

## **Advancing Your Safety Career with Online Education**

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Your safety career and its success is a function of a number of inputs that you have provided. One of the most important inputs is your education—both at the start of your career and during its development. Relatively few safety practitioners have degrees in the field. Those that do often want to advance their careers by building on that education. The educational environment today offers more options than ever before. A very important option is online education. It is available in more ways than ever, and it is better done and more exciting than at any time in the past. Colleges and universities offer learning in a variety of formats. With technology improvements in the last few decades, students have access to formal education in ways not dreamed of in the past.

When I began teaching in the early 1970s, I showed up for class and taught. We had secretaries and they used typewriters. I hand-wrote all tests and handouts, gave them to the secretary and they retyped everything on mimeograph paper. They needed two days of notice and they would return it to me without complaints. If I forgot and turned in something late, they dutifully did their jobs, but when I had it returned to pick it up, I also received their complaints. If a student needed academic credit for a course, he would either come to class on a regular basis—anywhere from thirty to forty-five times per semester, turn in the papers, and take all the tests, or he would sit for an exam that would offer equivalency credit. These exams were often standardized, but in the school where I taught, they were sometimes constructed by the professor. Theoretically, although it rarely happened, a student could read the book, learn the material, take the exam, and receive credit for the course. This was as close as anything came to “distance learning”.

My first significant exposure to learning outside of the traditional campus was when I traveled to another site to offer courses there. It required extra effort on my part, but students were now able to minimize their travel and take courses at a local classroom. In fact, I taught a number of classes at a federal minimum-security prison for students who had no other access to formal education. The students were bright and often motivated to do well. In fact, I had one who, upon graduation, was accepted into the Wharton School of Business. Of course, he had to finish not only his term at the college, but also the one in prison before he moved on.

Toward the late ‘70s I began to see a change. I was asked to “teach” a course that would only meet four times during the semester. Students would watch one hour of television

programming each week, study the text, and take mid-term and final exams. There was no homework, but we met one week prior to each test to answer questions and entertain discussions on the topics covered. Students learned the material by watching two, weekly half-hour public television programs and reading the text. The programs were outstanding. They were hosted by a famous, television personality and all were very interesting. About thirty percent of my students successfully completed the course. Many dropped and more just didn't do well on the exams. For what it was, the course couldn't have been done better. It just didn't fit the learning styles of some students. I began to realize that students learn in different ways, and one approach does not fit all students. Many do not have the discipline to successfully complete a course that doesn't meet on a regular basis and require timed assignments that move toward an end result.

The next significant step forward I observed in distance learning was when I taught a class via closed-circuit television. I was on one campus and students were at another location in a classroom. We interacted as if we were in the same room. Of course, I was dependent upon the view from the television monitor and, if students weren't in line of sight of the camera, I wasn't aware of what they were doing. Anytime a test was given, a monitor would be present at the remote site to assure that students were exercising the appropriate level of integrity. I'm sure this technology has been around for a long time, but I was first introduced to it in the late 80s.

By the mid-90s I saw a new variation in this method progressed when I moved to another university and we did the same thing using satellite technology. I would teach a course at one remote site and the signal was sent via satellite to two other, very distant sites. This was a great concept, but the technology wasn't dependable. As we tried the above though, we tried using a slight variation. We taped all of the presentation and stored them on VHS tapes. If a student needed a class that had been offered via television and it was not otherwise available, he could review the tapes, turn in the assignments, and take the exams at a monitored location. This was not a very popular option because many of those who tried it died of boredom.

As this was occurring, one of my colleagues received funding to begin offering courses via the Internet. I agreed to help and was pretty much told to have at it. There was no training, no model, and no example of what to do. I thought a lot about the process and eventually came to the conclusion that to create new material was a waste of everyone's time. My thinking was that someone had probably already thought about what I had to say, and to try to come up with the same material or something new was somewhat of a waste of time.

