require you to do a thesis, and are extremely competitive. Dr. Donnell (<http://www.me.gatech.edu/faculty/donnell.shtml>) is the ME resident expert on fellowships, so do talk to him if you plan to apply. The main advantage of having a fellowship is that you have much more flexibility in your choice of the research project and/or advisor you want to work on and/or with, because you effectively bring your own money and so you come "free" to your thesis advisor. Also, these fellowships are very prestigious and look great on your resume! But they do demand a significant amount of time and effort as the application process for most of them is arduous (transcripts, GRE, letters of recommendation, essay, etc). Most require US citizenship or permanent residency.

2. GRA:

If you don't have a fellowship but want to do a thesis MS, you should first determine what type of research interests you (say, by looking at the GWW School research brochure or on the ME website under "Research" (<http://www.me.gatech.edu/research/index.shtml>)). Once you know what you'd like to work on, meet with graduate students and/or faculty who also work in this area, and try to develop a relationship with them. Tell them you're interested in working with them for your MS. Maybe offer to work in their lab for course credit or pay while you're still an undergraduate student, or get a PURA award to do some undergraduate research with them (see the following website for more details: <http://undergradresearch.gatech.edu/index.php>) If people know you and know that you do good work, they will fund you for your MS, i.e., you'll get a GRA tuition waiver to cover the majority of your tuition and you will receive a monthly stipend for you to live on (currently \$1900/month).

3. GTA:

The GTA, or Graduate Teaching Assistantship, works like a GRA, except that instead of doing a thesis, you help a faculty member teach his/her courses. Usually you set up and monitor labs or deliver lectures or grade or any combination thereof. Generally GTAs are extremely hard to get because they go by priority to ME grad students who are doing an MS thesis or PhD. As MS NT you are at the bottom of the priority order: top priority are Ph.D. students who have passed their proposal, next are Ph.D. students who have passed their qualifying exams but not their proposal, next are Ph.D. students who have been admitted but haven't passed their qualifying exams, next are MS Thesis students, and then... you. In any given semester, there are too many students needing money and with higher priority than you, for you to expect to get any money at all. It

may happen, but it's unpredictable and highly unlikely. Dr. Whiteman (<http://www.me.gatech.edu/faculty/whiteman.shtml>) is the person who assembles the tentative GTA list each semester. The list then receives final approval from the Woodruff School Chair and Associate Chairs.

4. GTL:

All non-thesis MS students pay in-state tuition at GTL. So if you are considered an out-of-state student in Atlanta, and know you don't want to do a thesis for your MS, you might want to consider doing your MS at GTL so you're only charged in-state tuition (and not out-of-state as you would in Atlanta).

Q: % of students who have funding?

50% on on-campus grad students have funding. 80% of those students are PhD students. 15% are MS thesis students. Less than 5% of MS non-thesis end up with a GTA (and even then, maybe only for 1 term if Dr. Whiteman needs to fill a late hole in the GTA schedule).

II. I am interested in doing my MS in:

Georgia Tech Lorraine

Q: I want to do my MS at GTL. What about the MATH course, can I take it there?

A: GTL has nobody from the School of Mathematics teaching there, so, you can either take the class through distance learning there, or take it here while you're still on campus (before you leave for GTL) if that's possible with your schedule.

Robotics

Q: Is there a difference between ME 4451 and ME 6407?

A: There are many differences. For example, ME4451 is 2D, covers serial and parallel robots, and has a lab. ME6407 is 3D, covers serial robots only but in more depth, and has no lab. In the past, MS students were not allowed to count both courses towards their MS. We now allow double counting of these courses.

Manufacturing

Q: I am interested in getting a Certificate in Manufacturing during my MS. How do I go about it?

A: Information on the certificate of Manufacturing is available here:

http://www.marc.gatech.edu/mep/mep_manufacturing_certificate.html

You may have to add a seminar course to get it.

Med School

Q: I am interested in medical school. What are the requirements for pre-med? Can I do some undergraduate research in the area?

A: Please check out the following links:

- General website for pre-med and all things pertaining to medical school: www.aamc.org
- The college of science has a pre-med page for undergraduate students. <http://www.cos.gatech.edu/prehealth.htm>
- ECE maintains a page with some info for their undergrad students on a pre-med track. It's intended for ECE students, so not directly applicable to ME, but there's good general info on it anyway so I'd recommend you check it out: <http://www.ece.gatech.edu/academics/undergrad/pre-med.html>
- Dr. Andres Garcia, <http://www.me.gatech.edu/faculty/garcia.shtml>, is the ME resident expert on pre-med. Contact him directly.
- If you are serious about med school, definitely do try to get some undergraduate research experience in a bio-related lab before applying. Spend time on the web page of the bio profs in ME <http://www.me.gatech.edu/research/bioengineering.shtml>
- to identify projects that interest you and then meet the students who are actually doing the work (and eventually the prof in charge of it) to see if this is something that you'd like to work on as well and if the group welcomes you. On your med school application, undergraduate research experience will show that you are motivated, focused, and hard working, and will set you apart from other applicants.

Medical Physics (MP)

Dr. Farzad Rahnema (<http://www.me.gatech.edu/faculty/rahnema.shtml>) approves the Program of Study, so please contact him directly for any MP questions. Applications are done by paper (no online submission.) Please be aware that there is also a requirement for a clinical rotation.

Bioengineering

There is confusion with the MS in Bioengineering versus the MS in Biomedical Engineering. The Woodruff School serves as one of the home schools for MS in the interdisciplinary bioengineering program. There is no MS in Biomedical Engineering (except as an opt-out path for students initially admitted as doctoral students). <http://www.bioengineering.gatech.edu>