

# Apprenticeship to College Credit

A Handbook Preparing Apprenticeship Programs  
for the College Credit Course Review Process

A Handbook of the  
New Jersey State Employment & Training Commission  
Apprenticeship Pathways Committee

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College Education

February 2011



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## Introduction

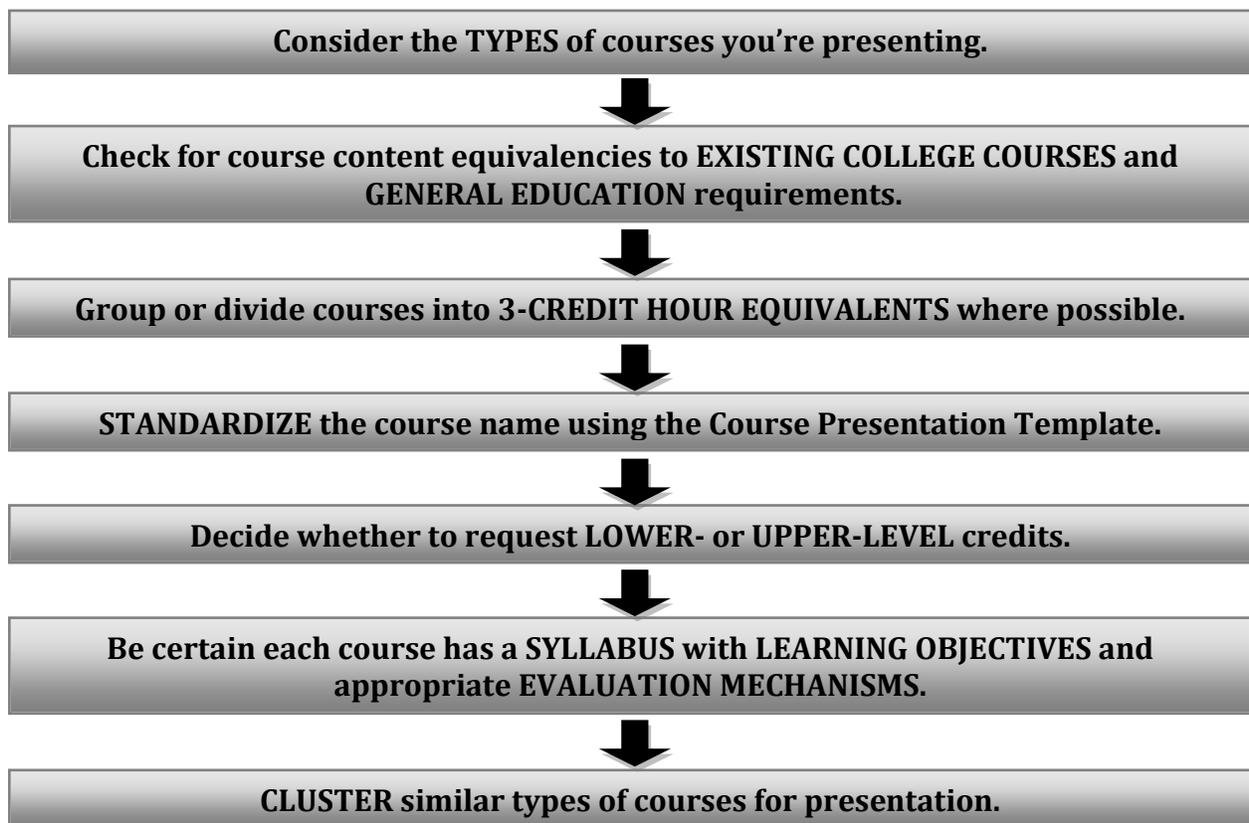
Apprenticeship as a form of education has been around for centuries and is perhaps the best-known model of combining theoretical lessons with routine opportunities for clinical practice. The introduction of the federal Registered Apprenticeship system in 1937, as set out in the National Apprenticeship Act (50 Stat. 664; 29 U. S. C. 50), solidified apprenticeship as a form of regulated, standards-based, postsecondary education directly linked to industries' needs and a worker's career development. Yet even as apprenticeship gained national standing in the United States, it was kept separate from the academic education delivered through the country's higher-education institutions.

The end of World War II and the passage of the GI Bill brought a seismic increase in demand for college programs for returning veterans who needed both an education and a path to meaningful employment. The community college system was created to expand access to postsecondary learning for veterans and eventually for other nontraditional students. Community colleges also served the vocational preparation needs of non-college-bound individuals for a wide variety of occupations that required training beyond high school. Initially these colleges separated the academic from the vocational track of their curricula.

More recently, educators have come to recognize that many skilled occupations in fields like manufacturing, automotive, construction, and health care require and incorporate academic preparation that is equivalent to the academic content of the college-degree academic program. Accordingly, the nation's registered apprenticeship programs were among the first to request college credit for the academic content of their programs.

Regardless of whether skilled trades training is provided through a community college or an independent provider, the greatest barrier to awarding academic standing to apprenticeship has been a mindset that vocational education is not the equivalent of a college liberal arts or sciences education. Apprenticeship classes are seldom taught by academic faculty, and their content is foreign to traditional programs of study in the arts and sciences. Therefore, an important factor in moving apprenticeship into the realm of

college credit is a credible process for establishing that the learning that takes place in apprenticeship is, at a minimum, equal to the learning that takes place in a traditional college classroom. The process of making the case that a specific apprenticeship is in fact equal and therefore qualified for college credit is the subject of this handbook. The diagram presented here illustrates the basic steps in making that case by efficiently and effectively packaging your course materials; each step is reviewed in detail in the chapters that follow.



Over the years, a number of apprenticeship programs have been evaluated and recommended for college credit. But receiving such a recommendation is only the first step; the next, more meaningful step is making that recommendation count toward a college degree. In the academic community, recognition is based not on how many credits students can accumulate for a program, but on how many college-level credits they can transfer onto a college transcript toward graduation requirements. This handbook is intended to help apprenticeship programs think about ways to standardize their approach

to the credit review process, ultimately making the transfer of credits easier for the apprenticeship program, the apprentices, and the colleges in which they enroll.

Chapter 1 gives an overview of the credit recommendation process. Chapter 2 discusses the three phases of the review process in detail: pre-review, review, and post-review. Chapter 3 compares an apprenticeship program's organizational structure to that of a college to help ensure that the program presents itself as professional and academically rigorous.

The remaining chapters discuss the heart of the process, comparing apprenticeship courses to college courses and presenting them in a standardized way that will help your program get the most out of your credit recommendation. Chapter 4 explains the college credit system and provides guidelines for determining the number of credit hours to request for each of your program's courses. The chapter also discusses levels, types, and values of credits. Chapter 5 provides guidance for comparing apprenticeship coursework to college courses. Chapter 6 guides you in standardizing your course presentations to gain the maximum number of credits for transfer to a college transcript. As discussed throughout this handbook, maximizing the number of credits that can be transferred course by course from the apprenticeship program to a college transcript is even more important than maximizing the number of credits a review team recommends. Chapter 7 focuses on how to present an essential part of every apprenticeship program, on-the-job learning (on-the-job training). Finally, Chapter 8 shows how to create a course syllabus that brings together all the elements discussed in the previous chapters.

The Resource Appendix at the end of the handbook provides practical resources to use throughout the process, including a course presentation template, checklists, outlines, and sample documents.



## Chapter 1: The Credit Recommendation Process

The review of an apprenticeship program for college credit requires significant initial effort on the part of the program seeking review. This is because the reviewing organization, whether a college or a third-party evaluation and recommendation service, must be convinced that the apprenticeship program meets the academic and administrative standards established for college-level learning and credentials. The review process is similar to the accreditation process colleges and universities must undergo periodically, as well as the external review process that college majors must regularly undergo; this process ensures that their programs meet all required standards. If noncollegiate programs like apprenticeship programs wish to be included in the collegiate system, they too must demonstrate that they meet such standards.

The reviewing organization spends a great deal of time looking at every aspect of the apprenticeship program to determine which courses are creditworthy and whether the program's administrative structure can support the necessary reporting responsibilities. After the review, the organization makes a credit recommendation for each course and gives each recommendation a date span. If the course is new or is newly structured, the date span begins on the review date and generally ends in three to five years, depending on the reviewing organization. If a course is older and has not had significant changes, the credit recommendation may be backdated up to five years before the date of review.

Once a recommendation's date span has ended, a new review is required to make certain that the course has evolved with the times, the evaluation instruments have been updated (primarily to prevent cheating), the record-keeping and administrative aspects continue to meet the proper standards, and the course delivery remains at a college level. This too is consistent with the reaccreditation process required of colleges. The period between reviews is an excellent time for apprenticeship programs to apply what they learned in the first review and, if appropriate, to consider increasing a course's degree of difficulty, number of classroom hours, or level of evaluation to strive for a higher credit recommendation at the next review.

If the reviewing organization is a college, apprenticeship courses may become part of an academic program at that college; then, when a student completes a course and has met the standards required for passing, the course will appear on that student's academic transcript at the college, provided the apprentice applies and is accepted there. Tuition and other fees may be associated with this process.

If the review is conducted by a recognized third-party evaluation service, each course that meets the service's established college-level standards receives a *credit recommendation*. This recommendation requires acceptance from a college before the course can be placed on a student's transcript. Awarding course credit based upon a third party's recommendation is up to the individual college, which usually has clear guidelines for the process.

Some colleges find it most expedient to transfer credits from an apprenticeship program as a block. However, these block credits can be quite limiting, particularly if a student wishes to transfer from one college to another (see Chapter 6 for discussion of the pitfalls of block credits). The guidelines in this handbook will help you establish courses that can be more easily placed on a college transcript course by course to prevent the problems inherent in block credits.

