Commonly-Asked Questions

The following questions are commonly asked by students applying to the Environmental Engineering & Science (EES) Program at Stanford. Many of the answers are relevant to all graduate programs within the Civil and Environmental Engineering Department, but some relate just to the EES program.

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I have not taken a molecular/cellular biology course. What should I do?
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**Answers to Commonly-Asked Questions:**

(A) Application Procedures

*What materials do I need to apply?*

Your application must include general GRE scores, 2 copies of official transcripts, a statement of purpose, the web application form, and 3 recommendation letters. TOEFL scores are required of all applicants whose first language is not English. Exceptions are granted for applicants who have earned a U.S. bachelor’s or master's degree from a college or university accredited by a regional accrediting association in the United States, or the equivalent of either degree from a non-U.S., college or university of recognized standing where all instruction is provided in English.

*How can I get an application?*

Application materials typically become accessible on the web by early September. If you wish to be considered for financial aid, these application materials are due in early December – see the website for the exact deadline. The standard application form includes a question on whether you want to apply for financial aid, so no special financial aid forms are needed.

*I need a waiver on the application fee.*

Applicants who are citizens or permanent residents of the U.S. are eligible for a waiver of the $105 application fee if they can obtain a GRE fee waiver for the current academic year. The GRE Fee Waiver Certificate can be printed from the web at [http://ntis01.ets.org/onyx/feewav.htm](http://ntis01.ets.org/onyx/feewav.htm)

For foreign students, Stanford University will not, under any circumstances, process application materials without an application fee. We realize that this strict policy presents difficulties for students from certain foreign countries, but Stanford will no longer allow us to make ANY exceptions to this rule, no matter what the reason.
What minimum scores are needed to be admitted?

Our department does not have any minimum numerical requirements for either the GPA or for the GREs. Instead, all application materials are evaluated in their entirety, to assess the relative strengths and weaknesses of each applicant, taking into account various factors [described more fully below, under Admissions Procedures]. We will often admit an applicant with a weakness in one area if the applicant appears to be strong in the other areas; however, we are less likely to admit applicants who seem weak in multiple areas.

For foreign students required to take the TOEFL, the University does not allow us to admit anyone whose TOEFL score is less than 575 (paper-based, or 230 for the computer-based test, or 89 for the Internet-based test); in the EES program, we seldom admit students with TOEFL scores of less than 593 (paper-based, or 243 for the computer-based test, or 97 for the Internet), because experience has shown us that such students find it difficult to do well in our graduate program.

Despite the lack of numerically-based evaluation criteria, some potential applicants still seek numerical data regarding our admitted students, to try and gauge what caliber of applicants we tend to admit. While we are willing to provide such data for the EES program, you must recognize that we do not use these numbers as criteria --- while most of our admitted students meet many of these criteria, there are also applicants meeting most of these numerical measures who are not admitted to the EES program.

About 2/3rds of the Master's students admitted to the EES program for 2008-2009 had undergraduate GPAs of at least 3.6, 2/3rds had verbal GREs of at least 550, 2/3rds had quantitative GREs of at least 750, and 2/3rds had analytical writing GREs of at least 4.5. For those admittees who were foreign students, about 2/3rds had TOEFL scores above 105 (Internet-based; equivalent to >620 for paper-based exam; >260 for computerized test).

How do I decide whether to apply to the EES or EFMH Master's program?

While there is substantial overlap between the two programs, EFMH emphasizes more the fluid mechanical, hydrological, mass transport and modeling aspects of environmental problems, while EES is more oriented towards chemical and biological aspects, with an emphasis on treatment technologies.
If you still feel uncertain about which program would be a better fit with your interests, we urge you to examine the MS course requirements for each program at our websites: http://www.stanford.edu/group/ees/guidelines.html for EES, and http://www.stanford.edu/group/efmh/efmh/degreereqs.html for EFMH.

Can I apply to start in Winter or Spring Quarter?

Both the EES and EFMH programs are structured to allow MS studies to be completed within 3 quarters, so many of our winter and spring quarter course offerings have as prerequisites courses offered in the autumn. Because of this, these 2 programs only offer admission starting in autumn quarter.

Where do I send the application and supporting material?

On-line applications are forwarded directly to the department. Supporting documents, i.e., transcripts, letters of recommendation, should be mailed to the Department of Civil and Environmental Engineering, Graduate Admissions Coordinator; Yang & Yamazaki Environment and Energy Bldg., Room 314, MC 4020; 473 Via Ortega; Stanford University, Stanford, CA 94305.

