



Massachusetts Department of  
**ELEMENTARY & SECONDARY  
EDUCATION**

# Chapter 74 Manual *for Vocational Technical Education Programs*

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## INTRODUCTION

**Disclaimer:** Sections of laws, regulations, and guidelines are reprinted and referenced in this document. They are reprinted here in order to help with their interpretation and use. The official copies of state laws, regulations, and guidelines as filed with the Secretary of State are implemented by the Department of Elementary and Secondary Education. The Department does not represent this Manual as a replacement for the official laws, regulations, and guidelines.

The law (M.G.L.c.74) and the Vocational Technical Education Regulations (603 CMR 4.00) governing vocational technical education are available on the Massachusetts Department of Elementary and Secondary Education - Career/Vocational Technical Education website at <http://www.doe.mass.edu/cte/>. These documents should be reviewed in conjunction with the review of this Manual.

This Manual was designed as a resource for school district staff in the implementation of vocational technical education programs known as Chapter 74-approved vocational technical education programs. The Manual includes the “Guidelines for Vocational Technical Education Programs and Educator Licensure” and provides interpretations and policies regarding the sections of the Vocational Technical Education Regulations (603 CMR 4.01 – 4.06) pertaining to vocational technical education programs. A Massachusetts Department of Elementary and Secondary Education – Office for Career/Vocational Technical Education staff person may be contacted for additional information. Tel. 781-338-3910 or email [careervoctech@doe.mass.edu](mailto:careervoctech@doe.mass.edu).

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**Massachusetts Vocational Technical Education Frameworks per the Massachusetts Vocational Technical Education Regulations 603 CMR 4.03 (4):**

The Massachusetts Vocational Technical Education Regulations 603 CMR 4.03 (4) require that vocational technical education programs “*be based on the applicable Vocational Technical Education Framework and the Massachusetts Curriculum Frameworks.*”

Vocational Technical Education Frameworks have been developed and are being implemented across Massachusetts. The Massachusetts Vocational Technical Education Frameworks are available on the ESE-Career/Vocational Technical Education website <http://www.doe.mass.edu/cte/frameworks/>.

**Massachusetts Certificate of Occupational Proficiency per M.G.L. c.69 s. 1D (iii) and the Massachusetts Vocational Technical Education Regulations 603 CMR 4.14:**

The Massachusetts Education Reform Act established the Certificate of Occupational Proficiency. The statute - M.G.L.c.69 s. 1D (iii) states: "*The certificate of occupational proficiency shall be awarded to students who successfully complete a comprehensive education and training program in a particular trade or professional skill area and shall reflect a determination that the recipient has demonstrated mastery of a core of skills, competencies and knowledge comparable to that possessed by students of equivalent age entering the particular trade or profession from the most educationally advanced education systems in the world. No student may receive said certificate of occupational proficiency without also having acquired a competency determination. Nothing in this chapter shall prohibit a student from beginning a program of vocational education before achieving a determination of competency. Such vocational education may begin at grade nine, ten, or eleven. No provision of law shall prohibit concurrent pursuit of a competency determination and vocational learning. There shall be no cause of action for a parent, guardian, or student who fails to obtain a competency determination, a certificate of mastery, or a certificate of occupational proficiency.*"

The Massachusetts Vocational Technical Education Regulations 603 CMR 4.14 state:

*“(1) Criteria for Candidacy for the Certificate of Occupational Proficiency  
In order to qualify as a candidate for the Certificate of Occupational Proficiency in a specific vocational technical education program, a student must possess a portfolio containing at a minimum a competency profile demonstrating the acquisition of the knowledge and skills associated with at least two years of full-time study in the program, as well as a career plan, safety credential and a resume.*

*(2) Criteria for Receiving the Certificate of Occupational Proficiency  
In order to receive the Certificate of Occupational Proficiency, a student must qualify as a candidate for the Certificate of Occupational Proficiency, have acquired a state competency determination for high school graduation, and be in good standing to graduate from the high school in which he/she is enrolled. The student must receive a passing score, as determined by the Commissioner, on the written test and the performance test for the Certificate of Occupational Proficiency.”*

Questions regarding the Massachusetts Certificate of Occupational Proficiency should be directed to the ESE-Student Assessment Services (SAS) office. Tel. 781-338-3625, Email: [mcas@doe.mass.edu](mailto:mcas@doe.mass.edu).

**Advisory Committees for Chapter 74-Approved Vocational Technical Education Programs per M.G.L. c. 74 s. 6; Massachusetts Vocational Technical Education Regulations 603 CMR 4.03 (1):**

For information, refer to the Career/Vocational Technical Education Advisory Committee Guide <http://www.doe.mass.edu/cte/resources/acguide.doc>. The Guide provides useful information pertaining to the formation and effective use of advisory committees for the purpose of developing and improving vocational technical education programs.

April 26, 2005 Note: The State Director of Career/Vocational Technical Education determined that school districts may meet the organized labor representation on their school's Program Advisory Committees by including organized labor representation on the General Advisory Committee in lieu of each Program Advisory Committee. Note: The State Director recommends that Program Advisory Committee members be given term limits. Terms should be structured so that they do not all expire in the same year. In addition, it is recommended that non-participating members be discharged.

