

Company Officer Internet/Hybrid Beta Test Final Report

October 17, 2008

Fire Officer Classes Beta Test for Internet\Hybrid Delivery

Over the past three years, numerous changes in the California Fire Service Training and Education System (CFSTES) have been proposed, developed, tested and implemented. This process has been facilitated by the California Fire Service Training and Education Strategic Plan known as "Blueprint 20\20".

Among these proposals, the California Statewide Training and Education Advisory Committee (STEAC) appointed an Ad-Hoc committee, at its' meeting on March 24, 2006, to investigate the feasibility of presenting the Fire Officer classes on the internet or in a hybrid (internet\classroom) delivery method.

The following report will provide an overview on the Beta Test and provide the Ad-hoc Committee's findings and recommendations to STEAC, the California State Board of Fire Services and California State Fire Marshal, Chief Kate Dargan for their consideration, modification and adoption.

This report is respectfully submitted by the Level 1 Internet/Hybrid Beta Test Committee, a subcommittee of the State Training and Education Advisory Committee.

The committee members are:

Richard Cabral
Dan Coffman
Mary Jennings
Mike Jennings
Thomas Pambianco
Mark Romer
David Senior – Chair

The committee would like to thank the the online instructors that conducted these internet/hybrid courses for their tireless commitment to the project.

Tim Capehart – Fire Prevention 1A and 1B
Dennis Childress – Fire Command 1C
Dan Coffman – Management 1
Natalie Hannum – Instructor Training 1A and 1B
Kevin Taylor – Fire Command 1A and 1B

EXECUTIVE SUMMARY

THE QUESTION IS NOT "DOES WEB BASED INSTRUCTION WORK?" THE QUESTION IS "HOW CAN WE BEST USE WEB BASED INSTRUCTION IN THE FIRE SERVICE?"

The Fire Service in California faces several challenges with the large number of retirements we are experiencing. We must be proactive in educating and training our workforce to equip them with the tools necessary to safely lead their engine companies during emergencies.

Budgetary constraints as well as distance to the training and time away from work all hinder firefighters and departments from getting the courses they need.

Over 90% of the colleges and universities in this country have Web Based Instruction (WBI) courses. Many institutes of higher learning have complete degree programs offered completely online. The California State University, Long Beach has a Master of Science in Emergency Services Administration offered with totally online instruction.

Accessibility - With WBI students can participate in coursework from virtually anywhere and anytime. The online/hybrid education option will allow firefighters the freedom and flexibility they may need to continue their education with the Company Officer classes whether they live in some remote area in the state or in a municipality.

Individualized Instruction – Through online education, students are able to learn concepts and theories in their own way, at their own pace. Maybe you learn better when you listen to the information or when you read it to yourself. Online education offers the ability to choose which method you prefer. Many course presentations can be viewed, listened to or printed out.

Communication – Online education tends to promote more communication. Students are no longer confined to asking questions during a class. Instructors and other students are easily available through posting on message boards, instant messages and email. Since online education instructors are unable to physically take attendance, the participation of students is the only way to know if a student is active in the class. This makes interaction and communication from students extremely high.

The Fire Service in California deserves the best training and education using the latest in educational methodologies and technologies. Web Based Instruction (WBI) has been used in colleges and universities since the mid 1990s and is a viable part of higher education. It is a good time to have WBI as an option for the State Fire Marshal training programs.

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FINAL REPORT FOR STEAC

Introduction

In this age of technology, students have become accustomed to receiving instruction and most everything else on the internet. In fact, the younger generation of firefighters, 30 years and younger, have been raised with the computer, internet, e-mail, Google, etc., and the more seasoned firefighters have been introduced to this technology through its implementation in so much of what we do today in the Fire Service.

Advances in technology, increasing demand on time, escalating costs and in response to a call for change by the Fire Service, have prompted STEAC to investigate the possibility of delivering CFSTES Fire Officer Classes in an internet/hybrid fashion.

But first, for purposes of this beta test, what is Web Based Instruction or internet/hybrid class delivery?

A class that is delivered on-line means that it is taught completely on an internet platform such as Blackboard, WebCT, etc... If a class is a hybrid, a portion of the course is presented on the internet and the remainder is taught in a conventional classroom. For example: Management 1 was taught in a hybrid fashion. The first thirty-two hours were conducted on-line and followed by a mandatory eight hour classroom session.

A matrix of each class taught, and the content and hours delivered in each method of instruction, as originally proposed by the Ad-Hoc Committee, is included in the Appendix A of this document.

Through this Beta Test, the CFSTES Fire Officer classes were evaluated to determine:

1. If the concept of delivering CFSTES classes on-line or in a hybrid fashion was appropriate?
2. How the internet/hybrid classes compared with the traditional classroom classes for delivery, outcomes and other factors relative to student learning and success?
3. If the current hours and content in each delivery method, as originally established by the Ad-Hoc Committee, was appropriate?
4. What changes to the courses were recommended?

In short, as with any new program, while a few minor difficulties were experienced in delivering these classes in an internet\hybrid fashion, they were expected and corrected as the classes were underway. In addition, while some minor modifications in the program are recommended, the Ad-Hoc Committee's findings validate the premise that the courses residing in the CFSTES Fire Officer Series of classes, can in fact be successfully delivered on the internet and in a hybrid fashion. In fact, in many situations, this method of delivery is preferred.

Finally, the recommendation that the Fire Officer classes be taught in an internet/hybrid fashion, in no way mandates this delivery method and is not designed to replace the classroom delivery of any of the classes in question. It simply provides another option to instructors and students who prefer to teach and learn through this methodology.

History

As stated above, current changes in California's Fire Service Training and Education are contained in "Blueprint 20\20": The California Fire Service Training and Education Strategic Plan. It is within this framework, that the internet/hybrid delivery of CFSTES Fire Officer Classes was Beta Tested.

At the STEAC Meeting on March 24, 2006, a proposal was made to investigate the feasibility of presenting some of the classes, or portions of the classes, in the Fire Officer Series, in a distance learning format.

An Ad-hoc Committee of STEAC members was appointed, with David Senior as the Chair, joined by Dan Coffman, Mary Jennings and Mark Romer. This Committee was expanded to include additional members from the Training Officers Rich Cabral, Mike Jennings and Tom Pambianco.

David Senior initially sent out a survey to all instructors of the Fire Officer classes with the course outlines and the following questions:

- Does the course outline meet the needs of the fire service today?
- What changes, if any, would you like to see in the course outline and why?
- Have you ever taken a course online?
- Have you ever taught a course online?
- Based on your experience teaching this course, how much of this course could be taught online? Why?
- How much MUST be taught in the classroom, face – to – face? Why?

While the response was smaller than desired, sixty respondents, the insights provided were useful.

The Committee then took all the lesson plans, sought additional input from members of the various stakeholders, met twice, in Sacramento and Fresno, to discuss the various comments and review each class outline to determine which learning domains could be taught in a distance learning format, and those which must be taught in the classroom.

The Committee brought its findings and recommendations to the January 19, 2007 STEAC meeting. STEAC approved the concept of teaching the classes or portion of the classes in the Fire Officer Series on-line and authorized the Fire Technology Program at Allan Hancock College, to conduct a Beta Test of the classes over a period of a year and bring the findings back to STEAC.

Instructors were selected and training provided on the Blackboard Learning Platform so course development could be completed and classes held from June 2007 through July 2008. All of the classes in the Fire Officer Series were taught with the exception of I-300: Intermediate ICS, which has not been approved by the National Wildfire Coordinating Group (NWCG) and Fire Investigation 1A: Fire Origin & Cause Determination, which was cancelled late due to an emergency that prevented the instructor from teaching the class. The intent was to teach each class at least twice.

A breakdown on internet and classroom hours for each class, as well as the instructors for each class, is contained in the Table below. A detailed breakdown of the learning domains authorized for on-line instruction in each class is provided in the appendices.

