ECRC Guide to the Graduate School Process

A Guide to Exploring, Learning, and Evaluating Graduate Programs and their Application Processes
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GRADUATE PROGRAMS OVERVIEW

UM SEQUENTIAL UNDERGRADUATE / GRADUATE STUDIES (SUGS)

**Overview:** A specialized degree program for Michigan Engineering undergraduates who wish to pursue a combined B.S.E./M.S.E. or B.S.E./M.S. in 5 years. This program is an expedient opportunity for Michigan engineers to complete a master’s degree in only 2 additional terms by double-counting credits between the bachelor’s and master’s degrees. Terms for admission to SUGS (including a GPA requirement) are set by each department. Interested students should speak with their academic advisor for more details.

**Application Deadline for Fall Enrollment:** Department specific (Ranges from 1–3 semesters prior to end of the bachelor’s degree)

**Timeline:** 3–4 Years for bachelor’s, 1–2 Years for master’s

**Standardized Testing:** Not required

**Letters of Recommendation:** Up to 3 letters required

MASTER OF ENGINEERING (M.ENG.)

**Overview:** A coursework-based professional degree that focuses on specialization for industry and does not involve completing a research thesis. This type of program is a great option for engineers looking to advance to management positions throughout their career or to further specialize in their respective field without completing research. These programs typically focus on practical skills and often take a shorter time to complete than other graduate programs.

**Application Deadline for Fall Enrollment:** January–February

- Some programs offer rolling admission
- Some programs offer admission cycles for a Winter/Spring semester enrollment

**Timeline:** Approximately 1–2 years when enrolled full-time

**Standardized Testing:** GRE typically optional, but is sometimes required

**Letters of Recommendation:** Up to 3 letters required
GRADUATE PROGRAMS
OVERVIEW

For most engineers, going to graduate school means obtaining a Master's degree or Doctor of Philosophy (PhD). This guide will focus on types of graduate programs within the field of engineering, but engineers may also decide to pursue graduate programs in other academic disciplines.

OVERVIEW:
A highly specialized research-based degree that requires completion of an original dissertation. If you are certain that you want to pursue a career in research, a PhD program will help you progress toward your career goal. You will become a subject matter expert in an engineering field of your choice. In addition to completing a dissertation, you will take 1–3 years of classes to complete a master's degree (unless you already have one).

APPLICATION DEADLINES:
Usually in late fall

TIMELINE:
Approximately 4-5 years

STANDARDIZED TESTING:
GRE may be required, research individual programs

LETTERS OF RECOMMENDATION:
Usually 3 letters required

DOCTOR OF PHILOSOPHY (PHD)

Overview: A highly specialized research-based degree that requires completion of an original dissertation. If you are certain that you want to pursue a career in research, a PhD program will help you progress toward your career goal. You will become a subject matter expert in an engineering field of your choice. In addition to completing a dissertation, you will take 1–3 years of classes to complete a master’s degree (unless you already have one).

APPLICATION DEADLINES: Usually in late fall

TIMELINE: Approximately 4-5 years

STANDARDIZED TESTING: GRE may be required, research individual programs

LETTERS OF RECOMMENDATION: Usually 3 letters required

MASTER OF SCIENCE (M.S. OR M.S.E.)

Overview: An academic degree that can involve the completion of a research thesis and may lead to a PhD program. If you are interested in a career in research or academia, this type of master’s program may be for you. These graduate programs can be a great way to enhance your research experience and become a more competitive applicant for PhD programs. Some PhD programs require the completion of a Master of Science prior to applying, whereas some programs integrate the completion of a Master of Science into the PhD.

APPLICATION DEADLINE FOR FALL ENROLLMENT: December–February

TIMELINE: Approximately 2 years

STANDARDIZED TESTING: GRE can be required, review each program’s application requirements

LETTERS OF RECOMMENDATION: Up to 3 letters required
WHAT ARE THE BENEFITS OF GOING TO GRADUATE SCHOOL?

**Specialization**
Graduate degrees provide greater opportunities for specialization and courses that facilitate a more nuanced understanding of a particular field.

