CHAPTER
1

Design with Learning in Mind

Learning Goals/Outcomes	
Design with Learning in Mind	Upon completion of this chapter, the faculty member will be able to: • Recognize the need to design the course from students' point of view. • Understand how course content can be altered appropriately for Web-based learning. • Document current course outcomes. • Review two learning styles inventories and the associated study resources.

Learning Resources	
References	• Chickering, A., and Gamson, Z. "Seven Principles for Good Practice in Undergraduate Education." *AAHE Bulletin,* Mar. 1987, pp. 3–6. • Felder, R. "Learning and Teaching Styles in Engineering Education." *Engineering Education,* 1988, *78*(7), 674–481. • Merrill, M. "First Principles of Instruction." *Educational Technology Research and Development,* 2002, *50*(3), 43–59.

Required Resources	• Chapter One *Conquering the Content*
Additional Resources	Learning styles inventories: Complete these two inventories: • http://vark-learn.com • http://www.engr.ncsu.edu/learningstyles/ilsweb.htm

Learning Activities	
Activities for this lesson	Gather all resources related to the course on which you will be working. • Complete Form 1 in Appendix A. • Complete Form 2A, 2B, and 2C in Appendix A. • Complete Form 3 in Appendix A. • Complete Form 4 in Appendix A. • Complete two learning styles inventories.

Self-Assessment	
Check your understanding	In order to be prepared for the lesson evaluation and the following modules, you should have: • Gathered course materials to verify these will be available as you revise course. • Completed Form 1 in Appendix A. • Completed Form 2A, 2B, and 2C in Appendix A. • Completed Form 3 in Appendix A. • Completed Form 4 in Appendix A.

Lesson Evaluation	
Evidence to proceed	• Course materials and completed forms from this chapter will be used in the next several chapters.

As faculty members we usually choose our subject matter because of passion for that topic. The natural world and problem solving intrigue me, therefore I originally trained as a scientist. What is it that made you select your discipline? Perhaps it was a teacher who took a special interest in you, a class that challenged you, some particular lesson that touched you at a sensitive time in your life, or somehow things just clicked when you thought about a certain subject and it all just made sense to you.

My goal with *Conquering the Content* is to allow you to remain that subject matter expert. Therefore, I will give you enough information to understand how learning takes place, how teaching online is different from teaching in the classroom, what you need to do to get your course online, information about course design and organization, and how to avoid some of the common pitfalls encountered as development progresses in Web-based courses. This book presents a practical approach that will lead you through the development of online course content as you proceed through the book. If you follow the system in this book, the course content you develop will be well organized and pedagogically sound with opportunities for active learning. In addition, the content will be formatted for easy updates at any time, and direct uploading into a learning management system.

The plan this book follows is one in which you will look at your course as a whole, select the highest-priority topics for the overall course, and place those items online first. In this way, the fundamentals for the entire course will be established and produced prior to adding anything fancy or flashy to any one topic (referred to here as *modules*). You may not have an award-winning module 1, but you will have the basis of the entire course completed. As an online instructor, I've found the latter is much preferable to the former. *Conquering the Content* provides information to add layers to your course as your skills and experience grow.

Later you may have that award-winning course, but you probably also will have some online teaching experience to make the revisions you'll need for that award. More important, you won't end up as I did in my first semester of teaching online when, way too close to the beginning of the semester, I had an awesome module 1 and nothing for the remainder of the course. Much of what I share with you in this book comes from my own experience of making a multitude of mistakes and finding ways to correct them. I want to help prevent you and others from repeating my time-consuming and frustrating mistakes.

Each chapter ends with a list of action steps and time estimates for these activites that will lead you through development of your course. Appendix B also assists you in planning course development based on the amount of time you have prior to the beginning of your course.

The process described in this book is based on educational principles, adult learning principles, Web-based learning principles, and brain and learning theory. It is not subject matter specific. This process has already proven successful for nursing, biological sciences, physical sciences, humanities, history, composition, literature, psychology, philosophy, speech, technical writing, elementary education, mathematics, computer science, accounting, gerontology, wastewater treatment, sleep deprivation, ethics, psychiatry, communications, pharmacy, and numerous other courses.