Because no college is required to accept credit recommendations for an apprenticeship course or program—no matter who makes the recommendation—establishing a partnership or articulation agreement with a college is vital for an apprenticeship program. New Jersey Pathways Leading Apprentices to a College Education (NJ PLACE) was established for this very purpose—to facilitate partnerships between federally registered apprenticeship programs and colleges in New Jersey. NJ PLACE's statewide model uses such articulation agreements to award college credit for the education provided in participating registered apprenticeship programs, and to define a realistic pathway toward degree completion. In 2010, NJ PLACE was established by New Jersey law to continue its work and expand its model into industries throughout the state. To learn more about NJ PLACE, visit [www.NJPLACE.com](http://www.NJPLACE.com).

## Chapter 2: The Three Phases of the Review Process

There are three main phases in any college credit review process. In the first, the **pre-review** period, you prepare your presentation and complete all necessary review paperwork and review team arrangements. The second phase is the **review** itself, which usually takes a day or more, depending on the number of courses being reviewed. In the third, **post-review** phase, the reviewing organization may ask you to supply additional documentation and information and to respond to constructive recommendations regarding your courses.

Your apprenticeship program may need to spend a considerable amount of time preparing for a review since there is no such thing as too much documentation as you go through this process. It is equally important to contact the NJ PLACE office at each phase of the review process and share with them any communications you receive from the reviewers. NJ PLACE may be able to offer you technical assistance and further guidance, in addition to facilitating college articulation agreements.

### Phase 1: The Pre-Review

Preparation is key. Most of the work involved in a review takes place during the pre-review phase, particularly with regard to collecting information, formatting it for presentation, and arranging meetings with the reviewers.

The first task is to collect everything associated with the courses to be reviewed, including:

- Manuals
- Handouts
- Books and texts
- Evaluation forms
- Attendance forms
- DVDs, videos, and other support materials
- Slides/presentations (e.g., PowerPoint presentations)
- Student evaluations
- Course schedules
- List of course instructors with a résumé for each

One effective strategy is to create a box for each course in which to collect all the support materials for that course. This makes it easy to see whether anything is missing for a particular course. You can copy items used in more than one course and place a copy with each course. Exceptions are textbooks and other significant materials that cover more than

one course. For these, it will be helpful to place a note in each relevant course box with the basic information about each item. Once you've collected and sorted the materials, you need to group and format them.

While you're preparing the courses for review, you need to work with the reviewing organization to arrange the review meeting itself. And although each organization and situation is different, there are some basic elements of the process that need attention.

**Logistics.** You need to arrange with the reviewing group when and where you will meet for the review. A training facility, college, or a neutral site like a hotel meeting room is fine. Just make sure to discuss all these points with the reviewing organization and mutually decide on the arrangements. Keep in mind that the review usually requires a site visit to your training facility and administrative offices.

**Process.** Make sure you have worked with the review committee to determine how the review meetings will proceed. Specifically, you need to understand your responsibilities in terms of how to present the program and courses. You may be asked to make a general presentation, giving a background on the apprenticeship, who it serves, how it is administered, and what qualifications your instructors possess. You may also be required to give a background on each course, on-the-job learning (OJL), and other reviewable aspects of your program. Clarifying the process beforehand prevents you from being blindsided by requests for unanticipated presentations on the day of the review.

**External Committee Selection.** Selecting the committee that is to review your apprenticeship is a critical aspect of the pre-review process. The degree of input you have in the selection of committee members varies among reviewing groups. You want to ensure that the committee members reviewing your courses meet the following minimum criteria:

1. *Academically qualified.* Has each committee member obtained the academic standing necessary to perform a review? Ask about the degrees they hold and request up-to-date résumés.

2. *Vocationally qualified.* Does each committee member have the necessary professional background for reviewing your courses? In other words, do they have any experience with apprenticeship or skills-based education and training, or any practical experience in the field? If not, they will likely try to force-fit apprenticeship into a standard academic framework, a scenario not usually favorable to the apprenticeship program and courses. You may be allowed to ask that the review team include an industry professional who has experience in both the content and the training environment. Be sure to ask the organization handling the review if this is a possibility.
3. *Philosophically open.* A committee member's philosophy about apprenticeship is difficult to determine but is worth your attention at this point. If members display obvious bias against apprenticeship education, they can hardly be positive or even objective in their review. Everyone should come to the table with an open mind about the courses and programs being reviewed.

**Internal Committee.** You need to form a committee within your apprenticeship program to work on the review preparation and represent the program during the actual review.

1. *Selection.* In choosing who will represent the apprenticeship at the review meetings, you need to make sure your committee at a minimum includes members with subject matter expertise for each course, as well as administrative expertise and decision-making authority. For the review meetings, you want to include all individuals who are key to the courses, who are experienced in how the administrative process works, and who have the authority to make decisions about issues that arise. Delaying a meeting while you track these individuals down would make your program look disorganized and cost you money in wasted time.
2. *Practice.* You should schedule at least one practice session in which your committee works as a team in a run-through of the review process. You need to determine who will answer certain questions and who will act as the representative of the apprenticeship if issues come up that require decisions.

**Cost.** Reviews come with a number of expenses, so you need to make sure beforehand that all associated costs, and who is responsible for each, are discussed and clearly stated in advance. These are the typical costs you can expect:

1. *Review fee.* This is the cost of the review process, charged per course or as a general fee for a set period of reviewing time, perhaps one day or one-half day.
2. *Honorariums.* These are the fees paid to a reviewer for being part of the review committee of the reviewing organization. This is usually a set amount and is rarely negotiable.
3. *Travel and lodging.* You are responsible for expenses related to travel and lodging for the review team. Some organizations charge a flat fee for these, and others either ask you to pay directly or ask you to pay the tab when presented with the charges. If you have a travel bureau or other discount options, you may want to look at making the arrangements and paying for this directly.
4. *Per diem.* Both the review team and the apprenticeship representatives may require a per diem to be paid as part of the review meeting process.
5. *Annual fee.* Be sure to check whether there are annual fees required between reviews. Membership in the reviewing organization may be required, as may periodic fees for listing courses in directories or in online Web resources.
6. *Renewal fees.* With the exception of most college reviews, courses and programs that are reviewed and awarded credit recommendations need to be reviewed again after a set period of time. This is usually either three or five years, but be certain to discuss this with the reviewing organization up front.

## **Phase 2: The Review**

The critical element of the review process is the meeting of the review team with the representatives of the apprenticeship program. This may take one or more days, depending on the number of courses and the amount of material the team needs to review. Be sure

you have full, accurate information concerning the expectations of the reviewing organization to make certain you have met their needs completely. Setting an open and productive tone for these meetings is critical.

During the review meetings, you can expect the review committee to examine each course and its associated materials carefully and in great detail. They may do this as a group, but it is more likely that separate groups of committee members will review courses at the same time. Then, they may come together as a full group to review the program as a whole, so that each committee member has a chance to ask questions.

You may be required to present an overview of the program, as well as of individual courses, depending on the needs of the committee. Make sure you have discussed the process before the meeting so that you can be prepared.

The primary role of the apprenticeship's internal committee in this phase is to facilitate the review process, answering questions and clarifying any misunderstandings concerning issues that may arise.

### **Phase 3: The Post-Review**

The post-review process usually involves follow-up with the review committee, which may need additional information, materials, or clarification before it can make its recommendations. These requests should be dealt with as quickly as possible. The review team may also make friendly recommendations, suggesting changes to courses that would result in a higher credit recommendation. It is the apprenticeship program's decision whether to agree to implement these suggestions, as well as its responsibility to inform the reviewing organization of its intentions regarding the suggestions.

After credit recommendations are made, the apprenticeship program is generally charged an annual fee by the reviewing organization to keep the recommendations current. It will also be necessary to have the recommendations renewed after a set period of time, usually three or five years. Depending on the reviewing organization and the number of times your program has undergone a review, you will be required either to provide updated course

materials and other documentation or to hold another review for your program. These renewals ensure that a program and its courses meet the same criteria and cover the same material as when originally reviewed or have been updated based on advances in the subject matter. Over time, some courses are no longer used, while new courses enter the apprenticeship program. Both of these instances require consideration.

Be sure to check with the organization about renewals and what is expected. The primary factors in renewal are usually the time and cost involved in the process.

The Resource Appendix provides useful checklists for each phase of the review process.

## **Chapter 3: Comparison of Apprenticeship and College Organizational Structures**

In reviewing apprenticeship courses for college credit, a key concern for reviewers is how the courses are managed and who is teaching them. Because reviewers need to see that an apprenticeship program is administered at a high level of professionalism and academic rigor, sloppy record keeping and lax administration have a significantly detrimental impact on college credit recommendations.

In apprenticeship programs delivered at more than one location, a credit recommendation for one training location does not mean that all affiliated sites are automatically covered. The courses, documentation, and administrative process have to be consistent and reflect an equally high standard across locations, and you will need to present evidence of this. In these cases, a central oversight and record-keeping structure must administer these functions. This requirement is similar to that applied in reviewing colleges that operate off-campus locations.

### **Record keeping**

Evidence of careful record keeping is essential to college credit recommendations for apprenticeship courses. Detailed and accurate records for each student must include the date a student enters and leaves an apprenticeship, attendance for each course, evaluation records, and other data required by individual colleges and universities.

### **Instructor Qualifications**

Instructors must be qualified not only to teach but to reliably evaluate a student's performance in an apprenticeship course. Colleges and universities have strict teacher-qualification standards for each course. In apprenticeship programs, instructors must have an acceptable level of both skill-based knowledge and experience to demonstrate their ability to teach and administer courses.

## **Consistency**

Reviewers look for consistency in content and quality for each course in your apprenticeship program. During the pre-review phase, ask yourself whether each course is taught the same way, using the same objectives, evaluations, and course materials, each time it is taught. In seeking college credit for apprenticeship, the program must be able to assure reviewers that a course is the same every time it is offered. This means that an apprentice who takes a course in worksite safety this year must receive the same (or better) course content and level of quality as an apprentice who took the course in a prior year. And more importantly from the academic perspective, the content and quality of a course this year have to equal or exceed those of the course when it was reviewed and recommended for credit.

