

Curriculum Development Guidelines

January 2008



CURRICULUM DEVELOPMENT GUIDELINES



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CURRICULUM DEVELOPMENT GUIDELINES



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Chapter 1: Introduction to the Manual

For the purposes of providing uniformity and standardization, State Fire Training has adopted specific standards, guidelines, and formats for course development and publication. The "Curriculum Development Guidelines" manual consists of two components:

🔗 Course Construction 🔗

🔗 Formats and Samples 🔗

The first section is designed to provide structural guidance for the process of developing courses. This section defines the stages of development that all courses of instruction must undergo in the developmental or revision process. It defines certain steps, techniques, and methods that must be included in the preparation of course materials.

The second section consists of specific publishing requirements for typing, editing, and final publication. It defines specific things such as the fonts, outlines, headers, footers, layout, sections, appendices, etc.

It should be noted that this manual is not intended to teach lesson plan development and other instructor training techniques taught throughout the Fire Instructor series. This manual will refer, however, to specific techniques taught within the six Fire Instructor courses as the standard to be used by course development task forces.

Congruity

The reason for requiring course developers to comply with the techniques taught in the Fire Instructor courses is simple. We cannot train our instructors to teach one way and then provide them with course materials that are inconsistent with those techniques. It is incongruent. The result of incongruity is poor performance in our course delivery system and will cause unnecessary delays and complications in the course development process.

Presumptions

At the very outset of this process, we need to discuss a few presumptions that are present in State Fire Training's delivery system with regard to the users of instructor guides and student manuals or student supplements. The first presumption is that a very large percentage of the instructors using State Fire Training course materials were not involved in the design of the original course or the instructional materials. To the contrary, most of them have completed instructor training and a generic instructor orientation course, then are sold the instructor guides and student materials and allowed to teach a course.

It is a basic presumption of State Fire Training that registered instructors will make a reasonable effort to use the standardized course materials in the manner in which they were designed. We also recognize, however, that an excellent instructor can take mediocre or even bad materials and teach students something. The corollary is that a poor instructor can take excellent materials and teach students something too. Unfortunately, if the course materials are mediocre then the excellent instructor will have to make an extraordinary effort to teach to his or her level of competency while a poor instructor will just take mediocre materials and deliver an inferior class.



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Chapter 1: Introduction to the Manual

There is another presumption that needs to be stated. This training and education system is not based on what an individual instructor knows. Rather, it is based on the need to ensure that the students are given the necessary information to perform at a specific level of competence in the day-to-day operations of a fire service agency. As a master instructor once stated, ***"It's not what the teacher knows at the end of the course that counts. It's what the student knows how to do."***

It goes without saying then that the system is not designed to merely train students to pass examinations or compete for promotions. It is designed to teach students to think and perform competently. This presumption must be considered during all course development projects.

This leads us to the last of the presumptions. State Fire Training recognizes that there are outstanding instructors that cannot, no matter how hard they try, develop curriculum other instructors could use. We also recognize that there are course developers that cannot, no matter how many times they try, stand up in front of a class, and actually deliver the instructional materials they just developed.

High quality course development processes must be a combination of subject-matter proficiency from the technical experts, instructional proficiency from the instructors, and organizational proficiency from the course developers. The course must have the content from the technical experts, the educational components from the instructors, and the structure from the course developers.

Maintenance

For the training and education system to succeed, we must provide standardized materials that do not stifle the creativity and competency of our instructor cadre. We also need to build into this system a process to help instructors when they experience trouble in delivering the materials. They need to know where they can go to obtain additional guidance and assistance in resolving curriculum problems.

In the process of trying to keep pace with the changes that impact the fire service, instructors often face the fact that materials are rendered obsolete faster than the curriculum rewrite process can keep up. If the curriculum is properly designed, then minor revisions can be accepted without a major impact on the concept of professional standardization.

Goal of the Manual

The goal of this manual is to build and maintain State Fire Training courses that will make the excellent instructor perform with confidence and will prevent the poor instructor from ruining the educational and training experience for their students. To accomplish this goal, we must have courses with built-in and realistic performance objectives. If the system does not demand performance, we will not get it.

The following pages contain the respective standards that have been adopted by State Fire Training. Course development task forces are expected to adhere to these standards unless they receive prior approval from State Fire Training.



Chapter 2: General Manual Information

The Office of State Fire Marshal (OSFM) is vested with the responsibility of developing and coordinating courses of instruction for the California fire service. To achieve that objective, the OSFM must establish procedures that set minimum standards for course development.

Establishing course development standards provides uniformity in course development criteria, improves the usefulness of materials for instructors, students, the educational delivery system, and assures compliance with appropriate training and educational methodologies.

Historical Perspective

The training and education of fire fighters is actually a fairly new field of vocational emphasis. The first documented training programs for fire fighters were in the Glasgow Fire Brigade in Scotland, under the direction of Firemaster James Braidwood in the 1830s. In the 1850s the Chief of the London Fire Brigade, Sir Eyre Massey-Shaw, wrote a comprehensive textbook on fire fighting that was rapidly followed by the development of specific fire fighting training techniques in the major fire departments all across the United States.

In 1929, Fire Chief Ralph J. Scott of the Los Angeles City Fire Department proposed to the U.S. Department of Vocational Education a document entitled, Study of a Fireman's Occupation. This document, which was produced by the members of the Los Angeles City Fire Department training staff, was an inventory of the knowledge domain of the fire service that existed in the 1920s. After adoption by the federal government, the Study of a Fireman's Occupation put into motion the development of a statewide fire training and education program that is still in existence in California today.

Shortly thereafter, the Peninsula Fire Chiefs' Club, later known as the San Mateo Fire Chiefs' Association, proposed that the State of California establish a statewide fire training program. The State Fire Marshal, J.W. Stevens, as well as individuals from the California Department of Education and the Fire Chiefs' Associations developed a plan that was implemented in the 1930s. The State Fire Training program was originally created as part of the State Department of Education. While it suffered some setbacks during the war years, it began to grow in the 1950s.

This system has evolved and grown over the years. From the humble beginnings by a small group of training officers, the system has grown to a statewide system involving community colleges, universities, and the entire spectrum of fire service personnel from fire prevention officers to fire mechanics. The system now reaches into the civilian population for pre-employment training.

By 1968, the Study of a Fireman's Occupation originally proposed by Chief Scott had undergone many revisions. It was suggested by Fire Chief Rod Porter, a member of the California Fire Chiefs' Association Training and Education Committee, that the courses of instruction needed to be updated. During the discussion, it was noted that a more important need was to review the entire body of knowledge required of the fire service. Using the newly titled Occupational Analysis, the University of California, Los Angeles completed an extensive analysis to determine the validity of the various tasks identified in the document. Because of that project, the California fire service sponsored legislation to create the State Board of Fire Services.



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Chapter 2: General Manual Information

The State Board of Fire Services (SBFS) was tasked with the responsibility of establishing voluntary minimum standards for fire fighter qualifications. Mr. Ed Bent, Supervisor of the Fire Service Training Program at that time, accompanied by key staff members James Miedl, Carlton Williams, Jerry Jones, Cedric Rowntree, Bob Shaw, Ray Russell, Ronny Coleman, and Glenn Hill made major modifications to the fire service training and education delivery system.

In the late 1970s, the program expanded from hands-on training delivered locally by the Fire Service Training and Education Program (FSTEP) to one involving community colleges and state universities. A rapidly increasing pre-service student population caused the training system to be divided between fire science technology and a certification program for positions within the fire service. The certification program became known as the California Fire Service Training and Education System (CFSTES).

In the 1980s, the primary thrust was on the development of position certification with an emphasis on competency within jobs in the fire service. By the end of the 1980s, it was clear that the fire service was undergoing some major organizational changes with increased responsibilities in emergency medical services, hazardous materials, and fire prevention. This change spotlighted the need to revise the Occupational Analysis again.

In 1992, State Fire Training created the Course Construction Task Force to look at four components of the training and education system:

1. To upgrade the California Fire Service Occupational Analysis on a regular basis,
2. To revise the Certification Training Standards (previously called the Career Development Guide) for the various certified positions,
3. To coordinate with the community college Fire Science/Technology program, and
4. To put into place a mechanism to periodically revise the certification courses to assure they are uniform and in congruence with current information and technology.

In 2007, the California Fire Service Occupational Analysis began being phased out of the curriculum development process.