Class	Instructor	Classroom	Internet
<i>I-300: Intermediate ICS</i>	<i>Not Taught</i>	<i>Not Online</i>	<i>Not Online</i>
Fire Command 1A: Command Principles for Company Officers	Kevin Taylor	16	24
Fire Command 1B: Incident Management for Co. Officers	Kevin Taylor	14	26
Fire Command 1C: I-Zone Firefighting for Company Officers	Dennis Childress	10.5	29.5
Fire Instructor 1A: Instructional Techniques, Part 1	Natalie Hannum	24	16
Fire Instructor 1B: Instructional Techniques, Part 2	Natalie Hannum	20	20
<i>Fire Investigation 1A: Fire Origin & Cause Determination</i>	<i>Not Taught</i>	<i>14</i>	<i>26</i>
Fire Management 1: Management\Supervision for Co. Officers	Dan Coffman	8	32
Fire Prevention 1A: Intro to the California Fire Code, Part 1	Tim Capehart	0	40
Fire Prevention 1B: Intro to the California Fire Code, Part 2	Tim Capehart	0	40

On completion of each class, instructors sought student input through a questionnaire on a variety of topics related to the online\hybrid delivery of the Fire Officer classes. Student feedback, instructor's finding and input from numerous fire service sources to committee members, prior to, during and after completion of the Beta Test provided the committee perspective for their findings, conclusions and recommendations in this report.

With significant interest in the beta test and the possibility of providing CFSTES classes in an internet/hybrid fashion, Chief Richwine and others encountered numerous inquiries. In addition to other outreach, in an effort to provide information to and elicit input from the Fire Service and others, an article on the Beta Test was published in the April 2008 issue of the "California Fire Service" magazine with a set of "Frequently Asked Questions". See Appendix B.

On August 5, 2008, the Ad-Hoc Committee re-convened in a conference call, to discuss the findings and to make the recommendations found in this report.

To provide a succinct recap of the instructor and students observations and recommendations, instructors were asked to answer questions as follows:

- Number of Students enrolled and that passed and failed?
- What, if any of the learning domains, would you recommend be changed in the delivery method? Give rationale.
- What recommendations would you make regarding the text (s) for this class? Give rationale.
- What other changes would you recommend in the delivery of this Online\Hybrid class? Give rationale.
- Other Observations or Comments

The following documents provide input to the above questions by the instructors for each of the classes taught.

Class Taught:	<i>Fire Command 1A – Kevin Taylor</i>				
Number of Students:	101	Passed	94	Failed	7
Question # 1	What, if any of the learning domains, would you recommend be changed in the delivery method? Give rationale.				
Answer # 1	Current distribution of 24 hours online and 16 hours in the classroom is appropriate given entry-level company officer command level of this course.				
Question # 2	What recommendations would you make regarding the text (s) for this class? Give rationale.				
Answer # 2	Current text is outdated and should be updated or dropped in favor of commercially available products.				
Question # 3	What other changes would you recommend in the delivery of this Online\Hybrid class? Give rationale.				
Answer # 3	None.				
Other Observations or Comments	<i>Of the 101 students, only 7 failed the course. All course failures were attributed to not following the college drop policy. No students that actually attended online and in person failed.</i>				
Class Taught:	<i>Fire Command 1B – Kevin Taylor</i>				
Number of Students:	76	Passed	72	Failed	4
Question # 1	What, if any of the learning domains, would you recommend be changed in the delivery method? Give rationale.				
Answer # 1	Scenario based training for Fire Command 1B (MCI, Wildland and Hazardous Materials) could be reduced from 12 hours to 8 hours given scenarios utilized in the online portion.				
Question # 2	What recommendations would you make regarding the text (s) for this class? Give rationale.				
Answer # 2	Current text is outdated and should be updated or dropped in favor of commercially available products.				
Question # 3	What other changes would you recommend in the delivery of this Online\Hybrid class? Give rationale.				
Answer # 3	None.				
Other Observations or Comments	<i>Of the 76 students, only 4 failed the course. All course failures were attributed to not following the college drop policy. No students that actually attended online and in person failed.</i>				
Class Taught:	<i>Three sessions of Command 1C - Dennis Childress</i>				
Number of Students:	59	Passed 32		Failed 29	
Question # 1	What, if any of the learning domains, would you recommend be changed in the delivery method? Give rationale.				
Answer # 1	None. The class went smoothly and we all learned a lot.				
Question # 2	What recommendations would you make regarding the text (s) for this class? Give rationale				
Answer # 2	None Keep the current Student Manual				
Question # 3	What other changes would you recommend in the delivery of this Online\Hybrid class? Give rationale				
Answer # 3	Make sure the classroom portion is kept in and maybe increased to 16 hrs.				
Other Observations or Comments	<i>Very interesting how many signed up and never participated. I actually had only 2 course failures but counted all who didn't finish as also failing to get such a high number.</i>				

Class Taught:	Management 1 Instructor - Dan Coffman				
Number of Students:	136	Passed	52 57	Failed	13 14
Question # 1	What, if any of the learning domains, would you recommend be changed in the delivery method? Give rationale.				
Answer # 1	Almost all of the students and the instructor feel that all learning domains now required to be taught in the classroom can be taught on-line in a threaded discussion or other method.				
Question # 2	What recommendations would you make regarding the text (s) for this class? Give rationale.				
Answer # 2	Almost all of the students and the instructor feel that the IFSTA Fire and Emergency Services Officer 4 th edition book should be used exclusively and that the CFSTES Student Manual be eliminated, except for those portions that are uniquely required by the State Board of Fire Services. The Student manual is out of date. It is based on the 3 rd edition of the IFSTA Fire Company Officer book and duplicates many of the materials covered in the new edition of the book.				
Question # 3	What other changes would you recommend in the delivery of this Online\Hybrid class? Give rationale.				
Answer # 3	Most of the students and the instructor feel that the class should be longer than the three weeks it was delivered. I would recommend that it be 8 weeks to allow for late enrollment, to allow students to get up to speed and to provide a richer learning experience.				
Other Observations or Comments	All of the students and myself, as a CFSTES instructor, embraced the concept of distance and hybrid delivery and learning for all SFM classes.				
Class Taught:	Fire Prevention 1-A 1st 1-A 2nd & 1-B – Tim Capehart				
Number of Students:	122	Passed - 93		Failed - 29	
Question # 1	What, if any of the learning domains, would you recommend be changed in the delivery method? Give rationale.				
Answer # 1	None, I mixed in video streaming, which helped to get points across in throughout the class.				
Question # 2	What recommendations would you make regarding the text (s) for this class? Give rationale.				
Answer # 2	IFSTA is coming out with the 7 th ed. of Fire Inspection & Code enforcement this should be adopted when it becomes available. I had to update code references in the SFM student supplement; it works with the code changes reflecting 2007 codes.				
Question # 3	What other changes would you recommend in the delivery of this Online\Hybrid class? Give rationale.				
Answer # 3	No additional changes, this class works as a total online and not as a hybrid. Minor problems were identified and worked out after the first class the second class went smoother. The feedback I received was all positive and the class was well received. It is my opinion and belief the pilot program has shown that offering Prevention 1-A & 1-B online does work and fills a unique need in the fire service.				
Other Observations or Comments	<i>Listen to your customers the firefighters, who desire that these online classes become permanent.</i>				