**Networking**
As a graduate student, you will have the opportunity to delve deeper into your field and meet experts. This will allow you to build relationships that could later help you find a position in industry or academia.

**Research Opportunities**
If you are interested in research in academia, government, or industry, graduate degrees are often required prerequisites for positions.

**Competitive Job Applicant**
A graduate degree gives you a higher level of expertise in your field of study and can make you a more qualified candidate for certain positions.

**Leadership Opportunities**
Some employers will require you to have an advanced degree for managerial positions. A graduate degree can enable you to move more quickly into management-level positions.
WHAT OTHER FACTORS CAN HELP ME EVALUATE IF GRADUATE SCHOOL IS RIGHT FOR ME?

Graduate school is not the best path for everyone. While weighing potential benefits, take into consideration the following factors as well:

**Cost**
Most graduate programs (especially Master’s programs) have a significant financial investment and delay your ability to begin working. Think of the price of graduate school as the actual fees, living expenses, and the opportunity cost of not working at a full-time job. While you can find fellowships, scholarships, and teaching assistantships to help fund your education, cost is still an important factor to take into consideration.

**Uncertainty in Career**
Invest time in career exploration before applying to determine if graduate school is the best path for you and your career interests. If you are not sure what you want to do next with your career, graduate school is not necessarily the right path for you. It is a significant investment in an experience you may not enjoy or need. Before committing to a graduate program, consider the following question: Is a graduate degree required, preferred, or optional in your chosen field? As you grow in your career, you may also develop interests in other fields and might have to pursue additional degrees. Some employers will offer tuition assistance programs for employees continuing their education in a field related to their work.

**Credentials**
If you are pursuing an advanced degree solely for the title rather than the knowledge obtained, you should spend more time further evaluating whether graduate school is a good investment for you. Work experience in a related field could be equally or more valuable.

**Time**
An advanced degree could take you anywhere from 1 to 5 years, depending on the program you choose. Evaluate how the program’s timeline fits in with your future career and life goals.
HOW DO I EVALUATE WHAT MASTER'S PROGRAMS ARE RIGHT FOR ME?

As you investigate master's programs, it's important to analyze a variety of factors to determine if the program is a good fit for you. Some of the factors you might consider are:

**Format of the Program**
Graduate programs can be primarily online, in-person, or a hybrid of both in person and online components. As you evaluate the programs, think about the format that will work best for you and your ability to make the most of the program's educational components.

**Program Timeline**
The length of master's programs can vary between different programs and universities. You'll want to evaluate your goals for your graduate education to determine what program timeline will work best for you. Some questions that can be helpful to consider are:

- Are you interested in exploring intern and co-op opportunities?
- Are you hoping to develop more research experience?
- Are you trying to move into a different field quickly?

**Reputable Program**
Is the program accredited? Are the faculty subject matter experts in their field? Will the program offer you opportunities to challenge yourself and continue to grow academically, personally, and in your career?

**Program Components**
Master's programs can vary in their program components and you'll want to identify the program components that will support your academic and career goals. Some common program components include specific course requirements, capstone or thesis projects, internships, research, professional development experiences, etc.

**Courses Requirements and Offerings**
Master's programs can be a great way to further your understanding of a particular field or expand your expertise by learning about a new field. As you identify master's programs, you'll want to examine the course requirements and offerings to determine whether there's a variety of interesting courses which will further your academic and career goals.

**Research Mentors**
For programs that offer a thesis component, you'll want to explore the different research labs within the department. It's helpful to identify multiple professors whose research interests you. If there's only one professor whose work interests you, it can create difficulties for completing your thesis if that professor is not available to supervise your thesis work.
WHY WOULD I PURSUE A PHD IN ENGINEERING?

A PhD is meant for those who are truly interested in and hope to pursue a career in research through academia, a government organization, or industry. If you wish to have a leadership position in a research setting, you will likely need a PhD.

HOW DO I DECIDE WHAT PHD PROGRAMS ARE BEST FOR ME?