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Chapter 3: Definition of Terms

Chapter 3: Definition of Terms

State Fire Training has a relationship with a variety of fire service training programs. It is appropriate, therefore, to define these relationships and limit course construction criterion to those courses that are under State Fire Training's control. The following definitions shall apply throughout this text:

ACCREDITED (CFSTES)	<p>A statewide course that meets the minimum accredited course construction requirements and includes some form of final examination or evaluation process to determine student competency. Most often, a written examination fulfills this need. A student completing an accredited course will receive an OSFM course completion certificate from State Fire Training. These courses are classified within the California Fire Service Training and Education System (CFSTES) and lead to an individual becoming certified in a particular fire service position or career track.</p> <p>Examples: Fire Command 1C and Fire Instructor 1B</p>
APPROVED (FSTEP)	<p>A statewide or local course that meets the minimum approved course construction requirements. A final written examination to determine student competency is desired, but not required. A student completing an approved course will receive an OSFM course completion certificate from the instructor. These courses are classified within the Fire Service Training and Education Program (FSTEP) and do not lead to an individual becoming certified in a particular position or career track.</p> <p>Examples: S-339: Division/Group Supervisor and Fire Control 3</p>
EQUIVALENT	<p>An equivalent course is presented by another delivery system such as the National Fire Academy, California Specialized Training Institute, or CDF Academy. An equivalent course has been evaluated and deemed to meet the same minimum standards as a CFSTES course. A student completing an equivalent course and receiving approval for equivalency will receive an OSFM equivalent course completion certificate from State Fire Training. These equivalent courses may be substituted for State Fire Training courses when applying for certification.</p> <p>Examples: Command and Control of Initial Operations (NFA) = Fire Command 2A Supervision 2 (CDF) = Fire Management 1</p>
SPONSORED	<p>A sponsored course is directly managed and financed by State Fire Training. A student completing a sponsored course will receive an OSFM course completion certificate from the State Fire Training.</p> <p>Example: Regional Instructor Orientation</p>

Limitations of This Manual

The purpose of this manual is to focus specifically on course construction criteria. It is not intended to establish policy and procedure for the overall implementation of the training and education system.



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Chapter 3: Definition of Terms

State Fire Training publishes a procedures manual as a companion document and the "Curriculum Development Guidelines" manual may refer to this or other documents. It is appropriate that all course developers and even participants are familiar with the contents of both documents.

Document Flow

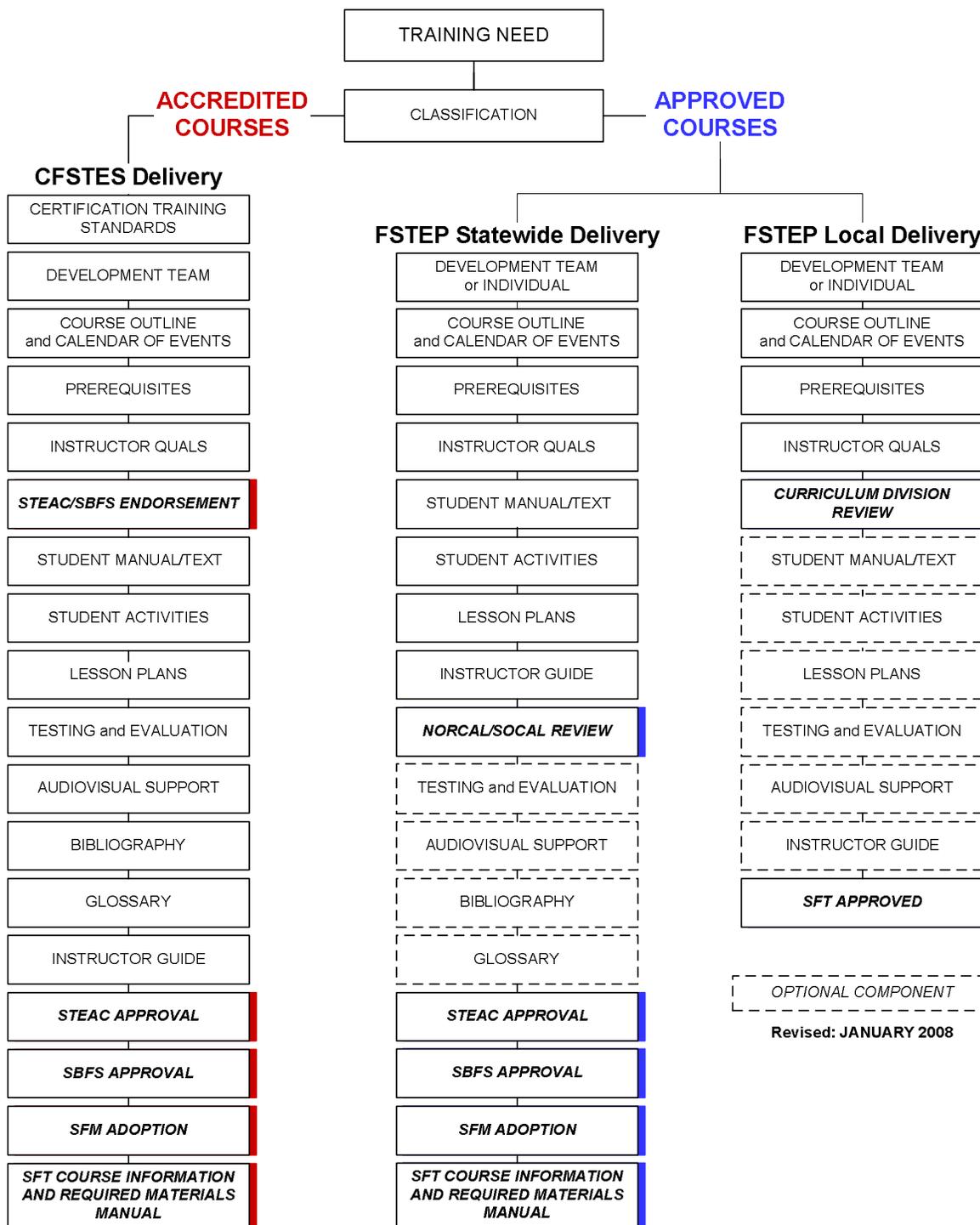
Course developers, technical experts, instructors, program coordinators, and other participants involved with State Fire Training must recognize the link between fundamental components in a fire service training program.

The following illustrates the components in the document flow sequence.

1. Certification Training Standards (for position certification tracks)
2. Course Outline
3. Prerequisites
4. Instructor Qualifications
5. Student Manual, Student Supplemental and/or Textbook
6. Lesson Plans
7. Testing and Evaluation
8. Audiovisual Support
9. Bibliography
10. Glossary
11. Instructor Guide

Subsequent sections of this manual will refer back to the document flow sequence in two ways. The first is in the sequence of events and course development considerations that must occur with respect to course construction. The second defines the specific differences among the various documents so they do not become ambiguous and overlapping.

Curriculum Development & Approval Process





Chapter 4: Certification Training Standards

Certification Training Standards Guides are specific blueprints for the competencies that a person must achieve in order *to be recognized for certification* in a specific rank structure. State Fire Training currently maintains or has identified certification training standards for:

1. Chief Officer
2. Community Risk Officer (formerly Public Education Officer)
3. Fire Apparatus Driver/Operator
4. Fire-Arson Investigator
5. Fire Chief
6. Fire Fighter
7. Fire Mechanic
8. Fire Marshal (formerly Fire Prevention Officer)
9. Fire Officer
10. Hazardous Materials Specialist
11. Telecommunications
12. Training Officer (formerly Fire Instructor)

Minimum Standards

The California fire service has recognized the National Fire Protection Association's (NFPA) Standards as one of the inventories of professional qualifications. However, we have also recognized that there are other standards that may apply and these have been adopted when appropriate. The Certification Training Standards Guide (CTS Guide) is a cross-reference that bridges the minimum standards and the courses of instruction.

Each of the tasks in a CTS Guide is keyed, when possible, to a subsection of the appropriate NFPA Standard. Because of this correlation between the CTS Guide and the NFPA standard, it can be said that each fire service position in California's certification system meets or exceeds the corresponding NFPA standard. In order to achieve this and satisfy the desired performance for California fire service personnel, a task that the NFPA has designated for a particular level (Fire Fighter II for example) may be included in California's Fire Fighter I requirements. In addition, in some instances, because of repetition in the NFPA standard, several subsections might be cited for a single task.

In other instances, California may have a requirement that has been overlooked or neglected by the NFPA. When there is no NFPA subsection in the standard to cite, the authority requiring the task, or a performance within the task, is listed. In those cases, the authority cited is the State Fire Marshal and is printed in *Italics*.