Class Taught:	Instructor Training 1A – Natalie Hannum				
Number of Students: 7		Passed 6		Failed 1	
Question # 1	What, if any of the learning domains, would you recommend be changed in the delivery method? Give rationale.				
Answer # 1	The learning domains should remain the same.				
Question # 2	What recommendations would you make regarding the text (s) for this class? Give rationale.				
Answer # 2	The 7 th edition of Fire and Emergency Services is what is currently available. This should be adopted and modifications be made to the curriculum and teaching assignments. The sixth and fifth editions are no longer in print and not available for all students. Because of the significant changes to the text, the student manual becomes an even more essential resource and needs to be update.				
Question # 3	What other changes would you recommend in the delivery of this Online\Hybrid class? Give rationale.				
Answer # 3	<p>Offer the course in not less than five weeks and no more than eight weeks. Instructor is a lot of work for the student and they must be given the time to do their assignments re-write if needed; therefore, the five week minimum. However, I would not go over eight weeks because of poor retention rates of on-line classes. Furthermore, the information can be covered in eight weeks and anything beyond this would be dragging it out.</p> <p>Adopt the quizzes that were provided in the final packet sent to David Senior. They support the material more adequately and prepare the student for the SFM certifying exam.</p> <p>Space the assignments more evenly (than did) and give assignment window for the students to turn them in. I did not do this and regretted it. It was hard to keep them on-track and created a lot of work for me (this was result of my rookie performance as an on-line instructor).</p>				
Other Observations or Comments	I would not recommend teaching on-line if you haven't taught the subject face-to-face. On-line is a very different arena and you must know your subject inside out to be able to communicate it effectively through electronic methods. The time for Instructor 1A should remain 16 on-line and 24 in-class; however, I would build an eight hour session toward the front or middle of the course. This would allow for the "short" presentation (you do two in 1A- a short presentation of 5 minutes and a long presentation/teach demonstration of 15-20 minutes) and some course direction and clarification before moving forward with the curriculum. This would have been helpful to the students to ensure they were on the right track, and helpful to the instructors once some of this was difficult to communicate effectively on-line.				
Class Taught:	Instructor Training 1B – Natalie Hannum				
Number of Students:	22 start 10 end	Passed 9	Cert Exams have not been graded yet	Failed 4	Cert Exams have not been graded yet
Question # 1	What, if any of the learning domains, would you recommend be changed in the delivery method? Give rationale.				
Answer # 1	The learning domains should remain the same.				
Question # 2	What recommendations would you make regarding the text (s) for this class? Give rationale.				
Answer # 2	The 7 th edition of Fire and Emergency Services is what is currently available. This should be adopted and modifications be made to the curriculum and teaching assignments. The sixth and fifth editions are no longer in print and not available for all students. Because of the significant changes to the text, the student manual becomes an even more essential resource and needs to be updated.				
Question # 3	What other changes would you recommend in the delivery of this Online\Hybrid class? Give rationale.				

Answer # 3	Offer the course in not less than five weeks and no more than eight weeks. Instructor is a lot of work for the student and they must be given the time to do their assignments re-write if needed; therefore, the five week minimum. However, I would not go over eight weeks because of poor retention rates of on-line classes. Furthermore, the information can be covered in eight weeks and anything beyond this would be dragging it out.
Other Observations or Comments	I would not recommend teaching on-line if you haven't taught the subject face-to-face. On-line is a very different arena and you must know your subject inside out to be able to communicate it effectively through electronic methods. The time frame of 20 hours on-line and 20 hours in-class for Instructor 1B should remain the same. The length of the in-class session is determined by the total number of students, since student are required to perform teaching demonstrations during the in-class sessions. The 20 hours of in-class is designed for the maximum student enrollment, which 25 per SFM guidelines.

While each class was unique in itself and reflected differing conclusions, the instructors and students agree that the Internet/hybrid delivery of the Fire Officer classes was something that should be approved.

In addition, unlike purely classroom presented classes, a higher number of students enrolled in internet/hybrid classes fail to finish classes primarily due to poor time management and unfamiliarity with on-line learning. This is consistent with internet/hybrid classes taught at community colleges, and as was demonstrated in these classes, students that complete the class, pass the class and the Certification Exam for that class.

Due to the class size limit set by State Fire Training (SFT) and the dropout rate after the start of the classes, many students, who want to enroll in the CFSTES classes, are precluded from doing so and the instructors recommend that CFSTES classes that are taught in an online\hybrid format allow a higher number of students to enroll than the SFT limit based on an agreed upon number between SFT and the institution where taught.

This happened because students sign up for classes at the college but do not sign the SFT paperwork until the in-class sessions so if they fall behind and drop the college class they do not show up anywhere in the SFT system. This is really not a problem for the colleges or SFT but is a problem for students waiting to take the class because by the time the in-class sessions start there have been several drops resulting in many empty seats in the classroom.

In their on-line discussions prior to and in their August 5th conference call, the Committee requested that the instructors or SFT provide answers to the following questions:

- Provide a comparison of student scores on the SFM certification exams (perhaps an average score from 3 or 4 of your regular classes and the average score from the on-line class).
- Did anyone have to retake the certification exam, and if so how was that accomplished?
- Were there any issues with the students completing any of the required assignments of the SFM curriculum?
- Were there any issues regarding group dynamics when the classes convened for presentations or group exercises?
- Did any SFM course restrictions cause any issues (Instructor\Student ratios or maximum class sizes, for example)

Responses to these questions, to date, have only been received from some of the instructors and classes as follows.

Class Taught:	<i>Fire Command 1A and Command 1B– Kevin Taylor</i>
Question # 1	Provide a comparison of student scores on the SFM certification exams (perhaps an average score from 3 or 4 of your regular classes and the average score from the on-line class).
Answer # 1	I don't have the results for the courses I've taught but they should be readily available at State Fire Training as you suggest.
Question # 2	Did anyone have to retake the certification exam, and if so how was that accomplished?
Answer # 2	All students passed the examination; no retakes required.
Question # 3	Were there any issues with the students completing any of the required assignments of the SFM curriculum?
Answer # 3	Occasionally students would not get their work done on time; however, all students in the courses completed all required assignments prior to a drop dead date established in each session.
Question # 4	Were there any issues regarding group dynamics when the classes convened for presentations or group exercises?
Answer # 4	Quite the opposite; group dynamics were enhanced in the on-line courses as the students represented a bigger cross-section of the California fire service as compared to local courses. This encouraged dialogue throughout the classroom sessions.
Question # 5	Did any SFM course restrictions cause any issues (Instructor\Student ratios or maximum class sizes, for example)
Answer # 5	No
Class Taught:	<i>Three sessions of Command 1C - Dennis Childress</i>
Question # 1	Provide a comparison of student scores on the SFM certification exams (perhaps an average score from 3 or 4 of your regular classes and the average score from the on-line class).
Answer # 1	I don't see why not. I think it would give a good view of how much the student is learning in each type of delivery. I was never given the state scores for my on-line classes so couldn't do it myself but it's a good idea.
Question # 2	Did anyone have to retake the certification exam, and if so how was that accomplished?
Answer # 2	I've had one failure due to poor scores. All of my other failures were due to lack of course participation. That single failure was done by retake luckily by myself as the student happened to live in my area. We met at another class I was teaching and I gave him the final. That being said I would offer one more solution to this question. I recently taught a Command 2E in Riverside and had people from all over attend. One guy from Northern CA failed the course. I had a friend in Northern CA who teaches this course proctor a retake for him. That could work for our on-line classes just as well.
Question # 3	Were there any issues with the students completing any of the required assignments of the SFM curriculum?
Answer # 3	This was big one for me. The non-attendance rate was high in my classes. Those people failed the course at the college. Not having signed the State Roster, they did not get a failure there.
Question # 4	Were there any issues regarding group dynamics when the classes convened for presentations or group exercises?
Answer # 4	Not in my courses.
Question # 5	Did any SFM course restrictions cause any issues (Instructor\Student ratios or maximum class sizes, for example)
Answer # 5	Yes and no. I agree that we cannot exceed the State recommended ratios, however the non-participating rate was high in my classes and students really wanting the course were left out as they had not registered in time. The course runs such a short