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**Admission Policies for Chapter 74-Approved Vocational Technical Education Programs per the Massachusetts Vocational Technical Education Regulations 603 CMR 4.03 (6):**

For information, refer to the Chapter 74 Manual for Vocational Technical Education Admission Policies [http://www.doe.mass.edu/cte/admissions/policies\\_manual.doc](http://www.doe.mass.edu/cte/admissions/policies_manual.doc). The Manual contains the "Guidelines for Admission Policies of Vocational Technical Secondary Schools and Comprehensive Secondary Schools." Sample admission policies are included in the Manual.

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**Nonresident Tuition for Chapter 74-Approved Vocational Technical Education Programs per M.G.L. c. 74 s. 7 & 7C; Massachusetts Vocational Technical Education Regulations 603 CMR 4.03 (6)(b):**

The policy and procedures for implementing the Chapter 74 vocational technical education nonresident tuition option are given in the "Guidelines for the Vocational Technical Education Program Nonresident Student Tuition Process Pursuant to M.G.L.c. 74"

[http://www.doe.mass.edu/cte/admissions/nonres\\_guidelines.html](http://www.doe.mass.edu/cte/admissions/nonres_guidelines.html). Nonresident tuition rates are at [http://www.doe.mass.edu/cte/admissions/fy10\\_trates.html](http://www.doe.mass.edu/cte/admissions/fy10_trates.html) and the Nonresident Tuition Application is at [http://www.doe.mass.edu/cte/admissions/nonres\\_app.doc](http://www.doe.mass.edu/cte/admissions/nonres_app.doc).

**National Occupational Program Approval Standards for Chapter 74-Approved Vocational Technical Education Programs per the Massachusetts Vocational Technical Education Regulations 603 CMR 4.03 (4):**

**National Occupational Program Approval Standards** are those standards established by an organization that is nationally recognized by a specific industry or industry cluster, and that is involved in the accreditation, approval, and/or certification of vocational technical education programs.

The Massachusetts Vocational Technical Education Regulations require that Chapter 74-approved vocational technical education programs meet National Occupational Program Approval Standards as set forth in "Guidelines for Vocational Technical Education Programs and Educator Licensure." The relevant section of the Guidelines is reprinted below (in italics):

*Each school with M.G.L.c.74 603 CMR 4.00 (Chapter 74 – approved CTE programs) must meet National Program Approval Standards approval for a minimum of one program per three-year period. The first three-year period will be September 1, 2003 - September 1, 2006. National Program Standards approval received prior to September*

*1, 2003 cannot be counted toward meeting this requirement.*

National Occupational Program Approval Standards by program are listed below.

### **Automotive Collision Repair and Refinishing**

National Automotive Technology Education Foundation (NATEF), 101 Blue Seal Drive, Suite 101, Leesburg, Virginia 20175, Tel. 703-669-6650, Web: <http://www.natef.org>  
Approval in a minimum of three (3) of the following five (5) areas is required: 1.Structural Analysis & Damage Repair, 2.Nonstructural Analysis & Damage Repair, 3.Mechanical & Electrical Components, 4.Plastics, Adhesives, 5.Painting & Refinishing.

### **Automotive Technology**

National Automotive Technology Education Foundation (NATEF), 101 Blue Seal Drive, Suite 101, Leesburg, Virginia 20175, Tel. 703-669-6650, Web: <http://www.natef.org>  
Approval in a minimum of the following four (4) areas is required: 1.Brakes, 2. Electrical/Electronic Systems, 3. Engine Performance, 4. Suspension & Steering.

### **Carpentry**

National Center for Construction Education & Research (NCCER), 3600 NW 43rd Street, Bldg. G, Gainesville, FL 32606, Tel. 888-622-3720, Web: [www.nccer.org](http://www.nccer.org)

### **Culinary Arts**

American Culinary Federation (ACF), 180 Center Place Way, St. Augustine, FL 32095, Tel. 800-624-9458, Web: <http://www.acfchefs.org//AM/Template.cfm?Section=Home6>

### **Diesel Technology**

National Automotive Technology Education Foundation (NATEF), 101 Blue Seal Drive, Suite 101, Leesburg, Virginia 20175, Tel. 703-669-6650, Web: <http://www.natef.org> For Diesel Technology programs, approval is a minimum of one (1) area is required.

### **Drafting**

American Design & Drafting Association (ADDA), 105 East Main Street, Newbern, TN 38059, Tel. 731-627-0802, Web: <http://www.ADDA.org>

### **Graphic Communications**

Printing Industries of America (PIA), 200 Deer Run Road, Sewickley, PA 15143-2600, Tel. 800-910-4283, Web: <http://www.printing.org/>

Graphic Arts Education and Research Foundation (GAERF), 1899 Preston White Drive, Reston, Virginia 20191, Tel. 866-381-9839, Web: <http://www.gaerf.org/about/gaerf.html>

### **Heating-Air Conditioning-Ventilation-Refrigeration**

Partnership for Air Conditioning, Heating, Refrigeration Accreditation (PAHRA), 4100 North Fairfax Drive, Suite 425, Arlington, VA 22203, Tel. 703-524-8800, Web: <http://www.pahrahvacr.org/contact.php>

HVAC Excellence- Home Office: 1701 Pennsylvania Ave NW, Washington, DC 20006  
Executive Offices and Grading Center: P.O. Box 491, Mount Prospect, IL 60056,  
Tel: 800-394-5268, Web: <http://www.hvacexcellence.org/Default.aspx>

