Chapter Three
Workforce Education Program Elements

A. Workforce Education Programs: Defining Characteristics

A workforce education program consists of a coherent sequence of courses designed to prepare students for employment in a career field. A workforce education program is developed by a college working in close cooperation with business and industry to satisfy a need for timely and effective workforce education. Additionally, many workforce education programs today are articulated with four-year college programs to provide students the opportunity for transfer and further education.

A workforce education program has a competency-based curriculum organized to teach industry-driven educational outcomes in terms of appropriate skills, knowledge, and perspectives needed by students to enter and succeed within a designated occupational field or fields. Additionally, all workforce education programs must provide students with opportunities to attain competence in oral and written communication as well as math and computer skills. These skills may be demonstrated by the inclusion of either applications or assignments in multiple courses or by courses in these basic competencies.

A workforce education program may lead to a single award (degree or certificate) or contain a "career cluster" of multiple awards/exit options (degrees and/or certificates). The program is usually identified by a four-digit Classification of Instructional Programs (CIP) code while an award is identified by a six-digit CIP code. When quite distinct disciplines are encompassed by the same four-digit CIP code, the program is defined by the six-digit CIP code. Refer to Table 3-1 for CIP code designations for programs.

1. Explanation of CIP Codes

The Classification of Instructional Programs (CIP) is a federal taxonomy developed by the U.S. Department of Education's National Center for Education Statistics (http://nces.ed.gov). It is used throughout the United States by state agencies and national associations to establish standard terminology to improve communication and standardize record-keeping and is published roughly once per decade. In Fall 2003, the Coordinating Board will begin using the 2000 edition of the manual, replacing the 1990 edition that has been in use since 1992.

As more digits are added to a CIP code, it becomes more specific. A two-digit CIP Code refers to programs within a broad career field. A four-digit CIP code refers to programs within a career cluster. A six-digit CIP code refers to instructional awards (degrees and/or certificates) relating to a specific occupation or job title.

For example, CIP code:

50	is	Visual and Performing Arts.
50.04	is	Design and Applied Arts.
50.0402	is	Commercial and Advertising Art.

Based on the nature of the discipline, the Coordinating Board groups technical programs either at the four-digit or six-digit level. Table 3-1 lists program areas by CIP Code level (four- or six-digit). The list of program awards that should be reported at the six-digit level is reviewed periodically.

Table 3-1. Program Areas by CIP Code 2000 Level

Program CIP Code[1]	Award CIP Code[2]	Program / Award Name
01.01		Agricultural Business and Management
01.02		Agricultural Mechanization
01.03		Agricultural Production Operations
01.04		Agricultural and Food Products Processing Management
01.05		Agricultural and Domestic Animal Services
01.06		Applied Horticulture/Horticultural Business Services
01.08		Agricultural Public Services
01.09		Animal Sciences
01.10		Food Science and Technology
01.11		Plant Sciences
01.12		Soil Sciences
03.01		Natural Resources Conservation and Research
03.02		Natural Resources Management and Policy
03.03		Fishing and Fisheries Sciences and Management
03.05		Forestry
03.06		Wildlife and Wildlands Science and Management
09.01		Communication and Media Studies
09.04		Journalism
09.07		Radio, Television, and Digital Communication
09.09		Public Relations, Advertising, and Applied Communications
10.01		Communications Technology/Technician
10.02		Audiovisual Communications Technologies/Technicians
10.03		Graphic Communications
11.01		Computer and Information Sciences, General
11.02		Computer Programming
11.03		Data Processing
11.04		Information Science/Studies
11.05		Computer Systems Analysis
11.06		Data Entry/Microcomputer Applications
11.07		Computer Science
11.08		Computer Software and Media Applications
11.09		Computer Systems Networking and Telecommunications
11.10		Computer/Information Technology Administration and Management
12.03		Funeral Service and Mortuary Science
12.04		Cosmetology and Related Personal Grooming Services
12.05		Culinary Arts and Related Services
13.05		Educational/Instructional Media Design

[1] Program sequence is indicated in parentheses, where applicable.
[2] Award-level CIP codes are listed in programs where one or more 6-digit CIP codes are defined at the program level

Program CIP Code[1]	Award CIP Code[2]	Program / Award Name
13.15		Teaching Assistants/Aides
14.02		Aerospace, Aeronautical and Astronautical Engineering
15.00		Engineering Technology, General
15.01		Architectural Engineering Technology/Technicians
15.02		Civil Engineering Technology/Technician
15.03		Electrical and Electronic Engineering Technologies/Technicians
	15.0303	Electrical, Electronic and Communications Engineering Technology/Technician
	15.0305	Telecommunications Technology/Technician
15.0304		Laser and Optical Technology/Technician
15.04		Electromechanical and Instrumentation and Maintenance Technologies/Technicians
15.05		Environmental Control Technologies/Technicians
15.06		Industrial Production Technologies/Technicians
15.07		Quality Control and Safety Technologies/Technicians
15.08		Mechanical Engineering Related Technologies/Technicians
15.09		Mining and Petroleum Technologies/Technicians
15.10		Construction Engineering Technology/Technician
15.11		Engineering-Related Technologies
15.12		Computer Engineering Technologies/ Technicians
15.13		Drafting/Design Engineering Technologies/Technicians
15.14		Nuclear Engineering Technologies/Technicians
16.01		Linguistic, Comparative, and Related Language Studies and Services
16.16		American Sign Language
19.00		Work and Family Studies
19.02		Family and Consumer Sciences/Human Sciences Business Services
19.04		Family and Consumer Economics and Related Studies
19.05		Foods, Nutrition, and Related Services
19.06		Housing and Human Environments
19.07		Human Development, Family Studies, and Related Services
19.09		Apparel and Textiles
21.01		Technology Education/Industrial Arts
22.03		Legal Support Services
23.11		Technical and Business Writing
25.03		Library Assistant
26.11		Biomathematics and Bioinformatics
26.13		Ecology, Evolution, Systematics and Population Biology
31.05		Health and Physical Education/Fitness
41.01		Biology Technician/Biotechnology Laboratory Technician
41.03		Physical Science Technologies/Technicians
43.01		Criminal Justice and Corrections
	43.0102	Corrections
	43.0103	Criminal Justice/Law Enforcement Administration
	43.0104	Criminal Justice/Safety Studies
	43.0106	Forensic Science and Technology
	43.0109	Security and Loss Prevention Services
	43.0110	Juvenile Corrections
	43.0111	Criminalistics and Criminal Science
	43.0112	Securities Services Administration/Management

Program CIP Code[1]	Award CIP Code[2]	Program / Award Name
	43.0113	Corrections Administration
43.0107		Criminal Justice/Police Science
43.02		Fire Protection
	43.0201	Fire Protection and Safety Technology/Technician
	43.0202	Fire Services Administration
43.0203		Fire Science/Firefighting
44.04		Public Administration
44.07		Social Work
45.07		Geography and Cartography
46.01		Mason/Masonry
46.02		Carpenters
46.03		Electrical and Power Transmission Installers
46.04		Building/Construction Finishing, Management, and Inspection
46.05		Plumbing and Related Water Supply Services
47.01		Electrical/Electronics Maintenance and Repair Technology
47.02		Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology
47.03		Heavy/Industrial Equipment Maintenance Technologies
47.04		Precision Systems Maintenance and Repair Technologies
47.0600 (00)		Vehicle and Mobile Equipment Mechanics and Repairers
	47.0606	Small Engine Mechanics and Repair Technology/Technician
	47.0610	Bicycle Mechanics and Repair Technology/Technician
	47.0611	Motorcycle Maintenance and Repair Technology/Technician
	47.0612	Vehicle Emissions Inspection and Maintenance Technology/Technician
	47.0613	Medium/Heavy Vehicle and Truck Technology/Technician
	47.0614	Alternative Fuel Vehicle Technology/Technician
	47.0615	Engine Machinist
	47.0616	Marine Maintenance/Fitter and Ship Repair Technology/Technician
47.0600 (02)		Aviation Technology
	47.0607	Airframe Mechanics and Aircraft Maintenance Technology/Technician
	47.0608	Aircraft Powerplant Technology/Technician
	47.0609	Avionics Maintenance Technology/Technician
47.0603		Autobody/Collision and Repair Technology/Technician
47.0604		Automobile/Automotive Mechanics Technology/Technician
47.0605		Diesel Mechanics Technology/Technician
48.03		Leatherworking and Upholstery
48.05		Precision Metal Working
	48.0501	Machine Tool Technology/Machinist
	48.0503	Machine Shop Technology/Assistant
	48.0506	Sheet Metal Technology/Sheetworking
	48.0507	Tool and Die Technology/Technician
	48.0509	Ironworking/Ironworker
48.0508		Welding Technology/Welder
48.07		Woodworking
48.08		Boilermaking/Boilermaker
49.01		Air Transportation
49.02		Ground Transportation
49.03		Marine Transportation
50.04		Design and Applied Arts

Program CIP Code[1]	Award CIP Code[2]	Program / Award Name
	50.0401	Design and Visual Communications, General
	50.0402	Commercial and Advertising Art
	50.0404	Industrial Design
	50.0409	Graphic Design
	50.0410	Illustration
50.0406		Commercial Photography
50.0407		Fashion/Apparel Design
50.0408		Interior Design
50.05		Dramatic/Theatre Arts and Stagecraft
50.06		Film/Video and Photographic Arts
50.07		Fine and Studio Art
50.09		Music
51.02		Communication Disorders Sciences and Services
51.06		Dental Support Services and Allied Professions
51.07		Health and Medical Administrative Services
51.08		Allied Health and Medical Assisting Services
51.0801		Medical/Clinical Assistant
51.0803		Occupational Therapist Assistant
51.0805		Pharmacy Technician/Assistant
51.0806		Physical Therapist Assistant
51.0808		Veterinary/Animal Health Technology/Technician and Veterinary Assistant
51.09		Allied Health Diagnostic, Intervention, and Treatment Professions
	51.0902	Electrocardiograph Technology/Technician
	51.0903	Electroneurodiagnostic/Electroencephalographic Technology/Technologist
	51.0906	Perfusion Technology/Perfusionist
51.0901		Cardiovascular Technology/Technologist
51.0904		Emergency Medical Technology/Technician (EMT Paramedic)
51.0905		Nuclear Medical Technology/Technologist
51.0907		Medical Radiologic Technology/Science/Radiation Therapist
51.0908		Respiratory Care Therapy/Therapist
51.0909		Surgical Technology/Technologist
51.0910		Diagnostic Medical Sonography/Sonographer and Ultrasound Technician
51.10		Clinical/Medical Laboratory Science and Allied Professions
51.15		Mental and Social Health Services and Allied Professions
51.16		Nursing
	51.1601	Nursing-Registered Nurse Training (RN, ASN, BSN, MSN)
	51.1603	Adult Health Nurse/Nursing
	51.1606	Maternal/Child Health and Neonatal Nurse/Nursing
	51.1612	Perioperative/Operating Room and Surgical Nurse/Nursing
51.1613		Licensed Practical /Vocational Nurse Training (LPN, LVN, Cert, Dipl, AAS)
51.1614		Nurse/Nursing Assistant/Aide and Patient Care Assistant
51.18		Ophthalmic and Optometric Support Services and Allied Professions
51.22		Public Health
51.26		Health Aides/Attendants/Orderlies
52.01		Business/Commerce, General
52.02		Business Administration, Management and Operations
52.03		Accounting and Related Services
52.04		Business Operations Support and Assistant Services
52.05		Business/Corporate Communications