Organizational Relationship

It is virtually impossible for anyone to know all the complexities of all the position certification tracks. The most obvious reason for this is the various levels of expertise that are required to perform in the



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Chapter 4: Certification Training Standards

position tracks which are sometimes from different knowledge areas, such as the differences between the public education field and the hazardous materials field.

It is difficult to maintain currency in any particular field of proficiency because of the comprehensiveness of the fire service. The array of skills required to be a fire fighter all the way up to and including the rank of Fire Chief are sufficiently distinctive so that it is impossible for any one person to possess expertise in all of them, at any one point in time.

State Fire Training, therefore, attempts to establish a relationship with professional organizations to serve as "mentors" for specific tracks of certification. The following potential mentors have been identified:

1. The California Fire Chiefs' Association (as the parent body)
 - Administrative Services Section
 - Emergency Medical Services Section
 - Fire Prevention Officers' Association
 - Fire Mechanics Association
 - Public Education Officers' Association
 - Training Officers' Association
2. Fire Districts' Association of California (FDAC)
3. California Joint Apprenticeship Committee (CALJAC)
4. National Joint Apprenticeship Committee (NTLJAC)
5. California Conference of Arson Investigators (CCAI)
6. Accredited Regional Training Programs
7. California Community Colleges that deliver Uniform Fire Science Technology Programs
8. Fire Chief's Department, League of California Cities

SFT Curriculum Development may request each of these organizations to identify a track of instruction or a specific course that the organization will monitor and make recommendations on based upon the modifications to the Certification Training Standards Guide.

By providing assistance with the CTS Guide, none of these organizations will assume any liability for the implementation of the program. As defined in the context of this manual, organizational assistance is a relationship between that professional association and the certification training standards only.

Because the CTS Guide results in the creation of specific courses of instruction, it is inferred that the entire vertical track from Level 1 up through the highest level is an area of interest for the organization. The organization's recommendations and proposals for improvement are actively sought and used.

Accredited Courses OF Instruction

The CTS Guide leads to the development of accredited courses of instruction that lead to certification within CFSTES. These courses have been organized by various levels, i.e., Level 1, Level 2, Level 3, and Specialty. Level 1, which essentially stops at the Fire Officer rank; Level 2 deals with Chief



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Chapter 4: Certification Training Standards

Officer courses which are aimed at middle management from battalion chief up through the second in command of most fire agencies and Fire Chief. Level 3 and specialty courses target specific certification tracks mastered by either fire service personnel or civilians.

Review Cycle

Certification Training Standards Guides require modification for several reasons. For example, the job description (duties) for a certification position may change through the years with some duties being added while others are not required any longer. Consequently, the accredited courses leading to this certification position need to reflect these changes. Accredited course subject matter may also be modified by the legislative process, at both the state and federal level. Many fire prevention courses have their content changed substantially by the adoption of model codes, outcomes of legal action, and changes in recognized standards.

To ensure Certification Training Standards Guides are current in respect to subject matter changes in a course and/or job duty modification, a review and adoption cycle has been established using a five-year cycle. It is appropriate and necessary for course developers, instructors, and users of the certification system to submit pertinent modifications to the CTS Guides. Revisions can be submitted at any time and should follow these steps:

- ❶ Identify the position needing revision.
- ❷ Copy the page(s) that need to be changed and make any minor modifications directly on the copies
or
Attach a typed version of your suggestions. Any suggested revisions, other than minor handwritten modifications, must be submitted following the Certification Training Standards Guide format.
- ❸ Include a letter summarizing your submittal and clearly identifying your qualifying credentials.
- ❹ Send to:
State Fire Training
Curriculum Development
PO Box 944246
Sacramento CA 95811
- ❺ Or fax to:
(916) 445-8128
SFT Curriculum Development

Suggesting revisions to a Certification Training Standards Guide does not guarantee a change will occur. The appropriate mentoring group will first review submissions and then forward their recommendation for adoption or rejection to the Chief of SFT. Remember, the Certification Training Standards Guide is the road map identifying the courses, texts, and references that will get you there.



Chapter 5: The Curriculum Task Force

Accomplishing the sequence of events required to develop or simply modify a course is not an easy task, and, it is not intended that any curriculum project be completed by an individual. To the contrary, it is anticipated that almost all curriculum development will be completed through the efforts of a task force. This section will clearly define how curriculum development task forces are put into place and will articulate the roles of the individuals involved.

Establishing a Task Force

Once a curriculum project has been approved, the Chief of SFT is responsible for creating a curriculum task force when a course of instruction must either be developed or revised to meet a new or emerging need.

Appointing a Leader

The Chief of SFT Curriculum Development must also appoint a Task Force Leader. The Task Force Leader may be selected from the practicing instructors in the field, someone who has curriculum development experience and background, or simply an experienced facilitator. It is beneficial, however, that the Task Force Leader be familiar with State Fire Training Procedures Manual and also experienced in the course delivery constraints in the field.

Candidates for Membership

The ideal task force includes a leader and membership that has several, if not most, of the following qualities:

1. Be highly organized.
2. Possess subject-matter expertise.
3. Have departmental or organizational support and long-term commitment to the project.
4. Be computer literate.
5. Have teaching experience and knowledge of course construction.
6. Have active subject-matter involvement in the field or its equivalency.
7. Have worked on a curriculum review process of some type in the past.
8. Be able to liaison with other instructors who are not on the curriculum task force, but may be involved in other levels of the same course or in other tracks of similar nature.
9. Non fire service members should not be prevented from participating in curriculum task forces as long as they have technical or educational expertise and are not in a conflict of interest.
10. Have a track record of dependability, i.e., meeting deadlines, attending most if not all meeting commitments, and responding for requests for information in a timely manner.
11. Have an established ability to interact effectively in groups.
12. Be able to represent statewide views due to professional networking.



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Chapter 5: The Curriculum Task Force

13. Have an understanding of the various delivery systems, such as statewide organizations, accredited regional academies, community colleges, local fire departments, etc.
14. Preferably be at an Instructor II or Instructor III level.
15. Be able to interface with other disciplines outside the fire service.
16. Be able to interface with fire science directors and/or community college instructors.

Task Force Leader Responsibilities

The Task Force Leader is charged with the responsibility to complete the following once the task force is in place:

1. Develop a preproject work plan with timelines and objectives.
2. Conduct a review of the appropriate Certification Training Standards Guide if working on a CFSTES course.
3. Ensure State Fire Training's course development process is used throughout the project.
4. Identify the resource materials to support the course.
5. Establish any course limitations with respect to the number of students per session and/or course limitations.
6. Identify instructor qualifications.
7. Make assignments for the division of labor and revision of all subsequent materials for course development. Assignments could include dividing time and efforts of curriculum task force members for the preparation of lesson plans, input to student manuals, audiovisual support, test question writing, etc.
8. Ensure the task force conforms to standardized formats.
9. Maintain communication with the Chief of the SFT.

Curriculum development has a minimum of two major components. The first is the process to get the curriculum done correctly. The second is the organization of the people to do that job. In order to improve the overall quality of State Fire Training's instructional materials, it is extremely important that both components be equally balanced.

A compilation of the latest up-to-date materials does not assure a quality course of instruction. Having an individual who is a good instructor completely responsible for the output of a particular curriculum development project does not always result in a desirable product. Teamwork is extremely important throughout this entire process.

The two processes work synergistically to produce a course that will not only result in improved instruction, but a higher level of performance by the fire service in general.

Committee Forms and Documents

The following forms and documents are used to recruit, enlist, and communicate with committee members. The Consent to Publish and Transfer Copyright Agreement ***must*** be signed by each member.