### **Machine Tool Technology**

National Institute for Metalworking Skills, Inc. (NIMS), 10565 Fairfax Boulevard, Suite 203, Fairfax, VA 22030, Tel. 703-352-4971, Web: <https://www.nims-skills.org/web/nims/home>

### **Metal Fabrication & Joining Technologies**

National Institute for Metalworking Skills. (NIMS) 10565 Fairfax Blvd., Fairfax, VA 22030, Tel. 703-352-4971, Web: <https://www.nims-skills.org/web/nims/home>

Welding Program Component (will count as a program for the purpose of meeting the requirements)

American Welding Society (AWS), 550 NW LeJeune Rd., Miami, FL 33126, Tel. 800-443-9353, Web: <http://www.aws.org>

### **Power Equipment Technology**

Equipment and Training Council (EETC), PO Box 1078, N59 W39556 Laketon Avenue Oconomowoc, WI 53066, Tel. 262-567-9100, Web: <http://www.eetc.org/>

### **State Board/Agency Accreditation Association Approvals per the Massachusetts Vocational Technical Education Regulations 603 CMR 4.03 (4) (a) 11:**

The Vocational Technical Education Regulations require that vocational technical education programs meet state board/agency approvals and accreditation association approvals as set forth in "Guidelines for Vocational Technical Education Programs and Educator Licensure." The list of programs and the required approvals is given below:

Cosmetology - MA Board of Registration of Cosmetologists

Electricity - MA Board of State Examiners of Electricians

Health Assisting (Certified Nursing Assistant Component) - MA Department of Public Health (Nurse Aide Registry)

Plumbing - MA Board of State Examiners of Plumbers & Gas Fitters

Practical Nursing - MA Board of Registration in Nursing

### **Process for Obtaining Chapter 74-Approval of a New Program:**

The application for Chapter 74 approval of a new vocational technical education program with complete instructions and resources is available in the "Application Package for Chapter 74 Vocational Technical Education New Program Approval"

[http://www.doe.mass.edu/cte/programs/approval\\_app.doc](http://www.doe.mass.edu/cte/programs/approval_app.doc). The approval process for a new Chapter 74-approved vocational technical education program must not exceed two years from the date of application. Applications not approved within two years will be returned. Speak with a staff member in the Office for Career/Vocational Technical Education very early in the planning process for technical assistance.

### **Substantial Changes in Chapter 74-Approved Vocational Technical Education Programs per the Massachusetts Vocational Technical Education Regulations 603 CMR 4.04 (4):**

The Massachusetts Vocational Technical Education Regulations 603 CMR 4.04 (4) state "*Substantial changes in any approved program shall be approved in writing by the Commissioner\* prior to implementation.*"

The Massachusetts Vocational Technical Education Regulations define the Commissioner as the “Massachusetts Commissioner of Education or his/her designee.” The Commissioner’s designee is the State Director of Career/Vocational Technical Education.

The State Director of Career/Vocational Technical Education understands that schools must make program curricula changes in approved programs in order to keep them current. It is not the intent to penalize programs (by virtue of state aid) for positive change. Therefore, the following guidelines are in effect.

A substantial curricula change in an approved program is when more than twenty-five percent of the total skills to be taught are modified. A substantial curricula change of more than twenty-five percent of the skills to be taught in an approved program would require the written approval of the State Director of Career/Vocational Technical Education. A substantial curricula change of more than fifty-percent of the skills to be taught in an approved program would require the program to be approved as a new program by the State Director of Career/Vocational Technical Education. A substantial change in an approved program that involves the other seven approval criteria, such as the admission policy, facilities, and cooperative education must receive the approval of the State Director of Career/Vocational Technical Education prior to implementation.

When the school staff determines that a substantial change is foreseen, it shall notify the Office for Career/Vocational Technical Education as prescribed in 603 CMR 4.04. School staff will be advised as to whether an application for a new program is required.

Only the State Director of Career/Vocational Technical Education shall approve, disapprove substantial changes and new programs.

**Closure of Chapter 74-Approved Vocational Technical Education Programs per the Massachusetts Vocational Technical Education Regulations 603 CMR 4.04 (5):**

The Massachusetts Vocational Technical Education Regulations 603 CMR 4.04 (5) state “A school district that seeks to discontinue an approved vocational technical education program shall submit a closure plan to the Department that includes a timetable for program closure, information outreach to affected students and their parents/guardians, and options for students to complete the vocational technical education program.”

It is very important that districts seeking to close a program consult with their liaison in the Office for Career/Vocational Technical Education upon the conception of the idea to close a program. The liaison will advise the district to submit a detailed closure plan as described above. The State Director of Career/Vocational Education will respond to the closure plan.

**Monitoring Chapter 74-Approved Vocational Technical Education Programs:**

The ESE-Office for Career/Vocational Technical Education conducts onsite monitoring of Chapter 74-approved vocational technical education programs to determine the program’s level of compliance with M.G.L.c. 74 and the Massachusetts Vocational Technical Education Regulations 603 CMR 4.00, as well as the federal Guidelines for Eliminating Discrimination and Denial of Services on the Basis of Race, Color National Origin, Sex and Handicap in Vocational Education Programs - 34 CFR, Part 100, Appendix B. Technical assistance is also provided during these reviews. Onsite monitoring is scheduled as part of ESE’s Coordinated Program Review (CPR) system where several federal and state programs including those under Chapter

74 and the Carl D. Perkins Career and Technical Education Improvement Act of 2006 P.L. 109-270 (Perkins IV) are monitored in the school district at the same time. In certain cases, the ESE-Office for Career/Vocational Technical Education will monitor Chapter 74-approved vocational technical education programs at additional times as well.