## **Apprentice Recruitment and Selection**

Reviewers want to know, in detail, how your program recruits and selects apprentices. They specifically like to review these facets of the process:

1. *Recruitment.* Information concerning how the apprenticeship program recruits should include all outreach methods such as job fairs, advertising, and working with high schools, pre-apprenticeship programs, and employers.
2. *Entrance standards and testing.* Reviewers want to know the standards for acceptance into the apprenticeship. Detail education level, entrance testing, and any other requirements.
3. *Interviews.* Make sure to provide information on how the program interviews applicants, including exactly who conducts the interviews and what questions are asked.
4. *Selection.* Details of the process for selecting apprentices need to include any votes or other actions the apprenticeship committee takes in making these decisions.
5. *Costs.* Provide reviewers with the costs charged an apprentice to participate in the program. Include all fees (including application fees), the cost of tools and materials, and any other costs for which the apprentice is responsible, such as dues and other

annual fees. Finally, if applicable, you can show the amount your training fund pays for each apprentice, to give a sense of your program's monetary value.



## Chapter 4: The Ins and Outs of College Credits

A college credit is the currency of an academic system. In theory the definition is simple: one college credit represents 12.5–15 contact hours with a qualified instructor plus 2–3 hours of work outside the classroom. In the era of online learning, and in light of the variety of new forms of instruction like internships and service learning, however, the system is less simple. Understanding the credit system is critical in preparing for a review of an apprenticeship program's courses.

### College Credit Basics

College credits are generally divided into three categories; lower level, upper level, and graduate. Only the upper- and lower-level credit designations are relevant in assessing apprenticeship for credits. These are sometimes also referred to as lower-division and upper-division credits.

There are also nonacademic credits. Vocational credits, for instance, usually aren't considered college-level credits and can't be transferred from one college to another, although they hold some value within the issuing organization or school.

Continuing Education Units (CEUs), another type of nonacademic credit, are not college-level credits and cannot be applied toward a college degree. These are generally earned for in-service or continuing education courses that were never intended to be counted toward a degree.

Finally, college course designations that begin with zero are typically developmental courses, sometimes called remedial or foundation courses. These courses are awarded no academic credits toward a degree. So a course listed as Math 095 is probably developmental math, and students who complete the course will receive no credits toward a degree, although they might be required to take the course before enrolling in a math course designated 100 or higher.

### **Lower-Level Credits**

Lower-level credits are usually earned in a community college two-year program or during the first two years in a four-year bachelor program. These credits are earned in entry-level courses taken to fulfill the general education distributions that all states require for bachelor degree-granting institutions. The courses usually carry number designations in the 100s or 200s and focus on subject-area fundamentals in English, science, math, social science, and humanities. For example, English 101 or Math 101 is probably an entry-level first-year course.

### **Upper-Level Credits**

Upper-level credits are generally earned in more advanced courses involving theoretical or analytical specialization. Upper-level courses are usually offered in the last two years of a four-year college degree program and often require introductory courses as prerequisites. They are generally given course-number designations in the 300s or 400s. For example, an advanced course in math might be designated Math 487.

When preparing for a course review, a basic consideration is whether to request lower- or upper-level course credit recommendations. Generally, if a course would most likely be offered in a community college or in the first two years of a four-year college, it should be considered a lower-level course. A course likely to be offered in the final two years of a four-year college can be considered an upper-level course. You can get a good idea of which category applies to the courses you are having reviewed by comparing them with listings in the course catalogs of various two- and four-year colleges. Most apprenticeship courses are comparable to 100- or 200-level courses. Documentation on this issue needs to be available for the review team.

### **General Education Credits**

Some apprenticeship courses may qualify as general education courses in a degree program, thereby reducing the number of additional college classes your apprentices need to complete their degree. Understanding general education requirements and considering whether some of your courses may qualify for general education credits is well worthwhile.

General education credits are earned in courses that relate to the central body of knowledge students are expected to gain in college, but perhaps not to a specific major, occupation, or professional field. Often a college uses standardized test scores to determine whether a student needs developmental classes before taking these courses. In some cases, performance measures, particularly advanced placement (AP) exam scores, may exempt a student from some general education requirements.

General education requirements differ based on the type of degree a student is seeking. Because associate in science (A.S.) and associate in arts (A.A.) degrees are usually considered transfer-oriented degrees (degree holders expect to transfer to a four-year college or university), their general education requirements are greater than those of an associate in applied science (A.A.S.) degree, which is often considered a career-preparation degree not designed for transferring students. However, in January 2011, a New Jersey law went into effect requiring the state’s public institutions of higher education to treat NJ PLACE participants transferring from the A.A.S. in Technical Studies degree program as they would A.S.- and A.A.-degree transfers (P. L. 2009, c. 200 (C. 34:15D-24)).

This chart shows the general education requirements for associate degree programs in New Jersey (see Resource Appendix for full details). NJ PLACE participants follow the A.A.S. degree minimum general education requirements.

<b>Course Categories</b> (Goal Categories)	<b>AA</b> credits	<b>AS</b> credits	<b>AAS, AFA</b> <b>AS Nursing</b> credits	<b>Certificate</b> credits
<b>Communication</b> (Written and Oral Com.)	9	6	6	3
<b>Mathematics – Science – Technology</b> <b>Mathematics 3-8 cr.</b> (Quant. Knlg. & Skills) <b>Science 3-8 cr.</b> (Sci. Knlg. & Rsng.) <b>Technological Competency or Information Literacy 0-4 cr.</b>	12	9	3	3
<b>Social Science</b> (Society and Human Behavior)	6	3	3	
<b>Humanities</b> (Humanistic Perspective)	9	3		
<b>History</b> (Historical Perspective)	6			
<b>Diversity courses</b> (Global & Cult. Awns.)	3			
Unassigned general education credit		6	8	
<i>General education foundation total</i>	<i>45</i>	<i>30</i>	<i>20</i>	<i>6</i>

The A.A.S. requires the fewest general education credits because studies are concentrated on technical courses closely related to a given career or professional field. Each New Jersey college interprets the unassigned general education credits differently, and most colleges require more than the state minimum twenty credits in general education coursework. As you prepare your courses for review, consider whether some have the potential to earn general education credits in the core areas described next and what, if anything, you could do to make them eligible for these.

**Written and oral communication** courses, which address the ability to communicate in traditional oral and written forms, are a common requirement in all college programs. These courses are usually titled English Composition, Communications, or something similar. Finding a course in an apprenticeship that meets this general education requirement is a challenge, but not impossible. Examples are a course in public speaking or report writing.

**Mathematics, Science, and Technology** courses involve conceptual understanding and application of math and science, including knowledge of computers and technology.

Mathematics courses run the gambit from basic math to calculus. To be considered a general education course, they usually have to include algebra (equations and formulas) and/or trigonometry. Many apprenticeship math courses should meet a college's general education requirements if the course is presented properly in the review.

Science courses are generally based on the scientific method of inquiry. Apprenticeship training often includes courses in physics, chemistry, and other sciences. The challenge is to make sure that the course is properly named and contains enough specific scientific content to qualify as a general education course in science.

In New Jersey, technology courses focus on computer technology skills. These courses teach students how to acquire, process, and convey information. Computer science and information technology are good examples of such courses. Many apprenticeships include computer-related courses that may meet the technology requirement.

**Social science** courses educate students in social awareness and the responsibilities of citizenship. They usually fall into the fields of sociology, economics, political science, anthropology, geography, and psychology and are not commonly found in an apprenticeship program.

**Humanities** courses are meant to enhance understanding and impart values of various cultures. They are typically history, music, philosophy, foreign language, and art courses, and some colleges also accept blueprint reading in this category. Apprenticeship programs often include a course of this type. Many, for example, offer a history of their union, profession, or industry, which may be categorized as a humanities course. Some programs include a foreign language course.

While colleges, programs, and degrees differ in their specific requirements for general education credits, almost no student graduates without some required courses and credits in these areas.

### **Semester vs. Quarter Credits**

Colleges and universities operate on either a semester system or a quarter system, and the value of a college credit is directly linked to the system used. A semester is generally fifteen weeks long, and most colleges designate the two main terms as fall and spring. The fall semester usually runs from September to December, the spring semester from January to May. Quarters are typically ten weeks in length. Colleges that use the quarter system of terms generally offer three or four quarters of courses a year.

A course that earns 3 semester hours of credit is equivalent to a course that earns 4.5 quarter hours of credit. However, 3 quarter-hours of credit is generally equivalent to only 2 semester-hours of credit. Be sure to first find out how a college awards credits, and how the reviewing organization recommends credits, before determining the credit-value of apprenticeship courses.

## **Types and Values of Credit Hours**

The final pieces of the academic hours puzzle are the types of credit hours that make up a course and the value awarded to each type. Essentially there are three types of credit hours: classroom, laboratory, and internship.

**Classroom** hours are just what you would expect: time a student spends in a classroom learning directly from a teacher. Classroom hours in an apprenticeship program are the most likely to be recommended for credit, because the extent of time spent and the nature of the learning process are easy for reviewers to observe and measure. A vital component of this designation is that the instructor demonstrates the skills being learned and is available for student questions and feedback to the student. The generally accepted ratio of semester classroom hours to credits is 15:1, that is, a course that requires a student to spend fifteen hours in a classroom over the course of a semester earns one credit.

**Laboratory** hours are generally the time a student spends in a controlled learning environment practicing skills taught in the classroom. Since this practice time is also under the direct supervision of an instructor, credit recommendations for these hours are second only to classroom hours in value. The generally accepted ratio of semester lab hours to credits is 30:1, meaning that lab hours are worth half as many credits as classroom hours or that a student must spend twice the number of hours in a lab to earn the same credit as time spent in a classroom.

Hours spent in an **internship** are generally the third-most-valuable type of credit hours. Internships traditionally are the time spent working with and further developing the skills learned in a classroom (and a laboratory, where applicable) in a structured but generally less supervised environment. Internships also give a student the chance to learn new skills from experience. Credits awarded for internships are generally few in number and require exponentially more student participation compared to credits for classroom or lab hours. The generally accepted ratio of semester internship hours to credits is 50:1, but this can vary widely among colleges.