Learning in the Twenty-First Century

Just as you want just enough information to put your course online, detailed steps about how to do the things you need to do, pitfalls to avoid, all without a bunch of extraneous explanations or background information, so do students. Think about how you proceed when you go to the Internet to look up information. You undoubtedly search to find:

- The best match for the subject at hand. You don't want to read thirty articles, just find a few of the facts you need and extract those facts yourself.
- Quick-loading information. If you have to wait more than five or ten seconds (or fifteen to twenty, on depending on the speed of your connection) for a page to load, you no doubt abandon that site for a different one.
- Clear, precise information with images to confirm you have identified things correctly or are going about the steps to a new task correctly.
- Checks or verifications along the way in a project so you don't get to the end of a sixteen-step process and find out you did something wrong in step 2. You want to know on step 2 whether you are right before proceeding to step 3.
- Few to no time wasters, which are frustrating and preventable.

Learning online is very different from learning in the classroom, and so what has worked for teaching materials in the past is not going to be suitable for Web-

based teaching. This is a rather tough adjustment for most faculty. We usually teach as we were taught, and those teachers taught us the way they had been taught, and so the cycle has gone for many decades or centuries. As Tony Bates, a prominent authority on distance learning points out, "to change is more work. You've got to be trained; you've got to learn new things; you've got to do things that you've never done before" (Awalt, 2007, p. 107).

Today we have powerful tools that have altered the learning environment and offer opportunities to work in new ways. In addition, we are constantly discovering new information about learning and brain research. Moreover, today's students have grown up in a visual environment, and they typically process multiple things at one time. They may simultaneously be searching the Web, listening to music, and talking on the phone. Then we wonder why they can't pay attention when they sit in our course and we lecture to them continuously for fifty minutes.

Advantages to Having a Course Online

I knew students would appreciate the convenience of accessing information on their own schedule, no class attendance requirement, and the ability to review course content and presentations more than the one time they were presented in the classroom. However, after my course was online, I realized additional advantages that I had not anticipated. Some of these advantages were due to advanced preparation of the Web-based course, which had to be complete before the semester began. For example:

- Students in my classroom course also benefit from learning guides being provided to them.
- Students are able to view the materials more than one time.
- Students can hurry through concepts that are familiar to them and go slower through concepts for which they need additional time.
- The Web-based course provided a permanent base from which to update my course since everything was documented and review of contents was more convenient.
- Static content enabled the students to provide more meaningful feedback on aspects and portions of the content that might need an added component.

- I knew for certain what the online students were viewing for magnified images. Whereas when we met in the laboratory, I was unable to check with each student on each microscope slide.
- It was much easier for me to critique my own course materials than to critique a video tape of myself presenting those materials.
- It was easier to incorporate the suggestions from external reviews since they could review the course material on their own time. The Web-based materials provided a target for review that was impersonal compared to critiquing my classroom presentations. Reviewers found it much more comfortable to provide constructive feedback.

How Web-Based Learning Is the Same as Classroom Learning

Think of your favorite teacher from all your years of school—the one who made a lasting impression on you. Using Form 1 in Appendix A, document the qualities that stood out about his or her teaching. (Remember that all forms are in Appendix A.) Typically, a person's favorite teacher is not one who was their easiest teacher, rather perhaps the person provided motivation, inspiration, or practical application. Your students may find these qualities very beneficial as well. The most effective teaching principles have been documented by several studies.

You may be familiar with the classic study by Chickering and Gamson (1987), which established seven principles for undergraduate teaching:

- Encourage faculty-to-student interaction.
- Encourage student-to-student interaction.
- Promote active learning.
- Communicate high expectations.
- Facilitate time on task.
- Provide rich, rapid feedback.
- Respect diverse learning.