PhD programs are often the graduate programs that require the longest time commitment. It’s important for you to consider your own research interests and personal preferences as you identify programs that will be the best fit for you. Below you’ll find some factors for you to consider as you evaluate PhD programs.

**Research Opportunities**
Make sure the school has more than one area of research you are interested in and more than one lab you would be interested in joining. You may not always get your top choice for a number of reasons, and you want to make sure that you will still be happy devoting a significant amount of time to your research.

**Mentorship**
Your faculty advisor will be the most important person in your graduate experience, so it is important to find the right mentor. When evaluating potential mentors, look into their research, discuss your personal and academic goals with them, learn about their work style, and talk to people currently and previously in the lab about their experience.

**Class/Research Ratio**
The first 1-2 years of a PhD program typically involve taking classes in addition to finding the lab where you will complete your research. Make sure you find programs that offer classes you are interested in and in an appropriate quantity.
HOW DO I DECIDE WHAT PHD PROGRAMS ARE BEST FOR ME?

Rotational Program
Some programs finalize your lab placement immediately upon entrance into the program for a faster start to your dissertation, whereas others have a rotation program that allows you to rotate through labs for 1-2 years prior to finalizing your choice. When deciding in which lab you will complete your PhD research, rotating through 2-3 labs before picking a mentor could help confirm you are in the right place.

Financial Support/Benefits
Most PhD programs are funded for engineering students, meaning that at least your tuition is completely covered by the program or your lab.
There are however many other financial considerations you should think about:
- Is there a stipend through this program? Is it enough to cover living expenses in the area?
  - Will they help you find additional financial support if needed?
- Does the program help you find housing?
- Does the program offer benefits?
- Will the program fund opportunities for you to present your work at conferences?

Check out the section on Funding for Graduate School to explore additional fellowships and scholarships that can support your graduate studies.

Location
Given the amount of time that a PhD takes to complete, it is important to consider whether the university is somewhere you would like living for the next 4-5 years.

Contributions to Field
It may be helpful to consider whether the program has a well-known reputation in your discipline. Researching significant contributions to your field of study from graduates and faculty of the program you’re looking at will help you determine whether the program has a large depth of research. Look for R1-tier doctoral institutions according to the Carnegie Classifications with very high research activity.
Most graduate programs will be looking for high levels of involvement in your undergraduate career. In addition to maintaining good academic standing, it is important to take advantage of the opportunities at Michigan for experiential learning outside the classroom. This involvement could be an on-campus job or internship, a project team, research, etc. These experiences should show that you have gained technical and leadership skills that would prepare you for an advanced degree.

If you are interested in pursuing a degree with a thesis component, such as an M.S.E. or PhD, it is highly recommended that you gain research experience during your undergraduate career.

HOW DO I FIND RESEARCH PROGRAMS?

**Undergraduate Research Opportunities Program (UROP)**
UROP provides opportunities for first-year and sophomore students to work on research and creative projects with University of Michigan researchers and community partners in all academic disciplines ([urop.info@umich.edu](mailto:urop.info@umich.edu)).

**Summer Undergraduate Research in Engineering (SURE)**
College of Engineering-specific program that offers summer research internships to students who have completed their sophomore or junior year. Participants conduct research with some of the country’s leading faculty in a wide range of engineering disciplines ([SUREprogram@umich.edu](mailto:SUREprogram@umich.edu)).

**Multidisciplinary Design Program (MDP)**
College of Engineering-specific program that offers a variety of faculty-led collaborative multidisciplinary research teams in addition to industry-sponsored projects ([engin-mdp@umich.edu](mailto:engin-mdp@umich.edu)).
HOW DO I FIND RESEARCH OPPORTUNITIES?