Program CIP Code[1]	Award CIP Code[2]	Program / Award Name
52.06		Business/Managerial Economics
52.07		Entrepreneurial and Small Business Operations
52.08		Finance and Financial Management Services
52.09		Hospitality Administration/Management
52.10		Human Resources Management and Services
52.11		International Business
52.12		Management Information Systems and Services
52.13		Management Sciences and Quantitative Methods
52.14		Marketing
52.15		Real Estate
52.16		Taxation
52.17		Insurance
52.18		General Sales, Merchandising, and Related Marketing Operations
52.19		Specialized Sales, Merchandising, and Marketing Operations
52.20		Construction Management

2. Types and Characteristics of Awards

Each program may have several awards. Generally, it is recommended that the number and type of awards not exceed the following:

- One AAS or AAA and several certificates, including **–**
- Two level one certificates, each between 15-42 semester credit hours (SCH);
- One level two certificate between 43-59 SCH;
- One enhanced skills certificate (if applicable) between 6-15 SCH.; and
- Several continuing education certificates

In some disciplines, a broader array of awards may be warranted. Under exceptional circumstances a program may also have an advanced technical certificate of 16-50 SCH.

This configuration of awards provides building blocks for students leading from basic to more advanced workplace competencies. Ideally, each award will enable students to build toward the associate degree. In cases where career clusters exist at the six-digit CIP code level, the program may contain separate certificates of similar length for the four-digit awards. For example, a program with an AAS in Automotive Technology may have parallel certificates of similar length in each of the three six-digit CIP codes that make up the cluster, i.e. Auto Body Repair, Auto Mechanics, and Diesel Mechanics.

In August 1998, the American Association of Community Colleges (AACC) published a policy statement concerning the associate degree. The text of the statement may be accessed on the Internet on the AACC website at www.aacc.nche.edu. The existence of several different degree titles for the same or highly similar programs inevitably results in confusion when potential employers consider the qualifications of workforce education program graduates. The AACC policy statement therefore urges institutions to avoid degree title

proliferation:

> *In recent years there has been a problem of titles for associate degrees. In certain states and in certain institutions, different degree titles are used due to tradition or local circumstances. But institutions should avoid degree title proliferation and the confusion which results, especially since students move from institution to institution and, upon graduation, to different areas of the nation. The use of multiple degree titles has been especially prevalent in occupational areas where some institutions offer many different degrees in specific technologies. In an attempt to reduce the number of these degrees and to avoid confusion about the level of academic achievement, it is highly recommended . . . (that the applied associate degree) have a limited number of designations to denote special fields of study such as nursing, computer technology, or law enforcement. . . Institutions are encouraged to use nationally standardized nomenclature to ensure transferability and a common understanding of the associate degree*.

The report further recommends that in contrast to narrowly specialized programs, programs should be designed to educate students broadly within an occupational cluster, preparing them for career advancement and lifelong learning opportunities. Where applicable, certificates should follow the same guidelines using standard nomenclature and types of awards.

The limitation on multiple awards within defined subject areas is intended to guard against undue award proliferation and to promote the successful movement of students toward program completion. The limitation is intended to trigger further staff review of new program applications and does not prevent exceptions from being requested by an institution or from being granted by the Commissioner.

Approved applied associate degree and certificate programs shall appear on the workforce education program inventory as maintained by the Coordinating Board staff and will be subject to established statewide institutional effectiveness program evaluation procedures. Awards must be listed in an institution's catalog, appear on a student's transcript, and be subject to an institution's Graduate Guarantee policy.

a. Associate of Applied Science/Associate of Applied Arts Degrees

The degree options for a workforce education program are the Associate of Applied Science (AAS) degree and the Associate of Applied Arts (AAA) degree. Degrees must be limited to a total of 60-72 semester credit hours. Each workforce education program should have at least half of its coursework drawn from a common technical specialty identified by the four- or six-digit CIP code designated for the program. This ensures that each degree or certificate program has a clearly defined subject focus and will provide students with valid opportunities for employment and career advancement.

These guidelines are not intended to establish an arbitrary number or percentage of specific courses that must be contained in a program; logical exceptions to the guidelines will be permitted.

An applied associate degree results in a formal award that indicates mastery of a prescribed series of competencies with defined employment outcomes. AAS and AAA degrees are technical or professional in nature and are usually identified with a broad designation (e.g., AAS in Electronics and AAA in Music Performance).

The technical specialty component of an AAS or AAA degree should constitute 50 percent to 75 percent of the course credits. These may include both WECM courses and academic courses that are directly related to the discipline. Except in the case of emerging disciplines, the use of WECM Special Topics and Local Need courses in the curriculum is limited to three courses (see Chapter Four for details). In certain cases, there are parallel courses listed in the *Workforce Education Course Manual (WECM)* and the *Lower-Division Academic Course Guide Manual (ACGM)*. In these instances, the *ACGM* courses with *WECM* equivalents may count as part of the technical specialty component. The remaining 25 percent to 50 percent of an AAS or AAA degree should consist of related or support courses and general education courses. In recent years, new career fields such as Biotechnology have emerged that may require extensive academic preparation for a student to enter the workforce. Such cases may warrant an exception to the general policy that 50 percent of the course credit be in technical course work, especially if some of the required course work has no *WECM* equivalent courses. In cases where the program would require a preponderance of academic courses, the college must document that the additional academic course work was recommended by the program advisory committee and that it is directly related to the occupational field and/or to a Coordinating Board-approved Field of Study Curriculum.

Coordinating Board rules and guidelines are aligned with the Principles of Accreditation of the Commission on Colleges of the Southern Association of Colleges and Schools (SACS). To meet SACS guidelines, each degree must have a minimum of 15 semester hours in general education. The 15 hours of general education must include at least one course in each of the following three areas: humanities/fine arts, social/behavioral sciences, and mathematics/natural sciences. Each college should work with its SACS representative concerning specific courses that will be acceptable to SACS. General education courses must be transferable courses found in the *Lower-Division Academic Course Guide Manual* (*ACGM*) or on the college's approved academic unique need course inventory. Examples of acceptable general education disciplines are listed in Table 3-2, below.

Table 3-2. Examples of General Education Courses by Area

Humanities/ Fine Arts*	Social/ Behavioral Science	Natural Science and Math
Humanities Literature Journalism Drama/Art/Music Philosophy Cultural studies Classical languages Ethics	Government History Psychology Sociology Anthropology Economics	Biology Chemistry Physics College-level Math (must be academic, not applied) Geology

***Note:** Use of Speech or English Composition courses to satisfy the Humanities/Fine Arts requirement is not recommended. SACS teams have disapproved this practice at a number of colleges.

Each degree program must also contain math, computer, and communication competencies. These should be built into every course and program to the extent that they are applicable and relevant. If a college elects math, computer science, or communication courses as general education requirements, the courses must be academic transfer courses of collegiate level and of a general nature, not geared to a specific occupation—e.g., welders, electricians, or secretaries.

In contrast, applied competencies should be built into the program. In other words, math for electricians might be an acceptable program course, but it is not a general education course.

Further, if a college chooses math as a general education requirement, it need not be college algebra. Another acceptable course is College Mathematics, a course which may include algebra and geometry, with topics in sets, logic, number systems, number theory, functions, equivalence, congruence, measurement, other geometric concepts, and the introduction to probability and statistics.

b. AAS/AAA Program Options and Specialties

A program **option** is a different AAS or AAA degree within the same four- or six-digit CIP code listed on the program inventory. A degree and one or more options (additional degrees) will only be approved in exceptional circumstances and must be justified by the requesting institution. Each option is listed on the CB inventory of awards.

A program **specialty** is a variation within one AAS or AAA degree allowing students to take different courses. A specialty does not result in a different AAS or AAA degree and is not listed on the CB inventory, but may result in a different certificate award. The specialty should match the program CIP code of the approved award and should share a significant number of its technical

courses. As a rule of thumb, specialties in the same program should have 50 percent of the technical courses in common. Program specialties may be approved as revisions to the original degree. Colleges interested in program specialties should work closely with Coordinating Board staff advisors. Examples of specialties include: AAS in hospitality administration/management with specialties in 1) hotel management and 2) tourism, or AAS in Computer Information Technology with specialties in 1) information systems security and 2) webmaster.

If a college has both an AAS or AAA and a shortened track to the degree, only the final award is listed on the CB inventory. For example, if a college has both an AAS in nursing and a licensed vocational nursing to associate degree nursing (LVN-ADN) transition track, the final award - the AAS - would appear on the inventory. When there are two tracks to the same award, they need not be of the same length; however, any credit given for previous learning must be tied to specific courses. For example, the college's associate degree in nursing program may require 72 SCH for students who have not completed the LVN program and only a total of 60 SCH for LVN transition students (e.g., 45 SCH of course work and 15 SCH transferred from the LVN program).

c. Credit Certificate Programs

A credit certificate should constitute a building block toward the AAS or AAA degree. At least 50 percent of the course credits should be drawn from a focused technical specialty. The remaining courses may be technical or academic courses.

Credit certificates will be approved in four different categories or levels:

(1) A **level one certificate** can be completed by a student in one calendar year or less. It must consist of at least 15 and no more that 42 semester credit hours. Students in level one certificate programs are not required to take a test for purposes of the Texas Success Initiative (TSI) as long as they take no more than 6 SCH outside the curriculum for the certificate program; nevertheless, all certificate programs should provide for local assessment and remediation of students.

Programs in professions requiring external program accreditation and licensure or certification examinations for practitioners (e.g., Licensed Vocational Nursing, LVN); and which exceed the credit hour limit may be approved by the Coordinating Board staff as TSI-waived if the program can be completed in one year or less, have a maximum of 48 SCH for the program including all admissions and course prerequisites, and have a maximum of 18 SCH per semester. These awards shall be identified on the CBM-009 (graduate/completer report) as CERT1. Approval for TSI waiver may **only** be obtained by written request to the Director of Instructional Programs, Community and Technical Colleges Division.