Application (If Needed)

STATE OF CALIFORNIA—THE RESOURCES AGENCY	ARNOLD SCHWARZENEGGER, Governor
<p>DEPARTMENT OF FORESTRY AND FIRE PROTECTION OFFICE OF STATE FIRE MARSHAL STATE FIRE TRAINING P. O. Box 944246 SACRAMENTO, CA 94244-2460 Website: www.fire.ca.gov</p>	
	
<p>Month Year</p>	
<p>State Fire Training is revising the Title courses and we are soliciting help from subject-matter experts from the California fire service.</p>	
<p>Role</p> <p>Each committee member is a voice for the region and organization they represent. The strength of the course curriculum is in the collective experience and expertise of this committee.</p>	
<p>Responsibilities</p> <p>Using the most current information available, develop and/or update lesson plans, student activities, periodic test items, exercises, certification exam items, and student supplemental text.</p>	
<p>Expectations</p> <ul style="list-style-type: none"> ▪ Attend and participate in all workshops; contribute to discussions ▪ Meet deadlines ▪ Contact the team leader and committee chair whenever you are unable to keep a scheduled workshop or meet a deadline ▪ Acknowledge communications ▪ Complete and review all assignments before each workshop ▪ Research and use current data ▪ Pay attention to detail ▪ Become familiar with and use State Fire Training's comprehensive Curriculum Development Guidelines for format and style ▪ Provide clear and concise wants and needs ▪ Serve as a liaison for your constituents ▪ Maintain confidentiality where appropriate ▪ Come to workshops prepared by bringing all research documents and other related materials ▪ Review and offer analyses of other members' material 	
<p>Consent to Publish and Transfer of Copyright Agreement</p> <p>Your contributions (work) may be used to develop a variety of documents and we will ask you to assign us the copyright, thereby granting SFT all rights to your work.</p>	
<p>Conservation Is Wise—Keep California Green And Golden Please Remember To Conserve Energy. For Tips and Information, Visit "Flex Your Power" at www.ca.gov</p>	



APPLICATION TO SERVE ON A SFT CURRICULUM COMMITTEE

FIRE INSTRUCTOR

Name: _____

Title: _____

Department: _____

Address: _____ [] Home [] Department

City/State/Zip: _____

Phone
Number: _____ [] Home [] Department

Cell Number: _____

Fax Number: _____

Email: _____ [] Home [] Department

1. Have you previously served on a SFT curriculum committee? [] Yes [] No
2. Briefly describe your fire service and/or training experience.

3. Explain how your experience will benefit this project.

Please return your application to: **Name, State Fire Training**
Box 944246, Sacramento CA 94244-2460
Fax: (916) ###-#### or first.last@fire.ca.gov

Responsibilities and Expectations



TITLE COMMITTEE RESPONSIBILITIES AND EXPECTATIONS

MISSION

Using current and substantiated information, develop and/or update all components of the **Course Title** in coordination with national and state standards.

MEMBERS

Chair: Name, Agency
 Co-chair: Name, Fire Service Training Specialist or Deputy State Fire Marshal
 Members: «FirstName» «LastName», «Department»
 «Next Record»«FirstName» «LastName», «Department»

ROLE

Each committee member is a voice for the region and organization they represent. You are also deemed a subject-matter expert in the topic. The strength of the course curriculum is in the collective experience and expertise of this committee.

RESPONSIBILITIES

Using the most current information available, develop and/or update lesson plans, student activities, periodic test items, exercises, certification exam items, and student supplemental text.

EXPECTATIONS

- Attend and participate in all workshops; contribute to discussions
- Meet deadlines
- Contact the team leader and committee chair whenever you are unable to keep a scheduled workshop or meet a deadline
- Acknowledge communications
- Complete and review all assignments before each workshop
- Research and use current data
- Pay attention to detail
- Become familiar with and use State Fire Training's comprehensive Curriculum Development Guidelines
- Provide clear and concise wants and needs
- Serve as a liaison for your constituents
- Maintain confidentiality where appropriate
- Come to workshops prepared by bringing all research documents and other related materials
- Review and offer analyses of other members' material

CURRICULUM DEVELOPMENT WORKSHOPS

Meetings will be held in the Curriculum Development Center at the CDF Academy in Lone or the Conference Room at State Fire Training in Sacramento.

WORKSHOP SCHEDULE

You can expect a minimum of 4 workshops, usually one every other month. However, this number may increase depending upon the project and the ongoing participation of the committee members.

The workshops will begin at 1100 on Mondays and conclude at approximately 1600 on Thursdays. This four-day schedule, which provides two full workdays, has proven to be the most effective.

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Chapter 5: The Curriculum Task Force

TRAVEL AND PER DIEM

Travel and selected per diem expenses will be prepaid by State Fire Training or reimbursed to you through the state's Travel Expense Claim process.

TRAVEL BY AIR

For those members flying to Sacramento, travel arrangements will be made for you by State Fire Training staff using contracted airlines. Ticketless travel is used, with flight information confirmed via email.

Mileage to and from the airport will be reimbursed at the current state rate per mile when using a private vehicle. Mileage is not reimbursed when using a department vehicle. Airport parking for a private or department vehicle is reimbursed when a receipt is provided at the **lowest parking rate available** for the airport. If you chose to park at a higher rate lot, that cost cannot be claimed as an expense.

Rental Car

Rental cars will be shared with other travelers whenever practical. All travelers should take the shuttle to the designated car rental office. The member who is the scheduled driver will wait at the rental car office until all other passengers arrive.

Rental car fees have been prepaid by State Fire Training. State policy requires you to return the rental car full of gas. There is a gas station at the airport located right before the rental car return.

TRAVEL BY CAR

For those members driving personal cars to the workshops will be reimbursed at the current state rate per mile. Mileage is not reimbursed when using a department vehicle. Road and/or bridge tolls for a private or department vehicle is reimbursed when a receipt is provided.

LODGING

Committee members will stay at a hotel located near the meeting site. Members will make their own hotel reservations and will be reimbursed at the current state rate. Higher-cost lodging arrangements can be made, but the expense above the state rate will not be reimbursed.

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Chapter 5: The Curriculum Task Force

Consent Agreement



CONSENT TO PUBLISH AND TRANSFER OF COPYRIGHT AGREEMENT Curriculum Development

PO Box 944246, Sacramento, CA 94244-2460

Date: November 6, 2007

Topic: Instructor Materials, Student Materials, Task Books, Slides, Certification Exam, Certification Training

Work(s): Standards

Publisher: California State Fire Training

SFT Editor(s): Name, Division Chief and Name, Fire Service Training Specialist or Deputy State Fire Marshal

State Fire Training (SFT) is pleased to have you participate as a member of the **Course Title Curriculum Development Committee** (Author). Your contributions (Work) may be used to develop a variety of documents and we ask you to assign us the copyright, thereby granting SFT (Publisher) all rights for the Work. This agreement will protect both parties from the consequences of unauthorized use of the documents. Accordingly, the parties agree to the following terms of publication:

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FY 2007/08



CURRICULUM DEVELOPMENT GUIDELINES



Chapter 5: The Curriculum Task Force

Workshop/Meeting Notice



CURRICULUM DEVELOPMENT WORKSHOP Notice and Agenda

Dates Course Title Curriculum Meeting

«FirstName» «LastName»
 «Next Record»«FirstName» «LastName»

PLEASE CONFIRM BY:
Month ##, 200#

Workshop Schedule

The workshop will begin at #### on Day, Month Date, 200# The workshop will conclude at approximately #### on Day, Month Date, 200#.

During the workshop, we will

Please **bring your resources** with you to the meeting.

Prior to the Workshop

Flight Information

For those of you flying, the following travel arrangements have been made. If your participation changes, please contact Name at (###) ###-#### as soon as possible.

DATES	FLIGHT	RENTAL CAR	NAME

Contact your local airport for any new check-in/security procedures.

Rental Car Information

Rental cars will be shared with other travelers if necessary. All travelers should take the shuttle to the car rental office. If you are scheduled as the driver for a rental car, please check your passengers' arrival times and wait for them at the rental car agency. Rental car fees have been prepaid by State Fire Training. State policy requires you to return the rental car full of gas.

Confirmation

In order to have a productive workshop and meet the project's timelines, it is important that I have your confirmation (either yes or no) at least two weeks before the workshop is scheduled to start. This prevents us from canceling and rescheduling this workshop at the last minute if too few committee members can participate.

Questions?

To confirm or ask any questions, please contact Name at (###) ###-#### or through email at first.last@fire.ca.gov. Thanks again for your participation and we will see you soon.



Chapter 6: The Course Development Process

How do we begin? Courses are developed under two different circumstances. The first of these is if there is no course to begin with. The second is if an existing course needs to be reviewed and updated. For purposes of simplification, we have taken the point of view that both should undergo a similar type process. However, the time frame may be drastically reduced for a course that is being updated versus a course that has not been developed, depending on the status of the course being updated. We have identified fifteen distinct steps that should be followed.

Step 1: Validate the Topic

The first step of any curriculum development process is to make sure that the course is in context with the existing Certification Training Standards Guide. Course developers should take the time to review the CTS to see if it has been updated or revised since the last time they reviewed its contents.

Remember that the Certification Training Standards Guides will be reviewed on a cycle; it is always possible that the course developer does not have the most recent copy. Therefore, the first step should be to check on this essential document and its validity. For those who have any question about whether their existing material is appropriate, contact State Fire Training.

Step 2: Classify the Course

The next step is to classify the course. The process of curriculum development also includes placing a label on the course as to where it fits into the overall scheme. In the previous section, we defined the difference between accredited (CFSTES) and approved (FSTEP) courses. Upon completion of the topic validation, the course needs to be categorized into the overall State Fire Training system.