Engineering Department Research
College of Engineering departments conduct research specific to their discipline. Check department web pages to explore faculty members’ research topics:
engin.umich.edu/departments

Research Experiences for Undergraduates (REUs)
REUs are a collection of summer research programs across the country and across disciplines that are funded by the National Science Foundation which facilitates research experience on an extended project at another research institution. Search for REUs:
nsf.gov/crssprgm/reu/reu_search.jsp

National Laboratories
Government institutions may offer research internships or cooperative education programs. Find a list of national laboratories in the “Government/National Laboratories” section of the “Additional Job Search Links” on ECRC’s Job Search Resources page:
career.engin.umich.edu/job-search-links/

Student Employment Website
Resource for students to explore, and apply to, part-time jobs at the University of Michigan, both on campus and with other local employers. Research Assistant positions may be found using this resource: studentemployment.umich.edu
REACHING OUT TO PROFESSORS FOR RESEARCH OPPORTUNITIES

If you are reaching out to a professor via email, write an engaging message where you describe your interest in the lab and your relevant qualifications. If you do not have directly-related research experience, focus on relevant classes you may have taken, teamwork/leadership experiences, and/or experiences where you had to learn new skills and adapt to a new environment. To facilitate scheduling a meeting, propose some times you would be available to meet with the principal investigator (PI), the head of the lab (most often a professor), when you reach out so that they can immediately schedule a meeting with you if they are interested.

Additionally, keep the message short and specifically tailored to their research. Be prepared for professors not to respond immediately to your email. It’s not personal; professors are just swamped with emails and may not see it, or they may not have openings for undergraduate students in their lab.

Example Email for Seeking Undergraduate Research Position

Dear [FACULTY PROFESSIONAL NAME],

My name is Anne Arbor, and I am a junior majoring in Biomedical Engineering with a minor in Computer Science. I learned about your lab through the spotlight of your most recent publication in the BME newsletter. After taking Quantitative Cell Biology, I am really interested in systems biology, so I was very intrigued to read about your research studying cellular mechanisms related to HIV. I would like to learn more about how you use measurements of cytokines as input to computational models to investigate disease susceptibility.

Over the summer, I participated in a research experience where I was involved in a project using data-driven modeling in order to study gene interactions related to melanoma drug resistance. While involved with this project, I gained skills using Python to organize data and perform principal component analysis, solve differential equations, and perform least-squares optimization. I believe my strong background in computation would allow me to quickly learn any languages or libraries used in your research.

I strongly believe that my dedication and skills would be beneficial to your project, and I would appreciate being considered for any openings on your team. I have attached my resume for your review and I look forward to speaking with you further.

Thank you for your time and consideration.

Anne Arbor
Example Email to Discuss Research Interests

Hi [Graduate Student],

I am a sophomore undergraduate student in Biomedical Engineering and I came across your research on the BME website and found your project on developing an in-vitro environment for culturing follicles. I was fascinated to learn that follicles are a cellular unit and that they can be encapsulated in a hydrogel like a single cell. The process of developing an environment to culture follicles in-vitro seems extremely complicated due to the many different signaling mechanisms and factors needed for growth in follicles.

If you have time, I would love to meet with you to discuss your project in more depth. The mini-course I am taking with the department has inspired my interest in tissue engineering and I am hoping to learn more about it from the different types of research taking place at Michigan. The information I gain will help me as I evaluate the possibility of pursuing a graduate degree after graduation. I am typically available Mondays and Wednesdays before 12 PM as well as Thursdays after 1 PM, but I am flexible and can work around your availability.

Thank you,
Your Name

Example Email for Research Opportunity Referrals

Hi [Graduate Student],

I am a junior in your [Course Name] and I'm interested in becoming more involved with research this semester. I am interested in [research topics you're interested in]. I was wondering if you knew of any research labs that are looking for research assistants? I would also appreciate any insight into the best resources for finding research opportunities.

Thank you for your time and guidance.

All the Best,
Your Name
### PREPARING YOUR GRADUATE SCHOOL APPLICATION

#### TIMELINE FOR GRADUATE SCHOOL APPLICATIONS

The timeline for your graduate school application preparation can range between 3-6 months depending on the number of requirements for each individual graduate program.