This chart offers a general idea of the credit value of each type of semester credit hour. The numbers represent only a general comparison of contact hours to credit and don't necessarily apply to any particular course or school.

	<b>Classroom</b>	<b>Laboratory</b>	<b>Internship</b>
<b>1 Credit=</b>	15 hrs	30 hrs	50 hrs
<b>2 Credits =</b>	30 hrs	60 hrs	100 hrs
<b>3 Credits =</b>	45 hrs	90 hrs	150 hrs
<b>4 Credits =</b>	60 hrs	120 hrs	200 hrs

Let's look at a specific example. Your apprenticeship has a mandatory Materials and Methods course of 60 hours—30 hours of instructor-led classroom work and 30 hours of laboratory work in the shop under the supervision of an instructor. If the required work is at a college level, we can calculate the credit value of the course using the formulas from the table.

30 hours of classroom work equals **2** credit hours.

30 hours of laboratory work equals **1** credit hour.

Adding the credit hours together, the course is equivalent to **3** credit hours

Using the chart, the formula is:

<p><b>#Classroom hour credit equivalents + #Laboratory hour credit equivalents = #Total credits</b></p>
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The remaining chapters guide you through the process of equating the apprenticeship coursework to college-level coursework.



## Chapter 5: Comparison of Apprenticeship and College Courses

The key to making the case that an apprenticeship course is worthy of a college credit recommendation is proving that what takes place in the course is at least the equal of what happens in a typical college course. To consider what it takes for a course to be creditworthy in a college setting, use the five basic academic elements outlined in this chapter.

### Content Equivalency

The first thing reviewers look at is whether an apprenticeship course is equivalent to a similar college course. The question to ask yourself in the pre-review phase is this: Is the training taking place in this apprenticeship class equal to or greater than college-level content? Another way of looking at this is to ask: Could I find a course like this in a college or university? The answer is often yes. To make sure, go online or obtain printed copies of the course descriptions in college catalogs and make the comparison. In New Jersey, course names and basic course descriptions for many New Jersey colleges are online at [www.NJTRANSFER.org](http://www.NJTRANSFER.org). It is vital to have available for the review team the documentation that supports the similarity of your courses with existing college courses, especially those from the college conducting the review or the college with which your program has a partnership or articulation agreement. Depending on your industry, you may find similar courses in the following program areas:

- Architecture
- Automotive technology
- Civil engineering
- Criminal justice
- Culinary arts
- Drafting and design
- Early childhood education
- Electrical utility technology
- Electronics technology
- Engineering
- Health sciences
- Mechanical engineering
- Sustainable energy
- Technological sciences or technical studies

For specialized apprenticeship courses not generally taught in a college, look for similar content-specific courses in other fields. For example, a course listed in a college catalog as Automotive Electrical Systems might compare to a skill-specific Electric Controls for Mechanical Equipment course in an apprenticeship program.

The Resource Appendix at the back of this handbook includes a Course Presentation Template for use in matching your courses with standard college courses, as well as guidance on standardizing the names of your courses for credit transfer purposes.

### **Course Length**

The next aspect reviewers consider is the length of the course. Does it require enough hours to make it worth a college credit? Almost all courses for academic credit meet a required minimum number of contact hours, that is, the time a student spends in the classroom learning under the direct supervision of a teacher. The general rule is that fifteen hours of classroom instruction are the minimum needed for one semester credit. Lab time and on-the-job learning (OJL) require more hours (see the end of Chapter 4). If a single class does meet the number of contact hours required to be worth three or four credits, you can combine several related shorter courses to reach the minimum contact-hour requirement. This could save your program money if your reviewers are charging by the course, and it should ultimately help smooth the college credit transfer process. (Credit hours are discussed in more detail in Chapter 6.)

### **Learning Objectives and Outcomes**

Reviewers expect each of your courses to have written learning objectives and outcomes that specify what students will be able to do with the knowledge they've gained by the end of the course and how their understanding will be observed and measured. The desired learning outcome should be more than simply for apprentices to gain knowledge, but to be able to **apply** that knowledge for a specific purpose. Just as every college-level course must have written learning objectives and outcomes, these are a critical aspect of your courses for the review team to consider, so make sure to establish them for each course. (Objectives and outcomes are discussed in more detail in Chapter 8.)

### **Evaluation Methods**

Along with learning objectives and outcomes for each course submitted for review, reviewers want to see an evaluation strategy in place that ensures apprentices reach the course's established learning outcomes. Here you can consider the following questions: Is

there a standard level of mastery required for students in this course? How does a student demonstrate that ability? How is it documented by the apprenticeship program? Are the evaluation methods and expected outcomes directly linked to the course's learning objectives? It is vital that each student's progress be documented throughout the apprenticeship and that the documentation system is the same for all students.

### **Quality of Materials**

Finally, the review team looks at the quality of the course materials. Are the manuals, books, and other materials equal to or better than college-level standards? In other words, do the materials used in the apprenticeship course reach or exceed what you would expect to find in a typical college course? Are the materials up-to-date? A thirty-year-old text is acceptable if its contents are still current; however, you need to replace texts with outdated information or procedures.

Even this simplified look at what makes a course creditworthy in a college setting highlights the importance of making sure that all training activities in an apprenticeship program meet the standards established for the traditional academic community of accredited colleges and universities. Many apprenticeship courses already meet these standards; the crucial element is the way the courses are documented and structured for the review. This is the subject of the chapters that follow.



## Chapter 6: Guidelines for Course Presentation

The way the content of the apprenticeship program is presented to the review team influences the team's credit recommendations. This chapter offers important guidelines for preparing the courses and materials that will be submitted for review.

### Standardization

One all-encompassing concept to keep center stage as you consider your preparation and presentation is **standardization**. The easier it is for a college to fit your courses into either their current naming structure or into a standard, universal apprenticeship naming structure, the easier it is for them to accept your courses into their systems. In academic terms, if your courses look like standard college courses, they have a far better chance of receiving both reasonable credit recommendations and transfer onto a college transcript, the ultimate goal. The more apprenticeship programs, particularly those in the same industry, work together to standardize course names in common subject areas, the easier and more likely it is that a college will transfer credits course by course into either an established program of study at the college or a new program of study the college establishes for this group of courses. The Course Preparation Template included in the Resource Appendix of this handbook offers guidance on standardizing course names.

It is especially important to give colleges a way to transfer the apprenticeship credits course by course rather than as a large block of credits for an entire apprenticeship program. Block credits may seem like an easy fix for both the college and the apprenticeship, but they can be detrimental to the student for this reason: they are almost impossible to transfer from one college to another. That is, block credits can create a serious roadblock for students who want to change schools, particularly students who want to transfer an associate degree toward a bachelor degree. Credits that transfer course by course have a greater likelihood of transferring between colleges.

## **Course Naming**

It is extremely important that apprenticeship programs cooperate to standardize course names in common subject areas. If you name courses similar to the way colleges name their courses and you align your course naming with that of other apprenticeship programs, particularly those in your industry, you make it easier for the credit review team to understand your course and recommend appropriate credit. A second and equally important result of standardized course naming is that it helps colleges transfer credits course by course. The more your courses appear to be unique, nonstandard courses, the less likely they are to receive fair credit recommendations or to be courses a college is willing to transfer into a degree program. This means that you need to pay particular attention to how you name and group your courses.

One thing to keep in mind in naming courses is that the more generic the name, the more likely it is to be given full consideration, for several reasons. First, more generic course names are easier for colleges to enter on a transcript and into their administrative systems. For example, Labor History is a much more generic name than History of Local 893. Second, the more a course sounds specific to a trade, profession or union, the harder it is for a review team or a college to see its broader value. Technical Math stands a better chance of recommendation than does Math for Plumbers.

Where possible, use consecutive numbering for courses in the same content area. For example, naming courses Blueprint Reading I and Blueprint Reading II works better than naming the same courses Basic Blueprint Reading and Special Topics in Blueprint Reading. The numbers show a relationship between the courses that is easier to document and list in college systems.

A course name needs to reflect its content level in relation to courses offered in a college setting. This naming has an impact on whether a course might be considered a lower-level or an upper-level course, or whether it satisfies a general education requirement (see Chapter 4). You should request upper-level credits for a course that represents the advanced level of learning you would find in the last two years of a bachelor degree program.

The more you standardize course names within your industry or, better yet, within the apprenticeship community, the more advantageous for your review. The Resource Appendix of this handbook contains a Course Presentation Template that includes suggested course names.

### **Course Grouping**

Course grouping can have as great an impact on courses' college transferability as course naming. The more your credit requests match typical college courses, the easier it will be to have them transferred on a course-by-course basis. Since the average college class is 3 semester credits, try to cluster your courses into groups worth 3 semester credits. This may mean combining several small, related courses into one large course or breaking down a large course into parts. It is much easier for a college to accept a 3-credit course and place it on a student transcript than several 1-credit courses or a few 8-credit courses. The exception to this rule is a lab science course, which is often worth 4 credits because it includes additional lab hours. An apprenticeship's science classes are best grouped into classroom time and lab work that equates to 4 credit hours. (See Chapter 4 for guidance on determining credit-hour requests.)

### **Course Numbering**

The prefixes and numbers associated with a course often vary among colleges, so assigning your courses meaningful numbers can be challenging. To tackle this challenge, keep in mind the college system of course numbering: 100 and 200 for the lower level of college study, 300 and 400 for the upper level. Consider the level of difficulty of each course or group of courses before you assign course numbers, and be sure to show a progression as an apprentice proceeds through the program. As a rule of thumb, use 100-level numbers for introductory and fundamental courses and 200-level numbers for courses that build on these 100-level courses with advanced or specialty studies. Use 300-level numbers for highly advanced courses that require 200-level course mastery, and 400-level numbers for courses requiring mastery of any 300-level courses. The Course Presentation Template in the Resource Appendix provides sample course numbers for illustrative purposes. New

Jersey apprenticeship programs should contact NJ PLACE for assistance with proposing course numbers that fit best with your targeted degree-granting institutions.

