

Find Out if Online Education is Right For You

Michael M. Dumais

Over the last decade, online engineering education has and will continue to grow as a viable option for those considering advanced degrees in any of the engineering fields. Currently, many colleges and universities offer certificate, bachelor's, and master's level engineering degrees online and that number is expected to rise in the coming years.¹

A simple web search of online engineering courses will reveal how many different schools actually offer online engineering courses and programs, but for anyone who has not participated in an online course before, the number of programs and schools, or even the format of online education, can be intimidating. This article will present an overview of what to expect in an online course, what to expect from an institution offering online courses, and whether or not online learning is right for you.

What is Online Engineering Education?

Online engineering education is the result of a collaboration between an institution of higher learning and information technology professionals. It is the process whereby students take academic courses while they are geographically separated from their instructors. The advent of this type of educational experience allows students anywhere in the world with an Internet-enabled computer to take an online course.

While students interact with their instructors in many different ways, they never actually meet them as in a traditional face-to-face class format. Generally, course management software such as Blackboard or WebCT is used to facilitate the course activities. These learning management systems assist the instructor in facilitating all aspects of the online course, including assignments,

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Check Points

How do you determine if online learning is right for you?

- ✓ Online courses are ideal for those who are driven to do the work ahead of time.
- ✓ A potential student needs to be familiar with or willing to learn some basic computer skills, such as sending file attachments and downloading information.

synchronous chats, asynchronous discussion boards, virtual lecture halls, examinations, and file exchanges.

Students who participate in an online course can expect to engage in several fundamental activities that help to assess their progress. In addition to the traditional assignments that contain readings from the class textbooks, the instructor may use external links to various Internet sites that will support the textbook readings. Many of these sites contain dynamic web components that illustrate the course's key concepts, which may help contribute to a student's understanding. It is not uncommon to see video lectures, podcasts, and other supporting materials that contribute to the learning process.

Additionally, students can expect to participate in asynchronous online discussions. These discussion

Online Course Sampler

Interested in seeing what a state of the art online engineering course looks like? Visit MIT Open CourseWare at <http://ocw.mit.edu/index.htm>. This is a monumental project, which makes over 1,100 online courses available. All disciplines are represented here, and this site gives an overview of the online course format.

forums act as a replacement to the face-to-face discussions that occur in a traditional classroom. Typically, after the students have completed the reading and visited the external links, they will be asked to participate in a discussion about the topic they have just read about.

Generally, the instructor will expect every student to write at least one substantial posting on the discussion and respond to at least two other student postings. The key to successful participation in this aspect of the online course is substantive posting. Because discussion boards are often a major contributor to the participation component of the grade, you want your posting to have a bit more than “I agree” or “I disagree.”

An emerging trend in computer engineering online courses is the use of sophisticated communication tools such as Elluminate. This software allows all students to meet together online and watch a lecture being delivered by the instructor. This video conferencing software allows the instructor to deliver a complete lecture, including a real-time view of a computer application on each student’s



screen. Once the lecture is complete the instructor can review each student’s screen with the class as they work through the applications being taught. Students can receive instant feedback on their work, and other students can learn by watching the instructor give constructive feedback on common problems.

Online Learning is Active Learning

While online courses are the ultimate in educational convenience, this course format is not for everyone. Unlike traditional educational settings where the student may sit passively in front of a lecturer for three hours a week as the major exposure to the course content, online students can generally expect to do more work in order to acquire the same amount of knowledge. This type of learning is considered active learning and transitioning to this type of learning can be difficult, especially if the instructor does not prepare the student for this shift in focus.

Is Online Learning for Me?

So, what kind of person would be a successful online learner? Generally, people who do a lot of the work ahead of time and don’t procrastinate until the last minute, as well as those who are comfortable with the increased independence and responsibility, will do well. Keeping up with the class is even more important for online students than for their traditional counterparts. A student should expect to spend at least as much, and perhaps even more time into completing assignments.

From a technical perspective, an online learner needs to be familiar with or willing to learn some basic computer skills. Students who are familiar with web



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browsers, e-mail, and sending file attachments should do just fine. There will be an initial learning curve associated with understanding the college's learning management system and how the professor formats the course. But if the student has the basic computer skills already outlined, then applying these skills to learning management software should be easy.

What to Look For in a School Offering Online Courses

Students looking to take an online course or even complete an online degree should be very careful about selecting the proper school. All legitimate schools go through a lengthy accreditation process in which a regional accrediting body investigates the school for competence in providing education to its students. With the advent of online courses, many non-accredited schools have sprung up across the globe.

Completing an online course or program in a non-accredited school can have dire consequences when it comes to becoming licensed or certified upon

graduation. Students should investigate the academic credentials of the school, making sure it has regional accreditation. If the school is not regionally accredited, then proceed very cautiously, as the school could be a scam designed to collect as much money from the student as possible before they find out the school is not a legitimate institution of learning.

Conclusion

Online learning in engineering, as in all other disciplines, is here to stay, and will only become more pervasive as educational technologies become more sophisticated. Engineering professionals will have an increasing ability to access high quality educational materials in an online environment. Carefully assessing the school and themselves will ensure a successful outcome, and thus lead to greater understanding of their individual discipline. ■

Reference

1. **Bourne J, Harris D, Mayadas F.** Online Engineering Education: Learning Anywhere, Anytime. *Journal of Asynchronous Learning Networks* 9(1): 2005.

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