I therefore structured weekly classes around reading assignments. Students were asked to read the material, do homework assignments, and then sign onto a Yahoo chat site to discuss the weekly lesson. The university where I taught did not have dedicated servers at the time. All homework was emailed to the student and turned in using my hotmail account. Although the system worked, it was crude and did not account for the different learning styles of students. Those who did well were self starters and had a good grasp of the material they read.

Over time, the university progressed and we all learned to do better jobs. We purchased commercially available software and established our courses on the web. Different methods of assignment were considered to accommodate varying learning styles of different students. When I moved to Embry-Riddle Aeronautical University (ERAU), I was amazed at how the technology

continued to advance and improve. ERAU had its own way of delivering courses and they maintained an ongoing effort to assure that everyone involved in teaching any form or online courses was well trained and prepared. No faculty member is permitted to utilize any form of remote delivery of his or her course until they have completed courses on doing so. In addition, each course is vetted through a rigorous process and no one is permitted to teach it until the course has been thoroughly reviewed and every effort made to assure that all essential components are in place and the each and every assignment works.

At least three people are involved in the creation and delivery of every course. Once the course has been crafted and reviewed, it is taught for the first time by the creator. Additional personnel are reviewing the course as it is delivered for the first time. Successful courses are then taught by others who are equally prepared. They have been through courses to help them be effective and their performance is closely watched throughout their initial delivery. Tweaks are made on an ongoing basis to assure a high quality of delivery. Every effort is made to accommodate different learning styles of students.

ERAU is well known for its broad distribution of campuses, with over 170 campuses and teaching sites worldwide. The president is often heard to say, “The sun never sets on Embry-Riddle.” Students on U.S military bases throughout the states, Europe, and the Middle East have the opportunity to sit in traditional classrooms and learn the material much as they would on any college campus.

ERAU offers “five ways to learn”. This is something you should be looking for in any college you are considering for online or remote learning. The major advantage is for those students who may be in different locations during their college careers. For members of the military this can mean deployment to remote locations or even assignments at sea. The “five ways to learn” offer students options permitting continuation and completion of their educations on a timely basis. ERAU’s explanation of those ways will help explain options available in traditional and online learning. The following section is slightly modified from the Embry-Riddle Website with changes made, so as not to promote the institution.

At Embry-Riddle Aeronautical University – Worldwide (this represents the campuses away from our two traditional campuses in Daytona Beach, Florida and Prescott, Arizona), the goal is to give the exactly the education needed, exactly the way it is needed. Each of the learning modalities, while distinct in its delivery and operation, provides the same high-quality information, instruction, and opportunities for interaction with faculty and fellow students. Students are encouraged to pick the one that fits learning and lifestyle best.

1. Classroom Learning
2. Online Learning
3. Web-based Classroom
4. Web-based Home
5. Blended Program (ERAU, 2011)

### Classroom Learning

This is the traditional learning with which all of us are familiar. With more than 150 locations across the United States, Europe, Asia, Canada and the Middle East, traditional classroom learning is available for students all over the world. For students who prefer a structured academic setting and direct contact with instructors and fellow students on a regular basis, this is right for them. The key attributes are scheduled class times, classroom attendance, face-to-face interaction, and direct collaboration. (ERAU, 2011)