**Cooperative Education in Chapter 74-Approved Vocational Technical Education Programs per M.G.L.c.74 s. 1; Massachusetts Vocational Technical Education Regulations 603 CMR 4.03 (7):**

For information, refer to the Chapter 74 Manual for Vocational Technical Cooperative Education Programs [http://www.doe.mass.edu/cte/programs/coop\\_ed/manual.doc](http://www.doe.mass.edu/cte/programs/coop_ed/manual.doc).

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**Related Instruction in Chapter 74-Approved Vocational Technical Education Programs per the Massachusetts Vocational Technical Education Regulations 603 CMR 4.03 (4):**

Related instruction is that body of integrated academic and technical conceptual and theoretical knowledge purposely organized, sequentially presented, and linked to the program in which the students are enrolled. Related instruction introduces, explains, and amplifies the concepts, history, theory, business practices, ethics, and legal foundations of the technical knowledge and skills to be acquired by students in a vocational technical education shop. By its very nature, the instruction must be integrated with the Massachusetts Curriculum Frameworks and the Massachusetts Vocational Technical Education Frameworks. Related instruction that shall be primarily taught by licensed vocational technical teachers in the specific program area. Academic teachers may assist in the delivery of related instruction components when their particular expertise will enhance the instruction.

Related instruction should be scheduled on a program-by-program basis. It may very well be that for certain programs it is best to schedule related instruction so that it is fully integrated with shop instruction. In other programs, related instruction may be best scheduled during a separate period.

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**Chapter 74-Approved Vocational Technical Education Exploratory Programs per Massachusetts Vocational Technical Education Regulations 603 CMR 4.03 (4) (e):**

The Massachusetts Vocational Technical Education Regulations 603 CMR 4.03 (4)(e) state in part: *"School districts that offer five or more approved vocational technical education programs shall provide a minimum of a one half year exploratory program approved by the Department for all incoming ninth graders."*

Students are to be made aware of the opportunities in a variety of vocational technical education programs including those that would prepare them for careers that are nontraditional for their gender. Beginning students should be assessed at the commencement of their vocational technical education for academic knowledge and skills and career interests. At the same time, they should be acquainted with as many of the school's vocational technical education programs i.e., shops (majors) as appropriate. The time spent in each program should be sufficient to allow the student to be adequately assessed. In addition, it should be ample to allow the student to become aware of the program requirements and the opportunities for employment and further education/training extended by the program. Each student should explore programs that would prepare her/him for careers that would be nontraditional for his/her gender. Students must receive appropriate safety training while exploring programs. The criteria and process to be used in selecting students for admission to particular vocational technical education programs as submitted and approved by ESE, shall be published, with a copy provided to each student and

parent/guardian.

### Examples of Exploratory Programs

*Schools in Massachusetts use a variety of models for exploratory programs. Some examples are:*

Total # Programs	# Programs Explored	Length of Exploratory	Example
9	9	Half Year	<ul style="list-style-type: none"> <li>Students explore each program for ten half days.</li> </ul>
19	19	Half Year	<ul style="list-style-type: none"> <li>Students explore each program for two and one half days.</li> </ul>
8	8	Half Year	<ul style="list-style-type: none"> <li>Students explore each program for six full days.</li> </ul>
10	10	Full Year	<ul style="list-style-type: none"> <li>During the first semester, students explore programs one period per day. During the second semester, each student explores three programs of their choice two periods per day for eighteen weeks.</li> </ul>
14	14	Half Year	<ul style="list-style-type: none"> <li>Students explore each program for three full days.</li> </ul>
15	15	Full Year	<ul style="list-style-type: none"> <li>Students explore each program two periods per day for twenty days.</li> </ul>
9	5	Half Year	<ul style="list-style-type: none"> <li>Students explore each program for nine full days.</li> </ul>
12	12	Full Year	<ul style="list-style-type: none"> <li>Students explore each program two periods per day for two weeks.</li> </ul>
15	10	Half Year	<ul style="list-style-type: none"> <li>Students explore each program for five full days.</li> </ul>
5	5	Half Year	<ul style="list-style-type: none"> <li>Students explore the each program for ten full days.</li> </ul>
19	19	Half Year	<ul style="list-style-type: none"> <li>Students explore each program for one day.</li> <li>Each student selects three programs.</li> </ul>
17	17	Half Year	<ul style="list-style-type: none"> <li>Students explore each program four days.</li> <li>Each student selects three programs.</li> </ul>
13	10	Half Year	<ul style="list-style-type: none"> <li>Students explore each program for ten full days.</li> </ul>

#### **State Aid for Chapter 74-Approved Vocational Technical Education Programs:**

The Chapter 74-approved vocational technical education program designation is the state regulatory indicator that ESE uses to denote that a career/vocational technical education program meets required approval criteria. Consequently, the number of students enrolled in Chapter 74-approved vocational technical education programs, as annually reported is a factor in the formula for determining the state aid school districts receive. For example, fiscal year 2008 state aid will

be determined by student enrollment as of October 1, 2006.

