

Prospective Energy Management & Design (EMD) Majors Frequently Asked Questions

I want to transfer to SSU as a junior. What courses do I need to have completed before being admitted into the major?

Technically, being admitted to SSU and the ENSP major does not depend on your having completed the “prerequisite” courses for the EMD study plan. However, you need to have the math, physics and chemistry prerequisites completed before starting the sequence of core EMD courses. In order to succeed in your first classes as an EMD major, you should have taken at least pre-calculus algebra and trigonometry (Math 107 or equivalent), one or preferably two semesters of general physics (Phys 210A & B or equivalent), and some chemistry (any college level chemistry or a full year of rigorous high school chemistry).

What about ENSP 202?

ENSP 202, Quantitative Methods in Environmental Studies, prepares you to apply the mathematics you’ve learned in school (including algebra, trigonometry, exponential functions, logarithms, and estimation techniques) in the real-world settings you will encounter in your energy career. ENSP 202 is not required for BS students, but they are nevertheless welcome to enroll. Students may test out of ENSP 202 by taking a test administered near the beginning of each semester. If you pass the test, you will not receive 3 units for ENSP 202, but you will be relieved of the requirement for graduation. Please check with the department office for test dates and instructions. Since the skills you acquire in ENSP 202 help you succeed in your core EMD curriculum, take it as early as possible.

When and how do I declare my major?

Right now, if your mind is made up, and if you have already taken ENSP 200 or equivalent (which must be completed with a B or better). Go to the ENSP Department office in Carson Hall #18 and ask the Administrative Coordinator, Jo-Ann Smith, for the application forms to declare the major. You will have to write a short essay and return it with your forms. Because of high demand, the grade-point average requirement for entering ENSP majors is 2.5. The department chair will review your application.

Can I graduate in four years, or four semesters as an upper-division student?

These days, the majority of students take longer than four years to graduate from college. In theory, it is possible to complete the EMD core curriculum in four semesters, along with upper-division GE and electives. However, this assumes that you are qualified to start your core EMD curriculum as an entering junior, which many students aren’t, and that you’re starting in the fall. What would most likely keep you from finishing your upper-division requirements in four semesters is not the total number of units, but the sequence and limited offerings of prerequisites and core courses.

Most of the core EMD courses (ENSP 337, 338, 437, 438 and 439L) are only offered once every two years, so it is imperative that you take them when they are offered. Note that ENSP 337 (fall) is prerequisite for ENSP 437 and 439L (subsequent spring) and ENSP 338 (fall) is prerequisite for ENSP 438 (subsequent spring). Your best bet for graduating in a timely manner is to complete your math and science prerequisites as early as possible.

What's the difference between the BA and the BS?

The BS requires significantly more math and science than the BA, in place of upper-division ENSP electives. Plan on the BS if you enjoy math and science, and if you can imagine yourself applying this type of knowledge in your future work or graduate studies. If you're not sure, go ahead and take a semester of calculus and/or some additional physics or chemistry and see how you like it. Many students surprise themselves with their ability. If it doesn't turn out to be your passion, you can always change your mind. Even if you decide against completing the BS, a few extra semesters of math and science under your belt are not wasted time and effort. Realistically, if you're going to learn hard-core math and science, now is the time; you most likely won't be teaching yourself this material from a book somewhere in mid-life.

On the other hand, if you don't enjoy math and science at all, do yourself a favor and don't take classroom seats away from students who do. The notion that a BS is a more valuable degree is a bad reason to pursue it: you don't want a degree just because it makes you eligible for a job you don't want to do. There are equally valuable lessons to be learned from the other courses, mainly upper-division ENSP, that you'd be missing out on while sweating through your science classes. Some employers explicitly prefer the breadth and wisdom of BA students over the narrower specialization of BS students.

Note that you cannot have a double major with a BS in one department and a BA in another.

Also note that unless you start your math and science curriculum for the BS in your freshman or sophomore year, it may be difficult to complete the degree in four years. Be aware of the minimum unit requirement for upper-division coursework, because almost all the math and science classes are numbered as lower-division.

What kinds of jobs do EMD graduates get?

A great variety: our graduates primarily work in the field of energy efficiency and renewable energy, which is rapidly expanding. Their jobs range from hands-on construction, installation, repair, and field crew supervision to analysis of building energy performance, economics of energy projects, energy retrofits, and energy policy, to green architecture, to sales and customer service in green energy. They wield hammers, screwdrivers, voltmeters, computer models, spreadsheets, drafting pencils, calculators and cell phones; they talk to homeowners, corporate clients, government agencies, electric utilities, or investors in their new start-up business. Many successful EMD graduates combine the skills they gain from our program with other professional expertise such as accounting, finance, construction, software engineering, public relations, or design. Quite a few decide to go on to graduate school.