The required components for the course will vary, depending on which category the course fits.

Step 3: Review the CTS Guide

This step applies to CFSTES courses only. See Chapter 4 for complete details on the Certification Training Standards Guide.

Step 4: Develop the Course Outline and Calendar of Events

Establish Course Objectives

After determining the need for the course, basic instructional design begins with establishing the course objectives. Course objectives will determine the specific scope of the course. They serve as a guide for the instructor, they identify specific planned results, and they establish a basis from which student behavioral objectives can be written.

Course objectives must describe what the students will do during the course. Although they are not necessarily written in measurable terms, they identify those behavior changes in the students that can be measured at the end of the course.



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Identify the Jobs to Be Taught

The course outline must include a list of those jobs that the instructor will teach. The number of jobs that must be included depends on the needs of the students and on the depth to which the instructor plans to develop student ability. These jobs could be designed to develop psychomotor skills, technical knowledge, or a combination of both.

Those jobs that the student must know first should be taught first. The teaching order sequence can be either the instruction-order method (simple to complex) or the production-order method (the order that jobs must be done under actual conditions).

Establish Teaching Times

Once the course objectives have been clearly defined and the jobs to be taught identified, a determination must be made with regard to the length of time to be devoted to the course as well as any special conditions under which the course must be conducted.

Although this is difficult to do before lesson plans are developed, teaching times for each job should be considered early in the development process. The amount of time available for the course will influence the objectives, teaching methods, lesson plans, instructional material, and evaluation.

Develop a Recommended Calendar of Events

There are two kinds of instructors in the fire service - those that want to be told how to do everything and those who do not want to be told how to do anything. A good teacher, however, is a person who knows how to manage the sequence of events in an organized way so the students achieve an improvement in performance as a result of having the educational and training experience. Good teachers need a sufficient amount of guidance so that they can organize their materials, but do not need to be told every single, solitary thing to say in a classroom.

The course outline also lists the course content in a recommended instructional order. It follows then that at some point even with an instructor guide, an instructor must take personal responsibility for how the course is actually delivered regardless of any deficiencies that are present in the suggested sequence of instructional order.

All accredited courses must contain a "recommended" calendar of events. This should be the course designers' best estimate of the sequence of events and the approximate period of time that should be devoted in the classroom by the instructor to assure that the students will achieve the required minimum performance upon completion of the course.

The purpose of the calendar of events is to provide a logical instructional order of the material. It should be pointed out that the calendar of events is not a mandatory tool. It is provided as a guide that can be modified by the instructor based on any number of circumstances. These could include the physical facilities used in the instruction, the nature of the students, and/or environmental conditions that impact the learning environment.

Assemble the Course Content

Materials need to be assembled that support the course objectives as defined in the course outline. The materials to accomplish this task may be obtained from any number of sources. Course developers are strongly encouraged to identify text and references that are already in publication. Texts and references



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that are out of print should be carefully analyzed to determine their general availability and applicability.

If it is clear that an adequate student manual does not exist that meets the course objectives, the course developers need to assemble their resource materials and create a student manual. It is extremely important, at this point; that course developers avoid legal entanglements by not photocopying copyrighted materials. It is the policy of State Fire Training to protect the copyright of any individual who has published under that condition.

Step 5: Identify Prerequisites

Upon completion of the basic course design, the Task Force Leader should review the existing course description and review the prerequisites to determine if the course title and description is still appropriate.

The step of reviewing prerequisites, whether it is placed here, closer to the beginning of the process, or, as the last step is a matter of personal choice. Perhaps this step belongs in several places. It makes no difference providing that the course developers are experienced. Course developers are encouraged to use it in the position that it assists them the most.

Regardless, after the basic curriculum has been developed, it is appropriate that the course that is designated as a prerequisite and any courses that are considered successive in a particular certification track be reviewed. The express reason for this is to conduct an audit to see if there is any overlap or unnecessary redundancy. While it is appropriate to have a certain degree of review in any class, it is not highly desirable that there be a great deal of overlap and/or that there be contradiction in terminology and/or methodology being recommended as part of the certification criteria.

Any modification that is needed to course outlines and/or lesson plans to eliminate redundancy should be closely coordinated with SFT Curriculum Development. There may actually be a reason for a certain degree of overlap between classes due to the fact that there is a lengthy time gap between taking the two courses and/or the subsequent instructional objectives may require a different level of performance from the student.

Step 6: Identify Instructor Qualifications

The course design should also indicate any specific instructor education or experience that may be required for quality course delivery. The task force should identify any additional criteria, above the standard minimum instructor requirements, and provide documentation to support each element.

Step 7: Develop the Student Manual

By definition, a student manual is any document that you wish to provide to the student for purposes of controlling the delivery of materials in the classroom environment. It is conceivable that you can adopt a text and still have a student manual (termed student supplement in this case) that contains specific instructions, student notes, and/or exercises that the students must use for course completion.

If a textbook can be located that deals with the right topics, has the right subject matter content, and requires very little modification to be used then course developers should consider its adoption. The development of a student manual is a time consuming and very difficult process. If we can use existing



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textbooks, we can make the development process operate much more rapidly. This is not meant to minimize the development of a student manual that is necessary. It is an expression of desire that we not continually "reinvent the wheel." In any case, a student manual must be compiled before you move on to any other element of the instructional design.

Course developers must be extremely careful in the development of student manuals so they are comprehensive. Yet, course developers should only use the amount of material required to cover the course objectives. Merely adding bulk to the student manual for the sake of filling up space is not appropriate. This is a matter of both economics and professional courtesy. Excess materials in a classroom do not improve performance unless they are used. It is extremely important for credibility of the overall program that student manuals provide a focus for the student. Extraneous information and duplication of large amounts of material, which will not be read by the student, are a waste of their time and an inappropriate use of fire service training resources.

Step 8: Develop Student Activities

Independent students prefer independent study, self-paced instruction, and would prefer to work alone on course projects than with other students. Dependent learners look to the teacher and to peers as a source of structure and guidance and prefer an authority figure to tell them what to do. Competitive students learn in order to perform better than their peers do and to receive recognition for their academic accomplishments. Collaborative learners acquire information by sharing and by cooperating with teacher and peers. They prefer lectures with small group discussions and group projects. Avoidant learners are not enthused about attending class or acquiring class content. They are typically uninterested and are sometimes overwhelmed by class activities. Participant learners are interested in class activities and discussion, and are eager to do as much class work as possible. They are keenly aware of, and have a desire to meet, teacher expectations.

Awareness of these learning styles requires us to develop alternative teaching methods for our classes so the standard lecture format is used on a limited basis. Including a variety of activities that require the students to hunt for, collect, investigate, and interpret the course material rather than simply listening to an instructor speak about the information provides acceptable alternatives. Student activities may also be used to evaluate whether the student has learned what was expected at any given point in the course.

These student activities might be a scavenger hunt through a particular section of the California Code of Regulations, a crossword puzzle for terminology, development of quiz or test questions with answers, simulation exercise, case studies, teaching demonstrations, and fire scene photography or sketching. The list is endless and should be considered throughout the development of a course.

Step 9: Develop Lesson Plans

Lesson plans are easily created by outlining the student manual or text used to support the course. Good instructional design, and our development process, also requires a lesson plan to provide a cover page and end page for each lesson plan. California fire service master instructors have reviewed the format provided in this manual for a standardized lesson plan. Lesson plans submitted must comply with this criterion.



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The **cover page** identifies the initial information required for a lesson plan. This information must include the lesson topic, time frame, level of instruction, the necessary materials, texts, and references used to support the topic, a preparation statement, and the all-important student behavioral objective. Instructional design must focus on the creation of the student behavioral objectives. They are probably the most essential element of the entire process, and serve two purposes simultaneously. First, they are used to develop the course of instruction. Second, they should be the basis upon which evaluation and testing techniques are developed. Their composition must clearly indicate that this is the minimum performance required in the classroom/instructional environment.

All lesson plans include recommended time frames. Lesson plan design requires that the amount of material to be delivered be consistent with the time available to deliver it and the behavioral objective to be achieved. For example, if you provide a topic that has a 30-minute time frame, the lesson plan should not be 20 plus pages long. Because of variations beyond the course developers' control, the instructor delivering the course may modify time frames.