The request must identify the award and include the total number of SCH in the award, the range of SCH per semester, the name of the applicable accrediting and licensing or certifying agency/agencies, and a statement of assurance that the award with all of its prerequisites can reasonably be completed in 12 calendar months. As a rule, the curriculum for a level one certificate is limited to one Special Topics or Local Need course.

(2) A **level two certificate** must consist of at least 43 and no more than 59 semester credit hours. Students in all level two certificates shall be subject to the requirements of the TSI. This award shall be identified on the CBM-009 as CERT2. As a rule, the curriculum for a level two certificate is limited to no more than two Special Topics or Local Need courses.

(3) An **enhanced skills certificate** is a certificate associated with an AAS or AAA degree program. The associated AAS or AAA must be a prerequisite for the enhanced skills certificate. The certificate must be well focused, clearly related to the program, and justifiable. It must consist of at least six and no more than 15 SCH and may extend an AAS or AAA award to an overall total that shall not exceed 87 semester hours. This award shall be identified on the CBM-009 as CERT3. The award must not be used to circumvent the 72 SCH cap for degrees. It is intended to provide skills beyond career entry or where external mandates make it impossible for specified programs to meet the 72 SCH limit.

(4) An **advanced technical certificate** is a certificate that has a defined associate or baccalaureate degree (or, in some circumstances, junior-level standing in a baccalaureate degree program) as a prerequisite for admission into the certificate program. It must consist of at least 16 and no more than 50 SCH. It must be focused, clearly related to the prerequisite degree, and justifiable to meet industry or external agency requirements. As a rule, the curriculum for an advanced technical certificate is limited to no more than three Special Topics or Local Need courses.

(5) An AAS or AAA degree program that provides a **shortened track** of 16-50 SCH for students who hold a related degree may offer an advanced technical certificate for the shortened track. For example, an AAS degree in Sonography may provide an advanced technical certificate in sonography for students who already hold an AAS in Echocardiography. In this case the program inventory would list both an AAS in Sonography and an advanced technical certificate in Sonography.

d. Institutional Awards

In addition to Coordinating Board-recognized awards, colleges may offer institutional awards of fewer than 15 SCH or 360 continuing education contact hours reflecting a course or series of courses which:

(1) represent achievement of an identifiable skill proficiency, or

(2) meet a student's self-defined educational objective.

Institutional awards shall be based on existing *WECM* courses or courses that are part of the institution's approved Local Need inventory. Institutional awards shall not be part of the Coordinating Board-maintained Program Inventory.

e. Continuing Education Certificate Programs

A coherent sequence of continuing education courses which total 360 or more contact hours must be approved as a workforce education certificate program. Courses may be considered part of a coherent sequence if they:

(1) include required and/or recommended prerequisites or co-requisites or

(2) lead to an external credential (license, certification, or registration) or

(3) are taken by a majority of students in sequence to meet occupational qualifications

These certificate programs may award continuing education units (CEU) according to the *Guidelines* in this chapter and *WECM* (*Workforce Education Course Manual—see Chapter Four*). All Continuing Education certificate programs must be listed on the college's approved inventory of programs and must be transcripted. Workforce education programs of 780 contact hours or more must be offered for SCH only. An exception is made for Emergency Medical Technology/Paramedic continuing education programs, CIP 51.0904, which may have a maximum of 800 contact hours.

A college wishing to convert CEU previously awarded to students to SCH must follow SACS guidelines. If the college converts CEU to SCH, it must maintain documentation that the continuing education courses have met the same objectives, rigor, evaluation process, and faculty qualifications as the analogous credit courses. The documentation must show that individual continuing education students have met the same competencies as the successful credit students prior to granting SCH retroactively for courses taken as continuing education.

f. Marketable Skills Achievement Awards

A **marketable skills achievement award** may be a sequence of credit courses totaling 9-14 SCH or workforce continuing education courses of 144-359 contact hours. These awards meet the minimum standard for program length specified in the federal Workforce Investment Act (WIA) but are too short to qualify as certificate programs on the Coordinating Board program inventory.

Marketable skills achievement awards are TSI-waived if they meet the following criteria:

(1) The content of the award must have been recommended by an external

workforce advisory committee or appear on the Local Workforce Development Board's Demand Occupations list;

(2) In most cases, the award should be composed of *WECM* courses only. However, academic courses may be used occasionally if recommended by the external committee and if appropriate for a TSI-waived program;

(3) If the award does not have at least 50 percent of its course work in a CIP code area in which the college has an approved program on the program inventory, the college must comply with the Single Course Delivery guidelines for *WECM* courses listed in Chapter Four of this manual; and

(4) The college should document that the marketable skills achievement award prepares students for employment in accordance with guidelines for the Workforce Investment Act.

Marketable skills achievement awards do not require prior approval from the Coordinating Board staff and will not appear on the college's program inventory. However, students who complete the awards may be reported as completers on the CBM-00M report (refer to the Coordinating Board Reporting and Procedures Manual for more details).

3. Groupings of Awards

Additional guidelines for logical and flexible groupings of awards within programs are as follows:

a. All awards in a program should begin with the same four-digit CIP code (or six-digit code for those specified at the six-digit level). Institutional Effectiveness (IE) standards apply to an entire program, not to individual awards within a program. Colleges will have the opportunity to provide feedback to the Coordinating Board staff on any necessary reclassification or division of existing programs.

Example of a correct grouping of awards:

Plumbing and Water Supply Services

Awards:

- AAS degree - Plumbing Technology/Plumber 46.0503
- Certificate - Pipefitter and Sprinkler Fitter 46.0502
- Certificate - Well Drilling 46.0504

Example of an incorrect grouping of awards:

Computer Science Program

Awards:

AAS degree - Computer Programming 11.0201

Certificate - Data Processing Technology 11.0301

b. Awards with the same four-digit CIP codes, but different six-digit CIP codes, *may* be placed in different programs. When a program is designed to produce a graduate in a specific occupation (as opposed to a cluster of occupations), the program must be identified by a six-digit CIP code.

Example: Radiologic Technology/Radiographer and Respiratory Care Therapy share the four-digit CIP code 51.09. However, these are different occupations and report to different accrediting and certifying agencies. Therefore, they must be identified by their six-digit CIP codes.

- Radiologic Technology/Radiographer Program, 51.0911
    - AAS degree - Radiologic Technology, 51.0911
- Respiratory Care Therapy Program, 51.0908
    - AAS degree - Respiratory Care Technology 51.0908

c. On the Coordinating Board's official program inventory, program titles are assigned by staff based on the title of the CIP code to which the program belongs. Colleges may choose their own award titles as long as they clearly convey the nature of the award. Colleges are encouraged to use common program titles as specified in the CIP code manual to promote maximum articulation with awards and programs offered by other institutions.

B. Program Requirements

Certain elements must be common to all workforce education programs. These include:

1. Program Demand

Using national, state, and local industry-based trends, standards, and labor market information, the college must document the need for the program in the college's service area. See Chapter Five, New Program Approval Process, for more details.

2. Effective Use of Advisory Committees

Each institution must establish separate industry-based advisory committees for each workforce education program or cluster of closely related programs. The broad purposes of an advisory committee are 1) to help a college document the

need for a workforce education program, and 2) to ensure that the program has both adequate resources and a well-designed curriculum to provide students with the skills, knowledge, and behaviors necessary to successfully meet the needs of business and industry. The advisory committee is one of the principal means of ensuring meaningful business and industry participation in program creation and revision.

a. Functions of an advisory committee include:

(1) evaluating the goals and objectives of the program curriculum;

(2) establishing workplace competencies for the program occupation(s);

(3) suggesting program revisions as needed;

(4) evaluating the adequacy of existing college facilities and equipment;

(5) advising college personnel on the selection and acquisition of new equipment;

(6) identifying local business/industry leaders who will provide students with external learning experiences, employment, and placement opportunities;

(7) assisting in the professional development of the faculty;

(8) assisting in promoting and publicizing the program to the community and to business and industry; and

(9) representing the needs of students from special populations.

b. Advisory Committee Composition

(1) Advisory committees must be composed of persons who broadly represent the demographics, including the ethnic and gender diversity, of the institution's service area as well as the demographics of the occupational field. Committee members should be knowledgeable about the skills used in the occupation for which they are providing information and guidance.

(2) Members should be drawn from both the private and public sectors with an emphasis on business, industry, and labor organizations.

(3) Tech-Prep program-specific advisory committees must include members who represent secondary and higher education as well as business and industry.

(4) Full-time faculty and staff of the community or technical college offering the program must not be members of the advisory committee but may serve in an ex-officio capacity. Part-time faculty who hold full-time positions within the career field may be members of the committee. Faculty and staff of senior institutions with whom the program may be articulated may also be members of the committee.

c. Advisory Committee Meetings/ Minutes

(1) Advisory committees must meet in person a minimum of one time a year and should, if possible, have a quorum present; however, it is recommended that contact with committees be maintained throughout the year via e-mail, fax, phone, or videoconference. During the development of new programs, advisory committees should meet frequently.

(2) All meetings of the advisory committee must be recorded in official minutes. The minutes must include:

(a) identification of committee members (name, title, and affiliation);

(b) an indication of the committee members' presence or absence from the meeting;

(c) the names and titles of others present at the meeting;

(d) the signature of the recorder; and

(e) evidence of that industry partners have taken an active role in making decisions that affect the program.

Minutes must be maintained in college files and made available to the Coordinating Board staff upon request. A sample format for recording advisory committee meeting minutes may be found at the end of this chapter.

3. Identification of Program Competencies

A credit program must consist of a curriculum that integrates necessary academic and workforce skills as identified in the professional literature, by program experts, by business and industry advisory committees, in recognized skill standards, and by other related professional organizations. Development of a competency-based curriculum requires identification of subject area-specific, general academic, and workforce skills.

A continuing education program consists of workforce skills identified in the same manner as those in credit programs. While continuing education programs do not contain academic courses, incorporation of appropriate academic skills is encouraged.

General academic and workforce skills necessary to attain entry-level employment for American workers are the topic of a 1990 report by the Secretary of Labor’s Commission on Achieving Necessary Skills (SCANS). The commission conducted extensive research and interviews with business owners, public employers, union leaders, supervisors, and laborers in a wide variety of work settings. In 1991, the Commission reported *What Work Requires of Schools* and noted that "good jobs will increasingly depend on people who can put knowledge to work." Additionally, they estimated that less than half of the students currently exiting high school possess the ability to find and keep good

jobs. From its research, the Commission determined that "workplace know-how" consists of two elements: foundation skills and workplace competencies (See "Chart of SCANS Skills" and a sample "SCANS Occupational Assessment" model at end of this chapter). Additional information may be found on the web at http://wdr.doleta.gov/SCANS.