These same teaching principles hold true whether you are teaching in the classroom or in a Web-based course. If you are not familiar with these principles, I

encourage you to find this classic study online. Among the many other papers based on Chickering and Gamson's original work is Chickering and Ehrmann's "Implementing the Seven Principles: Technology as Lever" (1996), which provides ideas for using the seven principles in a Web-based course.

Another excellent guide for Web-based courses is Merrill's "First Principles of Instruction" (2002). Most effective learning environments are those that are problem based and involve student in four distinct phases of learning:

- Activation of prior experience
- Demonstration of skills
- Application of skills
- Integration of these skills into real-world activities

Instructional design applications based on these principles follow:

- Learning is facilitated when learners are engaged in solving real-world problems.
- Learning is facilitated when existing knowledge is activated as a foundation for new knowledge.
- Learning is facilitated when new knowledge is demonstrated to the learner.
- Learning is facilitated when applied by the learner.
- Learning is facilitated when integrated into the learner's world.

No one would expect an athlete or a musician to perform without hours of practice. Yet much instruction seems to assume that when it comes to cognitive skills, such practice is unnecessary. Merrill (2002) notes that "appropriate practice is the single most neglected aspect of effective instruction" (p. 43).

Knowledge and skill are soon forgotten if they are not made part of the learner's life beyond instruction. Learners need the opportunity to reflect on, defend, and share what they have learned if it is to become part of their available repertoire (Merrill, 2002).

The principles documented by Chickering and Gamson and by Merrill are important to keep in mind when it comes time to develop the learning guides for your online course.

Learning Styles

Web-based learners have a variety of learning styles, just as classroom students do. It can be enlightening for your students to complete a learning styles inventory. You might direct them to these two: VARK Learning Styles Inventory (http://www.vark-learn.com) or Felder's Inventory (http://www.engr.ncsu.edu/learningstyles/ilsweb.html).

The Felder (1993) inventory addresses global and sequential information processing. Those individuals who process information globally are skilled at viewing issues via a picture view. Those who process sequentially usually proceed step-wise through the information considering individual details prior to understanding the big picture. The Web site provides several ways to help faculty meet different learning styles. In particular, faculty seldom give the big picture of what we are teaching prior to delving into the details. Nevertheless, it is important for students who are global learners that we present the global picture at the beginning (just as I outlined in the Preface what this book is about) and connect what the students are about to learn with some subjects with which they are already familiar. This process allows students to frame the new knowledge in its proper context.

Sheila Tobias's research on students who set out to be science majors and changed their major after the first year highlights the issues between sequential and global information processing. Science courses at the time she did her research were frequently taught sequentially, without providing a global overview. Tobias found that the overwhelming number of those who changed their major were global learners (Tobias, 1991).

Finding out about learning styles has changed the way I teach. I thought everyone learns by taking notes and reorganizing the information into different configurations until they know and understand it from several different angles.

That my way of learning is not everyone's approach was very eye-opening for me. I learned this from a student in one of my classroom courses who was failing the lab exams. Spelling counted in these exams, since in anatomy, the change of one letter in a word can give it a totally different meaning. She also could not pronounce the words correctly, and I was continually trying to help her get the pronunciations correct. We came up with a solution: I recorded the lab words on tape for her. I repeated each word slowly three times before I moved to the next one. Once I finished the list that way, I went back through the entire list saying each

word one time and asking her to repeat the word after me, this time pausing long enough on the tape for her to do so. On the next lab exam, she earned a 98 percent. She and I both were elated, and I made a tape for her for each of the remaining exams. Perhaps you are thinking, "Yes, but that takes too much time!" It does take time, but in the whole scheme of things, those few minutes I spent each week were well worth my time to accommodate her learning style.

Look back at the information you wrote in Form 1 about your favorite teacher. Did this person make a special effort to relate to the students? Did the person take a special interest in you? Many times that is the case. Most of us decided to teach so that we could make a difference in people's lives. But when the opportunity arises, sometimes we tend to shrink back because of time constraints. Let us not rob ourselves of the rewards of our profession for fear of investing time in our students and in creating learning opportunities for them. Most of us are successful because someone took the time to take a special interest in us and invest extra time in our lives.