The bulk of a lesson plan is found between the cover page and the end page. This is where you will find the lesson content or the **presentation/application** step. The **presentation** side includes everything the instructor says or does: presentation content in an outline form, instructor notes that identify student exercises and reference pages in the student material, alert the instructor of a possible method of presenting the following information, and initiate the distribution of materials. The **application** side includes everything the student participates in: potential questions or discussion items that the instructor may choose to use during the presentation of the lesson to gain feedback and monitor student progress, classroom exercises, and audiovisual cues. Although information is included here, instructors are encouraged to develop some of their own.

The **end page** for any lesson plan includes the method of evaluation to be used and any outside assignments required. For a technical lesson plan, the end page provides a summary. This allows the instructor to wrap up loose ends and provide a recap of the main points. For a manipulative lesson plan, the end page indicates methods the student will use to operate the equipment, handle the tools, and perform or practice the job they have just been taught.

Step 10: Testing and Evaluation

For a course of instruction to be accredited and used towards certification, it must include a testing component. In most instances, this is a written test that is linked to the student behavioral objectives and referenced to a specific answer or statement in the student materials.

A test planning sheet is developed by: 1) identifying the levels of learning and the content material to be tested, 2) deciding on relative importance of the content material at each level of learning, and 3) making a table to distribute the test items.

Answer Key

For each written test item, the **best** answer must be identified. The source where the answer can be found by the student needs to be identified by document title and the page number. A test item's answer cannot be found only in the instructor materials or through

All questions provided by the Curriculum Task Force shall be sourced to a Student Manual, Student Supplement, and Textbook.



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lecture. A question that is not sourced to material available to the student is unfair, unreasonable, and not useable.

Questions sourced to audiovisual presentations are also unacceptable. The reason that questions may not be derived from an audiovisual source is the fact that they may not be available under all delivery situations.

As mentioned earlier, there are differences between good instructors and good course developers. It might be useful to mention here that the expertise in developing good test questions is another opportunity to see a similar difference. Many good instructors are not adept at developing test questions.

Many course developers are not good at preparing test questions. This is, therefore, a very vulnerable step in creating credibility to the entire process. It starts with making sure that all questions tie back to the student behavioral objectives in the lesson plan and are sourced correctly.

SFT Curriculum Development needs a minimum of three questions for each hour of lecture time in a course of instruction. SFT staff reserves the right to edit questions to assure that they are designed to measure the correct responses.

Note: It is not appropriate for individual instructors to develop their own evaluation tools and use them in lieu of required State Fire Training evaluations.

Test Bank

State Fire Training will establish and maintain a test bank that is linked to the student behavioral objectives as identified in the various courses of instruction.

Item writers are advised to review Fire Service Instructor, IFSTA, Fifth Edition, regarding test development to make sure their test questions are valid, and appropriately and specifically referenced to avoid confusion for the students who are taking the exam.

Step 11: Audiovisual Support

Course developers are encouraged to provide a list of audiovisual materials that would support a specific course of instruction. They should develop, when possible, at least two applications of audiovisual materials to assist future instructors. The first of these could be a reference to any commercially available audiovisual materials that support the instructional objectives. The second would be to provide masters for overhead transparencies or slides that might be used to assist in instructional delivery.

Recommendations for the adoption or distribution of specific instructor-prepared slide programs and/or visual materials that are not commercially available should be discouraged. This is not intended to prevent individual instructors from preparing their own visual aids to support the class. Rather, the intention is to increase uniformity of the visual aids as part of the instructional design. For example, in the case of a course of instruction that deals with wildland fire control, perhaps a video produced by the National Wildfire Coordinating Group should be appropriately cited. However, references to videotape that someone in central California has (and no one seems to quite know where it is) is an inappropriate reference in an instructional design process.



Step 12: Create a Bibliography

The more comprehensive a course of instruction is, the more likely it is to draw sources of information from various locations and documents. It is virtually impossible for all instructors to have access to all the information used by course developers. On the other hand, it is common for instructors to have access to fire science libraries and/or their own personal library for collecting material that supports their own instructional activities.

One of the components of quality construction is the development of a bibliography that leads instructors to the right kinds and amounts of background information so that they can deliver quality instruction using the instructor guide. It is highly desirable, therefore, that course developers produce a bibliography for inclusion in instructor guides.

There are two critical considerations for bibliographic material. First, it is not beneficial to cite obscure and out-of-print materials as part of a bibliography. As a course developer, when you are putting together the references for the lesson plan or Certification Training Standards Guides, the most current editions and most readily available books are your appropriate sources. The second consideration is that a bibliography is of no use unless the citation is complete. Therefore, merely mentioning a book written by "Chief Smith" does not help another individual find that book. All citations should be, at the minimum, in compliance with the standards used in the development of community college textbooks. This would include, but not be limited to, the types of documents that would be universally available in the fire service.

Use of Copyright

Course developers should *not* reproduce copyrighted material. That does not mean there is an outright prohibition of using these materials. Certain publications, magazine reprints, and even segments of codes and standards may be used in course development. What is important is to recognize that copyright is a body of law that is designed to protect people from misuse of materials; it is not a law that is designed to eliminate their use. Instead, when course developers identify materials from professional publications or textbooks, the document should be clearly identified and the source properly cited.

It is the responsibility of SFT Curriculum Development to review all copyrighted materials and determine if permission can be granted for the reproduction of that material, or if it must be eliminated from the material before it is duplicated. When in doubt, course developers should, as a professional courtesy, contact the author, if available, or the editor of the publication and ask permission to use the material.

It should be noted that this same concern does not occur when looking at materials produced by government at the taxpayers' expense. While it is possible for there to be some restrictions on some materials, documents that are produced by the state and federal government are not normally copyrighted. The material can be reused by other agencies in order to avoid duplication of costs to the taxpayers. The one concern here is to make sure that all documents used in this fashion have been appropriately referenced and acknowledgements given to the agency that produced them in their original form.



Step 13: Create a Glossary

If the course of instruction introduces new terms to the student, the course development task force may wish to add a section to the student manual that serves as a glossary. This is not a requirement for all courses, but should be considered by the Task Force Leader.

Step 14: Create the Instructor Guide

Instructor Guide Format

This section is intended to serve as an overview of what should be contained in an instructor guide. The instructor guide has been designed to include a course outline, calendar of events, lesson plans, activities, slide index, and tests. Suggested application methods should be identified throughout each lesson for the instructor's use at appropriate times during their presentation.

The success of the students in any course depends greatly on the instructor's conformance to the student behavioral objective prescribed at the start of each lesson. The remaining portion of the lesson plan is designed to serve only as a guide, and as such, should not preclude instructors from adapting their own specific lesson plans to best meet the needs of the students and to cover items that may be required because of local conditions.

Group activities and direct application of the jobs addressed in the curriculum are essential to the success of any course. By including these in the instructor guide, you will help the apprentice instructor deliver a better course and may provide the journey instructor with some diversity in their delivery of the course.

Components of the Guide

The instructor guide is intended to serve as an outline of instruction in lesson plan form. For each job identified in the course outline, a lesson plan must be developed that contains a time frame, level of instruction, student behavioral objective, references, materials needed, preparation statement, lesson content, summary or application, evaluation, and any needed outside assignments.

Considerations for Lesson Delivery

With the exception of simulation equipment and materials, the information within the course shall be designed for presentation *without* the use of commercially or locally developed films, videotapes, and slides. This does not mean that instructors are prohibited from employing audiovisual aids during the course. Instructors are encouraged to use any audiovisual that will assist in the presentation of material and attainment of performance goals.

The students should be required to review the material previously covered and scan the material in upcoming class sessions. This will facilitate topic development and provide the instructor with a more receptive student base for class discussions.

Learning can often be enhanced if the instructor divides the class into groups. Student exercises can then be completed as group projects within the classroom. Placement into groups should occur within the first few hours of instruction. The curriculum affords numerous opportunities for student exercises within their groups. The instructor is encouraged, based upon time availability, to develop additional student exercises.



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Step 15: Approval and Adoption

Regardless of whether a course is brand new or a rewrite, there are several steps in the adoption process that must be completed before the course becomes official. These steps include:

1. Review by SFT Curriculum Development staff to determine if it conforms to the format and if major or minor revisions must be made before being reviewed by the Statewide Training and Education Advisory Committee (STEAC) and the State Board of Fire Services (SBFS).
2. Review and recommendation for SFM adoption by STEAC of the course outline, lesson plans, and student manual, student supplement or text to determine if the course is of sufficient quality and substance to meet the needs of the fire service.
3. Due to the wide constituencies who participate in STEAC, it is not anticipated that any curriculum development project will necessarily need to be routed back for extensive review and editing by third parties. What is anticipated is that the review by STEAC should be considered as the most comprehensive scrutiny as to whether the manual complies with the curriculum format standards and whether the program is acceptable to the California fire service.
4. Review and recommendation for SFM adoption by the State Board of Fire Services.
5. Adoption by the State Fire Marshal.
6. Upon adoption, the new or revised course description will be included in State Fire Training's Course Information and Required Materials manual.
7. An inaugural date will be established. All registered instructors for the course, all community college fire technology directors, and all accredited academies will be notified of the new course. The inaugural date established will allow enough time for an instructor to purchase the new course materials and prepare to deliver their first class.