Institutions must demonstrate that each award, whether for credit or continuing education, addresses SCANS. Evidence of this may include a **Program Competency Profile** and a **SCANS matrix**, i.e., a matrix of the skills and knowledge competencies to be mastered by the student upon completion of the award, with a crosswalk from the competencies to the academic and/or workforce courses where the competencies will be achieved. (See samples of a "Program Competency Profile" and "SCANS Matrix Model" at the end of the chapter.)

4. Selection of Program Courses

To select program courses, faculty and administrators should refer to the *WECM* and the *ACGM*. These manuals describe established courses and guidelines for the creation of Special Topics, Local Need, or Academic Unique Need courses. See Chapter Four for *WECM* Guidelines and the Community and Technical Colleges Division website http://www.thecb.state.tx.us/CTC/ for the *ACGM*.

Courses may be delivered by different types of instruction generally consisting of lectures and/or laboratories or external learning courses.

a. Definition of Types of Instruction

Lecture: Time used to present new material with additional cognitive and/or affective learning outcomes is classified as *lecture*.

Laboratory: Time used by college personnel to provide direct supervision of skill development, application, and practice of knowledge is classified as *laboratory*.

External learning experience: Time used to present or apply knowledge in a workplace setting is classified as *external learning experience*. The integration of knowledge gained through the external experience with previously learned concepts or practices, regardless of setting, time, or evaluation, is included in the instructional design of the external learning experience and would be classified as *external hours*. Advanced practice in a lab setting prior to performing an advanced or high-risk procedure may be included in this category. External hours may also include discussion of cases. For definitions of specific types of external learning experiences, see the section on "External Learning Experiences" in this chapter.

b. Assignment of Semester Credit Hours and Continuing Education Units

For semester credit hour (SCH) and continuing education unit (CEU) program formats, the educational institution must assign consistent and appropriate

ratios of contact hours to SCH or CEU for each course in the program according to the ratios and parameters established by Coordinating Board guidelines. **For suggested combinations of lecture and laboratory experiences, see Table 4.2, "Credit and Contact Hour Combinations for Existing *WECM* and Local Need Courses" in Chapter Four**.

(1) For lecture/classroom instruction per 16-week semester, a ratio of one SCH to one contact hour (1:1) must be used. If the instruction is compressed into less than a 16-week semester, the course must still require the same number of contact hours as it would in a long semester.

Example:

Eight-week summer course,

8 lecture hours per week = 64 total contact hours

64 total contact hours/16 weeks is equivalent to 4 hours per week for 16 weeks

Therefore, the course is assigned 4 SCH.

(2) For on-campus laboratory instruction per 16-week semester, a ratio of one SCH to two to four laboratory contact hours (1:2, 3, or 4) must be used. Therefore, one SCH can be earned for two, three, or four contact hours per week of laboratory instruction.

Example of a four SCH course with lecture and laboratory:

3 lecture contact hours/week	= 3 SCH
3 laboratory contact hours/week	= 1 SCH
total for the course	= 4 SCH

(3) For external learning experience ratios, see Tables 3-3 and 3-4 in this chapter.

(4) For continuing education units, institutions must use a ratio of 1 CEU to 10 contact hours. Calculation of CEU: When calculating the number of CEU for a course, the number of contact minutes should be totaled and divided by 60 to arrive at the number of contact hours. Non-instructional time such as breaks is not included. Total contact hours are then divided by 10 to determine the number of CEU. CEU can be expressed in tenths; that is, 17 contact hours equate to 1.7 CEU. When the fractional part of a contact hour is at least 50 minutes, the fractional portion may be counted as a whole hour. Calculations of contact hours involved in a workforce continuing education experience may include the following elements:

(a) In-class time with direct participation between the learner and instructor;

(b) Field activities, lab assignments, and projects with an instructor present;
(c) Activities in which there is no instructor present such as supervised independent study, computer-assisted instruction, external learning experiences or project-based assignments (after field-testing has shown the average amount of time required to complete the activity).

Examples of activities that are not included when calculating contact hours include time for study, assigned reading, meeting time devoted to business or organizational activities, and time allocated to breaks or refreshments (unless a presentation is made during refreshments).

c. Choice of Prerequisites

(1) All college-level, non-developmental courses which are required course prerequisites and/or requirements for entry into a degree or certificate must be included in the total hours for the award and must be clearly identified in the proposed curriculum plan. Developmental course hours must not be included in the total credit hours for the award.

(2) Course prerequisites to program admission are acceptable as long as the degree can be completed within two and one-half years, including the prerequisites.

(3) The following are examples of prerequisites which may be chosen by colleges and which must be included in a curriculum plan:

(a) *WECM* Course:
Machine Drawing -- This is a course in precision drawing of machine parts stressing correct procedures in making detail and assembly drawings. Prerequisite: Beginning Technical Drafting.

(b) *ACGM* Course:
Anatomy and Physiology I -- This course examines cell structure and function; tissues; and the skeletal, muscular, and nervous systems. Emphasis is on structure, function, and the interrelationships of the human systems. Prerequisite: General Biology

(4) When there are alternative means to satisfy a course prerequisite, the prerequisite does not need to be included in a curriculum plan. However, if high school courses are used as prerequisites, the courses must be those taken by most or all high school students. Some examples of alternative means:

Introductory Statistics -- This course is a study of collection and tabulation of data, bar charts, graphs, sampling, measures of central tendency and variability, correlation, index numbers, statistical distributions, probability, and application to various fields. Prerequisite: Two years of high school algebra or demonstrated competence as approved by the instructor. (Note: High school algebra can be reasonably expected of high school graduates.)

Beginning Word Processing -- Development of applications and procedures for operating a word processing system. Provides hands-on training, self-paced instruction on basic document creation, editing and formatting. Prerequisite: Typing skills of 30 words per minute, approval of instructor, or continuing education course in keyboarding.

d. Course Sequencing

(1) All curricula submitted for approval must demonstrate appropriate course sequencing to promote student attainment of skills and competencies. (For example, prerequisite courses must not be in the same semester as the courses for which they are the prerequisites unless the courses are compressed into less than a semester without an overlap in the sequenced courses.)

(2) In designing a course sequence, institutions must ensure that credit curricula demonstrate integration of academic and technical competencies or courses.

e. Compressed Semesters

Semesters compressed into fewer than 16 weeks must not award more than one SCH per week of instruction. For more information about courses in a shortened format, refer to Coordinating Board rules, Chapter Four, Subchapter A, 4.6(b)

f. Developmental Education Courses

For students with academic skill deficiencies, developmental education courses should be made available, as appropriate, to be taken prior to or in conjunction with curriculum requirements in workforce education programs. These courses may be used as described in the *ACGM* or they may be adapted for specific needs of workforce education-e.g., Technical Math for Electronics Technicians. If the content of a technical course is developmental (below college level), it must receive a developmental approval number and must not be counted toward credit for an award. Developmental approval numbers are available in study skills, English for speakers of other languages, writing, reading, and mathematics. [Reminder: Developmental courses for community and technical college students will only be funded by the state for a total of 27 semester credit hours within a college or district. This restriction includes course work taken during and since June 1996.]

5. Recruitment, Retention, and Program Completion by Students

Each program should identify factors that will facilitate student progress (e.g., assessment, remediation, counseling, orientation, child care, financial aid, transportation, etc.) and specific steps to help the student achieve success in the program. Maintenance of Student Success Plans for each program is optional, but strongly encouraged. However, TSI guidelines must be followed.

a. Assessment and Remediation of Students

All students enrolled in associate degree programs and Level Two certificate programs must meet requirements of the Texas Success Initiative (TSI), including assessment prior to enrollment in any college-level course work and any indicated developmental education or other strategy for achieving college readiness. (For more information about TSI requirements, please refer to Chapter 4, Subchapter C of the Coordinating Board rules). Although TSI requirements are waived for students enrolled in Level One certificate programs, colleges should also provide some form of assessment and developmental education for entering students in TSI-waived certificate programs.

It is strongly urged that colleges use one of the Coordinating Board-approved assessments or one of the nationally normed tests specifically created for workforce education students (e.g., Work Keys) to assess entering students in TSI-waived certificate programs. Further, it is strongly urged that workforce education faculty collaborate with academic and developmental education faculty to:

(1) determine local, appropriate cut scores on the assessment instrument to measure the entry and exit levels of basic skills competencies; and

(2) create sections of course-based or non-course-based developmental reading, writing, or math as appropriate to help students learn basic skills in work-based applications and contexts.

b. Credit Program Graduate Reporting

Graduates of programs approved by the Coordinating Board must be reported on the CBM-009 each fall semester following the close of the fiscal year. All chief instructional officers and workforce education administrators should consult with their reporting officials prior to submission of this report to ensure the accuracy of reported information. Compliance with guidelines includes the following (See Chapter Eight, Evaluation of Institutional Effectiveness for details):

(1) **Completion rate:** There must be a minimum of 15 graduates per program over a three-year period.

(2) **Placement rate:** A minimum of 90 percent of the graduates must be placed in jobs, enlisted in the military, or pursuing additional education within one year of graduation.

(3) The **Graduate Guarantee** shall be used for accountability purposes. The guarantee shall ensure the graduate's employer that the graduate has met program competencies and shall offer up to nine tuition-free hours of education for a program graduate judged by the employer to be unable to perform on the job the competencies as specified in the college program.

c. Continuing Education Reporting/Record Keeping

(1) All courses currently approved for workforce continuing education contact-hour reporting, regardless of length, will be reported on the **CBM-00C** (Quarterly Class Report) as outlined in the Reporting and Procedures Manual for Public Community and Technical Colleges. This includes all approved Local Need workforce continuing education courses and both regular and Special Topics courses found in the *WECM*.

(2) Student level data for workforce continuing education courses will be reported on the revised **CBM-OOA** (Students in Non-Semester Length Courses Report). To complete this report, follow the instructions provided by the Coordinating Board's Educational Data Center.

(3) In all cases, no more than the approved number of contact hours or no more than the actual number of contact hours taught per course (whichever is less) may be reported and claimed for state funding.

(4) If a workforce continuing education course is offered cooperatively by two or more institutions; only the institution of record, based on student registration, may claim state funding.

(5) Transcripting of CEU: An institution must maintain and issue upon request a record of each individual's participation in workforce continuing education activities for which CEU are awarded. Only those who successfully meet the established requirements for an activity are awarded CEU. A cumulative record or transcript represents an official verification of a learner's CEU participation. The institution should maintain records of participation for a period of at least seven years from the date of award. Policies regarding the retention and release of such records are established by the institution in keeping with the institution's policies for other types of student educational records. Policies must also adhere to requirements published in the following documents:

(a) *The Continuing Education Unit: Guidelines* (1994) of the Commission on Colleges, Southern Association of Colleges and Schools, and

(b) *Criteria and Guidelines for Quality Continuing Education and Training Programs*, and *The CEU and Other Measurement Units*, by the International Association for Continuing Education and Training (IACET). The following specified items of information shall be included on all CEU records and transcripts:

- Name and address of the institution.
- Name and social security number of the individual participant.
- Title of the course, program, or activity.
- Completion date.