The ESE-Office for Career/Vocational Technical Education receives inquiries requesting the timelines for program review and approval in order to qualify for the state aid that Chapter 74 approval brings. It is important to follow the timelines provided in the Application Package for Vocational Technical Education New Program Approval M.G.L.c.74

[http://www.doe.mass.edu/cte/programs/approval\\_app.doc](http://www.doe.mass.edu/cte/programs/approval_app.doc) if new program approval is desired prior to October 1 of any year. ESE cannot retroactively approve programs after October 1 for state aid.

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**Program Outcomes for Chapter 74-Approved Vocational Technical Education Programs per the Massachusetts Vocational Technical Education Regulations 603 CMR 4.05:**

Program outcome percentages for Outcomes I and II have not been set. Outcome III (*The percentage of vocational technical education program graduates who are employed in a field related to their program of study, in a military program related to their program of study, or who are enrolled in postsecondary education or advanced training twelve months after graduation*) was set at 70% by the Board of Education on April 29, 2003.

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**Role of the Vocational Technical Supervisor/Director in a Comprehensive High School per the Massachusetts Vocational Technical Education Regulations 603 CMR 4.03(1) (b):**

Each school district that conducts five or more Chapter 74-approved vocational technical education programs in public comprehensive high schools must employ a licensed vocational technical supervisor/director of vocational technical education to plan and supervise the programs. A supervisor/director of vocational technical education who is assigned to a single school within a district shall report to the principal of that school. The supervisor/director reports to the superintendent in cases where the supervisor/director supervises programs in more than one school in the district or supervises programs that are not under the principal.

The supervisor/director's responsibilities include organizing classes, keeping all statistical and financial records; reporting to local and state offices; recommending budgets (expenditures); preparing competency-based curriculum including courses of study and schedules for vocational technical education programs; preparing instructional material and recommending equipment; allocating space; conducting faculty meetings; recommending qualified teachers to the Principal; admitting students; supervising teachers, supervising instruction of students; investigating and recommending approval of cooperative employments; attending educational conferences and meetings; placing and following up students graduating from or leaving school; providing, in compliance with the law, information regarding students to employers and others requesting such information; and disseminating information regarding vocational technical education.

The high school principal and supervisor/director of vocational technical education shall have joint responsibility for planning and implementing programs and activities in which vocational technical education and other students jointly participate, including interrelated academic and vocational technical education programming and scheduling of students.

**Recommended Minimum Square Footage and Maximum Teacher-Student Ratio for Shops  
in Chapter 74-Approved Vocational Technical Education Programs**

(Actual teaching areas are indicated, and do not include wash-up, tool room, storage, or other areas.) Note that for off-campus construction and maintenance projects the recommended teacher-student ratio is eight (8).

<b>PROGRAM</b>	<b>Teacher-Student Ratio</b>	<b>Area per Pupil (Sq. Ft.)</b>	<b>Minimum Shop Area</b>	<b>Shop Ceiling Clearance Height</b>
Agricultural Mechanics	15	225	3375	18
Animal Science	20	200	4000	12
Automotive Collision Repair & Refinishing	15	275	4125	18
Automotive Technology	15	275	4125	18
Biotechnology	20	110	2200	12
Cabinetmaking	15	225	3375	18
Carpentry	15	225	3375	18
Cosmetology	*	*	*	*
Culinary Arts	15	125	1875	12
Dental Assisting	15	125	1875	12
Design & Visual Communications	20	110	2200	12
Diesel Technology	15	275	4125	18
Drafting	20	110	2200	12
Early Education and Care	20	75	1500	12
Electronics	20	110	2200	12
Electricity	15	225	3375	18
Engineering Technology	20	110	2200	12
Exploratory	20			
Environmental Science & Technology	20	125	2500	12
Facilities Management	20	175	3500	12
Fashion Technology	20	125	2500	12
Graphic Communications	15	150	2250	12
Health Assisting	15	125	1875	12

<b>PROGRAM</b>	<b>Teacher-Student Ratio</b>	<b>Area per Pupil (Sq. Ft.)</b>	<b>Minimum Shop Area</b>	<b>Shop Ceiling Clearance Height</b>
Heating-A/C-Ventilation- Refrig.	20	200	4000	12
Horticulture	20	175	3500	12
Hospitality Management	20	110	2200	12
Information Support Services & Networking	20	110	2200	12
Machine Tool Technology	15	200	3000	12
Major Appliance Installation/Repair	20	200	4000	12
Marketing	20	110	2200	12
Marine Service Technology	15	225	3375	18
Masonry and Tile Setting	20	175	3500	12
Medical Assisting	15	125	1875	12
Medical Laboratory Technology	20	110	2200	12
Metal Fabrication & Joining Technologies	15	200	3000	12
Office Technology	20	110	2200	12
Operating Room Technology	15	125	1875	12
Painting & Design Technologies	20	125	2500	12
Plumbing	15	150	2250	18
Power Equipment Technology	20	150	3000	12
Practical Nursing	15	125	1875	12
Programming & Web Development	20	110	2200	12
Radio and Television Broadcasting	20	125	2500	12
Robotics and Automation Technology	20	110	2200	12
Sheet Metalworking	15	150	2250	18
Stationary Engineering	20	150	3000	12
Telecommunications-Fiber Optics	20	125	2500	12

<b>PROGRAM</b>	<b>Teacher-Student Ratio</b>	<b>Area per Pupil (Sq. Ft.)</b>	<b>Minimum Shop Area</b>	<b>Shop Ceiling Clearance Height</b>
Welding	15	150	2250	12

\* Cosmetology programs must meet requirements for student-teacher ratio and facilities as set forth by the Board of Registration of Cosmetologists.