	time that we were not able to move the waiting list people up in time to participate. That being said, we have to keep the recommended ratios, as we do meet with the classes and need the size restricted for better use of the curriculum.
Class Taught:	Management 1 Instructor - Dan Coffman
Question # 1	Provide a comparison of student scores on the SFM certification exams (perhaps an average score from 3 or 4 of your regular classes and the average score from the on-line class).
Answer # 1	You may do a comparison of scores for previous SFM classes, however, the final\certification exam for these classes were taken on-line and questions taken from the text books rather than the printed certification exam which is based on out of date textbooks.
Question # 2	Did anyone have to retake the certification exam, and if so how was that accomplished?
Answer # 2	The final\certification exams for these classes were taken on-line and questions taken from the text books rather than the printed certification exam which is based on out of date textbooks. I did have one retake due to a technical\computer problem in the first set of classes taught. The original final\certification exam never registered a score, it was reset and the student was able to take the final\cert again. Note: Each time an on-line exam is opened, many of the questions and order of the questions are different due to a large database of questions and the randomizing feature on Blackboard.
Question # 3	Were there any issues with the students completing any of the required assignments of the SFM curriculum?
Answer # 3	Students who were motivated did not have problems completing the assignments. Those who procrastinated were the students who encountered difficulty and did not complete the course.
Question # 4	Were there any issues regarding group dynamics when the classes convened for presentations or group exercises?
Answer # 4	None, however, a near unanimous recommendation by students and the instructor found that the classroom required exercises could be appropriately completed on-line through threaded discussions and through other on-line methods eliminating the required classroom session.
Question # 5	Did any SFM course restrictions cause any issues (Instructor\Student ratios or maximum class sizes, for example)
Answer # 5	Due to the class size limit set by State Fire Training (SFT) and the dropout rate after the start of the classes, many students, who want to enroll in the CFSTES classes, are precluded from doing so. I recommend that CFSTES classes that are taught in an online\hybrid format allow a higher number of students to enroll than the SFT limit based on an agreed upon number between SFT and the institution where taught.
Class Taught:	Fire Prevention 1-A 1st 1-A 2nd & 1-B – Tim Capehart
Question # 1	Provide a comparison of student scores on the SFM certification exams (perhaps an average score from 3 or 4 of your regular classes and the average score from the on-line class).
Answer # 1	
Question # 2	Did anyone have to retake the certification exam, and if so how was that accomplished?
Answer # 2	2 retakes were accomplished online.
Question # 3	Were there any issues with the students completing any of the required assignments of the SFM curriculum?
Answer # 3	No issues with SFT curriculum. I also require a term project and some students needed reminding of the deadlines.
Question # 4	Were there any issues regarding group dynamics when the classes convened for presentations or group exercises?

Answer # 4	These were taught completely online.
Question # 5	Did any SFM course restrictions cause any issues (Instructor\Student ratios or maximum class sizes, for example)
Answer # 5	None
Class Taught:	<i>Instructor Training 1A – Natalie Hannum</i>
Question # 1	Provide a comparison of student scores on the SFM certification exams (perhaps an average score from 3 or 4 of your regular classes and the average score from the on-line class).
Answer # 1	Yes you may do a comparison of scores of the SFM certifying exam.
Question # 2	Did anyone have to retake the certification exam, and if so how was that accomplished?
Answer # 2	Yes- I had one re-take for Instructor 1A. The student made arrangements to travel from Goleta to Riverside to take the exam.
Question # 3	Were there any issues with the students completing any of the required assignments of the SFM curriculum?
Answer # 3	The only issues were outdated texts. With teaching on-line, students purchased their text via the internet or available bookstores and therefore could only get the most current edition (7th) of the Fire and Emergency Services Instructor. This edition is comprehensive and complete, but does not match up to the materials and test. Students who were pro-active and motivated did not have problems completing the assignments. Those who procrastinated were the students who encountered difficulty.
Question # 4	Were there any issues regarding group dynamics when the classes convened for presentations or group exercises?
Answer # 4	The group dynamics were interactive and professional. This requires adequate ice-breakers and introductory group activities that transition the students from their "cyber-participation" to their face-to-face contact.
Question # 5	Did any SFM course restrictions cause any issues (Instructor\Student ratios or maximum class sizes, for example)
Answer # 5	My only recommendation regarding class size and SFM restrictions is to increase the number of participants initially. The Instructor series caps at 25 students per class because of the time needed to perform teaching demonstrations. Due to the high attrition rate of on-line courses, both courses ended with less than ten people for the face-to-face sessions. Enrollment management can be done by over-enrolling above the 25 student limit and requiring early participation to "weed out" non-participants. This early participation requirement is how I approached 1B and quickly whittled the roster down to my active students, which went from 21 to 14 in the first two weeks.
Class Taught:	<i>Instructor Training 1B – Natalie Hannum</i>
Question # 1	Provide a comparison of student scores on the SFM certification exams (perhaps an average score from 3 or 4 of your regular classes and the average score from the on-line class).
Answer # 1	Yes you may do a comparison of scores of the SFM certifying exam.
Question # 2	Did anyone have to retake the certification exam, and if so how was that accomplished?
Answer # 2	It is un-known if there are any re-takes for Instructor 1B since the class just concluded and the exams have not been graded.
Question # 3	Were there any issues with the students completing any of the required assignments of the SFM curriculum?
Answer # 3	The only issues were outdated texts. With teaching on-line, students purchased their text via the internet or available bookstores and therefore could only get the most current edition (7th) of the Fire and Emergency Services Instructor. This edition is comprehensive and complete, but does not match up to the materials and test. Students who were pro-active and motivated did not have problems completing the assignments. Those who procrastinated were the students who encountered difficulty.
Question # 4	Were there any issues regarding group dynamics when the classes

	convened for presentations or group exercises?
Answer # 4	The group dynamics were interactive and professional. This requires adequate ice-breakers and introductory group activities that transition the students from their "cyber-participation" to their face-to-face contact.
Question # 5	Did any SFM course restrictions cause any issues (Instructor\Student ratios or maximum class sizes, for example)
Answer # 5	My only recommendation regarding class size and SFM restrictions is to increase the number of participants initially. The Instructor series caps at 25 students per class because of the time needed to perform teaching demonstrations. Due to the high attrition rate of on-line courses, both courses ended with less than ten people for the face-to-face sessions. Enrollment management can be done by over-enrolling above the 25 student limit and requiring early participation to "weed out" non-participants. This early participation requirement is how I approached 1B and quickly whittled the roster down to my active students, which went from 21 to 14 in the first two weeks.

Test Score Course Comparison

The comparison of average test scores between Internet/Hybrid and in-class courses is shown in the table below. The table demonstrates that overall the Internet/Hybrid courses have slightly higher test scores than the traditional in-class sessions.

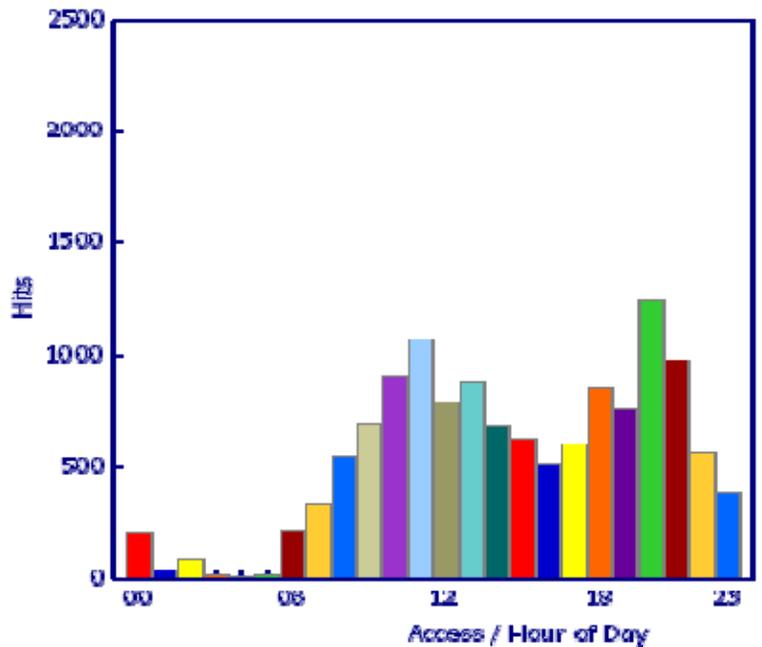
One reason for this is that unprepared students do not attend the final days of the class, only students that have finished their homework assignments come to the in-class sessions. This means that these unprepared students do not sign up for the SFT classes which results in a lower number of students in the class and higher average test scores.