- Number of CEU awarded.
- Report of assessment results or other requirements for satisfactory completion.

(c) For Transcripting/ Reporting:

- The *WECM* Rubric and Course Number will be utilized on all official institutional transcripts and reports.
- The institution is free to transcript the local title of the course.

6. Establishment of Program Linkages

Programs should demonstrate flexibility and opportunity for students. They should be designed to permit maximum access for students by establishing linkages with other programs in public secondary schools and/or institutions of higher education within the higher education region and/or service area.

Linkages may be demonstrated by various articulation agreements that provide for student transfer, inverted degree plans, advanced placement opportunities, 1+1 programs, and Tech-Prep programs.

7. Verification of Workplace Competencies

To verify entry-level workplace competencies, the college must provide *at least one* of the following for each approved award: a) capstone experience, b) eligibility for a credentialing exam, and/or c) an external learning experience.

a. Capstone Experience

The capstone is a learning experience resulting in a consolidation of a student's educational experience and certifies mastery of entry-level workplace competencies. The capstone experience must occur during the last semester of the student's educational program. Methods of providing a capstone experience include a:

(1) final external learning experience that allows a student to apply broad knowledge of the profession;

(2) comprehensive, discipline-specific examination prepared by the faculty of the workforce education program and administered at the conclusion of the program;

(3) course involving simulation of the workplace, case studies, portfolios, and employment scenarios; and/or

(4) discipline-specific special project, involving the integration of various teams of students performing activities to simulate the situations which may occur in the workplace.

b. Credentialing Exams

Credentialing exams are licensure, certification, or registration exams provided by state or national agencies or by professional organizations.

c. External Learning Experiences

An external learning experience is a competency-based learning experience, paid or unpaid, that enhances lecture and laboratory instruction and is provided at work sites appropriate to the discipline. The inclusion of an external learning experience in both certificate and applied associate degree plans is strongly recommended. The external learning experience allows the student to have practical, hands-on training and to apply learned concepts and theories in a workplace setting. There are five types of external learning experiences: clinical experiences, internships, practica, co-operative education, and apprenticeships.

Clinical and internship experiences provide workplace settings in which students learn and apply program theory and management of the work flow. Clinical experiences must take place in a health care setting and students must not be paid for the learning experiences. Internship experiences take place in any setting outside of health care and students may or may not be paid for the learning experiences. (Please refer to Table 3-3, Clinical Experience and Internship Courses in this chapter.)

Practica and cooperative education provide workplace settings in which students gain practical experience in a discipline, enhance skills, and integrate knowledge. (Please refer to Table 3-4, Practicum and Cooperative Education Courses, to determine which type of external learning experience is most appropriate.)

To determine which external learning experience is appropriate, colleges should review the criteria in Tables 3-3 and 3-4. Clinical experiences and internships are defined as closely supervised experiences with instruction in theory provided concurrently. Practica and cooperative education courses are less closely supervised, apply previously learned theory, and are suitable for the student who can work more independently and is either working in the discipline (cooperative education) or who is almost ready for career entry (practicum).

Apprenticeships provide workplace settings that are registered with the Bureau of Apprenticeship and Training (BAT) of the U.S. Department of Labor. See details later in this chapter.

1. General Information Regarding Clinical Experiences, Internships, Practica, and Cooperative Education

(a) External learning experiences must ultimately be under the control of the educational institution, although individuals in the sponsoring workplace may be responsible for the daily supervision of the student or for the

lecture component of cooperative education.

(b) External learning experiences must be governed by a written, signed agreement between the higher education institution and the organization providing the experience. The higher education institution must maintain copies of such agreements and have them available for review by the Coordinating Board staff. (A sample affiliation agreement is available upon request from the Community and Technical Colleges Division of the Coordinating Board.)

(c) Each institution must assure that the external learning experience is consistent with industry standards, supports specific written objectives outlined by the educational institution, and emphasizes current practices in the field of specialization.

(d) Prior to the beginning of the external experience, the institution must provide both the student and the external site with written documentation of the objectives, instructional strategies, and evaluation mechanisms of the external learning course.

(e) The institution must approve and evaluate all training locations and must evaluate all faculty members who supervise students. The on-site supervisor of each external experience should have appropriate qualifications in the applicable discipline. Written evaluation records must be maintained by the educational institution.

(f) A written External Learning Experience Evaluation Form, based on the student learning plan and describing student learning outcomes, must be developed by the instructor in conjunction with the external learning supervisor and provided to the supervisor at the external site. This form will allow the supervisor and the instructor to monitor student progress and learning activities accurately. The profile may be in the form of a matrix or checklist (see sample at end of the chapter) and maintained at the educational institution.

(g) Prior to the external experience, each student must receive a statement of the expectations of the external site.

(h) A student must be working toward an AAS or certificate in the specific technical education program to enroll in a course that provides external learning experiences except for those students in career exploration courses. (Career exploration courses must be for credit, not for continuing education.) Each student must be in contact with a designated instructor (college faculty or designated employee of external site) while at the work site.

(i) External learning experiences may be paid or unpaid and full or part-time depending upon the type of experience and credentialing requirements. Employment obtained for the purpose of wage earning only must not be considered as an external learning experience in the program.

(j) Institutions are encouraged to provide access to liability insurance for their students who are enrolled in the external learning experiences.

(k) For income tax purposes, to differentiate stipends from wages, colleges, businesses, and industries participating in external learning experiences are encouraged to refer to appropriate labor laws for clarification of employment versus non-employment relationships. The following six criteria should be met to indicate a non-employment relationship:

- the training, even though it includes actual operation of the facilities of the employer, must be similar to that which would be given in a workforce education program;
- the training must be for the benefit of the trainees or students;
- the trainees must not displace regular employees but rather work under their close supervision;
- the employer that provides the training must derive no immediate advantage from the activities of the trainees, and on occasion the employer's operations may actually be impeded;
- the trainees or students should understand that they are not necessarily entitled to a job at the conclusion of the training period; and
- the employer and the trainees understand that the trainees or students are not entitled to wages for the time spent in training.

(l) The maximum number of external contact hours in an AAS program must not exceed 1,008 hours unless the program is specifically exempt. Exemption may be granted to health professions programs based on the standard of practice for the specific discipline. To apply for an exemption, a professional organization must submit to the Coordinating Board a request and a rationale for such exemption. If a waiver is granted, it will apply to all programs in that discipline.

After reviewing state and national standards of practice for the following disciplines, external hour caps for the following disciplines have been established:

Discipline Name	**CIP Code**	**External Contact Hour Cap**
Respiratory Care Therapy	51.0908	2000
Radiologic Technology/Radiographer	51.0911	2000
Nuclear Medical Technology	51.0905	2000

Diagnostic Medical Sonography	51.0910	2000
Radiation Therapy	51.0907	1500
Echocardiography	51.0901	1500
Invasive Cardiography	51.0901	1500
	All other CIP codes	1008

(m) External learning experiences must be properly sequenced with other courses in the program. To ensure that the student has developed a minimum level of technical competency prior to entering the work site, external courses must have a lecture and/or laboratory prerequisite or co-requisite.

(n) In clinical, internship, and practicum experiences, formally scheduled discussion of the external experience with students is considered part of the external experience, not a lecture, for credit hour assignment.

(o) External learning experiences in continuing education courses must be approved in advance and are available only on a limited basis. External learning experiences may be approved for continuing education courses as follows:

- Up to ten contact hours in a topic may be part of a lecture/laboratory course.
- More than ten contact hours in a topic must be contained in a free-standing course separate from any lecture or laboratory course. Refer to the *WECM* inventory for currently approved courses. Any external learning courses not already listed in the *WECM* must be submitted as Local Need courses and must be approved in advance of instruction to receive funding.

(p) The following definitions are used in Tables 3-3 and 3-4:

- Clinical preceptor: a work-site supervisor who oversees the daily, hands-on experiences of a health professions student in the work place.
- Close supervision: to remain within a short distance in time or space; very attentive; constant oversight, guidance, and review of the hands-on experiences of a health professions student; daily organization of the student's activities.
- Direct supervision: daily oversight, guidance, and review of the hands-on experiences of workforce education students; daily organization of the student's activities.

- Indirect supervision: general oversight and guidance of the hands-on experiences of workforce education students; periodic review of the student's progress; overall organization of the student's activities.

Table 3-3. Clinical Experience and Internship Courses

CRITERIA	CLINICAL EXPERIENCE	INTERNSHIP
A. Instruction		
1. Level of instruction	basic, intermediate, or advanced	basic, intermediate, or advanced
2. Type of learning	required or elective	required or elective
3. Student outcomes	synthesize new knowledge; and/or apply previous knowledge; and/or learn to manage the work flow	synthesize new knowledge; and/or apply previous knowledge; and/or learn to manage the work flow
4. Method of instruction	practical experience related to theory simultaneously	practical experience related to theory simultaneously
5. Type of supervision	direct and/or close by faculty or clinical preceptor	direct by external site supervisor
6. Lecture component	prerequisite or co-requisite course	prerequisite or co-requisite course
B. Compensation for		
1. Student	no	yes or no
2. Faculty/ supervisor/clinical preceptor	college pays its faculty; external site pays clinical preceptor or supervisor	college pays its faculty; external site pays supervisor
C. Role of college faculty	primary instructor or periodic visits	primary instructor or periodic visits
D. Credit hour: contact hour ratio	1:3, 4, 5, or 6	1:3, 4, 5, or 6
E. Site of instruction	health care setting only	any setting *except* health care

Table 3-4. Practicum and Cooperative Education Courses

CRITERIA	PRACTICUM	COOPERATIVE EDUCATION
A. Instruction		
1. Level of instruction	basic for career exploration; intermediate for any program; or advanced for health programs	intermediate or advanced
2. Type of learning	required for health programs; required or elective for non-health programs	required or elective
3. Student outcomes	gain practical experience in a discipline; enhance skills, and integrate knowledge	gain practical experience in a discipline; enhance skills, and integrate knowledge
4. Method of instruction	supervised practice	lecture with supervised practice
5. Type of supervision	direct by faculty or a clinical preceptor for health programs or indirect by external site supervisor for non-health programs	Indirect by external site supervisor
6. Lecture component	prerequisite or co-requisite course	1 hour/week required
B. Compensation for		
1. Student	yes or no	yes or no
2. Faculty /supervisor/ clinical preceptor	college pays its faculty; external site pays supervisor or clinical preceptor	college pays its faculty; external site pays supervisor
C. Role of college faculty	periodic visits	lecture and/or periodic visits to external site
D. SCH:contact hour ratio	1:7, 8, 9, or 10	1:7, 8, 9, or 10

2. Apprenticeship

(a) General Information

Apprenticeship is a structured system of job training designed to prepare individuals for occupations in skilled trades and crafts. It combines industry skill standards (on-the-job training) under the supervision of experienced journeyman-level workers with job-related classroom instruction. Most apprenticeship programs are in construction and manufacturing and include occupations such as electrician, plumber/pipefitter, carpenter, and sheet metal worker.