**Safety and Health in Chapter 74-Approved Vocational Technical Education Programs per the Massachusetts Vocational Technical Education Regulations 603 CMR 4.03(3); (4) (15):**

The Career/Vocational Technical Education Safety Guide is posted at <http://www.doe.mass.edu/cte/safety/guide.doc>.

Schools that have Chapter 74-approved vocational technical education programs must have a comprehensive Occupational Safety and Health Plan for each Chapter 74-approved vocational technical education program.

Facilities must be inspected by building and safety officials per applicable local, state, and federal laws and regulations.

All students and staff in Chapter 74-approved vocational technical education programs must receive occupational safety and health training, including but not limited to the use, storage, and disposal of toxic and hazardous materials.

The Massachusetts Vocational Technical Education Regulations 603 CMR 4.00 require that regulations of the Occupational Safety and Health Administration (OSHA) governing work sites serve as the minimum standards for safety in Chapter 74-approved vocational technical education programs.

## Questions and Answers (Q's & A's) RE: Chapter 74-Approved Vocational Technical Education Programs

### Program Approval

- 1Q. What must be reviewed and approved prior to a program being designated a Chapter 74-approved vocational technical education program?
- 1A. M.G.L.c.74 Section 1 lists the approval criteria as organization, control, location, equipment, courses of study, methods of instruction, qualifications of teachers, conditions of admission of students, employment of students and expenditures. The Application Package for Vocational Technical Education New Program Approval M.G.L.c.74 [http://www.doe.mass.edu/cte/programs/approval\\_app.doc](http://www.doe.mass.edu/cte/programs/approval_app.doc) provides more details.
- 2Q. I heard that a program had to be operating with students enrolled for three years before it can be approved as a Chapter 74-approved vocational technical education program. Is this true?
- 2A. ESE would prefer that the program be approved as soon as possible.
- 3Q. The Chapter 74 law and regulations appear to be based on program approval, rather the approval of the school as a whole. Is this a fair interpretation?
- 3A. Yes. Each Chapter 74-approved vocational technical education program must meet the program approval criteria. Individual program approval may be revoked, but the remaining programs in the school would not necessarily be affected.
- 4Q. What are the grounds for revocation of program approval?
- 4A. The Commissioner or his/her designee may deny approval of, or revoke approval from, any program when the Commissioner or his/her designee determines that the program does not meet the requirements of one or more of the approval criteria, fails to meet the Program Outcome Standards, or violates any provision of applicable laws and regulations.
- 5Q. What are the benefits of a program being a Chapter 74-approved vocational technical education program?
- 5A. The obvious benefits are that students will receive instruction from teachers with business/industry experience. In addition, instruction is provided that meets industry standards including those for equipment and facilities. There is additional state aid associated with program approval due to the higher per pupil cost of the programs. Business, industry, and higher education will value the students in Chapter 74-approved vocational technical education programs.
- 6Q. What happens if an approved program falls below the 70% placement rate for graduates of the Chapter 74-approved vocational technical education program?
- 6A. ESE may initiate a review of such a program and request a corrective action plan. ESE will provide technical assistance where appropriate.

The Superintendent shall submit a corrective action plan to ESE for programs that are under review. ESE will monitor progress in meeting the goals of the plan. If, after one year under review, a program has not made satisfactory progress, its approval may be revoked.

The Commissioner or his/her designee may extend the review for a second year. The Commissioner or his/her designee will make the final determination regarding revocation of approval of an individual program.

7Q. On what is the placement rate based?

7A. The placement rate is the number of program graduates 9-12 months after graduation working in the military in a job related to their program of study, those in a civilian job related to their program of study & those enrolled in further education or training divided by the number of program graduates.

8Q. When will the Program Outcome II standard be set?

8A. After the development of the Certificate of Occupational Proficiency Assessment System is operational; the standards for percentage of vocational technical education students who receive a Certificate of Occupational Proficiency will be set.

9Q. Are programs periodically reviewed by ESE for Chapter 74 compliance?

9A. Yes. Chapter 74-approved vocational technical education programs are monitored onsite as part of the ESE's Coordinated Program Review (CPR) system. In addition, program monitoring is done by desk audit. Additional focused reviews are conducted onsite as needed.

10Q. Can ESE provide some guidance on program length?

10A. M.G.L. c. 74 section 2 was amended by the Education Reform Act in 1993 and it states in part: "The commissioner, under the direction of the state board, shall approve or disapprove vocational-technical programs in accordance with regulations published by the board; provided, however, that said regulations shall more heavily favor an outcome-oriented approach for approval of such programs over a quantitative approach which solely measures time spent on lab instruction; provided, further, that said regulations shall consider a program's intention to integrate vocational and academic instruction and to train students in all aspects of a chosen industry." It is recommended that shop instruction be in the range of 40-50% of the length of the school day or the equivalent thereof, in order to provide the necessary program scope. However, each program's length should be determined on an individual basis.

### **Advisory Committees**

1Q. Does ESE have any recommendations on how to select and use Program and General Advisory Committees?

1A. The Career/Vocational Technical Education Advisory Committee Guide <http://www.doe.mass.edu/cte/resources/acguide.doc> contains recommendations.