### **Materials**

Because your credit review presentation must contain the materials used in a course, make sure these are up-to-date and include course handouts, slides or visual presentations (e.g., PowerPoint presentations), manuals, and/or textbooks for each course. Dated and inadequate materials may trigger a tougher look at a course and may lead to a lower credit recommendation.

### **Clustering**

When presenting your courses for review, group them in obvious clusters by topic or content area. That is, don't scatter five math courses throughout the presentation; instead present them together as a topic area. This arrangement makes your courses look much more organized and your program much more professional. If you are clustering classes to meet the three-credit standard, make sure they relate by topic and present them as one cohesive group.

If possible, note the point in the program when apprentices are expected to have completed each course in the cluster series. For example, Occupational Safety and Health will be completed during the first half of program year 1, and Emergency Response will be completed during the second half of program year 1. Specifying completion by half-years where possible helps colleges equate a course to a semester, a boon to the course-by-course transfer process.

### **Consistency**

An easy way to reinforce the view that your apprenticeship program is a cohesive, connected educational program is to present all your courses and materials in a way that gives them the same look and feel. Fifteen courses that look like they belong together make a much better impression than fifteen courses that look disconnected or that come from different sources. One simple strategy for addressing this issue is to place all the course

materials in similar binders with matching covers, even if the materials inside differ from each other.

### **Instructor Résumés**

An extremely important aspect of the review is certifying the apprenticeship program's control over its instructors' qualifications. You need up-to-date résumés from all your instructors showing they have, at a minimum, achieved professional or journeyman status. (College instructors are required to have a degree one level above the level of the courses they teach; professional or journeyman status is the equivalent in apprenticeship programs.) Be sure each résumé highlights the individual's length and range of experience as an instructor, as well as any advanced professional and academic credentials such as a professional license or college degree. Keep copies of their advanced certifications and credentials on hand. Current, comprehensive résumés help establish credibility for your program.

### **Paperwork Completion**

You will need to submit paperwork relating to each course you are having reviewed. Carefully completing all such paperwork ahead of time helps prevent delays and surprises. Be sure to ask the reviewing organization any questions that come up while you're doing the preparation. Don't wait until the day of the review to get clarification on any aspect of the process or paperwork that doesn't make sense to you. And be sure to complete everything the reviewing organization has requested; don't let an incomplete or missing document derail the process.



## Chapter 7: On-the-Job Learning

For apprenticeship programs, one of the most challenging elements of the review process is receiving college credit recommendations for on-the-job learning (OJL), the US Department of Labor's new term for on-the-job training (OJT). Even though OJL typically covers thousands of hours in an apprenticeship program, most reviewers are reluctant to recommend credits for this major element of apprenticeship because they see it as work rather than as education. Your job is to convince them otherwise.

### Establishing OJL as an Educational Experience

To properly present OJL as a course worthy of college credit, you must do the following three things:

1. *Document.* Make sure that the OJL process is thoroughly documented. This has to be more specific than a statement that an apprentice spends two thousand hours a year out in the field. You need detailed documentation that reflects all the skills an apprentice learns during OJL hours, as well as the supervision the apprentice receives. Be sure your record keeping is consistent and organized; it will serve as the apprentice's journal or log of the learning experience.
2. *Evaluate.* Make the evaluation process for OJL hours clear. You must have not only specific lists of skills an apprentice is practicing, but also a detailed evaluation process on which an instructor or supervisor signs off. If an apprentice spends forty hours working on skills a, b, and c, exactly how is each skill evaluated and how is that evaluation documented?
3. *Connect.* Draw connections between the apprenticeship courses and the time spent in OJL. Demonstrate objectives and learning outcomes for OJL that parallel and link to related classroom instruction. This connection of the classroom to the workplace shows that on-site job training is simply education in another setting. In academia, similar training is usually termed "clinical practice." The more you connect a course with OJL, the more it supports the understanding that the apprentices' education flows throughout the apprenticeship program.

The essential element is to make the case for reviewers that OJL is not just working on the job but education. This argument is more persuasive when rigorous evaluation and record keeping takes place on the job. Again, these elements need to be more concrete than someone saying that learning and practice are taking place: OJL must have a clear link to classroom courses, have learning objectives and outcomes, and be subject to evaluation mechanisms and appropriate documentation. The Resource Appendix includes a sample apprentice monthly work record that can serve these three functions.

## **Determining OJL Credits**

### ***OJL as Internship***

In addition to making sure that OJL is viewed as an educational experience, you want reviewers to equate on-the-job learning with a concept familiar to colleges. OJL is most similar to internships, cooperative education, or residency programs at colleges, particularly those in skilled fields like medicine and nursing, so it is best to present it from this perspective. The purpose of OJL is to facilitate the transition from student (i.e., apprentice) to professional (i.e., journeyman) using the following learning objectives:

- To provide apprentices with an orientation to varied work settings within their profession/trade
- To provide a practical opportunity for apprentices to demonstrate understanding and competence in technical skills and procedures related to their profession/trade
- To provide apprentices the opportunity to apply sound judgment and critical thinking skills in a real-world environment
- To develop an apprentice's time-management and teamwork skills
- To develop these skill sets through professional/journeymen observation and demonstration, as well as through practical (i.e., hands-on) learning with professional/journeymen oversight
- To increase the apprentice's level of applied skill and degree of job responsibility with each successive internship

### ***Dangers of Equating OJL to Labs***

In the past, some programs have equated OJL with lab time related to their classroom-based courses, but **this practice is not recommended**. Certainly, labs are designed to be the place where a student is involved in hands-on learning under the direction of a teacher, a scenario that sounds a lot like what happens during OJL: apprentices practice and hone their skills under the supervision of professionals/journeymen and supervisors while receiving valuable feedback to improve their skills. Placing OJL in the context of a laboratory class in college seems to make a lot of sense on the surface, and it would likely appeal to an academic reviewer. **However, there are dangers in equating OJL to lab time.**

The first danger is that labs are generally worth a single semester credit hour, so treating OJL as lab time may further dilute the credit recommendation. Asking for more than one credit for lab time may make it difficult for a college to accept it on a transcript. The second danger is that to equate OJL hours to lab time, you would need to separate OJL hours by skill set in practice (not just in theory). Those hours would have to be consistent from apprentice to apprentice, not just within a single class of apprentices but from year to year. Not all professions/trades can meet this requirement, and the overall goal is to create standardization among apprenticeship programs. Remember, it's standardization that will help all apprenticeships, yours included, achieve the most college credit transfers from their credit recommendations.

Therefore, to both standardize the academic treatment of OJL and to maximize credit transfer, **it is recommended that you submit OJL courses by apprentice year as internships** rather than by skill sets as lab time.

### ***Number of Credits***

The last issue regarding OJL concerns the number of credits to request for each year of the apprenticeship. Even though apprentices spend the majority of their education in OJL, colleges have difficulty granting a majority of credits from this type of learning. Therefore, you'll need to strike a balance.

As long as you can meet the basic requirements just discussed, it is recommended that you **request four semester internship credits for each year of OJL** during the apprenticeship. Although the typical two thousand OJL hours is ten times the normal four-credit internship hours, dividing your OJL any further is not likely to result in any more actual credit transfers onto a college transcript or into a degree program. And because this is where credits really count, there is no need to spend the time, energy, and money submitting OJL in increments of less than one year. If you request upper-level credits for your advanced coursework and you directly connect your OJL to these advanced courses, you should consider requesting upper-level credit for the corresponding years of OJL. This case is more likely to be made in apprenticeship programs of more than two years.

## Chapter 8: Course Syllabus Design

Once you have strategically determined how to present your apprenticeship program's coursework, you are ready for the final step—creating a detailed and professional syllabus for each course being reviewed.

A course syllabus generally contains these main elements:

1. Course name and number
2. Course schedule
3. Instructor name(s) and contact information
4. Course prerequisites
5. Course description
6. Course objectives
7. Learning outcomes
8. Evaluation specifics
9. Required materials
10. Course outline/Instruction

Let's look at these elements in more detail.

1. The **course name and number** is a critical part of the course syllabus (and review). These must accurately reflect the course content and fit within the academic naming and numbering scheme employed by the reviewing organization. The closer the name corresponds to already existing credit courses at colleges, the easier it is for the reviewers to feel comfortable with awarding it credit. For more information on course naming, see Chapter 6 and the Course Presentation Template in the Resource Appendix. Numbering should reflect the course level (see Chapter 4) and where it fits in the progression of your program's courses.
2. The **course schedule** shows how often the course is taught and how long each session lasts. For example, the course session could be fifteen three-hour sessions over the course of fifteen weeks or five eight-hour sessions over the course of one week. If your

class has a regularly scheduled day and time (e.g. Wednesday 6:00 – 9:00 P.M.), be sure to include this detail.

3. Because college classes are taught by various instructors, the syllabus always includes the **instructor's name and contact information**. When you prepare your course syllabus, be sure to include the name of the instructor or instructors who teach the class. You can list the training center as their contact information. If your program is offered at more than one location, you should include a description of the qualifications an instructor needs to teach the course.
4. Listing **course prerequisites** is important when courses are delivered in sequence, that is, when a course requires that another course or set of courses be completed first. Listing required prerequisites shows the reviewers that your apprenticeship program is equivalent to a college program of study and helps explain course numbering and requested credit levels.
5. A **course description** provides a brief overview of your course and is usually a single paragraph. You can also note the teaching format(s), that is, classroom, lab, or on the job.

**Course objectives and learning outcomes** are the most critical elements of your syllabus. Without them the reviewers have little information on which to base their decision about credit worthiness. Objectives and outcomes are directly tied to evaluation, and reviewers will check for this connection. For instance, you can't say you are teaching shop math and then evaluate students by having them balance a checkbook.

6. A **course objective** should describe in one or two sentences what apprentices should be able to **do** at the end of the course: how they will be able to use the knowledge gained in the course for a specific purpose. For example, the objective for a welding course could be to qualify the apprentice for certification as a welder (the apprentice will be able to use the knowledge gained to earn certification). The objective of an occupational safety and health course may be to prepare the apprentice to work safely on the job and properly identify and address any safety concerns (these are specific

skills to which the apprentice will apply the knowledge gained in the course). If a federal OSHA certification results from satisfactory course completion, you can add this to the objective.