What is the application deadline?

Applications and supporting material are due in early December. See our department’s admissions website for the specific date: http://cee.stanford.edu/prospective/grad/grad_admissions.html

(B) Admission Procedures

Criteria for graduate admission decisions?

The EES program evaluates graduate applications based on 4 general criteria.

First, we evaluate your academic preparation by looking at where you went to school, what you studied, and what kinds of grades you got (not just your GPA, but which classes you did well/poorly in, and whether your grades tended to get stronger or weaker as you progressed).

Next, we look at your standardized test scores. We do not view these as a perfect measure of your abilities, but they do provide us with a way of comparing the different applicants. We look most closely at the Quantitative
score, as a rough measure of your technical abilities. [For verbal skills, we rely much more on the English skills you show in your statement of purpose, and on TOEFL scores for nonnative speakers.]

We look closely at your statement of purpose, to evaluate how well your interests and abilities match with our EES program's focus areas. We also look for the answers to 3 questions: (1) Why are you interested in environmental engineering and science; and (2) Why do you want to continue on for graduate studies? and (3) Why do you feel that Stanford's EES program will help you fulfill your educational objectives?

Finally, we look closely at your recommendation letters, to find out what others say about your strengths and weaknesses. So we hope that your letter writers know you fairly well, and have a technical or scientific background, and can provide insights into your suitability for our academic program.

**Procedure for admissions at the MS Level?**

At the MS level, each program in the Civil & Environmental Engineering Dept. chooses a faculty committee to review the MS-level applicants. This committee evaluates how well-qualified you are for admission, and whether your interests are a good fit with the program. In the EES program, we have a target class size of ~25-30 MS students; by looking at what fraction of the admittees in recent years have chosen to attend Stanford, we can estimate how many students we should offer admission to. We do not use waiting lists; instead each applicant is either offered or not offered admission. Many years, we must turn down well-qualified applicants in order to stay within our target class size.

If you are offered admission, we will indicate in the letter whether we will be seriously considering you for merit-based funding. Our funding resources for MS students are quite limited --- the entire EES faculty reviews the applications of those students being seriously considered for financial aid, and decides as a group which individuals should receive funding offers.

**Procedure for admissions at the Ph.D. Level?**

Our department's policy is to only admit Ph.D. students who have full funding (stipend plus tuition), either from an outside fellowship or from funds being provided by their faculty research sponsor. So to be admitted, a faculty member needs to (i) judge you to be a promising candidate for their research program, and (ii) have funds available (usually a research assistantship from a funded project) to fully support you.
At the Ph.D. level, applications to the EES program are circulated among our faculty, so that each one can assess whether their research areas overlap with your background and interests. The decision to admit is made by the individual faculty member whose research group you would be joining. Typically, Ph.D. applicants do not receive decision letters until mid-to late March, due to the time it takes to complete this review process.

Because the Ph.D. admissions criteria include funding, and because funding depends on getting research projects funded, the number of students admitted as Ph.D's varies greatly from year to year, and from faculty member to faculty member. Only rarely do we consider applications outside of our usual January-March schedule, because usually the number of applications we receive in January already exceeds the amount of funding available.

**Do we accept non-engineering majors?**

The EES program gladly accepts students with non-engineering academic backgrounds. Almost every year, our MS class includes students with undergraduate degrees in areas like Biology, Chemistry, and Geology, and we also occasionally get students with more unusual backgrounds, like Ecology, Physics, Economics, and Mathematics. We find that students having a strong chemistry background tend to do especially well in our EES program.

For prerequisites, the EES program would most like to see a year of college calculus, an introductory class in fluid mechanics, an introductory class in organic chemistry, and a class in molecular or cellular biology. While we will admit students who lack some of these prerequisites, we will encourage them to pick up the course background they lack BEFORE arriving at Stanford (because we assume in our fall quarter classes that they already have this background).

**Financial aid for MS students?**

Financial aid decisions are made once the admissions process is completed. We are able to offer a small number of financial aid packages to MS students using funds made available to our Environmental Engineering & Science group. These 9-month fellowships are awarded based entirely on merit (without any consideration of financial need or citizenship). In a typical year, 4-6 financial aid packages are offered at the MS level in the EES program.
Should I send an updated transcript with my fall quarter/semester grades?