Course	Number class/test records	Average Score	Maximum Score	Instructor
Fire Management 1 (6 sessions)	109	83.9 or 83.9%	100.00	D. Coffman
Fire Management 1 Jan 07 – June 08	1459	38.15 or 76.3%	50.00	
Fire Command 1a (3 sessions)	89	45.54	50.00	K. Taylor
Fire Command Jan 07 – June 08	1866	40.74	-	
Fire Command 1b (2 Sessions)	65	43.91	50.00	K. Taylor
Fire Command Jan 07- June 08	1344	42.63	-	
Fire Command 1c (3 sessions)	32	38.05	50.00	D. Childress
Fire Command 1C Jan 07 – June 08	1362	38.95	-	
Instructor Training 1a	7	43.86	50.00	Natalie Hannum
Instructor 1A Jan 07 – June 08	1909	36.81		

The information on the next two pages shows when students logged onto the course and the total number of times students logged on. It is interesting to see how students access the course at all hours of the day.

Command 1A

Hour of Day	Hits	Percent
00	200	1.55%
01	36	0.28%
02	85	0.66%
03	15	0.12%
04	5	0.04%
05	15	0.12%
06	208	1.61%
07	337	2.61%
08	541	4.18%
09	680	5.26%
10	903	6.98%
11	1064	8.23%
12	789	6.1%
13	875	6.76%
14	675	5.22%
15	621	4.8%
16	513	3.97%
17	601	4.65%
18	854	6.6%
19	761	5.88%
20	1242	9.6%
21	976	7.54%
22	559	4.32%
23	381	2.95%
Total	12936	100%



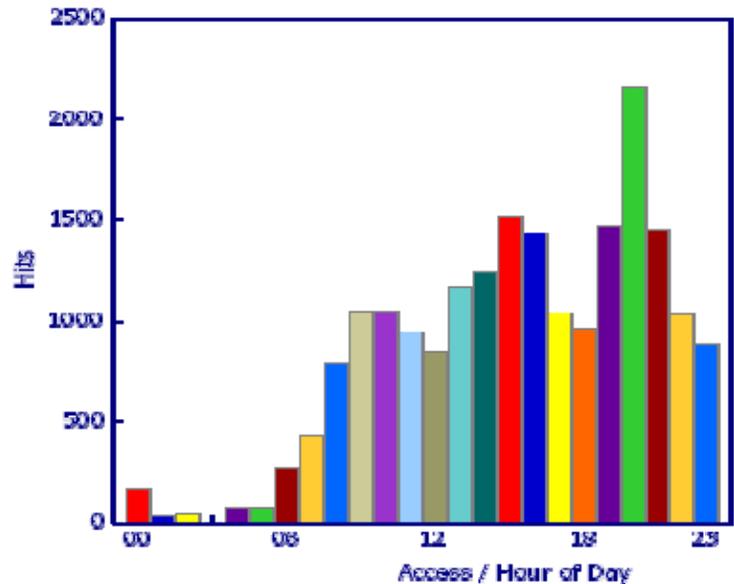
“I really liked the online format! It gave me the time to take the class I would not have been able to take with my work schedule. The instructor did a great job with the online portion of the class and was available anytime I needed to communicate with him. The online instruction led right into the classroom portion, it worked very well.

I hope to take more online classes when they are offered.”

Timothy Quickel, Cal Fire Fresno

Fire Prevention 1A

Hour of Day	Hits	Percent
00	158	0.79%
01	34	0.17%
02	41	0.2%
03	1	0%
04	71	0.35%
05	72	0.36%
06	272	1.35%
07	427	2.13%
08	785	3.91%
09	1045	5.2%
10	1041	5.18%
11	943	4.69%
12	838	4.17%
13	1169	5.82%
14	1246	6.2%
15	1522	7.58%
16	1437	7.15%
17	1034	5.15%
18	962	4.79%
19	1474	7.34%
20	2152	10.71%
21	1450	7.22%
22	1031	5.13%
23	884	4.4%
Total	20089	100%



“This class gave me the flexibility to do my course work at the time I had available. This let me spend more time studying for the class in a time when I could concentrate on the class without any distractions whether at home or in Catalina. I did not expect this class to be harder than a class taught in the classroom but it was and I learned a lot. I hope to take more online classes.”

Rick Bertram, Santa Maria City Fire Department

Conclusions and Recommendations

While a call for specific modifications can be found in each class, a general consensus in the input received from all sources, particularly from the instructors and students, and supported by the Ad-Hoc Committee indicate the following:

Recommendation # 1: The courses residing in the CFSTES Fire Officer Series of classes can be successfully delivered on the internet and in an Internet/Hybrid fashion.

The recommendation that the Fire Officer classes be taught in an internet/hybrid fashion as an option to traditional classroom delivery in no way mandates this delivery method and is not designed to replace the classroom delivery of any of the Level I classes.

Recommendation # 2: As the Company Officer Certification Program is being redesigned to meet the new NFPA 1021 and the needs of the California Fire Service, we recommend that the curriculum committees design the courses with the Internet/Hybrid course option in mind. Course outlines should clearly identify learning domains that may be taught online and learning domains that must be taught in the classroom.

Recommendation # 3: Each curriculum development committee should have at least one person with online instructional experience to assist in identifying learning domains suitable for Web Based Instruction.

Recommendation # 4: Explore the use of Standardized "off the shelf" textbooks and other courseware to be used for these CFSTES classes. Exams would be tied to these textbooks and courseware.

Recommendation # 5: The generic courses developed by the volunteer instructors for this beta test be given to SFT for duplication and made available for instructors interested in teaching online courses.

Items needing further consideration #1: A number of students enrolled in internet/hybrid classes do not finish classes primarily due to poor time management and unfamiliarity with on-line learning.

If the maximum number of students for a level 1 class is forty and the college class fills, by the time the students come to the classroom to sign up for the SFM course only 25 out of the 40 have completed sufficient coursework to finish the class. This leaves a waiting list of students not able to get into the class at the beginning of the course and many empty seats in the classroom.

Due to the dropout rate after the start of the college classes, and the class size limit set by State Fire Training (SFT), many students, who want to enroll in the CFSTES classes, are precluded from enrolling.

The committee would like further consideration that when CFSTES classes are taught in an online\hybrid format SFT allow a higher number of students to enroll in the college class than the SFT limit. We further believe in-class numbers should remain consistent with SFT maximums. This means when Internet/Hybrid classes meet in the classroom SFT maximums will be enforced.

Items needing further consideration # 2: The Management 1 class was taught six times during the beta test. The instructor and students have recommended the present course be taught completely online without the 8 hour in-class session required in the beta test. They feel this is a purely an academic course. The committee has some reservations about this but feel further consideration should be made.