All apprenticeship programs must be registered in Texas with the Bureau of Apprenticeship and Training (BAT) of the U.S. Department of Labor.

Program sponsors are individual employers, associations of employers, or groups of employers in cooperation with organized labor.

(b) Program Length and Content

Most apprenticeship programs require 2,000 hours per year of on-the-job training and a minimum of 144 hours of job-related classroom instruction per year. The length of training varies by occupation and is determined by industry standards. The majority of apprenticeship programs require four or five years of training.

Apprentices are full-time, paid employees who work a regular 40-hour week and learn while they earn. Qualifications for applicants vary according to the program. However, all apprenticeship programs require applicants to meet the minimum age requirements (usually 17 or 18) and be physically able to perform the essential functions of the job. In addition, most occupations require the applicant to have a high school diploma or GED to enter training.

(c) State Funding Sources

State funds are available for job-related classroom instruction costs only, never for the on-the-job-training portion of an apprenticeship program. State funds may be accessed from either the Texas Workforce Commission (TWC) or the Texas Higher Education Coordinating Board, but not both.

Funding from TWC: Authorization for state funding of classroom costs of apprenticeship programs from the TWC is found in the Texas Education Code, Chapter 133. The TWC awards apprenticeship funds to eligible programs by a formula contact-hour rate. Local education agencies (public school districts and state postsecondary institutions) act as fiscal agents for the funds with administrative costs not exceeding 15 percent of the total contract. Funds can only be used for job-related classroom instruction costs and to help pay for part of the expenses such as instructor salaries, instructional supplies and materials. In programs receiving Chapter 133 funds, apprentices may not be charged tuition or fees by the local education agency other than an administrative fee not to exceed $5; only registered apprentices are allowed to attend classes; and apprentices must be employed in the private sector. For further information on TWC processes, please, refer to TWC's Administrator's Guide for Apprenticeship Training Programs or contact the TWC Apprenticeship Coordinator. Additional information is available on the web at http://www.twc.state.tx.us/svcs/apprentice.html.

Funding from the Coordinating Board: If an apprenticeship program wishes to use a community or technical college semester credit hour (SCH) or workforce continuing education (CEU) course or courses to apply to the 144 or more hour requirement for job-related classroom

instruction, the college may enroll regular as well as apprenticeship students in the course(s) and obtain regular contact hour funding for such courses from the Coordinating Board. These courses would be chosen from the *Workforce Education Course Manual (WECM)* as described in Chapter Four of these *Guidelines*.

(d) College Credit

The 144 or more hours of job-related classroom instruction per year could be transcribed by community or technical colleges as CEU, or the hours could be taught in SCH credit hour courses which would probably result in an award of 6-9 SCH for students per year.

Of the total hours of on-the-job training acquired through apprenticeship, a total of 1008 may be converted to SCH by the community or technical college to apply toward student completion of a certificate or associate of applied science (AAS) degree. (As noted above, on-the-job training hours do not qualify for state funding, from either TWC or the Coordinating Board.)

The college should utilize the instructions for cooperative education courses to determine what courses to transcript and the amount of credit to be awarded. The ratio of 7-10 contact hours of apprenticeship training per week for a total of 16 weeks would thus equal 1 SCH and the total of 1008 hours could result in a program maximum of 9 SCH for students.

Apprenticeship programs and community and technical colleges are encouraged to work together so that students are able to learn, earn, and acquire college credit. Colleges are also urged to explore partnership opportunities with secondary schools in creating Tech-Prep AAS programs and with universities in articulating apprenticeship AAS programs with baccalaureate degrees. (See *GIPWE* Part II for more information about apprenticeships and Tech-Prep.)

8. Guidelines for Continuing Education Unit (CEU) Courses

1. Background

The CEU Guidelines provide instructions and procedures for the correct implementation of Coordinating Board rules and regulations (Chapter 9, Subchapters A, F and G) regarding approval and funding of workforce continuing education courses taught by Texas public community and technical colleges.

Additional information in this section is drawn from the *Criteria for Accreditation* (1996) of the Commission on Colleges, Southern Association of Colleges and Schools, specifically Section 4.6 on Continuing Education, Outreach and Service Programs; *The Continuing Education Unit: Guidelines* (1994) of the Commission on Colleges, Southern Association of Colleges and Schools; and from *Criteria*

and Guidelines for Quality Continuing Education and Training Programs - The CEU and Other Measurement Units, International Association for Continuing Education and Training (IACET), 1998.

2. General Instructions for Approval and Offering of Workforce Continuing Education Courses

a. To be approved for state funding, workforce continuing education courses must be consistent with the roles and missions of community and technical colleges and must be designed to respond effectively to identified workforce needs by providing

(1) preparatory education in occupations addressed in credit workforce education programs; or

(2) preparatory education in other occupations requiring other than a baccalaureate or advanced degree for which there is a documented need within the Texas economy; or

(3) education to enhance or extend the skills of employees already working in a particular field.

b. Workforce continuing education courses with basic skills content must be designed for specific occupations and specific occupational target populations and must include appropriate occupational objectives. Courses that are solely academic or developmental in content (e.g., TSI preparation) are not eligible for state funding under this category.

c. Workforce continuing education courses submitted for Local Need approval should not duplicate existing *WECM* courses or other approved workforce continuing education courses within the institution.

d. A coherent sequence of continuing education courses which total 360 or more contact hours must be approved as a postsecondary workforce education program. No single workforce continuing education lecture or laboratory course may require more than 176 contact hours.

e. Tuition and fees for workforce continuing education courses offered for continuing education units (CEU) must be established by the institution's governing board and be uniformly and consistently assessed. The institution's board may delegate interim authority for establishment of tuition and fees; however, the institution's board must at least annually ratify or approve any changes in tuition and fees.

(1) Based on the $25 minimum tuition stated in Section 54.04 of the Texas Education Code, it is recommended that minimum tuition be $.50 per contact hour for students in workforce continuing education courses.

(2) Institutions providing (contract) courses to organizations for which credits or CEU are earned and for which tuition is charged must charge out-of-

state tuition to non resident students who are brought from out of state for such contract classes (see Coordinating Board Rules, Chapter 9, Subchapter G). Based on the $200 minimum tuition for nonresident students stated in Section 54.04 of the Texas Education Code, it is recommended that minimum tuition be $4.00 per contact hour for non resident students who are brought from outside the state for contract classes. For this purpose, a “non resident student” is one who lives and works outside the state.

(3) In general, colleges must charge for courses that award CEU in order to generate state formula funding. However, governing boards may choose to charge zero tuition in one of two special circumstances as follows:

(a) If all or a significant portion of the institution's costs for facilities, instructor salaries, equipment, and/or other expenses are covered by business, industry, or other local public or private clients, individual students may be exempt from tuition. These in-kind contributions must satisfy a definition of sufficiency as determined by the local governing board.

(b) If the workforce continuing education course is taught in federal prisons and facilities, equipment, supplies, and/or other expenses are borne by the federal government.

f. An approved workforce continuing education course may be delivered through contract instruction consistent with Coordinating Board Rules and Regulations, Chapter 9, Subchapter G.

g. An approved workforce continuing education course may be offered out-of-district/service area, subject to approval by the appropriate Higher Education Regional Council(s) as specified in Chapter 4, Subchapter E of the Coordinating Board Rules and Regulations.

9. SACS Guidelines for the Award of Continuing Education Units
(see *Criteria for Accreditation*, 1998)

a. Purposes for award of Continuing Education Units (CEU)

(1) The CEU serves as a unit of measure to recognize an individual's participation in non-credit activities that meet appropriate criteria.

(2) The CEU may serve as the accounting unit of an institution's total non-credit courses, programs, and activities.

(3) The CEU criteria provide a systematic planning model for program development and delivery, which helps to ensure quality workforce continuing education programming.

b. CEU Administrative Criteria

(1) Organization. The institution has an identifiable office or division with designated professional staff to plan and administer workforce continuing education programs. Through this office, the institution ensures that both administrative and program criteria are followed for learning experiences offering CEU.

(2) Learning Environment and Support. The institution provides a supportive and positive learning experience through appropriate educational facilities, learning materials, equipment, and support services consistent with the goals and planned learning outcomes of each learning experience.

(3) Record Keeping. Refer to Section on Continuing Education Reporting/Record Keeping, earlier in this Chapter.

c. CEU Program Criteria

(1) Needs Identification. The program or activity is planned in response to the educational needs that have been identified for a target audience.

(2) Learning Outcomes. Each program or activity has clear and consistent written statements of intended learning outcomes (e.g., behavioral or performance objectives). These outcomes represent what learners are expected to accomplish as a result of the learning activity. They represent the knowledge, skills, or attitudes required to move a target audience to another level of competencies. Program content, instructional methods, and types of learner assessment are dictated by the learning outcomes.

(3) Instruction. Qualified instructional personnel are directly involved in planning and conducting each learning experience. These personnel have competence in the subject matter, a clear understanding of intended learning outcomes, knowledge and skill in selection and use of appropriate instructional strategies, and ability to effectively communicate educational content to the target audience.

(4) Content and Methodology. The selection and use of content and instructional methodologies is consistent with the learning outcomes. Methods are selected which appeal to the diverse learning styles of each audience. Learners are actively involved, have an opportunity to process in some way what they have learned and to receive feedback.

(5) Assessment of Learning Outcomes. Program planning includes ways in which participants will demonstrate the achievement of the learning outcomes. Demonstrations may be done in different ways -- questions and answers, discussions, simulations, written or oral exercises, reports, projects, or plans. Demonstrations are observable and measurable. They create active learning, help to promote and reinforce learning, and are used throughout the program.

(6) Program Evaluation. Each program is evaluated for its quality and effectiveness. Program evaluations are the institution's main source of feedback. Evaluation may measure reactions of participants, the amount of learning, changes in behavior, or provide information about the planning, development, administration, instruction, and support services for a program.

d. Summary

The CEU should be awarded to individuals only for participation in those non-credit activities that (1) have been organized to provide well planned instruction based on learning outcomes, (2) require some demonstration of achieved learning outcomes, and (3) meet specific criteria outlined in section c (CEU Program Criteria) of this section, above.

10. Other Requirements

Although this chapter outlines the basic requirements for a workforce education program, other requirements may also apply.