<table>
<thead>
<tr>
<th>Timeframe</th>
<th>Activities</th>
</tr>
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<tbody>
<tr>
<td>6 MONTHS</td>
<td>- Identify graduate programs of interest &lt;br&gt; - Schedule your GRE test date if required for your programs &lt;br&gt; - For PhD programs, review individual professors’ websites to see if they are accepting new graduate students for this application cycle</td>
</tr>
<tr>
<td>4 MONTHS</td>
<td>- Review the application details for all graduate programs of interest and organize the deadlines and requirements</td>
</tr>
<tr>
<td>3 MONTHS</td>
<td>- Evaluate whether you need to retake the GRE &lt;br&gt; - Identify letter of recommendation writers and ask if they feel comfortable writing you a letter of recommendation &lt;br&gt; - Assemble your final list of graduate programs and their application requirements and deadlines</td>
</tr>
<tr>
<td>2 MONTHS</td>
<td>- Request your official transcripts from the University of Michigan’s Office of the Registrar (ro.umich.edu) &lt;br&gt; - Start working on your application essays and CV/resume</td>
</tr>
<tr>
<td>1 MONTH</td>
<td>- Email recommendation letter writers a draft of your application essay, CV/resume, and a list of the graduate programs you plan to apply to &lt;br&gt; - Edit your application essays and ask a trusted advisor to review your essays and provide feedback</td>
</tr>
<tr>
<td>1 WEEK</td>
<td>- Send a reminder email to letter of recommendation writers about upcoming deadlines &lt;br&gt; - Finalize your application materials</td>
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Standardized Tests
The GRE is one of the most common standardized tests for graduate school applications and requires you to schedule a time to take the test at a designated testing facility. Depending on the time of year, there may be more limited availability for testing dates and it may take longer to schedule a test. Best practice is to look for testing dates early on in your application process so that you’re able to secure a testing date months before the application deadlines. Additionally, it takes 10-15 days for GRE scores to be sent to your selected graduate schools, so you want to avoid scheduling your test less than 3 weeks before your application deadline. You can practice for the GRE test using the free resources available at: ets.org/gre/revised_general/prepare/

If English is not your native language, schools may also ask you to take the TOEFL or IELTS tests and submit those scores to them as well.

Recommendation Letters
Most graduate programs require at least 3 letters of recommendation and some prefer that at least 2 of the letters are from faculty members. You’ll want to identify recommenders with whom you have a good rapport and who can speak to your development as a scholar. It’s important to ask people if they feel comfortable writing you a letter of recommendation, rather than assuming they will write the letter for you. You should provide your recommenders with as much notice as possible before the program’s application deadline. Best practice is to ask potential recommenders 3-4 months before the earliest application deadline. Recommenders should be given a minimum of 1 month’s notice before the deadline to enable them to write you a strong recommendation letter.

Once your recommenders have agreed to write your letter, you should make the process as easy for them as possible. Send them a list of all the graduate programs you’re applying to, the deadline for each program, and a short description of why you’re interested in each program. It’s also helpful to provide them with your CV and draft personal statement and/or statement of purpose so they can better understand your interests in the program and your previous experiences that have led you to pursue a graduate degree. You can also offer to meet with your recommenders to discuss your interests and goals further.
COMMON COMPONENTS OF GRADUATE PROGRAM APPLICATIONS

CVs and Resumes
A CV or Curriculum Vitae is a document that showcases your academic and research accomplishments. The document is formatted similarly to a resume, but it doesn’t have a particular page limit and its contents will prioritize research, publications, presentations, teaching experiences, and awards over other experiences.

A resume is typically limited to one page and focuses on showcasing your professional experiences and skill sets. Common sections include: Education, Work Experience, Project Experience, Leadership Experience, Activities, Volunteering, Skills, Awards, etc.

You can reference the ECRC Career Guide for example resumes and information about creating a CV. You can also have your CV and/or resume reviewed by the ECRC by scheduling an appointment through your Engineering Careers, by 12Twenty account.

Application Essays
One of the more time consuming tasks of the graduate school application process is writing the application essays. Two of the most common application essays are the Personal Statement and the Statement of Purpose. For some graduate programs, these essays are essentially the same thing, however for other graduate programs, they are treated as two distinct essays. It is important for you to read each prompt for each program separately to ensure that you are responding to their essay questions appropriately. Some graduate programs may also have their own unique essay questions, so it’s important that you review each application carefully to ensure that you are able to allocate enough time to write each required essay. Later in this guide, we’ll discuss the two most common essays more detail.