Appendix A

CFSTES Fire Officer Classes Classroom\Internet Matrix

I-300: INTERMEDIATE ICS (1994) FSTEP					
	Course Content	Time	C	D	Rationale
1	NWCG NFES 2452 Module 7	5			
2	NWCG NFES 2454 Module 8	5		X	
3	NWCG NFES 2456 Module 9	4		X	
4	NWCG NFES 2458 Module 10	4			
5	NWCG NFES 2460 Module 11	8		X	
C: Classroom		27:00 Total Hours			
D: Distance		This class has not been approved for internet delivery			
FIRE COMMAND 1A: COMMAND PRINCIPLES FOR COMPANY OFFICERS (1995) CFSTES					
	Course Content	Time	C	D	Rationale
1	Orientation and Administration	1:30		X	
2	The Learning Process	0:15		X	
3	Fire Command Overview	0:30		X	
4	Fire Chemistry	0:30		X	
5	Fire Phases	0:45		X	
6	Effects of Time	0:30		X	
7	Fire Behavior within Structures	0:30		X	
8	Extinguishing Agents	0:30		X	
9	Water Application	0:45		X	
10	Protection Systems	1:00		X	
11	Building Construction	0:45		X	
12	Occupancy Types	0:15		X	
13	Pre-Fire Planning	0:30		X	
14	Fire Data	0:15		X	
15	Local Resources	0:15		X	
16	State and Federal Resources	0:15		X	
17	Fireground Safety	0:30		X	
18	Size-up	1:00		X	
19	Strategy, Tactics, and Methods	0:30		X	
20	Report on Conditions	0:15		X	
21	Role of the First-In Officer	0:45		X	
22	Company Operations	0:15		X	
23	Determining Resources Requirements	0:30		X	
24	Apparatus Placement	0:30		X	
25	Initial Fire Attack	0:30		X	
26	Management Overview	0:30		X	
27	The Fire Service	0:30		X	
28	The Company Officer	0:30		X	
29	Pressure of Command	0:45		X	
30	Performance Standards	1:15		X	
31	Levels of Emergency	0:15		X	
32	Decision Making	1:00		X	
33	Communications	0:30		X	
34	Management by Objectives (MBO)	0:30		X	
35	Divisions of Fire Fighting	0:45		X	
36	Command/Control Components	0:45		X	
37	Simulation Overview	1:00	X		
38	Skull Session Exercises	3:00	X		
39	Simulator Use	12:00	X		
40	Daily Reviews	2:00		X	
41	Course Review and Certification Exam	1:00		X	
C: Classroom 16 hours		40:00 Total Hours			
D: Distance 24 hours					

FIRE COMMAND 1B: INCIDENT MANAGEMENT FOR COMPANY OFFICERS (1998) CFSTES					
	Course Content	Time	C	D	Rationale
Unit 1: Course Overview and ICS Review					
1	Orientation and Administration	1:00		X	
2	Course Overview	1:00		X	
3	Fire Command 1A Review	2:00		X	
4	Concepts of ICS Organization	3:00		X	
Unit 2: Multi-Casualty Incidents					
1	Components of Triage and START	2:00		X	
2	ICS and EMS Multi-Casualty	1:30		X	
3	ICS-MCI Implementation Overview	1:30		X	
Unit 3: Hazardous Materials Incidents					
1	Hazardous Materials Overview	0:30		X	
2	Properties of Hazardous Materials	1:00		X	
3	Toxicology	0:30		X	
4	Site Control/Work Zones	0:30		X	
5	Evacuation Considerations	1:00		X	
6	Decision-Making Process	0:30		X	
7	ICS & The Hazardous Materials Incident	1:30		X	
Unit 4: Wildland Fire Incidents					
1	Factors Affecting Wildland Fires	2:00		X	
2	Defensive and Offensive Strategies in Wildland Fire Fighting	0:30		X	
3	Use of Direct and Indirect Attack Methods on Wildland Fires	1:00		X	
4	Structure Protection and Triage in Wildland Fires	2:00		X	
5	Wildland Fire Safety	1:00		X	
6	Simulation Exercises	14:00	X		
7	Course Review and Certification Exam	2:00		X	
C: Classroom 14 hours		40:00 Total Hours			
D: Distance 26 hours					

FIRE COMMAND 1C: I-ZONE FIRE FIGHTING FOR COMPANY OFFICERS (2004) CFSTES					
	Course Content	Time	C	D	Rationale
Unit 1: Introduction					
1-1	Orientation and Administration	1:00		X	
1-2	Authority	0:30		X	
Unit 2: Fire Environment					
2-1	Fire Behavior and Weather	2:30		X	
2-2	Fire Prediction Systems	1:00		X	
Unit 3: ICS					
3-1	Review of the Incident Command System	1:00		X	
3-2	Duties and Responsibilities of the Company Officer	2:00		X	
3-3	Incident Action Plan	1:30		X	
Unit 4: I-Zone Operation Principles					
4-1	Resources	3:00		X	
4-2	Communications	1:30		X	
4-3	Strategy and Tactics	1:00		X	
4-4	I-Zone Size-up	1:00	X		
4-5	Report on Conditions	2:30		X	
Unit 5: Safety and Survival					
5-1	Introduction to Safety and Survival in the I-Zone	0:45		X	
5-2	The Risk Management Process	1:00		X	
5-3	Entrapment Avoidance	0:45		X	
5-4	Last Resort Survival	1:00		X	
5-5	Properly Refusing Risk	0:30		X	
5-6	Fire Fighter Fatality and Near-miss Case Studies	4:30	X		
Unit 6: I-Zone Incident Operations					
6-1	Pre-incident Operations	2:00		X	
6-2	Incident Operations	5:00	X		
6-3	Post-incident Operations	1:00		X	
	Unit Tests	3:00		X	
	Course Review and Certification Exam	2:00		X	
C: Classroom 10.5 hours		40:00 Total Hours			
D: Distance 29.5 hours					

FIRE INSTRUCTOR 1A: INSTRUCTIONAL TECHNIQUES, PART 1 (1996) CFSTES					
	Course Content	Time	C	D	Rationale
1	Orientation and Administrative Details	1:00		X	
2	Reasons for Instructor 1A	1:00		X	
3	Utilization of the Occupational Analysis	2:00		X	
4	Development of a Course Outline	2:00	1	1	Prep work online
5	Procedures Used for the Completion of a Job Breakdown	2:00	1	1	Prep work online
6	Identification of Instructional Terms	1:00		X	
7	Concepts of Learning	1:00		X	
8	Introduction to Levels of Learning	1:00		X	
9	Construction of Behavioral Objectives	2:00	X		
10	Manipulative Lesson Planning	3:00	X		
11	Qualities of a Good Instructor	1:00		X	
12	Introduction to the Psychology of Learning	1:00		X	
13	Methods Used to Evaluate Teaching Demonstrations	2:00	X		
14	Teaching Demonstrations	15:00	X		
15	The Impact of EEO and AA Programs	1:00		X	
16	The Role and Responsibilities of the Instructor	1:00		X	
17	Evaluation of Course Effectiveness	2:00		X	
18	Course Review and Certification Exam	1:00		X	
C: Classroom 24 hours		40:00 Total Hours			
D: Distance 16 hours					
FIRE INSTRUCTOR 1B: INSTRUCTIONAL TECHNIQUES, PART 2 (1997) CFSTES					
	Course Content	Time	C	D	Rationale
1	Orientation and Administration	0:30		X	
2	Reasons for Fire Instructor 1B	0:30		X	
3	Course Outline Development	1:00		X	
4	Technical Lesson Plan Components	1:00		X	
5	Levels of Instruction	1:00		X	
6	Student Behavioral Objectives	2:00	X		
7	Technical Lesson Plan Development	1:30	X		
8	Introduction to Instructional Aids	1:00		X	
9	Utilization of Instructional Aids	1:30		X	
10	Introduction to Information and Activity Sheets	1:00		X	
11	Managing the Classroom Environment	0:30		X	
12	Student Application Techniques	1:30		X	
13	Methods of Technical Lesson Plan Delivery	0:30		X	
14	Introduction to Evaluation and Testing	1:00		X	
15	Utilization of Evaluation Tools	1:00		X	
16	Introduction to Test Construction	1:30		X	
17	Methods Used to Evaluate Teaching Demonstrations	0:30	X		
18	Teaching Demonstrations	16:00	X		
19	Administrative Details (Quizzes, Daily Review, Student Assistance)	5:00		X	
20	Course Review and Certification Exam	1:30		X	
C: Classroom 20 hours		40:00 Total Hours			
D: Distance 20 hours					