7. **Learning outcomes** directly tie in with the course's objective and are composed of two basic elements. First, each outcome must be observable and measurable. A learning outcome that includes demonstration of a skill or behavior is both observable and measurable. If you list things the student will "understand" or "learn," you must include a concrete way to observe and measure this outcome. Second, each learning outcome must contain an evaluative element. The statements of these outcomes will prove valuable as you prepare the evaluation-specifics element of your syllabus. Well-written learning outcomes look something like this:

Upon completion of this course the student will be able to demonstrate the correct use of personal protective equipment.

Upon completion of this course the student will be able to describe the processes and procedures for decontamination, medical surveillance, and site control.

8. **Evaluation specifics** are detailed descriptions of how students will be evaluated to determine if they have met the course objectives. It is here that you make the point that your course involves more than just having a student listen to a teacher or watch a DVD. Reviewers are focused on making sure your courses result in real learning, and this is the reality element in your syllabus.

Be sure to make the evaluation process clear. Using the "personal protective equipment" example, the evaluation specifics could be:

Over the course of ten weeks, students will receive X hours of lecture and classroom demonstration by the instructor, as well as X hours of lab-based practice, in the use of personal protective equipment, the situations when this equipment is required because of jobsite hazards, and the accurate identification of hazardous situations. Students will complete two written assignments that present real-world scenarios

in which students must identify hazards and how to properly clean them. Instructors will also observe and evaluate students on suiting up properly with personal protective equipment. Finally, students will complete a written exam at the end of the course demonstrating the correct use of personal protective equipment.

This level of detail shows a review team that not only is the course content presented to the students, but also each student must demonstrate the ability to meet the course objectives.

9. In the **required materials** section, list all items that are part of the course. This includes books, manuals, handouts, materials, tools, and any other relevant course materials. This list is equivalent to the required-reading section in a college course syllabus.
10. A college course syllabus generally includes a **course outline**, that is, an outline of planned instruction that includes the topics and objectives, assignments, and evaluations anticipated for each class session. When you design your course outline in a similar manner, reviewers can see how the course's content is covered session by session and understand how these sessions relate to your course objectives, learning outcomes, evaluative elements, and text and materials.

This seems like a lot of detail, but the course syllabus is a blueprint of your course. Reviewers are unlikely to find any course without such a blueprint worthy of credit. Your course blueprint needs to provide the same level of detail required of the syllabus for every college credit course. The Resource Appendix contains an outline of a syllabus, as well samples for reference.

## Resource Appendix

The appendix contains the following resources for practical use during each phase of the course review process:

- Course Presentation Template
- Documenting On-the-Job Learning Using the Apprentice Monthly Work Record
- Pre-Review Checklist
- Review Checklist
- Post-Review Checklist
- New Jersey College General Education Requirements
- Course Syllabus: Outline
- Course Syllabus: Sample Apprentice Course
- Course Syllabus: Sample Three-Credit College Course

# Course Presentation Template

STANDARD COURSE NAME BY TYPE	COURSE NUMBER*	SEM. CREDITS (COMBINE CLASSROOM & LAB HRS)	COURSE LEVEL	COURSE FOCUS
<b>Foundation/Remedial</b>				
Basic Mathematics	MTH090	3	LL	Fundamental mathematical operations of arithmetic (addition, subtraction, multiplication, division), number types (decimals, fractions, percentages), and calculations using a ruler
<b>Communications or Technology</b>				
Computer Literacy	COMP101	3	LL	Basics of computer literacy, including function, use, and applications
<b>Humanities</b>				
Computer-Aided Design	CAD105	3	LL	Theories, principles, and techniques of graphics communication for the construction and engineering disciplines
Spanish	SPN101	3	LL	Basic Spanish for communicating on the jobsite
Labor History	HST111 or HST211	3	LL	Trade-union history (local and/or international) and/or the history of the labor movement and/or U. S. employment
<b>Mathematics</b>				
Technical Mathematics	MTH105	3	LL	Topics selected from arithmetic, algebra, geometry, and trigonometry with applications for profession/trade
<b>Business</b>				
Personnel Management & Supervision	BUS 221	3	LL	Fundamental concepts in the management/supervision process of planning, organizing, leading, and control; emphasizes decision making and the leadership roles of the manager or supervisor
Cost Estimating	BUS 231	3	LL	Estimating procedures and techniques used for developing budgets and schedules to meet the performance requirements of industry projects, including considerations of labor, raw material, and capital equipment costs
<b>Engineering</b>				
Strengths of Materials	ENG or TCH 221	3	LL	Study of the strength of materials with emphasis on practical applications; topics include axial stress and strain, material properties, torsion stress and strain, shear and moment diagrams, bending shear stresses, beam design, theoretical and specification column analysis and design, connection analysis, and combined stresses using Mohr's Circle

# Course Presentation Template

STANDARD COURSE NAME BY TYPE	COURSE NUMBER*	SEM. CREDITS (COMBINE CLASSROOM & LAB HRS)	COURSE LEVEL	COURSE FOCUS
<b>Science</b>				
Applied Chemistry	CHM101	4	LL	Foundations of chemistry with practical examples, experiments, and exercises related to skills required on the job; courses in thermodynamics (HVAC & Refrigeration) or the science of welding may qualify as chemistry courses.
Applied Physics	PHY101	4	LL	Topics of motion, mechanics, heat and energy, properties of matter, sound, light, electricity and magnetism, along with application of these principles to your profession/trade
Fluid Mechanics	PHY 221	4	LL	Basic concepts and applications of fluid systems, including essentials of fluid properties, fluid statics, Bernoulli's theorem, fluid measurements, and losses due to flow in pipes; lab work deals with models and operational systems as well as exercises involving the underlying principles of hydraulic and pneumatic mechanisms.
Thermodynamics	PHY 321	4	UL	Thermodynamics analysis of the mechanical refrigeration cycle and its associated equipment; topics include properties of matter, ideal gas processes, laws of thermodynamics, Mollier and p-h diagrams, psychometric properties of air, reciprocating compressors, evaporators, system equilibrium, condensers, and cooling towers
<b>On-The-Job Learning</b>				
Profession/Trade Internship Year 1	TCH 151	4	LL	On-the-job learning documented, evaluated, and connected to classroom instruction – 1st year apprentice
Profession/Trade Internship Year 2	TCH 152	4	LL	On-the-job learning documented, evaluated, and connected to classroom instruction – 2nd year apprentice
Profession/Trade Internship Year 3	TCH 251	4	LL	On-the-job learning documented, evaluated, and connected to classroom instruction – 3rd year apprentice
Profession/Trade Internship Year 4	TCH 252	4	LL	On-the-job learning documented, evaluated, and connected to classroom instruction – 4th year apprentice
Profession/Trade Internship Year 5	TCH 351	4	UL	On-the-job learning documented, evaluated, and connected to classroom instruction – 5th year apprentice

# Course Presentation Template

STANDARD COURSE NAME BY TYPE	COURSE NUMBER*	SEM. CREDITS (COMBINE CLASSROOM & LAB HRS)	COURSE LEVEL	COURSE FOCUS
<b>Common Trade/Industry Courses, level 100 (divide into Parts I, II, III as appropriate)</b>				
Trade Introduction	TCH 101	3	LL	Orientation to and fundamentals of your trade
Profession/Trade Fundamentals: XXX	TCH 105	3 each	LL	Study of a topic or concept not listed elsewhere that is fundamental to your profession/trade
Occupational Safety & Health	TCH 108	3	LL	Basics of jobsite safety, including courses such as OSHA 10, OSHA 30, Mine Safety, Lead Safety, and CPR
Profession/Trade Skills: XXX	TCH 110, 111...	3 each	LL	Skill-focused course or group of courses not listed elsewhere but considered a basic skill for the trade (i.e., not advanced)
Tools and Equipment	TCH 121	3	LL	Use and care of the common tools and equipment used to perform the work of your trade
Construction Materials & Methods	TCH 125	3	LL	Fundamentals of residential and/or commercial construction materials and practices, including types of construction, structural design requirements, and the properties of common construction materials in your trade
Blueprint Reading	TCH 131	3	LL	Reading and interpreting blueprints and specifications associated with the construction trades; emphasis on interpretation of details for foundations, floor plans, elevations, and schedules
Electrical Circuits	TCH 135	3	LL	Basic study of AC and DC electrical circuits using basic electrical quantities and analysis of series, parallel, and series-parallel circuits
Welding Fabrication Methods	TCH 141	3	LL	Welding, soldering, and brazing techniques and practical applications; divide into types of welding if appropriate (i. e. , arc, oxy fuel)

# Course Presentation Template

STANDARD COURSE NAME BY TYPE	COURSE NUMBER*	SEM. CREDITS (COMBINE CLASSROOM & LAB HRS)	COURSE LEVEL	COURSE FOCUS
<b>Common Trade/Industry Courses, level 200+ (divide into Parts I, II, III as appropriate)</b>				
Specialty Profession/Trade Skills: XXX	TCH 210, 211...	3 each	LL	Specialty skill particular to your profession/trade; prerequisite is mastery of 100-level course(s)
Structures	TCH 226	3	LL	Application of the principles of strength of materials to the analysis and design of structural steel, reinforced concrete, timber, and aluminum structures
Surveying	TCH 231	3	LL	Introduction to surveying, measurement theory, field and office procedures, and error analysis; lectures emphasize the concepts, computations, analysis and adjustments of leveling, angle observation, distance measure, and control traverses; field exercises stress the techniques of distance measure, from rough pacing to the use of the Electronic Distance Measure instrument, as well as the correct procedures for horizontal and vertical angle observations
Rigging	TCH 236	3	LL	Fundamentals of rigging, including procedures for using equipment to safely move materials and tools, identifying appropriate knot or practice for securing lines, describing the step-by-step procedures for moving and mounting equipment, and understanding materials and the science of their performance in rigging situations
Emergency Response	TCH 241	3	LL	Basic principles of emergency response and management related to natural or human-caused disasters; identification assessment, and monitoring of risks; and mitigation of risks using available technological, human, and organizational resources, including hazardous material handling
Advanced Profession/Trade Skills: XXX	TCH 310, 311...	3 each	UL	Skill-focused course or group of courses at a highly advanced level; prerequisite is mastery of a 200-level course

\* *Note:* In New Jersey, higher education institutions do not share a consistent course numbering system. Therefore, the course numbers in the template are strictly illustrative. New Jersey programs should contact NJ PLACE for assistance with proposing course numbers that best fit your targeted degree-granting institutions.