If you haven't already done so, complete the VARK learning styles inventory (http:/www.vark-learn.com) and record your scores here:

Visual: _____

Auditory: _____

Read/Write: _____

Kinesthetic: _____

Predominant style: _____

Knowing our predominant style is important because we tend to teach in ways that favor it. Instead, we need to strive to present information in ways that are useful to all learning styles.

One of the biggest advantages to having your students complete learning skills inventories is that following submission of the questionnaire, students are presented with access to many practical suggestions for studying. These learning styles inventories provide an entry point for students to consider the techniques from a neutral source and in a way that does not imply they don't know something; rather they learn study techniques appropriate for their specific strengths. It is critical that students learn how to study, and any tool that facilitates this can prove the key to reaching our students.

Now take the Felder Inventory, (http://www.engr.ncsu.edu/learningstyles/ilsweb.html) and record your scores here:

Place numerical score in the first blank and letter identification in second blank.

Perceiving versus Intuitive	_____	Letter	_____
Visual versus Auditory	_____	Letter	_____
Inductive versus Deductive	_____	Letter	_____
Active versus Reflective	_____	Letter	_____
Sequential versus Global	_____	Letter	_____

Many teachers are sequential perceivers, meaning that they need information to come in through the five senses and in a sequential manner. Intuitive learners learn in fits and starts. They may get the answer, but cannot explain where or how they got the answer. At times these individuals can be accused of cheating because they cannot identify the steps to working out the math problem, even though they know the correct answer. It takes them a while to discern how they arrive at what it is they know.

It is very important that you know the learning styles of your students in order to be able to work with them in your course. In Chapter Three when we discuss assessment and the process of grading throughout the semester, and in particular when it comes to the early and intermediate steps of projects, intuitive learners may have great difficulties. In addition, your teaching style may or may not be compatible with all of your students' learning styles.

Felder (1988) defines teaching style in terms of answers to five questions:

1. What types of information does the instructor emphasize?
2. What mode of presentation is stressed?
3. How is the presentation organized?
4. What mode of student participation is facilitated by the presentation?
5. What type of perspective is provided on the information presented?

These questions are important to consider when creating learning materials for your students.

Form 11 provides a place for you to record your students' learning styles. Using this when you speak to your students about studying will give you an opportunity to better assist or better direct them to appropriate resources. In addition, the data collected from these forms may highlight the need for additional resources for portions of your course to address specific learning styles. For example, if a number of students who are visual learners have questions about a particular portion of the content, this could signal that additional visual or graphical aids on this content will prove beneficial.

Think "Learning," Not "Teaching"

We typically think of our courses as what we will teach. Instead, if you alter your thinking to that of the students in your course and think, "What do students need to learn?" this change of perspective will help the design process tremendously. One of the mistakes faculty make (often unconsciously) is to add more work to a Web-based course than to a classroom course. Accrediting agencies expect Web-based courses to be equivalent to classroom courses, asking neither more nor less of students in those courses than of students in a classroom course. The learning strategies may be different, but the content covered and learning outcomes should be the same.

The Online Student's Environment

Just as it was best for me to write this book fully accepting the fact that you will not have the opportunity to place your entire Web-based course online all at once, it is best for you to develop your course fully accepting that your students will not have uninterrupted time to work on your Web-based course. It would be ideal if they had a protected hour to work on the course when nothing else was happening, but how many of us have blocks of time with no interruptions? We need to plan with an understanding that students will have interruptions. If they do not, all the better, but telling them they need to put aside a specific time to work on your course and commit to that time is like expecting students to have questions for you only during your office hours.

Rather than being surrounded by a room full of other students who are focused on your subject matter for a period of time, an online student may be surrounded

by any number of circumstances at home. Crying babies have no concern for class time; if they are in distress, now is the time for action. By the same token, ringing phones, toddlers, meal preparations, carpools, work, and other duties often require that students interrupt their Web-based learning time. Do not underestimate the distractions that a student may be dealing with at home. These distractions will have an effect on their concentration levels for Web-based courses.