FIRE INVESTIGATION 1A: FIRE ORIGIN & CAUSE DETERMINATION (1996) CFSTES					
	Course Content	Time	C	D	Rationale
1	Orientation and Administration	1:00		X	
2	Introduction to Fire Investigation	1:00		X	
3	Fire Behavior	4:00		X	
4	Legal Aspects of Fire Investigation	3:00		X	
5	Arson Law	1:00		X	
6	Fire Scene Documentation	1:00		X	
7	Point of Origin Determination	4:00	3	1	Prep work online
8	Accidental Ignition Sources	3:00	2	1	Prep work online
9	Electrical Ignition Sources	2:30	X		
10	Arson Fire Indicators	4:00	3	1	Prep work online
11	Incendiary Devices	1:00		X	
12	Structure Fire Investigation	4:30	3:30	1	Prep work online
13	Vehicle Fire Investigation	2:00		X	
14	Wildland Fire Investigation	4:00		X	
15	Explosions	2:00		X	
16	Course Review and Certification Exam	2:00		X	
C: Classroom 14 hours		40:00 Total Hours			
D: Distance 26 hours					

FIRE MANAGEMENT 1: MANAGEMENT/SUPERVISION FOR COMPANY OFFICERS (2000) CFSTES					
	Course Content	Time	C	D	Rationale
Unit 1 – Introduction					
1-1	Orientation and Administration	1:00		X	
5-1	Introduction to Management & Supervision	1:30		X	
Unit 2 – Supervision					
2-1	Principles of Organizations and Organizational Structure	1:00		X	
2-2	Motivation	2:00		X	
2-3	Delegation	1:00		X	
2-4	Problem Solving/Decision Making	1:30		X	
2-5	Verbal Communication	2:00		X	
2-6	Written Communication	1:00		X	
2-7	Group Dynamics	2:00	X		
2-8	Managing Conflict	1:00	X		
2-9	Performance Evaluations	1:30	X		
2-10	Coaching, Counseling & Progressive Discipline	1:30	X		
2-11	Due Process	1:00		X	
5-2	Grievance Handling	1:00	X		
Unit 3 – Management					
5-3	Internal and External Influences	2:00		X	
3-1	Elements of Management	2:00		X	
3-2	Managing Change	1:00		X	
5-4	Time Management	1:30		X	
Unit 4 – Leadership					
4-1	Basic Views of Leadership	1:00		X	
4-2	Situational Leadership	1:00		X	
5-5	Leadership Qualities and Traits	1:00		X	
Unit 5 – Human Relations					
5-6	Managing The Workplace Environment	2:00	1	1	Prep work online
5-7	Affirmative Action, Equal Employment Opportunity, and ADA	1:30		X	
Unit 6 – Safety and Wellness Programs					
6-1	Safety Management	1:30		X	
6-2	Stress Management and Wellness	1:00		X	
6-3	NFPA 1500 Standard	1:00		X	
Unit 7 – Laws, Standards, and Liability					
6-4	Liability of The Company Officer	1:00		X	
	Quizzes	2:00		X	
	Course Review & Certification Exam	1:30		X	
C: Classroom 8 hours		40:00 Total Hours			
D: Distance 32 hours					

FIRE PREVENTION 1A: INTRODUCTION TO THE CALIFORNIA FIRE CODE (2003) CFSTES					
	Course Content	Time	C	D	Rationale
Unit 1: Responsibility and Authority					
1-1	Orientation and Administration	2:00		X	
1-2	Terminology Relating to Responsibility and Authority	0:30		X	
1-3	Legally Established Responsibilities and Empowerment	1:30		X	
1-4	Legal Responsibilities of The Inspector	2:00		X	
1-5	Understanding, Reading, and Using The California Fire Code	2:00		X	
Unit 2: Occupancy Classification and Types of Construction					
2-1	Terminology Relating to Occupancy Classification and Construction	2:00		X	
2-2	Building Construction Classifications	1:30		X	
2-3	Relationship of Fire Protection to Building Construction & Occupancy	1:00		X	
2-4	Classification of Occupancies	3:00		X	
Unit 3: Egress Requirements					
3-1	Terminology Relating to Egress	1:00		X	
3-2	Determining Adequate Means of Egress	2:00		X	
3-3	Means of Egress Requirements	3:00		X	
3-4	Maintaining The Egress System	1:00		X	
Unit 4: Fire-Resistive Assemblies					
4-1	Terminology Relating to Fire-Resistive Assemblies	0:30		X	
4-2	Types of Classes & Roof Coverings	1:00		X	
4-3	Purpose & Location of Fire Rated Building Construction & Components	2:00		X	
4-4	Fire Doors and Windows	0:30		X	
Unit 5: General Fire Safety Provisions					
5-1	General Fire Safety	1:30		X	
5-2	Fire Safety Requirements for Decorative Materials & Furnishings	1:00		X	
5-3	Fire Drills and Emergency Evacuation Plans	0:30		X	
5-4	High-Piled Storage Requirements	1:00		X	
5-5	Electrical Fire Hazards & Safety Devices	1:00		X	
Unit 6: Principles and Procedures for Fire Inspections					
6-1	Factors Relating to Life Safety	2:00		X	
6-2	Conducting a Life Safety Assessment	1:30		X	
6-3	General Fire Inspection Practices	1:30		X	
6-4	Procedures for Correcting Fire Hazards and Modifications of Requirements	1:30		X	
6-5	Handling Fire Prevention Complaints	0:30		X	
	Course Review & Certification Exam	1:30		X	
C: Classroom 0 hours		40:00 Total Hours			
D: Distance 40 hours					

FIRE PREVENTION 1B: Introduction to the California Fire Code (2003) CFSTES					
	Course Content	Time	C	D	Rationale
Classroom 0 hours					
Online 40 hours					
Unit 1: Introduction to Fire Prevention 1B					
6-6	Orientation and Administration	2:30		X	
Unit 2: Flammable and Combustible Liquids and Gases					
2-1	Flammable and Combustible Liquids Terms and Characteristics	1:00		X	
2-2	Acceptable Containers for Flammable and Combustible Liquids	0:30		X	
2-3	Introduction to Material Safety Data Sheets	0:30		X	
2-4	Inside Storage of Flammable and Combustible Liquids	1:00		X	
2-5	Outside Storage of Flammable and Combustible Liquids	1:00		X	
2-6	Dispensing, Using, Mixing, and Handling Flammable and Combustible Liquids	1:30		X	
2-7	Properties of Compressed, Cryogenic, and Liquefied Gases	1:00		X	
2-8	Fire Hazards of Compressed and Liquefied Gases	1:00		X	
2-9	Procedures for Inspecting Motor Vehicle Dispensing Stations	0:30		X	
2-10	Procedures for Inspecting LPG Occupancies	0:30		X	
2-11	Procedures for Inspecting Flammable Finish Application Occupancies	1:00		X	
2-12	Methods for Controlling Ignition Sources and Explosive Atmospheres	1:00		X	
Unit 3: Hazardous Materials and Explosives					
3-1	Hazardous Materials Terms & Characteristics	1:00		X	
3-2	Sources of Technical Information on Hazardous Materials	0:30		X	
3-3	Regulating Hazardous Materials	0:30		X	
3-4	Introduction to Hazardous Materials Management Plan (HMMP)	0:15		X	
3-5	Storage and Transfer Practices of Compressed and Liquefied Gases	1:00		X	
3-6	Hazards of Explosives and Fireworks	1:00		X	
3-7	Storage of Hazardous Materials	1:00		X	
3-8	NFPA 704 Identification Systems	0:15		X	
3-9	Classification By Hazard	0:30		X	
3-10	Inspection of The Incidental Use, Handling, & Storage of Hazardous Materials	1:00		X	
Unit 4: Portable Fire Extinguishers					
4-1	Portable Fire Extinguisher Classifications	0:00		X	
4-2	Portable Fire Extinguisher Placement	0:30		X	
4-3	Procedures for Inspecting Portable Fire	0:30		X	