### Online Learning

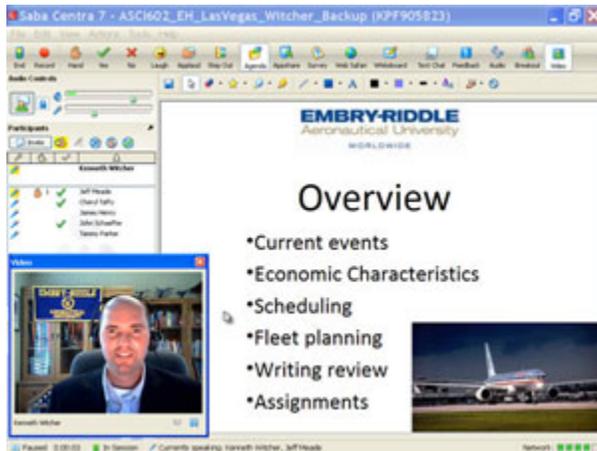
Online learning provides maximum convenience and flexibility for students with busy schedules and those who are or may be living in very remote locations. Course material is available 24/7, so students may access it from anywhere in the world, at any time - day or night. While ideal for independent learners, this modality still provides opportunities for interaction with the instructor and fellow students via various online channels. Online learning key attributes include creating your own working/learning schedule; home/remote learning; independent learning; online interaction (non real-time) with students and instructors through E-mail, discussion boards, and web activities; and lesson archiving. Strictly online learning requires strict discipline to complete assignments on a self-determined schedule and to learn primarily from reading. Some online programs permit and even encourage web chats and telephone conversations with the professor. This may work for or against the student depending upon the structure of these activities. (ERAU, 2011)

### Web-based Classroom

The first variation of online education comes in what ERAU refers to as “Eagle Vision”. This is a web video conferencing platform that connects geographically distributed classrooms together into one live, real-time virtual classroom. (Similar technology is offered by many universities.) Through EagleVision, students attending class on opposite sides of the world can talk to one another, interact with the same instructor and collaborate on common problems and lessons. The characteristics of this are very similar to those of a classroom except that the remote classroom sites are connected online. They meet at scheduled class times and require classroom attendance. Students still have face-to-face interaction with other students and the instructors in the remote classroom through virtual interaction with other classrooms. Lessons are archived and there is still collaborative technology to incorporate audio/video conferencing, online chatting, polling, and webcasting. (ERAU, 2011)

### Web-based Home

Web-based home courses allow students to access a virtual classroom from their own home computer or laptop. They enjoy the flexibility associated with home/online learning and benefit from real-time interaction with faculty and other students. Following is a webpage from what ERAU refers to as an EagleVision Home (EVH) classroom.



The key attributes of this approach are scheduled classes; home/remote learning; real-time, virtual interaction with students and instructors in different locations; and collaborative technology that also utilizes audio/video conferencing, online chatting, polling, and webcasting. Lessons are also electronically archived so that those who couldn't make it to class can review them later.

Completing a college degree in a traditional classroom environment doesn't work for everyone. Most adult learners have very busy lives and face unique challenges while earning a degree. If flexibility and convenience are critical, consider this: taking online classes means no commuting, no traffic, and no sitting in a classroom after a long day at work. With just a computer and an Internet connection, a student can work toward a degree from practically anywhere. (ERAU, 2011)

### Blended Program

Some programs and courses are offered in multiple modalities; otherwise known as "blended program". (ERAU, 2011) These programs offer students the opportunity to take a portion of the program in a classroom and a portion online or in a virtual environment. For students who lack experience in pure online education, this can be a positive way to introduce themselves to the online mode of learning.

Regardless of the mode of learning selected, students should consider how they learn and how disciplined they are. Every one of our programs is structured so that students complete assignments on a regular basis. Although students have some flexibility regarding their time during the week, they normally must turn in assignments due on a weekly basis. If students don't have the discipline to stay with the class and complete assignments on a timely basis, they will likely not do well. Some succeed with reading and learning on their own; online and computer-based courses require much of that. Normally, professors are available for individual sessions by computer or on the phone, but before selecting a particular program or university, check that out. Find out exactly what the availability might be when individual help is needed. (ERAU, 2011)

### Other Considerations

## **Accreditation**

When considering an institution of higher education, a key factor is accreditation. Accreditation comes in multiple forms and many institutions will advertise themselves as being “fully accredited”. From my perspective, there are two major considerations regarding accreditation. First, is the institution regionally accredited? There are six regional accreditation bodies in the United States:

- Middle State Association of Colleges and Schools (Commission on Higher Education)
- New England Association of Schools and Colleges (Commission on Technical and Career Institutions and Commission on Institutions of Higher Education)
- North Central Association of Colleges and Schools (The Higher Learning Commission)
- Northwest Association of Schools and Colleges
- Southern Association of Colleges and Schools (Commission on Colleges)
- Western Association of Schools and Colleges (Accrediting Commission for Community and Junior Colleges and Accrediting Commission for Senior Colleges and Universities)

The above bodies require colleges and universities to meet certain standards that are considered acceptable among one another. These institutions are recognized by the U.S. Department of Education (DOE) and the Council for Higher Education Administration (CHEA). Schools go through a rigorous review process every ten years to maintain this accreditation. Although these are not the only accrediting bodies recognized by one or both of the above, these are the bodies whose institutions recognize one another. If you enroll in a course at any of the above, you can be assured that if that course is offered at another institution of higher education, it will be transferrable. For example, if you take Introduction to Occupational Safety and Health at Murray State, it will likely also be recognized at Indiana University of Pennsylvania because both are regionally accredited. Schools will often review course descriptions and syllabi to assure similarity, but the courses are transferrable. If you take a course at a college or university, not regionally accredited, you run the risk that the course will not be recognized by another institution or by an employer when you graduate. Regional accreditation also becomes a factor when you apply for graduate school. The regionally accredited graduate school is almost always going to require a degree from a regionally accredited university. Accreditation of particular colleges and universities can be checked out by going to [chea.org](http://chea.org). Their website will permit you to enter the name and location of the college or university and learn about whether it is accredited and the type of accreditation it has.

In addition to college or university accreditation, there is also program accreditation. Many colleges and universities have individual programs in safety, health, and/or environmental areas that seek additional accreditation at the program level. For example, the Occupational Safety and Health program at Murray State University is accredited by the Accreditation Board for Engineering and Technology (ABET). This accreditation was initiated by the American Society of Safety Engineers (ASSE) and the American Industrial Hygiene Association who worked through ABET to institute accreditation for safety and health programs. About twice as often as universities submit for regional accreditation, Murray State submits a report and a visiting team reviews and responds to that report to assure that graduates of the program at Murray State are achieving the outcomes desired by the university and ABET. This accreditation requires a level of quality that must be demonstrated every five years. This particular program accreditation, as it applies to safety programs, and the one offered by the Aviation Accreditation Board International (AABI) for safety programs related to aviation, are recognized by the Board

of Certified Safety Professionals (BCSP). Graduates of accredited safety-specific programs may become eligible to be awarded the Graduate Safety Professional (GSP) upon graduation. By being recognized as GSPs, students are not required to sit for the Associate Safety Professional (ASP) examination, but will qualify to sit for the Certified Safety Professional (CSP) examination after an appropriate amount of work experience. In other words, program accreditation can be invaluable toward advancement of careers.

### **Costs**

Costs of programs may vary greatly, depending on the institution, the program, and your own employer. Tuition costs should be compared and it pays to shop. A few quick guidelines may help guide you in your selection of schools. Typically, state or public schools are less expensive than private or not-for-profit universities; however, out-of-state tuition may run the state school tuition as high as or higher than non-state institutions. Out-of-state tuition may or may not apply to online or other forms of distance-learning courses. Universities may also offer scholarships or other forms of tuition reduction to offset costs. Schools have financial-aid offices to help guide you toward forms of public and private assistance. Check with your employer to learn if there is tuition assistance available through your company. Your employer may pay part or all of your tuition depending on a number of factors. Be sure to learn if the specific courses, in the specific delivery format you are seeking are covered by the assistance you are seeking.

There are numerous other factors to consider when seeking online or distance education. I've touched on delivery modes, accreditation, and costs. Other variables may also be important to you. I encourage you to research and learn as much about the institution and the particular programs as possible. Be certain to check on the items mentioned in this article. Once you have completed your research and tentatively selected an institution, be certain to talk to others in the field and get input from them. ASSE has numerous resources available including its website, the Educational Standards Committee, and the Academics Practice Specialty. Each of these resources can help guide you toward a quality academic degree.

### **References**

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