Yes, do go ahead and send updated versions of your transcript. While this is not required, it is helpful to see what classes you are taking in your senior year, and how you are doing.

How about research opportunities at the MS level?

The 9-month MS program in EES only requires 45 units of coursework. Research Assistantships tend to be given to Ph.D. students, so this is not a reliable source of financial aid for our MS students. However, all of the MS students in the EES program, whether funded or not, are offered the opportunity to participate in research projects as part of their first year of study — it is up to them to decide how they want to divide their time between classes and research. [A total of up to 9 units of research coursework (which is equivalent in research involvement to a 25% Research Assistantship over three quarters) can be credited towards the 45 units of coursework required to earn an MS degree in the EES program here at Stanford.]

Students wanting more extensive involvement in research typically stay on to pursue an Engineer's or Ph.D. degree after completing the MS. For post-MS studies, students are only admitted if full financial aid is available to them (either from their research supervisor, or from outside funding sources).

How am I assigned a faculty member as my MS advisor?

Since the 9-month (3 quarter) MS program in EES focuses on coursework, students do not need to affiliate themselves with a research group. Instead, each MS student admitted to the EES program is assigned a coursework advisor by the admissions coordinator. At the MS level, the primary responsibility of the advisor is to assist the students in selecting classes.

Students wishing to continue on for PhD-level work typically spend the first few months of their MS year becoming better acquainted with the various faculty and their research areas before deciding with whom they would like to work.
(C) Questions Regarding Submitted Applications

Have all my application materials been received?

Please wait until mid-February to ask about the status of your application, no matter what program in our department you are applying to! We have a single departmental staff member who, in addition to her regular responsibilities, is in charge of logging in and sorting out the more than 500 graduate applications that are received by our department in mid-December. It takes her most of January just to assemble the individual application folders and assess whether each one is complete. The department will send you an email sometime in January acknowledging receipt of your application. If anything is still missing from your application in early February, we will send you a second email telling you what is missing.

Why haven't I heard yet whether I've been admitted?

Since our department receives over 500 applications (for all our programs combined), an entire month or more is required for the department staff to sort out the materials into separate folders for each applicant, and log their information onto the Stanford computer system. When folders are considered "complete", they are then given to the faculty admissions committee in the appropriate program for review. We do not use some kind of mathematical formula to arrive at an admissions decision; instead, we literally read the entire contents of each folder to assess the overall strengths/weaknesses of each applicant. As you might suspect, this also takes quite a bit of time; the EES program typically spends more than 6 weeks reviewing the applications we receive. This is why the decision letters for our admissions get mailed out continuously from mid-February through late March.

We realize that environmental graduate programs at some other US schools mail out admission decisions more quickly than we do. However, it is important to us to evaluate thoroughly each set of application materials, and to carefully consider each admission decision, so we are not willing to institute shortcuts that might speed up our application review process.

Why haven't I heard yet regarding financial aid?

Decision letters on admission are typically mailed out between late February and mid-March; these letters will indicate whether or not your application will be considered for financial aid.

Each program must wait to hear from the Department and from Stanford's
School of Engineering before knowing how much funding will be available for financial aid in a given year. There are also two types of School of Engineering-level fellowship awards where we must first "nominate" candidates, and then wait to hear whether our nominees have been selected for funding. Thus, while you will be notified of the decision regarding admission sometime between late February and mid-March, we usually are not able to make financial aid offers until late March.

Since Stanford does not waive tuition, we usually offer "full" fellowships, in which tuition is fully paid for, and a monthly stipend is provided which is considered enough to fully support the student. In recent years, the EES program has been able to offer 4-6 students full financial aid packages at the MS level, with funding recipients selected based on who appears strongest to us academically (without consideration of financial need or citizenship).

*I applied to the Ph.D. program but was admitted to the MS program. Why?*

We admitted you initially to the MS program because you do not have an MS degree. Stanford School of Engineering requires grad students to fulfill course requirements equivalent to an MS even if they are interested "just" in the Ph.D. These MS course requirements can typically be completed within a 9 month period (3 quarters of study).