Chapter 7: Glossary

- Activity**Student exercises or assignments that enhance a lesson plan.
- Affective Learning**Learning that relates to interests, attitudes, and values.
- Appendix**Supplementary material to be included at the end of a text or manual.
- Behavior**The manner in which a person conducts himself or herself. Learning has not happened if there is no change in behavior.
- Behavioral Objective**A specific performance that is expected from a student to demonstrate that they have grasped the competencies and skills offered in a course of instruction. It is stated in observable and measurable terms and identifies what the student will be able to do, under what conditions, and a standard of accuracy or speed.
- Cadre**A framework. A nucleus of trained personnel around which a larger organization (the California fire service) can be trained.
- Calendar of Events**A document contained in an instructor guide that provides a recommended instructional order for the lesson plans
- Certification Training Standards Guide**Document that provides fire service personnel with an overview of the minimum requirements for certification within a specific track. It cross-references the specific task with the National Fire Protection Association Standard. The CTS Guide also identifies where the information and training can be found in order to achieve competency in this area.
- CFSTES**California Fire Service Training and Education System.
- Cognitive Learning**Learning that relates to knowledge and intellectual skills.
- Competency-based Learning (CBL)**Training based upon the competencies of a profession or job.
- Computer-assisted Instruction (CAI)**An instructional approach that uses the computer to present instruction to the student on an individualized, self-paced basis.
- Copyright**The exclusive right to reproduce, publish, and sell the matter and form of literary, photographic, musical or artistic work.
- Course**Training material developed to meet requirements of a major function of some position. Courses are based upon some logical grouping of performance objectives.



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- Course Developer**.....The person(s) responsible to ensure that all phases of the developmental process are accomplished in a professional manner for a specific course of instruction.
- Course Objectives**A specific identification of the planned results of a course of instruction.
- Course Outline**A list of jobs and information to be taught to fulfill previously identified needs and objectives.
- Course Update**Revision process that removes outdated information from course content or the changing of content to reflect new or revised behavioral objectives, and replacing it with information of a more current nature. Course update does not require that the course have to be totally revised or revalidated depending upon the extent and nature of the information changed.
- Criterion-Referenced Testing**The measurement of individual performance against a set standard or criteria, not against other students. Mastery of learning is the essential element to criterion-referenced testing.
- CSFM**California State Fire Marshal.
- Curriculum**Material used to organize courses of instruction designed to meet training certification or other job requirements
- Demonstration**.....A teaching method that includes the act of showing a person how to do something.
- Domains of Learning**Areas of learning and classification of learning objectives, which are often referred to as cognitive (knowledge), affective (attitude), and psychomotor (skill) learning.
- Evaluation**The systematic and thoughtful collection of information for decision-making consisting of criteria, evidence, and judgment. A process to compare the results of instruction with student performance and instructional objectives. Evaluation of the course, the students, and the instructor are all part of this process.
- Feedback**Student responses, generated by questions, discussions, or opportunities to perform, that demonstrate learning or understanding. A communication process used by one person to recognize what another person feels at a particular point in time about a particular thing. Feedback requires providing specific information to students relative to their performance in a learning environment. It is a dynamic process that is two-way and very complex. "Constructive criticism" of behavior is not the same as feedback. Feedback only occurs when there is an exchange between the observer and the observed.



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- Fire Service Training Specialist (FSTS)**.....A person within State Fire Training who has been given the responsibility to function in the fire service training area.
- Four-step Teaching Method**.....A teaching method based upon four steps: preparation, presentation, application, and evaluation.
- FSTEP**Fire Service Training and Education Program. It is different from CFSTES in that FSTEP focuses primarily on the manipulative skills training. FSTEP courses do not lead to certification.
- Goal**The general end toward which effort is directed.
- Illustration**A method of teaching that uses the senses of sight to clarify details or processes. Illustration differs from demonstration and includes use of drawings, pictures, slides, transparencies, film, models, and other visual aids that may clarify details or processes.
- Individualized Instruction**The process of matching instructional methods and media with learning objectives and the student's learning style.
- Information Sheet**An instructional sheet used to present ideas or information to the learner; used when desired information is not part of any student text, student manual, or student supplement.
- Instructional Development Process** ...The process designing classroom instruction that consists of three major components: analysis, design, and evaluation.
- Instructional Objectives**See Behavioral Objectives.
- Instruction Order**The organization of lesson plans according to learning difficulty so that learning proceeds from the simple to the complex.
- Instructor**An individual charged with the responsibility to conduct a class, direct instructional process, teach skills, impart new information, lead discussions, and cause learning to take place.
- Instructor Guide**A document produced by State Fire Training that contains, at a minimum, lesson plans, course outline, calendar events, activities, and tests.
- Job**An organized segment of instruction designed to develop psychomotor skills or technical knowledge.
- Job Analysis**A method of analyzing a job into elemental skills, knowledge, abilities and other worker characteristics needed by employees for job success. The method often involves a "brain-storming" session with a group of experts in the field involved. The elements are then rated based on scales developed for the purpose.



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- Job Breakdown**An instructional list of systematic procedures (operations) and required knowledge (key points). It is designed to assist in teaching and learning a psychomotor objective.
- Key Points**Factors that condition or influence operations within an occupation. Information that must be known to perform the operations in a job.
- Law of Association**.....The principle that learning comes easier when new information is related to similar things already known. New facts and concepts are learned best if they are related to an existing knowledge base.
- Law of Effect**.....The principle that learning is more effective when a feeling of satisfaction, pleasantness, or reward accompanies or is a result of the learning process.
- Law of Exercise**.....The principle that repetition is necessary for the proficient development of a mental or physical skill. More student involvement and practice improves learning.
- Law of Intensity**The premise that if the student experience is realistic, the more likely there will be a change in behavior or learning.
- Law of Readiness**The concept that a person learns best when they are mentally and physically ready to receive instruction. The reason for learning is clear to them.
- Law of Recency**The idea that the more recently the reviews, warm-ups, and make-up exercises are practiced just before using or evaluating a skill, the more effective the performance.
- Learning**.....A relatively permanent change in behavior that is observable and occurs as a result of acquiring new knowledge or skills.
- Lesson Plan**An outlined guide for teaching, listing pertinent teaching information, and using the four-step teaching method.
- Level of Learning (Instruction)**.....The depth of instruction for a specific skill and/or technical information.
- Manipulative Performance Test**...Practical competency-based test that measures mastery of the psychomotor objectives as they are performed in a job or evolution. An evaluation that involves a hands-on demonstration by the student and is witnessed by an evaluator.
- Master Instructor**An individual who has been qualified by State Fire Training to teach Fire Instructor 1A and 1B courses.



CURRICULUM DEVELOPMENT GUIDELINES



Chapter 7: Glossary

- Materials Needed**A list of everything needed to teach a lesson: models, visual aids, equipment, tests, slides, etc.
- Method of Instruction**.....A procedure, technique, or manner of instructing others determined by the type of learning to take place. A systematic plan for presenting or working with information. Lectures, demonstration, skits, role-playing, group exercises or discussions, and simulations are all instructional methods.
- Motivation**.....An internal process in which energy is produced by needs or expended in the direction of personal goals.
- Needs Assessment**Determining the gap between what is being done and what should be done.
- Norm -referenced Testing**.....The measurement of student performance against other students, with an emphasis on discriminating among students and assigning grades.
- OSFM**.....Office of State Fire Marshal.
- Performance Test**.....A test administered in the middle or at the end of instruction to measure performance. Ladder raises, typing, and driving tests are examples of performance tests.
- Prerequisite**A requirement, usually in the form of a segment of training or comparable learning experience, that is required before taking a course. Prerequisites are designed to build the knowledge base of students so that they can successfully deal with increasing levels of performance requirements.
- Presentation**A lesson plan format that addresses the cognitive objectives by introducing new information, facts, principles, and theories.
- Proficiency Test**See Performance Test
- Pretest**.....An examination given prior to starting a course of instruction to determine the level of preexisting knowledge in the student.
- Psychomotor Learning**Learning that relates to physical or manipulative skills.
- Regional Instructor**.....A person who has been qualified by State Fire Training to teach one or more CFSTES or FSTEP courses and complies with the procedures of the office.
- Reliability**The consistency and accuracy of measurement in a test. A condition of validity. The extent to which a test or other device is free from chance errors of measurement resulting in scores which are stable, dependable, and similar on repeated measurements.