- For requirements specific to the *WECM*, see Chapter Four.
- For new program application requirements, see Chapter Five.
- For program revision requirements, see Chapter Six. For Tech-Prep implementation requirements and specific legislative documents dealing with Tech-Prep programs, see *GIPWE* Part II (published separately).
- For approval of distance education courses and awards, colleges should refer to THECB Rules and Regulations, Chapter 4, Subchapter E and other related documents available at: http://www.thecb.state.tx.us/CBRules/. These rules are designed to assure the quality of courses and programs as well as the adequacy of the technical and managerial infrastructures to support those courses and programs.

C. Examples

1. Advisory Committee Meeting Minutes

CHAIRPERSON:		
MEETING DATE:	MEETING TIME:	MEETING PLACE:
RECORDER:		PREVIOUS MEETING:

MEMBERS PRESENT: OTHERS PRESENT:

Name and Title		Name and Title		Name and Title	

Agenda Item	Action Discussion Information	Responsibility
Old Business:		
Continuing Business:		
New Business:		
Curriculum Decisions:		
Other:		

MINUTES

Key Discussion Points	Discussion
Old Business:	
Continuing Business:	
New Business:	
Curriculum Decisions:	
Other:	

CHAIRPERSON SIGNATURE:	DATE:	NEXT MEETING:

2. Chart of SCANS Skills

SCANS Skills are grouped in two areas: (1) foundation skills and (2) workplace competencies.

1. **Foundation Skills** are defined in three areas: (a) basic skills, (b) thinking skills, and (c) personal qualities.

   (a) **Basic Skills:** A worker must read, write, perform arithmetic and mathematical operations, listen, and speak effectively. These skills include:
   - Reading: locate, understand, and interpret written information in prose and in documents such as manuals, graphs, and schedules.
   - Writing: communicate thoughts, ideas, information, and messages in writing, and create documents such as letters, directions, manuals, reports, graphs, and flow charts.
   - Arithmetic and Mathematical Operations: perform basic computations and approach practical problems by choosing appropriately from a variety of mathematical techniques.
   - Listening: receive, attend to, interpret, and respond to verbal messages and other cues.
   - Speaking: organize ideas and communicate orally.

   (b) **Thinking Skills:** A worker must think creatively, make decisions, solve problems, visualize, know how to learn, and reason effectively. These skills include:
   - Creative Thinking: generate new ideas.
   - Decision Making: specify goals and constraints, generate alternatives, consider risks, and evaluate and choose the best alternative.
   - Problem Solving: recognize problems and devise and implement plan of action.
   - Visualize ("Seeing Things in the Mind's Eye"): organize and process symbols, pictures, graphs, objects, and other information.
   - Knowing How to Learn: use efficient learning techniques to acquire and apply new knowledge and skills.
   - Reasoning: discover a rule or principle underlying the relationship between two or more objects and apply it when solving a problem.

   (c) **Personal Qualities:** A worker must display responsibility, self-esteem, sociability, self-management, integrity, and honesty.
   - Responsibility: exert a high level of effort and persevere toward goal attainment.
   - Self-Esteem: believe in one's own self-worth and maintain a positive view of oneself.
   - Sociability: demonstrate understanding, friendliness, adaptability, empathy, and politeness in group settings.
   - Self-Management: assess oneself accurately, set personal goals, monitor progress, and exhibit self control.
   - Integrity and Honesty: choose ethical courses of action.

2. **Workplace Competencies** are defined in five areas: (a) resources, (b) interpersonal skills, (c) information, (d) systems, and (e) technology.

(a) **Resources:** A worker must identify, organize, plan, and allocate resources effectively.

- Time: select goal-relevant activities, rank them, allocate time, and prepare and follow schedules.
- Money: Use or prepare budgets, make forecasts, keep records, and make adjustments to meet objectives.
- Material and Facilities: Acquire, store, allocate, and use materials or space efficiently.
- Human Resources: Assess skills and distribute work accordingly, evaluate performance and provide feedback.

Examples: use computer software to plan a project; prepare a budget; conduct a cost/benefits analysis; design an RFP process; write a job description; develop a staffing plan.

(b) **Interpersonal Skills:** A worker must work with others effectively.

- Participate as Member of a Team: contribute to group effort.
- Teach Others New Skills.
- Serve Clients/Customers: work to satisfy customers' expectations.
- Exercise Leadership: communicate ideas to justify position, persuade and convince others, responsibly challenge existing procedures and policies.
- Negotiate: work toward agreements involving exchange of resources, resolve divergent interests.
- Work with Diversity: work well with men and women from diverse backgrounds.

Examples: collaborate with a group member to solve a problem; work through a group conflict situation; train a colleague; deal with a dissatisfied customer in person; select and use appropriate leadership styles; use effective delegation techniques; conduct an individual or team negotiation; demonstrate an understanding of how people from different cultural backgrounds might behave in various situations.

(c) **Information:** A worker must be able to acquire and use information.

- Acquire and Evaluate Information.
- Organize and Maintain Information.
- Interpret and Communicate Information.
- Use Computers to Process Information.

Examples: research and collect data from various sources; develop a form to collect data; develop an inventory record-keeping system; produce a report using graphics; make an oral presentation using various media; use on-line computer data bases to research a report; use a computer spreadsheet to develop a budget.

(d) **Systems:** A worker must understand complex interrelationships.

- Understand Systems: know how social, organizational, and technological systems work and operate effectively with them.
- Monitor and Correct Performance: distinguish trends, predict impacts on system operations, diagnose deviations in systems' performance and correct

malfunctions.

- Improve or Design Systems: suggest modifications to existing systems and develop new or alternative systems to improve performance.

Examples: draw and interpret an organizational chart; develop a monitoring process; choose a situation needing improvement, break it down, examine it, propose an improvement, and implement it.

(e) **Technology:** A worker must be able to work with a variety of technologies.

- Select Technology: choose procedures, tools or equipment including computers and related technologies.
- Apply Technologies to Task: understand overall intent and proper procedures for setup and operation of equipment.
- Maintain and Troubleshoot Equipment: Prevent, identify, or solve problems with equipment, including computers and other technologies.

Examples: read equipment descriptions and technical specifications to select equipment to meet needs; set up and assemble appropriate equipment from instructions; read and follow directions for troubleshooting and repairing equipment.

3. SCANS Occupational Assessment

The know-how identified by SCANS is made up of five competencies and a three-part foundation of skills and personal qualities needed for solid job performance. The rating level ranges from 1 (low) to 5 (high). Please circle your response.

COMPETENCY		RATING
Resources: Identifies, organizes, plans, and allocates resources.		
C1	Time: Selects goal-relevant activities, ranks them, allocates time, and prepares and follows schedules.	**1 2 3 4 5**
C2	Money: Uses or prepares budgets, makes forecasts, keeps records, and makes adjustments to meet objectives.	**1 2 3 4 5**
C3	Materials and Facilities: Acquires, stores, allocates, and uses materials or space efficiently.	**1 2 3 4 5**
C4	Human Resources: Assesses skills and distributes work accordingly, evaluates performance, and provides feedback.	**1 2 3 4 5**
Information: Acquires and uses information.		
C5	Acquires and evaluates information.	**1 2 3 4 5**
C6	Organizes and maintains information.	**1 2 3 4 5**
C7	Interprets and communicates information.	**1 2 3 4 5**
C8	Uses computers to process information.	**1 2 3 4 5**
Interpersonal: Works with others.		
C9	Participates as a member of a team: Contributes to group effort.	**1 2 3 4 5**
C10	Teaches others new skills.	**1 2 3 4 5**
C11	Serves Clients/Customers: Works to satisfy customer=s expectations.	**1 2 3 4 5**
C12	Exercises Leadership: Communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies.	**1 2 3 4 5**
C13	Negotiates: Works toward agreements involving exchange of resources; resolves divergent interests.	**1 2 3 4 5**
C14	Works With Diversity: Works well with men and women from diverse backgrounds.	**1 2 3 4 5**
Systems: Understands complex interrelationships.		
C15	Understands Systems: Knows how social, organizational, and technological systems work and operates effectively with them.	**1 2 3 4 5**
C16	Monitors and Corrects Performance: Distinguishes trends, predicts impacts on system operations, diagnoses system=s performance, and corrects malfunctions.	**1 2 3 4 5**
C17	Improves or Designs Systems: Suggests modifications to existing systems and develops new or alternative systems to improve performance.	**1 2 3 4 5**
Technology: Works with a variety of technologies.		
C18	Selects Technology: Chooses procedures, tools, or equipment, including computers and related technologies.	**1 2 3 4 5**
C19	Applies Technology to Task: Understands overall intent and proper procedures for setup and operation of equipment.	**1 2 3 4 5**
C20	Maintains and Troubleshoots Equipment: Prevents, identifies, or solves problems with equipment, including computers and other technologies.	**1 2 3 4 5**

FOUNDATION		RATING
Basic Skills: Reads, writes, performs arithmetic and mathematical operations, listens, and speaks.		
F1	Reading: Locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules.	**1 2 3 4 5**
F2	Writing: Communicates thoughts, ideas, information, and messages in writing; creates documents such as letters, directions, manuals, reports, graphs, and flow charts.	**1 2 3 4 5**
F3	Arithmetic: Performs basic computations; uses basic numerical concepts such as whole numbers, etc.	**1 2 3 4 5**
F4	Mathematics: Approaches practical problems by choosing appropriately from a variety of mathematical techniques.	**1 2 3 4 5**
F5	Listening: Receives, attends to, interprets, and responds to verbal messages and other cues.	**1 2 3 4 5**
F6	Speaking: Organizes ideas and communicates orally.	**1 2 3 4 5**
Thinking Skills: Thinks creatively, makes decisions, solves problems, visualizes, knows how to learn, and reasons.		
F7	Creative Thinking: Generates new ideas.	**1 2 3 4 5**
F8	Decision Making: Specifies goals and constraints, generates alternatives, considers risks, and evaluates and chooses best alternative.	**1 2 3 4 5**
F9	Problem Solving: Recognizes problems and devises and implements plan of action.	**1 2 3 4 5**
F10	Seeing Things in the Mind's Eye: Organizes and processes symbols, pictures, graphs, objects, and other information.	**1 2 3 4 5**
F11	Knowing How to Learn: Uses efficient learning techniques to acquire and apply new knowledge and skills.	**1 2 3 4 5**
F12	Reasoning: Discovers a rule or principle underlying the relationship between two or more objects and applies it when solving a problem.	**1 2 3 4 5**
Personal Qualities: Displays responsibility, self-esteem, sociability, self-management, integrity, and honesty.		
F13	Responsibility: Exerts a high level of effort and perseveres towards goal attainment.	**1 2 3 4 5**
F14	Self-Esteem: Believes in own self-worth and maintains a positive view of self.	**1 2 3 4 5**
F15	Sociability: Demonstrates understanding, friendliness, adaptability, empathy, and politeness in group settings.	**1 2 3 4 5**
F16	Self-Management: Assesses self accurately, sets personal goals, monitors progress, and exhibits self-control.	**1 2 3 4 5**
F17	Integrity/Honesty: Chooses ethical courses of action.	**1 2 3 4 5**