What's an Internship, when do I take it, and how do I sign up?

Please see the general information sheet about ENSP Internships, available in the department office. The idea is that you gain work experience with an organization or private company that relates to your personal career goals, and that helps you integrate your academic learning with practical applications in the field. The required four units of internship (45 hours work per unit * 4 units = 180 hrs work total) can be divided up among more than one internship. You may also receive credit for up to four additional internship units, although these do not count toward any specific graduation requirements (but they might help you get full-time status, for example).

Most students do their internship during their senior year, often in the last semester, because having more energy curriculum under your belt helps you get a more meaningful internship with more responsibility and

advancement opportunities. Whether and how much you get paid is between you and your internship employer. While your major advisor may be able to help you locate a suitable internship position, it is your responsibility to find it, contact the company or agency, and set up your employment arrangement. Don't hesitate to make cold calls or send e-mail inquiries to companies that look interesting.

Once you've identified your internship, take an Internship Agreement Form to the person who will be your supervisor there and ask them to fill out the applicable section with you (note the supervisor's signature is required twice). The point of doing this is to have clarity about what is expected of you, and about what kind of support you can expect from your supervisor and the organization. You want neither too much responsibility ("Just take this project and run with it, go figure it out") nor too little (making coffee and photocopies for the office). Also bring along with you the "Information for Internship Field Supervisors" available in the department office, which helps explain the process and requirements to them.

When your Internship Agreement Form is filled out by you and your field supervisor, bring it to me (your major advisor) to complete and sign; then you submit it to the department office for the Chair's and Dean's signature. The course ENSP 499 will be added to your schedule; you do not have to (nor can you) add it online yourself. The firm deadline for submitting Internship Agreement Forms is the end of the second week each semester. To ensure time for processing, you should submit your form to the department no later than Wednesday of the second week of classes.

By default, EMD Internships are graded on a CR/NC basis. See the informational handout about deliverables to receive credit.

You may start actually working on an internship before the semester starts and before your Internship Agreement Form has been processed by the department office, but you should consult your advisor first.

What courses will be offered when?

In the current budget situation, we cannot make any guarantees about future course offerings. However, the department will make every effort to stick with the following routine:

ENSP 200 several sections every semester
ENSP 201 every fall
ENSP 202 every fall
ENSP 330 every fall
ENSP 337 fall of even years (2010, 2012, 2014)
ENSP 338 fall of odd years (2009, 2011, 2013)
ENSP 437 spring of odd years (2009, 2011, 2013)
ENSP 439L spring of odd years (2009, 2011, 2013)
ENSP 438 spring of even years (2010, 2012, 2014)
ENSP 430 every spring

As noted above, the fall courses (337, 338) are prerequisites to the subsequent spring courses (437 & 439L, and 438, respectively).

What courses are top priority for me to enroll in?

When you sign up for your limited number of units during REG 1, you have to make difficult prioritizing decisions. No matter what you do, you may run the risk of not getting classes that you would need in order

to graduate on schedule. Some classes (say, an upper-division GE course) may be more likely to fill up before you get another shot at enrolling; others (say, a core ENSP course) may be more likely to accommodate you at a later time, but the setback to your graduation schedule in the event we cannot get you into the class would be much more severe. Unfortunately, it is not within the faculty's power to change those circumstances, and we can not make the tough choices for you. At this time, we don't even know enough about future course offerings or seat availability to give you well-informed advice. The only thing we can promise you is that we care, and that we will continue to make our very best efforts to help our ENSP majors on their way to graduation.

What if I can't get my classes?

For math, physics and chemistry, and GE courses that don't count toward the in-residence or upper-division requirement, consider taking an equivalent course at the junior college.

Also note this: courses that are full at the beginning of the semester often see students dropping. Some courses maintain waitlists, others don't; check with the instructor. More often than not, a determined and persistent student who keeps showing up and doing the work will end up being able to add the class they really want. At least, that's how it used to be. This is not to say that you should make a pest of yourself and refuse to take "no" for an answer. What it does mean is that you can improve your chances by investing some extra work at the beginning of the semester for classes you may or may not end up enrolling in. If two classes you are interested in have a schedule conflict, check with the instructor to see if it's okay to attend half of each class until your schedule is resolved.

Finally, remember to let the Chancellor's Office, the California Legislature and the Governor's Office know how much the CSU course offerings mean to you.