Students admitted to our MS program who are interested in continuing on for a Ph.D. fill out a simple form in January of the MS year, indicating whether they want to pursue an Engineer's or Ph.D. degree, and which faculty member(s) they would like to work with. Then the application materials used for the MS admission (like transcripts, recommendation letters) are reused. Whereas we do admit MS-level students without financial aid, we only admit post-MS students if full funding (tuition and stipend) is available to support them. Also, whereas MS applicant folders are reviewed by an admission committee for the program (based on mutually-agreed-upon criteria), Ph.D. folders are reviewed just by the individual faculty member(s) whose research group the student is interested in joining. To get admitted for Ph.D. studies, the faculty member has to (i) judge you as a good prospect for doing PhD-level research in his/her group; and (ii) have adequate funding available to fully support you [unless you have an outside fellowship].
I was admitted, but didn't get funding --- what are my options?

We get many very strong students applying to our program, and it is disappointing to us that we can't offer more of them financial support for their MS studies, because we realize that it is costly to attend Stanford. Stanford does not permit any sort of tuition waiver.

If you are US citizen, you were sent information on loans available through Stanford. The other possible option, if you qualify based on financial need (as judged by recent tax returns and other financial information), is to apply for federal work-study funds. For more information, contact Sally Gressens, who is the Asst. Dean for Graduate Studies in the School of Engineering; she's at gressens@stanford.edu.

Our RA/TA resources are very limited, and tend to be used to support our ongoing PhD students. Occasionally, RA funds become available over the summer (because a new project gets funded) --- if PhD students aren't available to do the work, then the professor may offer the RAship to an incoming MS student. However, this occurs only sporadically – in 4 of the 5 past years, zero MS students have been offered RAships.

In recent years, some students admitted to our program without funding have come to Stanford feeling certain that they will be able to convince some faculty member to offer them a TAship or RAship. Despite admirable resourcefulness and great persistence, these unfunded students have not been successful at finding assistantship funding inside or outside of our department. These unhappy students have asked us to make this situation abundantly clear to potential students who do not receive funding. Their message to you is: Do not accept admission to the EES program at Stanford without funding unless you are willing and able to borrow or afford the full costs of education.

We realize that applicants from places like India and China will likely not be able to attend Stanford without financial assistance. The EES faculty have had an ongoing debate about whether we should offer admission to such applicants. Some feel that it is frustrating for the applicant to be offered admission without financial aid (and that the applicant will wonder why we have ignored their clearly stated need for funding), so they favor just telling such applicants that they were not accepted into the MS program. Our current practice in the EES program is to let these applicants know that we judged them as academically qualified for the program by admitting them, even if we aren't able to offer them funding.
I was told I would be considered for financial aid. What are my chances?

In recent years, the EES program has been able to offer funding to most, but not all of those applicants who were notified that they would be considered for financial aid. The percentage funded fluctuates depending on how much funding is made available to our program from the University, the School of Engineering, and our Department.

I've got a financial aid offer from another school. How soon will Stanford let me know about financial aid?

Stanford (as well as about 300 other US universities) belongs to the Council of Graduate Schools (CGS). All CGS members have signed a resolution saying that any prospective graduate students receiving offers of financial aid (scholarships, fellowships, traineeships or assistantships) have until April 15th to respond. You should have been sent a copy of the CGS resolution with your written financial aid offer from the other school.

You can examine the CGS website at http://www.cgsnet.org to see the text of the resolution, and to check whether this other university is a member. Stanford mails out financial aid offers towards the end of March, which should give you adequate time to make a careful, informed decision about which school to attend before the April 15th deadline.

(D) Other Questions About the Graduate Program at Stanford

How long does it take to complete the MS program?

Our MS program is coursework only, and can be completed in 3 quarters (9 months). About 20% of our students choose to spread out their MS studies over 5 quarters (15 months).

How do current MS students apply to go on for a Ph.D.?

Students who wish to stay on for a Ph.D. become affiliated with a particular research group when they begin their post-MS studies. Since many students starting an MS are not sure whether they want to stay on for a Ph.D., our program does not require them to make this decision until midway through their MS studies. If they decide they are interested in pursuing a Ph.D., then a faculty member must agree to officially admit the student into his/her research group. Students are not admitted to the Ph.D. unless full funding (tuition and stipend) is available to support them, usually from the faculty member's sponsored research funding.
How long does it take to complete the Ph.D. program?

Stanford requires Ph.D. students to complete at least 90 units of study beyond the M.S. degree. This represents a minimum of 2-1/2 years of post-MS study. However, it is typical in the EES program for a PhD student to take 4-5 years to complete a PhD thesis of the quality and depth we expect of our students.