Application Fees
For each application, you will likely be asked to pay an application fee. These fees can range from $45-$250 and can add up quickly if you’re applying for multiple programs. You’ll want to make sure you budget an appropriate amount of funds as part of your application preparation for graduate school. Universities also offer application fee waivers for applicants with demonstrated financial need. If you have concerns about the cost of the application fees, make sure you review each program’s process for requesting an application fee waiver. Some programs may offer fee waiver opportunities for students who attend their prospective student programs.
PERSONAL STATEMENTS AND STATEMENTS OF PURPOSE

Personal Statement
Personal Statement prompts will ask you to reflect on the elements of your individual identity that have led you to pursue a graduate degree. You could include a discussion of your co-curricular activities (student organizations, leadership roles, volunteer work, study abroad, project experience, sports, academic difficulties, challenging circumstances, etc) or reflect on how your social identities have shaped your journey to graduate school. If the Personal Statement is the only application essay you are submitting for the graduate program, you will want to conclude your essay by discussing your interest in the graduate program and how it will help you excel in your career.

As you’re brainstorming ideas/topics for your essay, reflect on the following questions:
- What drew you to this field?
- How have your experiences helped you evolve as a person?
- Which experiences facilitated the greatest amount of growth?
- What has shaped your academic experiences?
- How have your interests changed over time?
- What appeals to you about this graduate program?
- What do you see yourself doing after graduate school?

Statement of Purpose
Statement of Purpose essay prompts are more common amongst research oriented graduate programs. In this essay, you’ll want to focus your discussion on your evolution as a scholar and researcher and the experiences that have prepared you to thrive in a graduate program. The body paragraphs of your essay will focus on your relevant research, project, and academic experiences. Your discussion should also provide evidence that you have the skills necessary to excel in a graduate program such as: critical thinking, problem solving, teamwork, initiative, motivation, communication, etc.

As you’re brainstorming ideas/topics for your essay, reflect on the following questions:
- What do you want to study in graduate school? What drew you to that topic?
- What research experiences have prepared you for graduate school?
- How have you expanded your research skills?
- How have your research interests evolved over time?
- What do you want to do with a graduate degree?
- Why do you want to apply to this particular graduate program?
- If applying for a PhD program, who are the professors you want to work with and why?
GENERAL ESSAY TIPS

1. **Write a Compelling Introduction**
   Distinguish yourself as a strong applicant with a compelling introductory paragraph; showcase your excitement and investment in the field and emphasize your fit for their field of study. Your introductory paragraph should not start with “I am applying to X graduate program because…” or “Since I was a little kid and playing with Legos, engineering has always been my ideal career path”.

2. **Organization and Balance**
   Read through your essay and make sure your thoughts are clear and organized in a logical fashion. The reader should be able to follow your transitions from one topic to another. Incorporate topic sentences in each of your body paragraphs to help facilitate the organization of your ideas. You want your essays to tell a cohesive story rather than appear as 4-5 distinct paragraphs.

3. **Don't Overuse Specific Words**
   As you’re trying to convey your excitement and interest in a particular field or graduate program, you want to be mindful of overusing specific words such as “passion”, “fascinating”, “interesting”, etc. If you find yourself repeating certain words over and over again, try to state your underlying intention more clearly, such as why you find something fascinating/interesting.

4. **Proofread**
   Review your essay for grammatical and spelling errors. A well-written essay helps to demonstrate your preparedness for a grad program. If you struggle with proofreading, find a trusted friend or advisor.