# Documenting On-The-Job Learning

## *Using the Apprentice Monthly Work Record*

These are excerpts from the insulators' apprentice monthly work-record booklet. The cover of the booklet contains instructions detailing evaluation criteria, evaluation method, and grading scale. The booklet provides an easy way to document skill learning, with learning objectives and evaluation mechanisms for each work week. It also provides concrete evidence of the connection of OJL to classroom instruction.

### APPRENTICE INSTRUCTIONS

Complete attached forms with names, dates, job name, company name, hours spent on each process each day and total hours. If absent, indicate in column for that day. (If unemployed, indicate that also). At the end of the work week, turn card into your foreman or job supervisor. He will return the book to you after grading and detaching his portion of the form. This booklet must be returned to your instructor the first week of the following month.

### FOREMAN INSTRUCTIONS

Please grade the apprentices work and performance for the week according to the 0-4 scale on the card. Also check mark in appropriate column for overall evaluation for that week. Tear off on perforated line. You may mail in all reports in one envelope as provided. The foreman reports must be in at the end of the month (or sooner if job is completed or apprentice leaves job). This responsibility is part of the apprenticeship agreement. Records for the apprentice cannot be completed without these reports.

NAME \_\_\_\_\_ WEEK ENDING \_\_\_\_\_

	M	T	W	T	F	S	S	RATING
APPLYING MOLDED P/C (HOT) (COLD)								
APPLYING DUCT INS. (RIGID) (FLEXIBLE)								
ASBESTOS ABATEMENT								
APPLYING BLOCK INSUL (WIRE) (BANDS) (OTHER)								
CANVASING OR OTHER FINISH WORK								
MATERIAL HANDLING								
APPLYING JACKET MAT'L (METAL) (OTHER)								
FAB SHOP (FITTINGS) (METAL) (BANDS)								
OTHER (SPECIFY)								
JOB NAME _____							TOTAL HOURS	
COMPANY NAME _____								

ADD-M-For maintenance jobs.

NAME \_\_\_\_\_ WEEK ENDING \_\_\_\_\_

### FOREMAN APPRENTICE EVALUATION

RATING SCORE 0 TO 4	GOOD	POOR
0-FAIL		
1-POOR		
2-AVERAGE		
3-ABOVE AVERAGE		
4-EXCELLENT		

Attendance \_\_\_\_\_  
Tools \_\_\_\_\_  
Attitude \_\_\_\_\_  
Reliability \_\_\_\_\_

REMARKS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

DAYS ABSENT FROM JOB \_\_\_\_\_

TIMES LATE FOR WORK \_\_\_\_\_

FOREMAN'S SIGNATURE \_\_\_\_\_

# Pre-Review Checklist

*Pg 1*

- Contact the NJ PLACE office.
- Select the organization to perform the review and contact them. Be sure to get all the forms they require and understand their process and timeline.
- Gather all relevant materials.
- Group materials by course.
- Make sure each course includes at least the following:
  - Syllabus
  - Materials
  - Evaluations
- Organize and revise courses and materials as necessary to meet review requirements.
- Secure a copy of the apprenticeship standards for presentation at the review.
- Secure a copy of apprenticeship qualifications for presentation at the review.
- Secure a copy of the apprenticeship agreement for presentation at the review.
- Prepare documentation and materials related to administration and maintenance of the record-keeping functions within the program.
- Collect up-to-date résumés from all staff and instructors.
- Work with the reviewing organization to determine the following:
  - Logistics – date, time, and place of review
  - Financial responsibility
  - Review team members
  - Review team requirements concerning courses and materials
- Complete all paperwork and forms required by the reviewing organization.

# Pre-Review Checklist

*Pg 2*

- Forward any materials and documentation requested prior to the review meeting.
- Determine internal staff and instructors necessary for the review and form an internal review committee.
- Hold a practice session with your internal review committee.
- Determine if external expertise is necessary and arrange for participation.
- Recheck all of the above.

# Review Checklist

- Verify logistics such as time and place of the review.
- Notify the NJ PLACE office of these logistics.
- Verify that all required personnel are present.
- Verify that all standby personnel are available as necessary.
- Organize materials in groups corresponding to each course.
- Be prepared to present any information requested by the reviewing organization.
- Be prepared to justify all of the credit recommendations that you have requested with documentation and subject-matter expertise as necessary.

# Post-Review Checklist

- Respond to any follow-up requests immediately.
- Maintain lines of communication with the review organization and work with them to assure a timely report.
- Share any communications you receive with the NJ PLACE office, including follow-up requests and credit recommendations.

Be sure to work with NJ PLACE on obtaining articulation agreements with local community colleges.

# NJ College General Education Requirements

*This chart has been provided by NJ Council of County Colleges.*

**A General Education Foundation for  
Associate in Arts, Associate in Science, Specialized Associate, and Certificate Programs  
in New Jersey's Community Colleges  
(1997 Adoption, 2007 Reaffirmed, August 15, 2007 Revision)  
APPROVED BY PRESIDENTS – 9/11/2007**

General Education Goal(s) addressed									Course Categories (Goal Categories)	AA credits	AS credits	AAS, AFA AS Nursing credits	Certificate credits
1								9	Communication (Written and Oral Com.)	9	6	6	3
	2	3	4					9	Mathematics – Science – Technology Mathematics 3-8 cr. (Quant. Kalg. & Skills) Science 3-8 cr. (Sci. Kalg. & Rang.) Technological Competency or Information Literacy 0-4 cr.	12	9	3	3
				5				9	Social Science (Society and Human Behavior)	6	3		
					6			9	Humanities (Humanistic Perspective)	9	3	3	
						7		9	History (Historical Perspective)	6			
							8	9	Diversity courses (Global & Cult. Anns.) Unassigned general education credit	3			
<i>General education foundation total</i>										45	30	20	6

Gen. Ed. Foundation Course Categories	NJCC Goal Categories*	Course Criteria: Below are brief descriptions of the course criteria for satisfying the requirements. For fuller descriptions, see the NJCC GE Course Criteria (August 15, 2007).
1 Communication	1 Written and Oral Communication	An array of courses which prepare students to speak, read, and write effectively. At least two of these must be composition courses for A.A. and A.S. degrees. At least one of these must be a composition course for specialized degree programs and certificates.
2 Mathematics	2 Quantitative Knowledge and Skills	Any college level mathematics course including statistics, algebra, or calculus course(s). These courses should build upon a demonstrated proficiency in basic algebra.
3 Science	3 Scientific Knowledge and Reasoning	Any course(s) in the biological or physical sciences – including non-majors survey courses. At least one of these courses must have a laboratory component.
4 Technology	4 Technological Competency or Information Literacy	Any course that emphasizes common computer technology skills (e.g. computer science, information technology) that helps students to access, process, and present information. This component is not required for students who can demonstrate competency.
5 Social Science	5 Society and Human Behavior	Any introductory course(s) from among anthropology, economics, geography, political science, psychology, or sociology.
6 Humanities	6 Humanistic Perspective	Any broad-based course(s) in the appreciation of art, music, or theater; literature; foreign language; history; philosophy and/or religious studies.
7 History	7 Historical Perspective	Any broad-based course(s) or sequence of courses in World, Western, non-Western, or American History.
8 Diversity courses	8 Global and Cultural Awareness	Any course whose primary purpose is to expose students to a multicultural society or people, possibly within the context of non-introductory study of a foreign language. If this goal is integrated into one or more general education course(s), the three credits may be moved from this category to another general education category.
	9 Ethical Reasoning and Action	This ethical reasoning and action goal may be infused in any of the above categories. These courses should include the ethical implications of issues and situations.

Note: This document should be used in conjunction with the NJCC GE Learning Goals & Suggested Individual College-Wide Learning Obj. (8-15-2007).

Programs	Allocation Notes: The credit allocation below is consistent with the 1997 NJCC Gen. Ed. Foundation grid.
AA	The Associate in Arts (AA) program requires a minimum of 45 semester credit hours of general education coursework from among the indicated categories.
AS	The Associate in Science (AS) program requires a minimum of 30 semester credit hours from among the indicated categories, with minimum distributions as shown. Beyond these minimums, any 30-credit subset of the AA program credit distribution will be accepted. General education coursework in excess of the 24 credits listed should follow the AA distribution limits.
Specialized Associate AAS, AFA, & AS Nursing	The specialized associate degrees shall include Applied Associate in Science (AAS), Associate in Fine Arts (AFA), and AS in Nursing. These programs shall require no fewer than 20 semester credit hours of General Education. Notwithstanding any articulation agreements, the general education courses should support career preparation. General education coursework in excess of the 12 credits listed should follow the AS distribution limits.
Certificate	The Certificate (or Academic Certificate) shall prepare students to read and write effectively. At least one other general education course is required. The Certificate of Achievement (COA) requires no general education courses beyond those that support career education. The Certificate of Completion (COC) is a noncredit certification program, which is not applicable within the general education context.

# Course Syllabus

## *Outline*

**Course Name and Number:**

**Course Schedule:**

**Instructor Name(s) and Contact:**

**Course Prerequisites:**

**Course Description:**

**Course Objective(s):**

**Learning Outcomes:**

**Evaluation and Grading (sometimes called Class Requirements or Assignments):**

**Required Materials:**

**Course Outline/Instruction:** This section describes time allotted to topics, objectives to be accomplished, and the use of evaluation mechanisms and materials. While the description can be in paragraph form, many college syllabi break down the course description into an outline of class topics as follows:

**Time Period 1**    **Class Topic 1:** Description of the topic covered and materials required.  
(e. g. , **Week 1; Day 1; 8 Hrs)**    Include information on all assignments and evaluation mechanisms (skill testing, quizzes, tests, instructor observation). Note how the topic is covered (lecture and demonstration, lab practice, or both), with the number of hours devoted to each method.