### **Facilities and Equipment**

1Q. The regulations state that the regulations of the Occupational Safety and Health Administration (OSHA) governing work sites shall serve as the minimum standards for safety in the vocational technical education program. Where can we get information on these standards?

1A. The Internet is a valuable source. In addition, review the Career/Vocational Technical Education Safety Guide <http://www.doe.mass.edu/cte/safety/guide.doc>.

### **Program of Study**

- 1Q. The regulations require a Program of Study. Are there any recommended examples available?
- 1A. There are many high schools that have published a Program of Study in recent years so there are many examples. It is suggested that schools review various examples. Community college catalogs in Massachusetts are useful examples.

### **Admission of Students**

- 1Q. I have lots of questions about admission policies. Are there any guidelines?
- 1A. The Chapter 74 Manual for Vocational Technical Education Admission Policies [http://www.doe.mass.edu/cte/admissions/policies\\_manual.doc](http://www.doe.mass.edu/cte/admissions/policies_manual.doc) includes guidelines, sample admission policies as well as Q's & A's.

### **Exploratory Programs**

- 1Q. What does "one half year" year mean in terms of an exploratory program? Does it mean 495 hours or 247.50 whereas there are 990 hours in the school year?
- 1A. One half year means one-half of the total time spent in shop in the ninth grade. For most schools that would mean in the range of 198 – 247.50 hours.

### **Cooperative Education**

For information, refer to the Chapter 74 Manual for Vocational Technical Cooperative Education [http://www.doe.mass.edu/cte/programs/coop\\_ed/manual.doc](http://www.doe.mass.edu/cte/programs/coop_ed/manual.doc).

### **Internship Sites**

- 1Q. Must a substitute teacher be licensed as a vocational technical teacher in the program area in which he/she is serving as a substitute in order to supervise students working off-site such as in nursing homes?
- 1A. The regulations state that "*non-licensed substitute teachers and teacher (instructional) aides shall be supervised by an appropriately licensed vocational technical teacher while serving in a vocational technical laboratory and shall not be allowed to supervise students using hazardous equipment.*" Whereas the nursing home is an off-site "laboratory" it is can be concluded that a non-licensed substitute teacher shall not provide the supervision off-site.
- 2Q. Does the CORI law apply to those supervising students on paid/unpaid internships?
- 2A. Yes. The Chapter 74 Manual for Vocational Technical Cooperative Education includes information on CORI.

## **Appropriate Educator Licenses for Chapter 74-Approved Vocational Technical Education Programs**

### **Teachers Licensed under Chapter 74 and the Massachusetts Vocational Technical Education Regulations 603 CMR 4.00**

Each Chapter 74-approved vocational technical education program shall have at least one teacher with the appropriate Vocational Technical Teacher license as identified for the program in the table below. Obviously, the number of students to be taught would dictate the total number of teachers in the program.

An additional teacher with a different vocational technical teacher license from that listed in the table below for the specific Chapter 74-approved vocational technical education program may also teach in the program provided that the teacher would impart knowledge and skills that: 1. he/she is licensed to teach, and 2. are necessary to impart to students in the program.

**Example:** A Chapter 74-approved vocational technical education Carpentry program must have at least one teacher with a Vocational Technical Teacher license in Carpentry. Obviously, the number of students to be taught would dictate the total number of teachers in the program. That being said, an **additional** teacher, such as a teacher with a Vocational Technical Teacher license in Cabinetmaking may teach in the Chapter 74-approved vocational technical education Carpentry program to impart Cabinetmaking knowledge and skills to students in the Carpentry program.

Note that the ratio of Carpentry teachers to Cabinetmaking teachers in the Carpentry program shall not exceed a one FTE Carpentry teacher to one FTE Cabinetmaking teacher ratio. For example, one Carpentry teacher to two Cabinetmaking teachers in the Carpentry program would not be allowable.

### **Teachers Licensed under Chapter 71 and the Massachusetts Regulations for Educator Licensure and Preparation Program Approval 603 CMR 7.00**

A teacher with a license issued under Chapter 71 and the Regulations for Educator Licensure and Preparation Program Approval 603 CMR 7.00 may teach appropriate units of curricula in a Chapter 74-approved vocational technical education program.

**Example:** The Massachusetts Vocational Technical Education Frameworks include strands in “Embedded Academics” (Strand 3) and “Management & Entrepreneurship” (Strand 5). A Chapter 74-approved vocational technical education Carpentry program must have at least one teacher with a Vocational Technical Teacher license in Carpentry. Obviously, the number of students to be taught would dictate the total number of teachers in the program. That being said, a teacher with a teacher license in business may teach units related to management & entrepreneurship in the Chapter 74-approved vocational technical education program in Carpentry. Note that it is not anticipated that business, physics and mathematics teachers would be full-time teachers in the Carpentry program, as they would teach a limited number of units.

### **Note Regarding Chapter 74-Approved Vocational Technical Education Exploratory Programs:**

Each teacher in a Chapter 74-approved vocational technical education exploratory program must hold a Vocational Technical Teacher license in a field within the same Occupational Cluster, or in a related Occupational Cluster. For example, a teacher with a Vocational Technical Teacher license in Carpentry may, teach in the exploratory program for the Construction Cluster.

### **Superintendents and Principals:**

All vocational technical school districts and agricultural high schools must employ a superintendent holding a valid Vocational Technical Superintendent/Assistant Superintendent

license. All vocational technical high schools in vocational technical school districts and agricultural high schools must employ at least one principal holding a valid Vocational Technical Principal/Assistant Principal license. Note that vocational technical high schools in vocational technical school districts and agricultural high schools may employ an additional principal/assistant principal licensed pursuant to Chapter 71 603 CMR 7.00.