CURRICULUM DEVELOPMENT GUIDELINES



Chapter 7: Glossary

- SBFS**.....State Board of Fire Services.
- Session Guide**A plan for using a group of lesson plans or instructional materials during a predetermined period.
- SFT**State Fire Training
- Simulation**Any form of application (exercise) that attempts to produce an experience in the student that parallels the real world.
- Skill**.....A technical proficiency in a particular task. Generally, skill relates to performance by manipulation.
- STEAC**Statewide Training and Education Advisory Committee.
- Student Manual**A document published by State Fire Training that contains, at a minimum, information to support the instruction, course outline, calendar of events, activities, and audiovisual notes. If a student manual is used for a course, no additional textbook is required.
- Student Supplement**.....A document published by State Fire Training that contains, at a minimum, additional information to support the instruction that is not found in the adopted textbook, course outline, calendar of events, activities, and audiovisual notes.
- Study Sheet**.....An instructional sheet designed to arouse interest in the assignment and to provide instructions for additional or outside by the student.
- Subject-matter Expert**.....A person who has a great deal of knowledge of a particular subject.
- Target Group**A group of individuals with similar training needs and a similar knowledge for which a course is being designed.
- Task**.....A combination of duties and jobs in an occupation that are performed regularly and require psychomotor skills and technical information to meet occupational requirements. The completion of a specific series of activities that are required in order to achieve the objectives of a unit.



CURRICULUM DEVELOPMENT GUIDELINES



Chapter 7: Glossary

- Test**A set of questions, problems, or exercises to evaluate a student's knowledge, abilities, aptitude, or qualifications of a subject or skill. According to the Equal Employment Opportunity Commission, "... the term 'test' is defined as any paper and pencil or performance measure used as a basis for any employment decision...ability tests which are designed to measure eligibility for hire, transfer, promotion, membership, training, referral or retention. This definition includes, but is not restricted to, measures of general intelligence, mental ability and learning ability; specific intellectual abilities; mechanical, clerical and other aptitudes; dexterity and coordination; knowledge and proficiency; occupational and other interests; and attitudes, personality or temperament. The term 'test' includes all formal, scored, quantified or standardized techniques of assessing job suitability including, in addition to the above, specific qualifying or disqualifying personal history or background requirements, specific educational or work history requirements, scored interviews, biographical information blanks, interviewers' rating scales, scored application forms, etc." (Guidelines on Employee Selection Procedures, Section 1607.2, 1970).
- Test Planning**The planning steps to determine the purpose and type of test, identify and define the learning objectives, prepare the test specifications, and construct the test items.
- Test Planning Sheet**A document that supports questions used in the certification exam. At the minimum, a test-planning sheet would show the behavioral objective for the question, the correct answer, and a source reference where a third party can obtain the answer to the question.
- Training Aid**.....Anything that helps or augments the instructional process, e.g., films, videotapes, slide programs, overheads, models, charts, etc.
- Unit**.....A division of a block within an occupation consisting of an organized grouping of tasks within that block.
- Validity**.....The degree to which a test measures what it is supposed to measure.



CURRICULUM DEVELOPMENT GUIDELINES



Chapter 8: Course Development Checklist

Chapter 8: Course Development Checklist

During the design of a course of instruction there are a million details a course developer has to keep organized. Once the course design has been put into writing, the Task Force Leader has to go back and check to see if they have complied with all of the course development requirements.

The purpose of this checklist is to assist Task Force Leaders and the SFT Curriculum Development staff in improving the quality of courses of instruction. The list we have put in this text is subjective; we know that. If you have opinions on the types of questions we need to be asking, let the staff know. We are always looking for ways of improving the level of quality in our courses.



CURRICULUM DEVELOPMENT GUIDELINES



Chapter 8: Course Development Checklist

Complete and Return When Submitting Draft Curriculum

COURSE TITLE:		
TASK FORCE LEADER:		
DEPARTMENT:		
HOME ADDRESS:		
CITY/ZIP:		
HOME/WORK PHONE:		
TASK FORCE PARTICIPANTS: <i>Please attach a list of names. Include department and home addresses and telephone numbers.</i>		
QUESTION	YES	NO
1. Does the curriculum task force reflect the appropriate mix of subject matter experts <u>and</u> course development expertise?		
2. Were the course objectives reviewed and/or developed?		
3. Did the task force review the Certification Training Standards Guide?		
4. Does the course outline describe a body of knowledge that is capable of achieving the minimum performance spelled out in the Certification Training Standards Guide?		
5. Is this course valid and does it address the needs of a specific target audience?		
6. Is the course systematic and does it offer an orderly process to conduct the class?		
7. Are the lesson plans listed in recommended instructional order?		
8. Does each lesson plan have written behavioral objectives?		
9. Does the course adopt a specific textbook?		
10. Is that text widely available?		
11. Does the course create a student manual?		
12. Is the student manual linked with the course outline and lesson plan chronologically?		
13. Does the course take into consideration the students' previous level of training?		
14. Does the course respect the instructor's need for flexibility, but at the same time provide a good sense of meeting the minimum course requirements?		



CURRICULUM DEVELOPMENT GUIDELINES



Chapter 8: Course Development Checklist

QUESTION	YES	NO
15. Does the course respect the resource constraints of the delivery system or would it be difficult to deliver throughout California?		
16. Is the course relevant and meaningful and does it focus time on the knowledge and skills the learner needs for the job?		
17. Is the course comprehensive without being redundant of courses that precede or succeed it in the curriculum?		
18. Does the course emphasize "need to know" tasks/topics and avoid extraneous information or activities?		
19. Does the instructor guide provide an instructor who was not part of the curriculum task force adequate information to teach the class?		
20. Does the instructor guide contain adequate references and resource listing to assist an instructor in developing their own background in the topic?		
21. Is the material internally consistent?		
22. Does the course provide students with adequate opportunity to practice or simulate meaningful and relevant tasks?		
23. Does the course make use of media and materials that are reasonably available and avoid overly complex, expensive, and time-consuming delivery techniques?		
24. Does the course duplicate the context (physical surroundings, materials, tools, equipment, and job requirements) in which students must function after competing the course?		
25. Does the course of instruction have a plan for evaluation of learner progress?		
26. Are all questions offered for use in certification examinations properly sourced?		
27. Does the overall course of instruction create a sense of quality?		
28. Is the material consistent with the Format Guidelines?		
29. If you had used your own money to take this course, would you believe that you had gotten your money's worth?		



Appendices: Formats

This chapter illustrates specific publishing requirements for writing, typing, editing, and producing a final document. It contains useful information for both the developer and the word processor. This section should not, however, be considered all-inclusive. Not every type or style of document State Fire Training publishes is included in the following pages. As we move forward with curriculum development, we will add to and modify this chapter.

Certification Training Standards Guide

- Format
 - Cover
 - Inside cover
 - Table of contents
 - Preface and acknowledgments
 - Introduction
 - Certification tracks
 - CTS pages
 - Bibliography

Student Manual/Supplement

- Format
 - Cover
 - Inside cover
 - Table of contents
 - Preface and acknowledgments
 - Course outline with texts and references
 - Calendar of events
 - Manual page with heading styles
 - Activity sheet
 - Glossary
 - Other relevant material
- Remember that a student manual is developed for courses not using a textbook. A student supplement is developed for courses using a textbook but where additional (or supplemental) information is required.

Student Task Book

- Introduction
- Task book



CURRICULUM DEVELOPMENT GUIDELINES



Appendices: Formats

Instructor Guide Section

- Format
 - Cover
 - Inside cover
 - Table of contents
 - Preface and acknowledgments
 - Course outline with texts and references
 - Calendar of events
 - Student progress chart
 - Lesson plan (technical)
 - Lesson plan (manipulative)
 - Activity sheet (with answers when applicable)
 - Appendix A: Glossary
 - Appendix B: Case study (other relevant material)
 - Appendix C: Evolutions or manipulative performance tests
 - Appendix D: Instructor tests
 - Include answer key with reference pages
 - Appendix E: Student tests
 - Multiple-choice, completion, fill-in, short answer, matching
 - To be copied by the instructor for use during the class.

Primary Instructor Trainee Task Book (in progress)

- Introduction
- Task book

Senior Instructor Trainee Task Book (in progress)

- Introduction
- Task book