**Time Period 2**    **Class Topic 2:** Same elements as above

**Time Period 3**    **Class Topic 3:** Same elements as above

**...Continue listing each time period and each topic covered in the course.**

# Course Syllabus

## *Sample Apprentice Course - Pg 1*

### **Syllabus: Hazardous Materials Handling TCH241**

**Course Schedule:** This course is a total of 60 hours over the course of 15 sessions, with 30 hours of classroom instruction and 30 hours of lab work. Classroom and lab sessions are combined where appropriate into 4-hour blocks.

**Instructor Information:** The instructors for this course are journeymen possessing the experience and qualifications to be able to perform all of the demonstrated skills. They have been trained as instructors by the international education office's instructor training program.

**Course Prerequisites:** This course is intended for apprentices in the second half of their first year of training and requires satisfactory completion of OSHA 30.

**Course Description:** This course prepares students to safely handle hazardous materials on the worksite, including lead, and advises them of legal rights and regulations pertaining to hazardous materials. The first part of the course is focused on hazardous materials in general and the second is focused on lead. Instruction is a combination of lecture, skill demonstration, and student practice in the skills lab.

**Course Objectives:** The objective of this course is to enable students to work at hazardous waste sites and work on construction sites where there is a possibility of lead exposure by instilling the practical skill and knowledge to handle hazardous materials safely.

**Learning Outcomes:** Upon successful completion of this course, the student will be able to: recognize hazards and use hazardous material information sources; describe legal rights and responsibilities related to hazards, including lead; describe the health effects of hazardous materials, including lead; implement the processes and procedures for decontamination, medical surveillance, and site control; correctly use personal protective equipment and respirators; work in confined spaces; describe appropriate site practices and hazard control; describe processes and procedures for emergency response; explain the history of lead and its uses; identify regulations and sampling methods related to lead; follow hazard communication regulations; and describe work methods on steel structures where lead may be present.

**Course Assignments:** Students are required to complete 6 question sheets on class topics: 3 individually and 3 in small groups. In addition, students will practice skills demonstrated by their instructor, then demonstrate mastery of these skills in a skills lab and/or outside in a work area. Students will also be required to pass two exams: one will focus on hazardous materials and the other on lead hazards.

**Course Grading and Attendance:** Student course grades are computed as follows: each question sheet is worth 5%; demonstrating skill mastery is worth 30%; and each written exam is worth 20%.

**Course Materials:** *Hazardous Material Training Manual* and video series; *Lead Hazard Training Guide* and video *A Breath of Air*; *Confined Space Training Manual*; Smart Mark hazard awareness curriculum on Confined Spaces, Hazard Communication, Materials Handling, and Personal Protective Equipment; CPWR Disaster-Response DVD

# Course Syllabus

## *Sample Apprentice Course - Pg 2*

**Instruction:** All classes except exam days combine lecture, skill demonstration, and student practice in the skills lab or outside work area.

- Class 1 Recognizing hazards and hazardous material information sources  
*Hazard Material Training Manual* and video
- Class 2 Legal rights and responsibilities related to hazards  
*Hazard Material Training Manual*  
Individual Assignment 1 due
- Class 3 Health effects of hazardous materials  
*Hazard Material Training Manual*  
*A Breath of Air*  
Small group assignment in class
- Class 4 Processes and procedures for decontamination  
*Hazard Material Training Manual*
- Class 5 Use of personal protective equipment and respirators  
Smart Mark materials on Personal Protective Equipment  
Individual Assignment 2 due
- Class 6 Medical surveillance and site control  
*Hazardous Material Training Manual*
- Class 7 Appropriate site practices and hazard control  
*Hazard Material Training Manual*  
Small group assignment in class
- Class 8 Processes and procedures for emergency response and confined spaces  
CPWR Disaster-Response DVD  
*Confined Space Training Manual*  
Smart Mark materials on confined space
- Class 9 Hazardous materials exam and skills demonstration
- Class 10 The history of lead and its uses  
*Lead Hazard Training Guide* and video
- Class 11 Regulations and sampling methods related to lead  
*Lead Hazard Training Guide*
- Class 12 Hazard communication regulations  
Smart Mark materials on hazard communication  
Individual Assignment 3 due
- Class 13 Work methods on steel structures when lead may be present  
*Lead Hazard Training Guide*
- Class 14 Workers' legal rights related to lead  
*Lead Hazard Training Guide*  
Small group assignment in class
- Class 15 Lead hazards exam and skills demonstration

# Course Syllabus

## *Sample 3-Credit College Course – Pg 1*

*This syllabus is provided courtesy of Rutgers University Professor David Bensman, PhD.*

### **Syllabus: Development of the Labor Movement 2**

Prof. David Bensman

**Course Overview:** This course explores how Americans built this nation, through individual, family, communal and political action, from the rise of industrial capitalism in the late nineteenth century, to the present day. As students engage with each other in extensive weekly discussions, analyze the textbook, watch video clips, and research and write their term paper, they are encouraged to reflect on how their own lives have been influenced by the efforts of previous generations to make a good life and a decent society. While the course will focus on how people worked, and what their workplaces were like, it will also focus on how political movements, business innovations and government policies shaped workplaces and created the rules by which we live and work today.

**Course Objectives and Grading:** The course seeks to help students develop five skills.

*Critical thinking*

*Relating social theory to personal experience*

*Understanding events in social context*

*Developing clear and persuasive argument*

*Supporting argument with evidence*

All assignments will be graded with these objectives in mind. Students will be expected to document their evidence by citing sources

### **Class Requirements:**

1. **Participation in discussion forums** (See **On-line Discussion Guidelines** and **Grading Rubric** in Document Sharing.) 60% of grade
2. **Term paper.** 40% of grade. (See **Term Paper Assignment** guideline in Document Sharing.)

**Book to Buy: *Who Built America? Volume 2*** (third edition) by American Social History Project  
Bedford St. Martin

Available from Barnes and Noble bookstore, Ferrin Mall, or on-line.

**ISBN-13:** 9780312446925

**Pub. date:** 12/21/2007

# Course Syllabus

## *Sample 3-Credit College Course - Pg 2*

### **Course Outline**

#### **Unit One: Introduction – The Great Upheaval**

Jan. 19-23

Reading: Who Built America? Volume 2, pp. 19-21

Video: “The Grand Army of Starvation”

#### **Unit Two: Progress and Poverty**

Jan. 24-30

Reading: WBA? Prologue and Chapter One

Video Clips: “John D. Rockefeller, a Biography;” “Enterprise of a Thousand Tears;” and “The Secret History of the Ku Klux Klan ”

#### **Unit Three: Community and Conflict**

Jan. 31- Feb. 6

Reading: WBA? Chapter Two

Video Clips: “Haymarket Riot,” and “Homestead Strike and Andrew Carnegie”

#### **Unit Four: Industrial Capitalism Triumphs**

Feb. 7-Feb. 13

Reading: WBA? Chapter Three

Video Clip: “The Pullman Strike ”

#### **Unit Five: Change and Continuity in Daily Life**

Feb. 14-20

Reading: WBA? Chapter Four

Video Clips: “Ford and Taylor: Scientific Management,” “The Beat Goes On,” and “Upton Sinclair’s The Jungle ”

#### **Unit Six: Radicals and Reformers in the Progressive Era**

Feb. 21-27

Reading: WBA? Chapter Five

Video Clips: “Killing for Coal and “Interview with Frances Perkins’ Biographer, Kristen Downey ”

#### **Unit Seven: Wars for Democracy**

March Feb. 28-March 6

Reading: WBA? Chapter Six

Video Clips: “World War I Footage,” “St. Louis Race Riot,” and “Seattle General Strike ”

#### **Unit Eight: A New Era**

March 7-13

Reading: Who Built America? Chapter Nine

Video Clips: “Working for Ford,” Parts 1 and 2

#### **Unit Nine: The Great Depression and the First New Deal**

March 21-27

Reading: WBA? Chapter Eight

# Course Syllabus

## *Sample 3-Credit College Course – Pg 3*

Video Clips: “The Great Depression,” “The Rise and Fall of the National Recovery Act,” and “The Historic Battles of San Francisco, Minneapolis and Toledo, 1934.”

### **Unit Ten: Labor Democratizes America**

March 28-April 3

Reading: WBA?, Chapter Nine

Video Clips: “AFL vs. CIO split in 1935,” “The Woman Behind the New Deal”, (section on Perkins in New Deal), “Flint Sit-down Strike, 1937,” “Chicago Memorial Day Massacre,” “Frank Hague vs. The Red Menace.”

### **Unit Eleven: A Nation Transformed**

April 4-10

Reading: WBA? Chapter Ten

Video Clips: “John L. Lewis and Miners in WWII,” “Rosie the Riveter.”

### **Unit Twelve: The Cold War Boom**

April 11-17

Reading: WBA?, Chapter Eleven

Video Clips: “Army-Sen. McCarthy Hearings on Communism,” “The Growth of the Suburbs, Levittown, Pa.,” “Integration in Suburbia?” and “Strong Arms to Aid the USA, Los Braceros, Part 1).

### **Unit Thirteen: The Rights-Conscious Sixties**

April 18-April 25

Reading: WBA? Chapter Twelve

Video Clips: “Montgomery Bus Boycott,” “Cesar Chavez and the United Farmworkers,” “Workplace Health and Safety Movement, WWII to OSHA,” and “Tony Mazzochi Tribute.”

### **April 25 – Drafts of Term Paper Due**

### **Unit Fourteen: Economic Adversity Transforms the Nation**

April 24-May 1

Reading: WBA? Chapter Thirteen

Video Clip: “Reagan Fires Air Traffic Controllers.”

### **May 10 – Term Paper Due**