<b>Chapter 74-Approved Vocational Technical Education Program</b>	<b>Appropriate Vocational Technical Teacher License</b>
<b><u>AGRICULTURE &amp; NATURAL RESOURCES CLUSTER</u></b>	
AGRICULTURAL MECHANICS	AGRICULTURAL MECHANICS
ANIMAL SCIENCE	ANIMAL SCIENCE
ENVIRONMENTAL SCIENCE & TECHNOLOGY	ENVIRONMENTAL SCIENCE & TECHNOLOGY
HORTICULTURE	HORTICULTURE
<b><u>ARTS &amp; COMMUNICATION SERVICES CLUSTER</u></b>	
DESIGN & VISUAL COMMUNICATIONS	DESIGN & VISUAL COMMUNICATIONS
GRAPHIC COMMUNICATIONS	GRAPHIC COMMUNICATIONS
RADIO & TELEVISION BROADCASTING	RADIO & TELEVISION BROADCASTING
<b><u>BUSINESS &amp; CONSUMER SERVICES CLUSTER</u></b>	
COSMETOLOGY	COSMETOLOGY
FASHION TECHNOLOGY	FASHION TECHNOLOGY
MARKETING	MARKETING
OFFICE TECHNOLOGY	OFFICE TECHNOLOGY
<b><u>CONSTRUCTION CLUSTER</u></b>	
FACILITIES MANAGEMENT	FACILITIES MANAGEMENT
CABINETMAKING	CABINETMAKING
CARPENTRY	CARPENTRY
ELECTRICITY	ELECTRICITY
HEATING-AIR CONDITIONING-VENTILATION-REFRIGERATION	HEATING-AIR CONDITIONING-VENTILATION-REFRIGERATION
MASONRY & TILE SETTING	MASONRY & TILE SETTING
PAINTING & DESIGN TECHNOLOGIES	PAINTING & DESIGN TECHNOLOGIES
PLUMBING	PLUMBING
SHEET METALWORKING	SHEET METALWORKING
<b><u>EDUCATION CLUSTER</u></b>	
EARLY EDUCATION AND CARE	EARLY EDUCATION AND CARE

<b>Chapter 74-Approved Vocational Technical Education Program</b>	<b>Appropriate Vocational Technical Teacher License</b>
<b><u>EXPLORATORY PROGRAMS</u></b>	SEE NOTE ABOVE
<b><u>HEALTH SERVICES CLUSTER</u></b>	
DENTAL ASSISTING	DENTAL ASSISTING
HEALTH ASSISTING	HEALTH ASSISTING
MEDICAL ASSISTING	MEDICAL ASSISTING
MEDICAL LABORATORY TECHNOLOGY	MEDICAL LABORATORY TECHNOLOGY
OPERATING ROOM TECHNOLOGY	OPERATING ROOM TECHNOLOGY
PRACTICAL NURSING (LPN)	PRACTICAL NURSING (LPN)
<b><u>HOSPITALITY &amp; TOURISM CLUSTER</u></b>	
CULINARY ARTS	CULINARY ARTS
HOSPITALITY MANAGEMENT	HOSPITALITY MANAGEMENT
<b><u>INFORMATION TECHNOLOGY SERVICES CLUSTER</u></b>	
PROGRAMMING & WEB DEVELOPMENT	PROGRAMMING & WEB DEVELOPMENT
INFORMATION SUPPORT SERVICES & NETWORKING	INFORMATION SUPPORT SERVICES & NETWORKING
<b><u>MANUFACTURING, ENGINEERING &amp; TECHNOLOGICAL CLUSTER</u></b>	
BIOTECHNOLOGY	BIOTECHNOLOGY
DRAFTING	DRAFTING
ELECTRONICS	ELECTRONICS
ENGINEERING TECHNOLOGY	ENGINEERING TECHNOLOGY
MACHINE TOOL TECHNOLOGY	MACHINE TOOL TECHNOLOGY
MAJOR APPLIANCE INSTALLATION/REPAIRING	MAJOR APPLIANCE INSTALLATION/REPAIRING
METAL FABRICATION & JOINING TECHNOLOGIES	METAL FABRICATION & JOINING TECHNOLOGIES
ROBOTICS & AUTOMATION TECHNOLOGY	ENGINEERING TECHNOLOGY
STATIONARY ENGINEERING	STATIONARY ENGINEERING
TELECOMMUNICATIONS – FIBER OPTICS	TELECOMMUNICATIONS – FIBER OPTICS
<b><u>TRANSPORTATION CLUSTER</u></b>	
AUTOMOTIVE COLLISION, REPAIR & REFINISHING	AUTOMOTIVE COLLISION, REPAIR & REFINISHING
AUTOMOTIVE TECHNOLOGY	AUTOMOTIVE TECHNOLOGY
DIESEL TECHNOLOGY	DIESEL TECHNOLOGY

<b>Chapter 74-Approved Vocational Technical Education Program</b>	<b>Appropriate Vocational Technical Teacher License</b>
MARINE SERVICE TECHNOLOGY	MARINE SERVICE TECHNOLOGY
POWER EQUIPMENT TECHNOLOGY	POWER EQUIPMENT TECHNOLOGY