How Web-Based Learning Is Different from Classroom Learning

One of the most notable differences between the classroom and the Web-based environment is just that: the environment. First, you aren't standing at the front of the room ready to dispense the knowledge to the students. In addition, there aren't twenty to four hundred other people surrounding the student, all with a dedicated fifty minutes devoted solely to the subject matter.

Altered Learning Environment

In the classroom when you give encouraging words to one student, you are simultaneously giving positive feedback to all the students. But online students never hear these words to other students. Nor do they hear you say "good morning" and see a smile from you each class period. None of those cues are available to students in Web-based courses. Instead, for online students, everything becomes verbal; it takes lots of verbal positive reinforcement to replace all those visual cues that are not happening.

It is crucial for your students' benefit and for your own self-preservation that your course be designed in such a way that it creates a clear pathway of learning for the students. The most frequent criticism I hear about Web-based courses is how confusing the course is or how unclear it is to find the proper path within the course.

For a classroom course, you and the students go into the classroom and shut the door. There is almost no record of what is said in that classroom except for the notes that students take. In a Web-based course, in contrast, there is a visible, archived record of what you have presented for the class. This is more like publishing an article or a chapter in a book than teaching a class. Your course materials are now representing not only you but also your department and your institution. Peer review thus becomes a vitally important part of your course. Typo-

graphical errors in your course materials, for example, reflect poorly on you, your department, and your institution.

The design of the online course becomes much more important than in a classroom. You'll need to make a few alterations in your course materials in order to accomplish the same learning outcomes in a very different environment. And as you do, you will have numerous opportunities for teaching in more effective ways.

When I thought in terms of my biology lab, I had the freedom not to worry about spending time getting to twenty-five students and telling each of them, "No, that is not the *Amoeba*; that is a speck of dust on the cover slip." "No, that is not *Plasmodium*; that is the pointer in the eyepiece."

Learner-Centered Environment

The Web-based environment allows repetition of content. Some students may need to hear a presentation several times in order to be able to absorb it. If the student is willing to invest that amount of time, why should he or she not be able to have that option available? In classroom courses, repeating sections of content usually is not a reasonable option. When content is available in a Web-based course, repetition of information is possible.

The learner-centered environment of an online course has a number of facets:

- *Self-selected.* That students choose when to come into the course and work on the subject matter adds a distinct psychological advantage: they are mentally prepared because they chose to work on the course materials. Even if it's to avoid something else they don't want to do (laundry, working in someone else's course), they've chosen to come to class. In a classroom course, in contrast, the students are required to come to class at a specific time. Even if they originally selected this schedule themselves, who says that on a given Wednesday at 10:00 A.M., it is agreeable for them to be there? By the way, you as a faculty member get to self-select the moment you go to class in a Web-based course too.
- *Time.* Students may work at the time of day when they are at their best. You may be at your best in the morning; if so, you can develop your course in the morning. Some students may be at their best at 11:00 P.M. and "come to class" then. Another student can come to class at 2:00 A.M. With everyone working at their optimum time of the day, both the course and the participation in the course are more likely to be the best effort possible.

• *Place.* Students can choose a place where they can concentrate well and at their convenience. A student who must travel for work or vacation can keep coming to class no matter where he or she is. This means that students can keep up with course work much better than students in the classroom, who if they have a conflict at, say, 10:00 on Monday, totally miss whatever happens in class. In a Web-based course, the attitude is, "Oh, don't worry. Do it later."

• *Pace.* Web-based learning students can move quickly through parts they understand, go slowly through parts they don't understand, and repeat sections as needed. Faculty members have always had the difficulty of not reaching all the students. Some students are left behind, while others aren't challenged enough. With a Web-based course, students can take care of this for themselves. And because materials are already online, there is no extra effort required by the faculty member to meet individual students' needs.

• *Around-the-clock access.* Students can access the course content when you are not available. In classroom courses, access to information is typically available during class time and during the faculty member's office hours. With content and other course materials online, this information is available around the clock.