5. **Avoid Clichés**
   The phrase “dream school” is often overused in application essays and often results in a superficial representation of your interest. Instead, list the characteristics or elements of the program that make it your top choice. Another common cliché in application essays is incorporating a childhood story into your essay. Your intention may be to indicate your long held interest in the field, but this approach can create the illusion that your interest hasn’t evolved since your childhood fascination. Instead, focus on recent events or an analysis of the importance and/or challenges of a particular topic in your field.
Example Introductory Paragraph for a Statement of Purpose

Engineering has the potential to address innumerable challenges, but the challenge I find myself chasing is flight safety. I am fascinated by the interdisciplinary nature of autonomous aircraft systems designed to mitigate risk and analyze a variety of flight factors to make decisions. Despite the advancement in these autonomous systems, the question of safety still remains. I am captivated by the complexities involved in creating redundancies for autonomous systems to ensure the safety of passengers onboard the aircraft. I am driven to pursue a master’s of science in aerospace engineering to study how autonomous aircraft systems can improve in their ability to make decisions in response to unexpected stimuli. I believe my previous research and project experiences have contributed to my evolution as a researcher and will enable me to thrive in a robust research environment at School X.

Example Body Paragraph

Through Introduction to BME Design, I have gained experience conducting literature reviews, optimizing models, and adhering to preordained specifications in a design process. In this class, my team followed the FDA design process in order to develop an artificial aortic bypass that delivered an anti-inflammatory drug to treat peripheral artery disease (PAD). As part of this project, my team performed a user needs and market analysis, developed several design concepts, created computer drawings of our design in Solidworks, and completed several computational models in COMSOL in order to examine the release profile of the drug from our bypass. I led my team through the modeling process by performing the literature review and computational analysis to determine the initial loading dose of drug needed and the required diffusivity properties of our bypass in order to maintain a certain blood concentration for 100 days. I spent many hours researching possible diffusivity barrier materials and running parametric sweeps of the model to determine the optimal choices for our design. In this project, I was able to demonstrate my ability to understand and finetune a computational model. I am extremely interested in the varied applications of models and how they can be used to further our understanding of biological concepts without extensive benchwork. This project specifically enhanced my interests in designing new delivery mechanisms for therapeutics. I am intrigued by the ability to predict how effectively a delivery mechanism will function to deliver a drug before any lab testing and I hope to investigate these mechanisms further in this program.
Example Conclusion Paragraph for a Statement of Purpose

I believe the thesis option for the master’s of science in Computer Science at School X will be the best fit for me because of the academic and research environment fostered by the Computer Science department. I am eager to explore the variety of course offerings of the program, particularly Advanced Algorithmic Game Theory, Statistical Models in Natural Language Understanding, and Reintegrating AI to further my understanding of artificial intelligence. For the thesis component of the program, I’ve identified several potential research mentors amongst your faculty with compelling research focus areas. Professor X’s paper on Syntactic Heuristics in Natural Language processing and the development of an evaluation dataset to test a model’s reliance on heuristics fascinates me because of its application to improving natural language interference. I am also intrigued by the work of Professor Y who has leveraged the BERT model to incorporate visual elements and linguistic elements into their model’s training. The thesis and course components of this program will enable me to refine my career interests in artificial intelligence and support the next steps in my career as I evaluate PhD programs and industry opportunities.
Graduate school programs can require a significant financial investment, so it’s important to understand different funding opportunities available to you. Funding opportunities for graduate programs can vary depending on the program type and the school’s scholarship availability. Some schools may have robust scholarship opportunities, while others may have more limited funding available. If you are interested in funding opportunities for graduate school, it’s important that you check with the individual department or program you’re interested in to understand the funding opportunities that are available to you and how you can apply to them. In addition to the scholarships offered by individual programs, some employers also provide a tuition reimbursement program as part of the benefits package offered to their employees. Corporate tuition reimbursement programs can have a variety of requirements for their participants, so make sure you read through the program materials carefully.

### Types of Funding Opportunities
- Departmental Funding
- Faculty Grant Funding
- Endowed Scholarships
- Government Scholarships
- Society Scholarships
- Industry Scholarships
- Assistantships
- Corporate Tuition Reimbursement

### Scholarship Resources
- DOD SMART Scholarship Program
- NSF Graduate Research Fellowship Program
- NIH Fellowships
- Homeland Security Graduate Fellowship
- NASA Fellowship
- Hertz Fellowship
- Ford Foundation Fellowship
- Department of Energy Fellowships
- University of Michigan CoE Scholarship Office