4. Program Competency Profile

Business Manager

COM Course Title:	Introduction to Business 131	Business Math 131	Computer Science 130	Marketing 131	Career Planning 115	Business Communications 231	Management 231	Business Law 231	Physical Education 111	Accounting 231	Marketing 231	Management 232	Cooperative Education 241	Finance 231	Management 235	Marketing 233	Cooperative Education 242
Evaluate Market	✓			✓							✓			✓	✓	✓	
Put Together a "Game Plan"				✓			✓				✓				✓	✓	
Prepare Budget to Meet Business Objectives	✓			✓						✓	✓			✓	✓	✓	
Set Short-Term Goals	✓			✓			✓				✓		✓	✓	✓	✓	✓
Set Long-Term Goals	✓			✓			✓						✓	✓	✓		✓
Evaluate Previous Year's Activities				✓							✓			✓	✓	✓	
Visit Work Station	✓						✓						✓		✓		✓
Maintain Open Door Policy							✓								✓		
Listen to Employees and Customers	✓			✓		✓	✓					✓	✓		✓		✓
Read Written Correspondence From Employees and Customers						✓	✓					✓	✓		✓		✓
Keep Confidentiality, if Asked	✓						✓					✓	✓		✓		✓
Respond to Input Appropriately							✓					✓			✓		
Share Business Objectives and Results With Employees	✓						✓					✓			✓		
Determine Employees' Needs							✓					✓			✓		
Locate Qualified Applicants					✓		✓					✓			✓		
Determine Job Requirements	✓		✓		✓		✓					✓			✓		
Develop and Maintain Adequate Application Form					✓		✓					✓			✓		
Review and Evaluate Completed Application					✓		✓					✓			✓		
Interview Qualified Applicants					✓							✓					
Perform Background Checks												✓					
Screen Applicants for Job, as Needed					✓							✓					
Select Employee												✓					
Maintain Paper Trail								✓				✓					
Reject Unselected Applicants												✓					
Determine Reason for Discharge							✓					✓					
Investigate Reason for Discharge							✓					✓					
Document Reason for Discharge							✓					✓					
Evaluate for Consistency of Discipline												✓					
Inform Employee of Action												✓					
Collect Company Property												✓					
Process Final Paperwork												✓					
Read Business-Related Materials	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓		✓
Review Statistical /Financial Report and Analyze Data	✓	✓								✓				✓	✓		
Compare and Interpret Data	✓	✓								✓				✓	✓		
Share / Report Relevant Data			✓			✓				✓				✓			
Take Required Action										✓							

4. Program Competency Profile

Business Manager

COM Course Title:	Introduction to Business 131	Business Math 131	Computer Science 130	Marketing 131	Career Planning 115	Business Communications 231	Management 231	Business Law 231	Physical Education 111	Accounting 231	Marketing 231	Management 232	Cooperative Education 241	Finance 231	Management 235	Marketing 233	Cooperative Education 242
Follow up, as Necessary (continued on next page)							✓			✓					✓		
Communicate Company Image, Policies, and Safety	✓						✓						✓		✓		✓
Outline Job Duties					✓		✓					✓	✓		✓		✓
Identify Specific Procedures per Task			✓				✓					✓	✓				✓
Teach Specific Procedures per Task			✓				✓					✓	✓		✓		✓
Observe and Verify Comprehension of Job Duties							✓					✓	✓				✓
Evaluate and Correct Employee Performance					✓		✓					✓			✓		✓
Retrain as Needed							✓					✓					✓
Assess Strengths and Weaknesses	✓						✓					✓			✓		
Identify Employees' Objectives	✓						✓					✓					
Outline Plan to Strengthen Weaknesses							✓					✓	✓		✓		✓
Reinforce Strengths	✓											✓					
Provide Experience in Various Job Strengths							✓					✓	✓				✓
Determine Mutual Objectives Within Organization					✓		✓					✓	✓		✓		✓
Provide Continuous Guidance					✓							✓					
Recognize /Reward Job Performance	✓			✓	✓		✓					✓					
Determine Basic Staff Requirements							✓					✓			✓		
Anticipate Changes in Staffing Needs	✓						✓					✓			✓		
Review Budget							✓			✓				✓	✓		
Adjust Staff Accordingly							✓										
Identify Customer	✓			✓									✓		✓		✓
Determine Customer Needs	✓		✓	✓							✓		✓		✓	✓	✓
Provide Goods and Services to Meet Needs	✓		✓	✓							✓		✓			✓	✓
Promote Goods and Services	✓			✓							✓		✓			✓	✓
Provide Customer Incentives	✓			✓							✓		✓			✓	✓
Use Follow-up Procedures	✓			✓			✓				✓					✓	
Prioritize Activities	✓						✓						✓		✓		✓
Delegate Responsibilities	✓						✓										
Direct and Follow up on Activities	✓						✓						✓				✓
Identify Problems	✓		✓				✓						✓		✓		✓
Solve Problems (People, Equipment, Business, etc.)	✓						✓					✓	✓	✓	✓		✓
Determine Specific Quality and Needs							✓						✓		✓		✓
Evaluate Costs	✓	✓							✓					✓	✓		
Justify Expenditure	✓								✓					✓	✓		
Complete Transaction	✓													✓			✓
Verify Receipt of Goods	✓													✓			✓

Dorothy McNutt. Used by Permission.

5. SCANS Matrix Model

Program: Manufacturing Engineering Technology: Machining C CIP: 48.0501								**Credential:** Certificate	
LIST OF ALL COURSES REQUIRED AND IDENTIFIED COMPETENCIES									
Competencies								**Course Number**	**Course Title**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**		
x	x	x	x	x	x	x	x	ORI 102	Introduction to College
x	x	x	x	x	x	x	x	MET 100	Machine Tool Practices I
x	x	x	x	x	x	x	x	MET 1103	Precision Tools and Measurements
x	x	x	x	x	x	x	x	MET 1603	Industrial Specifications and Safety
x	x	x	x	x	x	x	x	MTH 115	Occupational Mathematics
x	x	x	x	x	x	x	x	MET 200	Machine Tool Practices II
x	x		x		x		x	ENG 107	Oral and Written Communications
x	x	x	x	x	x	x	x	WLT 105	Survey of Welding Processes and Applications
x	x		x	x	x			PSY 112	Human Relations
x	x	x	x	x	x	x	x	MET 300	Machine Tool Practices III
x	x	x	x	x	x	x	x	MET 301	Manufacturing Processes
x	x	x	x	x	x	x	x	MET 2303	Introduction to CNC
x	x	x	x	x	x	x		MET 400	Machine Tool Practices IV
x	x	x	x	x	x	x		MET 2406	Advanced CNC
								COMPETENCY REFERENCES	
							8 B BASIC USE OF COMPUTERS		
						7 B WORKPLACE COMPETENCIES			
					6 B PERSONAL QUALITIES				
				5 B THINKING SKILLS					
			4 B SPEAKING AND LISTENING						
		3 B ARITHMETIC OR MATHEMATICS							
	2 B WRITING								
1 B READING									

Terry Sawma. Used by permission.

6. External Learning Experience Student Evaluation Form

Student Name _____
Affiliating Institution _____
Dates of External Learning Experience From: _____ To: _____
Dates Absent: _____
Number of Days Late: _____

Please circle the most representative response for each behavior demonstrated by the student.

Key:
5 Always
4 Most Always
3 Usually
2 Sometimes or Occasionally
1 Never
N/A Not Applicable or Not Observed

Affective Traits:

1.	Starts activities immediately	N/A	1	2	3	4	5
2.	Respects the meaning of privileged information	N/A	1	2	3	4	5
3.	Maintains personal appearance and hygiene as appropriate for the workplace	N/A	1	2	3	4	5
4.	Is skillful in adapting to and working with others	N/A	1	2	3	4	5
5.	Approaches assignments with confidence	N/A	1	2	3	4	5
6.	Maintains an orderly work area	N/A	1	2	3	4	5
7.	Replenishes supplies when needed	N/A	1	2	3	4	5
8.	Willingly stays to complete or correct work	N/A	1	2	3	4	5
9.	Searches for answers to questions in available time	N/A	1	2	3	4	5
10.	Maintains/prepares satisfactory records	N/A	1	2	3	4	5
11.	Follows established company procedures	N/A	1	2	3	4	5
12.	Organizes workload	N/A	1	2	3	4	5
13.	OTHER SKILLS UNIQUE TO THE OCCUPATION: _____	N/A	1	2	3	4	5

Psychomotor Skills:

1.	Routine tasks are completed within acceptable limitations	N/A	1	2	3	4	5
2.	Routine tasks are completed within acceptable time	N/A	1	2	3	4	5
3.	Sophisticated tasks are completed within acceptable limitations	N/A	1	2	3	4	5
4.	Sophisticated tasks are complete within acceptable time	N/A	1	2	3	4	5
5.	OTHER SKILLS UNIQUE TO THE OCCUPATION: _____	N/A	1	2	3	4	5

Cognitive Skills:

1.	Transfers knowledge of principles and procedures to new techniques	N/A	1	2	3	4	5
2.	Recognizes tasks that are beyond student capacity	N/A	1	2	3	4	5
3.	Applies classroom learning to workplace setting	N/A	1	2	3	4	5
4.	Interprets charts, graphs, and data correctly	N/A	1	2	3	4	5
5.	Troubleshoots equipment	N/A	1	2	3	4	5
6.	Identifies and attempts to solve discrepancies in systems, results, or information	N/A	1	2	3	4	5
7.	OTHER SKILLS UNIQUE TO THE OCCUPATION: _____	N/A	1	2	3	4	5

This student has Entry-Level Skills:

Now
After additional external learning experiences
After additional course work
After additional course work and additional external learning experiences

Please provide additional information regarding your evaluation of the student's performance in this external learning experience.
Comments:

I have seen this evaluation and discussed it with my workplace supervisor.

Student Signature _____ Date _____

Supervisor Signature _____ Date _____

Reviewed by College Instructor _____ Date _____

7. Transcript Form

Name of College Address	Name: Address: City & State:	SS Number: ZIP:		
Course Number	Course Title and Description	Date Completed	CEU Awarded	Assessment Results
One workforce continuing education unit is defined as 10 contact hours of participation in an organized workforce continuing education experience under responsible sponsorship, capable direction, and qualified instruction.				
			Date	
			Director of Continuing Education	