	Extinguishers				
Unit 5: Special Fixed Fire Suppression Systems					
5-1	Fixed Fire Protection Systems	1:00		X	
5-2	Procedures for Inspecting Fixed Fire Protection Systems	1:00		X	
5-3	Procedures for Inspecting Commercial Cooking Equipment	0:30		X	
Unit 6: Detection and Alarm Systems					
6-1	Detection and Alarm Systems Terms and Characteristics	0:30		X	
6-2	Fire Alarm System Components	0:45		X	
6-3	Fire Alarm Signaling System Classifications	0:30		X	
6-4	Procedures for Inspecting Fire Alarm Systems	0:30		X	
6-5	CFC Requirements for Fire Alarm Systems	0:15		X	
Unit 7: Water-Based Fire Protection Systems					
7-1	Water-Based Fire Protection Systems Terms and Characteristics	1:00		X	
7-2	Water Supply Systems	0:30		X	
7-3	Sprinkler Systems Benefits, Limitations, and Design	0:30		X	
7-4	Types of Sprinkler Systems	1:00		X	
7-5	Sprinkler System Components	1:00		X	
7-6	Procedures for Inspecting Sprinkler Systems	1:00		X	
7-7	Procedures for Conducting Tests on Wet-Pipe Sprinkler Systems	0:30		X	
7-8	Procedures for Conducting Tests on Dry-Pipe Sprinkler Systems	0:30		X	
7-9	Characteristics of Standpipe Systems	1:00		X	
7-10	Procedures for Inspecting Standpipe Systems	1:00		X	
	Unit Tests	3:00		X	
	Course Review and Certification Exam	2:00		X	
C: Classroom		0 hours	40:00 Total Hours		
D: Distance		40 hours			

Appendix B

Frequently Asked Questions

Updated FAQs September 2008

- **Verification of allotted classroom time and the actual hours students are putting into the on-line classes.**

When the courses are approved by SFT the hours of instruction are identified for online hours and classroom hours. The number of hours each student is online can be tracked by the instructor. What cannot be tracked is how much time off the computer the student is spending on the class. The comments from students have been they spend more time working on the online class than they do in a classroom class.

- **That the college can verify that the instructors are in the locations they say they are-- they didn't send surrogate instructors in their place.**

How is this any different than in a regular classroom class? These are STATE Certified Instructors and they MUST live up to the SFT procedures manual.

- **Instructor training (description) for teaching on-line training.**

Colleges require instructors have training in online course development and delivery using the online platform at the college. While each college has different requirements they all require instructors learn how to use their program for online instruction.

- **What is the procedure for handing off the framework for each course to other campuses?**

The beta test courses were taught using the Blackboard platform. If a different platform is used at the local college then information can be cut and pasted into that platform. If Blackboard is being used then the instructor will just add his/her instructional material to the generic course.

- **Information regarding incompatible platforms (i.e.: Solano College uses E-College)**

There is no standard platform used across the state but each platform can have the information cut out of Blackboard and pasted into their platform

- **Who is authorized to be a host agency?**

While this has not been discussed I would recommend the online option be exclusive to colleges or even Regional Academies. This would be a perk for the Regional academies and help in quality control.

- **Language for the SFT Procedures Manual. Who can and cannot teach on-line classes?**

If the colleges, or even more restrictive, the Regional Academies are authorized to exercise this option then it would be SFM certified instructors that are approved online instructors by their college.

Frequently Asked Questions

Course Management/Development

- **What is the platform? Will the course be converted to other platforms?**

The courses for the beta test will be put into the Blackboard format. In the future, any instructor/college can change the format to fit the platform they are using.

- **Who/what will be the central repository of the developed courses.**

The basic beta test courses will be given to SFT and made available to any instructor that wishes to have a copy.

- **Who determines the locations of the mandatory class sessions?**

The instructor or the host community college or fire department.

- **Who monitors/validates their attendance?**

The on-line attendance is validated by course work completion by set dates, entries in threaded discussions and/or mandatory chat room work. Like any course taken the most important part of the course is student learning. If the student learns the required information, the amount of time they spent is immaterial whether longer or shorter. Most online classes are harder than courses held in a classroom.

- **How can you ensure the person taking the class is really the person who shows up for the classroom sessions?**

As in any course, the person that comes to class in middle of the course is expected to have the knowledge from the online portion of the course. A quiz at the beginning of the first classroom session covering the online material will ensure their knowledge and their ID will validate who they are. This is only one of several ways.

- **How many students will be able to attend online?**

The maximums for the internet/hybrid courses are exactly the same as classroom courses.

Instructors

- **Can other instructors have the course syllabus and related materials to teach a course in their area?**

All the general information that is required to teach the class will be given out in the Blackboard platform. Just as in the information given by SFT for classroom presentations. The instructor will only need to add their own additional course material the same way they do with their classroom courses.

- **How are instructors trained to deliver SFT courses in this format?**

Community colleges have training sessions for their instructors based on the platform they use at that college. Most colleges require instructors to have this instruction before they are allowed to teach an online course. This instructor training is necessary to give the instructor the necessary tools to teach a good online class.

- **Will SFT develop and make available a Train the Trainer for instructors?**

SFT is only allowing these courses to be taught in an online format if the instructor elects to teach in this format. The instructors will be responsible to meet the requirements of their institution or online provider.

Students

- **How are the students able to interact with other students/instructor?**

There are several ways this can happen, team projects, chat rooms, threaded discussions, and if a classroom portion is required, in class.

- **How will they complete assignments?**

They can be emailed or mail a hard copy, instructors choice. Some assignments may require filling out an online form or may answer discussions questions in a chat room. There are several options.

- **Do they use the same materials? How are they graded?**

The materials will be the same as the instructor uses in the classroom. The instructor grades the assignments and re-emails them back to the student or puts them in a self-addressed stamped envelope provided by the student and sends it back to the student.

Beta Test

- **Because this is a beta test, will the students receive credit from Allan Hancock? Will SFT recognize these courses as meeting the requirements for the Fire Officer Certification?**

Yes this is a college class and meets the same student learning outcomes as the classroom course. These Classes are Fully Accredited by the California State Fire Marshal. A CFSTES Course Completion Certificate will be awarded to all students that meet the requirements of each class.

- **How will SFT be able to distinguish between online delivery Beta test and classroom delivery at another host agency?**

The question really is "do the students have the required knowledge, skills and abilities (KSA) at the end of the online\hybrid class?" This is tested by exam at the end of the course. The SFT Fire Officer Certification courses are driven by the students obtaining the KSAs and proving their mastery by an evaluation process. If there are the same exit skill requirements then there should be no need to differentiate between classes.

Evaluation

- **What is the evaluation process for the course, instructor and overall learning experience?**

During the beta test there is an evaluation filled out by each student. The instructor also evaluates the course and effectiveness of the learning domains taught online.

- **Will students be asked for their evaluation/input of the online methodology?**

Yes

- **What evaluation process will measure and compare the success/failure of students compared to standard delivery methods?**

Presently the evaluation is of the course and the applicability of online instruction for the allowed learning domains. What we do know is that online instruction is not for everyone. Students inexperienced with online courses do not realize the difficulty of the course and understand they must be self-disciplined enough to complete projects on time.