I have been admitted. Can I postpone my admission to a later year?

In the EES program, we routinely grant requests to defer admission by one year, but do not allow deferrals of more than one year. If you have been offered financial aid, you cannot defer your funding offer. Requests for a 1-year deferral, should be sent to the department’s admissions coordinator (CEE-admissions@lists.stanford.edu). If you wish to be considered for funding a second time, you will need to notify the department’s admissions coordinator by the end of January of the following year that you wish to reactivate your admission and be considered for financial aid; otherwise, you should notify us of your intent to attend by the beginning of March of the following year, so that you will receive materials like on-campus housing information in a timely manner.

When will I receive my I-20 form?

Foreign students offered admission to a U.S. university are sent an I-20 form so that they can get a visa. At Stanford, a single central office is in charge of filling out the thousands of I-20 forms needed each year for newly-admitted foreign students. They will not begin preparing your I-20 form until after you mail in the response form, indicating that you will be attending Stanford. Once this response form is received from you, it typically takes 8-10 weeks for Stanford to mail an I-20 to you. At the department level, we cannot do anything to speed up this process. Foreign students are encouraged to seek a visa promptly upon receiving their I-20; we have been told that in certain countries, non-immigrant visa requests are currently taking up to several weeks to be processed by the U.S. Consulate, due to increased security procedures.

I have not taken an organic chemistry course. What should I do?

Your offer of admission to the EES MS program is not contingent on completing an organic chemistry course, nor will we "check" when you arrive to see whether you have taken such a course. You should view our concerns about your organic chemistry background as a "let the buyer beware" type warning: students in recent years who have attended our program without
an Organic Chemistry background have told us that they feel at a disadvantage relative to their classmates in certain classes, and have found that they need to work harder at times, or to seek more help from the TA.

If you cannot take an introductory organic chemistry course before arriving at Stanford, then we strongly recommend that you undertake a self-study to learn the basic concepts. One reference students have found helpful is Chapter 5 of “Chemistry for Environmental Engineering”, by C.N. Sawyer, P.L. McCarty, and G.F. Parkin, McGraw Hill Inc., ©2003.

If you feel comfortable with organic compound nomenclature, how chemical composition can influence characteristics like solubility, volatility and susceptibility to reaction, and the basics of kinetic and redox reactions in aqueous systems, you will be adequately prepared for our program.

I have not taken a fluid mechanics course. What should I do?

Your offer of admission to the EES MS program is NOT contingent upon having to complete a course in fluid mechanics. We will not check when you arrive here to see whether you have taken such a course. We realize that it is not typical for non-engineering majors to take such a course. Instead, we wanted to let you know that students in recent years who have entered our graduate program without having had a fluid mechanics class have found that they have had to work harder in certain classes, due to this gap in their education. We will be assuming at the beginning of autumn quarter that you are already familiar with basic fluid mechanical concepts (like streamlines; laminar vs turbulent flows; conservation of momentum, mass and energy; Stokes law); if these concepts are familiar to you from a class you took in Physics or some other scientific area, you will be adequately prepared.

I have not taken a molecular/cellular biology course. What should I do?

Your offer of admission to the EES MS program is not contingent on completing a biology course, nor will we "check" when you arrive to see whether you have taken such a course. We realize that some of the more traditional undergraduate civil engineering programs do not require such a course, despite the growing importance of environmental biotechnology as a remediation strategy.

However, you will not be able to take CEE274A in the autumn unless you have a basic background in cellular/molecular biology. Students lacking this preparation will be encouraged to take our undergraduate Aquatic Chemistry and Biology class (CEE177) instead. Either CEE274A or CEE177 is required
as a prerequisite for students wishing to take the Environmental Biotechnology class (CEE271B) in the winter.

**How/When do I preregister for classes?**

Stanford does not do preregistration for classes, because the vast majority of courses do not have limits on class size. Instead, students spend the first week or two of each quarter sitting in on classes they are thinking of taking, to better assess which courses they would benefit from the most. Each year, our department holds an orientation for new graduate students, usually on the Thursday before autumn quarter classes start; you will be mailed an announcement regarding this orientation in August. As part of the orientation, each program will meet with their newly-admitted students to go over the degree requirements, describe their course offerings, and offer advice on which classes you should consider taking.