The Student's Role

Students in a Web-based course are more responsible than those in a classroom course for seeking out knowledge. There is no longer a person standing at the front of the room to guide the student through a lesson for an hour. Online students need enough discipline to come to class by logging in and then working through the content. This is placing more responsibility on the student to begin with. In addition, there is no one there saying, "Class is over at 10 to the hour; you don't leave until then."

The greater responsibility on the student is another reason that directions and the pathway for progress through the course must be abundantly clear to students: There is an increased need for them to communicate with each other. Learning guides, discussed later in this book, can help facilitate this communication.

Because of these differences in the environment, course content requires these components:

- Short, directed learning segments—Chunk-ability
- Ability to repeat and review content—Repeat-ability

- Ability to stop and resume without having to start all over—Pause-ability
- Clear, direct instructions—Understand-ability

We'll talk more about these issues as you develop your content presentations.

The Faculty Member's Role

One of the changes in the faculty role is the distinction between development and design activities, and facilitation and teaching activities in courses. You may find yourself developing a course you do not end up teaching or teaching a course you did not develop. This is becoming more and more common as institutions begin to rely on adjunct teaching staff for Web-based teaching. Whether that is your situation or not, development and facilitation are independent activities in Web-based courses. Development and design activities are best accomplished and completed prior to the beginning of the semester, so that the semester may be spent on the facilitation and teaching aspects of the course.

There is a tremendous advantage to placing teaching materials into usable enduring materials. Once the course units or modules have been developed, time can be spent on revisions. The instructor is then free to interact with participants in the course. After you have taught your course online one time, you can build from the foundation you have created. Your starting point will be much higher than it was when you began, so you will be able to stand on your own shoulders, so to speak, and build from a higher foundation. Your course becomes stronger and more robust each time you teach it.

Course Development and Design The design and development of the course, rather than the facilitation and teaching of the course, is where the transfer of knowledge takes place. In a classroom course, we typically think of teaching as dispensing knowledge, but today, knowledge is readily available (for example, over the Internet), so faculty are no longer the keepers of the knowledge. Instead faculty now explain that information, explore how to make connections with it, decipher what is most important, explain how it matters to everyday life, and so forth. Dispensing knowledge is something a machine can do, and faculty are much more talented and useful than any machine. Our role now is to make sure that information is presented in a way that is relevant, understandable, memorable, and useful to the students.

I was working with a faculty member who was developing a Web-based course. He was in a large group of mixed subject matter experts, so I was speaking in general terms. It turned out that his course was for remedial reading students. It was a blended course, and therefore not completely Web based, but some customization was in order. We knew that these students have some difficulties, and expecting them to learn to read by posting lots of course documents was a definite stretch. This goes back to the point that Web-based courses have to be planned from the beginning. One of the ways that students learn to read is by hearing others read out loud and by reading out loud themselves, so I suggested some ways to incorporate audio files and assignments in which the students would read out loud and turn in those readings. There are ways to teach most subjects online, but you have to be thoughtful about the way courses are planned.

Course Facilitation and Teaching As facilitators and teachers in Web-based courses, we lead students rather than dispense knowledge to them. We become the bridge between students and content rather than the source of the content. It is a perhaps subtle change but nevertheless important because it means taking on different responsibilities.

A faculty member who is acting as the sage is reaping the benefits of working with, structuring, and communicating the content. One goal in designing effective and efficient learning environments is for students to work as intensively with the content. Strategies that support this shift in perspective include having the students moderate discussion forums, prepare concept summaries and examples for other students, and assume greater responsibility as frontline moderators for the course (Boettcher, 2007).

Design features incorporated in this system of course development and the learning guide will create an environment in which students are confident of their pathway, and the only challenge is the course content, not the navigation of the course or figuring out what must be done in order to complete the course. This focus on students when designing the course will free you up to spend the semester teaching and interacting with the students in regard to the content rather than answering questions about course navigation or specific directions about assignments.

Course logistics questions detract from the true reason faculty are available for their students: for students to learn information they cannot get from any other source. A properly designed and developed course should trigger very few logisti-

cal questions during the semester, so your time can be spent on interacting with students, not developing or designing your course.

Appendix D provides a list of design and development tasks.

Advanced Planning

Your students are extremely busy individuals and need to be able to plan their lives in advance. One way I helped my students was to commit to test dates at the beginning of the semester so they could arrange work schedules, babysitters, and other help. I would not change test dates on them. If I had to be flexible about something, I might change the amount of material covered on the exam but not the date. This commitment to the students and my respect for them set a tone of professional courtesy in the course that ends up working to everyone's advantage.

For now, it will be helpful to document what is currently taking place in the course you'd like to work with as we work through *Conquering the Content.* The action steps that follow will help you proceed to Chapter Two, which addresses making sure course materials are in a format that can be ready to be easily updated.

Action Steps

You should have already completed the learning styles inventories and recorded your results.

Step 1

Select one course to develop as you work through this book. You may have more than one you need to complete, but for now, choose only one. Preferably this course will be taught a semester or two in the future so you will have some time to work through this book.

Complete Form 1 in Appendix A by reflecting on former teachers and the qualities they possessed to become your favorite teacher. Your students will also appreciate these same qualities in you.

Time estimate: 5 minutes

Step 2

Gather all materials for the entire semester in one place for the Web-based course you will be developing: textbooks, lecture notes, journal articles, electronic files,

assignments, and so on. This step will be more time-consuming for some individuals than for others. The large time variance is based on the fact that some faculty will have their materials already assembled at their fingertips, while other faculty may have to spend substantial time collecting course lecture notes, reference articles, and other course materials which may not already be assembled in one place.

Time estimate: 5 minutes to 15 hours

Step 3

Document the way the course is currently organized. How do you give grades? Do you have a series of quizzes? Projects? Exams? Papers? Whatever you normally do in the classroom, put that information on Forms 2A, 2B, and 2C.

Time estimate: 20 minutes

Step 4

Complete Form 3 on course revisions.

Time estimate: 12 minutes

Step 5

Using your favorite search engine, search for online course content in your subject matter area. The following sites will prove useful:

- World Lecture Hall, http://web.austin.utexas.edu/wlh/

  Open to faculty, developers, and students alike, World Lecture Hall publishes links to pages created by educators worldwide who produce Web-based course materials in any language. While some courses are delivered entirely over the Internet, others are designed for students in residence. Many fall somewhere in between. In all cases, they can be visited by anyone interested in Web-based courses.

- Merlot, www.merlot.org/

  Multimedia Education Resource for Learning and Online Teaching (MERLOT) provides peer-reviewed online teaching and learning materials. Professionals are encouraged to share advice and expertise about education with expert colleagues.

- MIT OpenCourseWare, http://ocw.mit.edu

  In its ongoing commitment to advancing education and discovery through knowledge open to everyone, Massachusetts Institute of Technology (MIT) OpenCourseWare provides free lecture notes, exams, and other resources from over 1,800 courses from MIT's entire curriculum.

- Lolaexchange, www.lolaexchange.org/

  Sponsored by Wesleyan University, Lolaexchange contains materials for use across the curriculum with an emphasis on modules for information literacy. LoLa facilitates the exchange of information pertaining to high-quality learning objects.

- MedEdPORTAL, www.aamc.org/mededportal

  A service of the Association of American Medical Colleges, MedEdPORTAL is an evolving resource. Educators and students from around the world are encouraged to explore free peer-reviewed materials.

You can place in the search box the name of the subject you are interested in plus the term "course" or "course content." Get a sense of how content is presented in the areas you search. Observe the things you like or don't like about each. Spend some time developing an eye for what seems logical and easy to follow versus courses or materials that are less organized or not as easy to grasp. You may use the Ideas for Application pages at the end of the book to record design elements that appeal to you.

Time estimate: 30 minutes to 2 hours

Step 6

Document on Form 4 the current sequence of chapters in your course. Convert these chapter numbers to the name of the topic covered in each chapter. These topics will now become the *modules* for your course. (Hereafter I will refer to them as modules.)

Time estimate: 7 to 15 minutes