

R E P O R T R E S U M E S

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HIGHER EDUCATION IN THE NATION'S FIRE SERVICE, INTERNATIONAL
FIRE ADMINISTRATION INSTITUTE.

STATE UNIV. OF N.Y., ALBANY, CTR.FOR EXEC.DEVELOP.

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EDUCATION, PROGRAM DEVELOPMENT, *CURRICULUM, *DIRECTORIES,
STATE AGENCIES, CURRICULUM DEVELOPMENT,

THIS PUBLICATION IS A REVISED AND UP-DATED EDITION OF A
PUBLICATION, "FIRE SERVICE TECHNOLOGY CURRICULA SURVEY,"
BASED ON A SURVEY CONDUCTED IN 1966 BY THE INTERNATIONAL FIRE
ADMINISTRATION INSTITUTE FOR THE PURPOSE OF ASCERTAINING THE
SCOPE OF THE FIRE EDUCATION PROGRAMS IN THE NATION'S
INSTITUTIONS OF HIGHER LEARNING. A DIRECTORY OF INSTITUTIONS
OF HIGHER LEARNING OFFERING COURSES IN FIRE SCIENCE LISTS 58
SCHOOLS IN 18 STATES. CURRICULUM OFFERINGS IN FIRE SCIENCE
ADMINISTRATION AND TECHNOLOGY ARE LISTED FOR 14 OF THESE
PROGRAMS. BACKGROUND INFORMATION FOR IMPLEMENTING FIRE
SCIENCE PROGRAMS IS GIVEN IN "COLLEGE AND UNIVERSITY
PHILOSOPHY AND POLICY REGARDING NEW CURRICULA" AND
"RECOMMENDATIONS FOR FIRE SCIENCE PROGRAM DEVELOPMENT AND
IMPLEMENTATION." DIRECTORIES OF STATE FIRE TRAINING
SUPERVISORS AND STATE FIRE MARSHALS AND A SUMMARY CHART OF
FIRE SCIENCE-ADMINISTRATION COURSES AND A U.S. MAP SHOWING
THEIR LOCATION ARE INCLUDED. THIS DOCUMENT IS AVAILABLE FOR
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STATE UNIVERSITY OF NEW YORK

INTERNATIONAL FIRE ADMINISTRATION INSTITUTE
Sponsored by International Association of Fire Chiefs

H I G H E R E D U C A T I O N
I N T H E
N A T I O N ' S F I R E S E R V I C E

Center for Executive Development
State University of New York at Albany
Albany, New York

February, 1968

**INTERNATIONAL FIRE ADMINISTRATION INSTITUTE
SPONSORED BY THE INTERNATIONAL ASSOCIATION OF FIRE CHIEFS
CHARTERED BY THE REGENTS OF THE STATE OF NEW YORK
AFFILIATED WITH THE STATE UNIVERSITY OF NEW YORK AT ALBANY**

PURPOSE:

1. To engage in research and otherwise obtain material for the preparation of courses of study in fire administration and subjects related thereto, and to prepare such courses of study.

2. To make such material and courses of study in fire service administration and subjects related thereto available for use by educational institutions, particularly at the college level, in the United States and foreign countries, and to work with and assist educational institutions in the development of such material.

To give assistance by grants or establishment of scholarships, or otherwise, to students in the field of fire administration; and to receive grants and gifts for carrying out the objectives of the Institute.

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D. F. F.

1968

FOREWORD

The steady stirring of interest in, and enthusiasm for, systematic and deliberate programs of higher education for the fire service in the past two years is most significant. Powerful currents are flowing toward professionalizing the fire service toward enhancing the educational posture of the fire service toward increasing research efforts toward recruiting candidates with greater career potential.

The Wingspread Conference in 1966 provided a catalyst in the form of twelve statements of national significance to the fire problem in the United States; two of the statements were directly related to education, i. e., "Professional status begins with education," and "The scope, degree and depth of the educational requirements for efficient functioning of the fire service must be examined." These statements, though broad in scope, focused sharply on the current and dynamic knowledge explosion. The Wingspread spirit gained momentum at the Saratoga Symposium on Higher Education for the Fire Service, held in 1967. During the early part of 1967, the editors of Fire Engineering Magazine conducted a symposium of fire chiefs and educators to explore in depth the challenging years of the 1970's as related to the problem areas defined in the Wingspread Conference, the symposium findings were published in the September issue of Fire Engineering Magazine. President Johnson requested legislation be part of a national effort to reduce our shameful loss of life and property from fire (in 1967 12,200 persons died, property loss was \$2,070,000,000.). The Fire Safety and Research Act of 1967 was introduced in Congress (S 1124 - HR. 11284), Title II of the Act proposes the appointment of a national commission on fire prevention and control. The December 1967 issue of "Firemen", a publication of the National Fire Protection Association, contained an excellent article entitled "Education - Which Way for the Fire Service", which again pointed out the sense of urgency by all concerned on this problem.

It is estimated that some nine million students will be enrolled in institutions of higher education by 1975. The nation's two year colleges are expanding rapidly, the present enrollment of some eight hundred thousand is expected to double by 1974. The two year college holds much promise for those in the fire service seeking post-high school technical training and an academic setting where perhaps they will be motivated to go on to the final two years of college and the baccalaureate degree. The high school drop-out is today's lost man; tomorrow's lost men will be the college drop-outs.

The International Fire Administration Institute, responding to hundreds of requests for guidance and educational counseling, conducted a survey of the nation's institutions of higher learning for the purpose of ascertaining the scope of the fire education programs. The survey was completed and the findings published in November, 1966. The demand for this publication has been beyond our expectations and is now in its fifth printing. The publication, entitled "Fire Science Technology Curricula Survey, has been sent to fire departments, institutions of higher learning, labor organizations, federal and state agencies, libraries, fire chiefs, deans of academic institutions, and personnel representing various organizational levels of the fire service.

This new publication, "Higher Education in the Nation's Fire Service" is a revised and up-dated edition of the original publication mentioned above, and contains additional data valuable to fire executives and college administrators charged with the responsibility for developing and implementing programs of higher education.

Professor D. F. Favreau
Executive Director
International Fire Administration
Institute
State University of New York at Albany
Albany, New York, 12203

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SELECTED SAMPLING OF FIRE SCIENCE COURSES

Colleges and Universities

Course Description	Allan Hancock College California	Auburn Community College New York	Antelope Valley California	Chaffey College California	Compton College California	Connecticut State Technical Institute	Forest Park C. C. Missouri	Glendale College California	Hudson Valley C. C. New York	Illinois Institute of Technology	Lansing Community College Michigan	Long Beach City College California	College of Marin California	University of Maryland Maryland	Milwaukee Inst. of Tech. Wisconsin	Monterey Peninsula Col. California	Mt. San Antonio College California	New York City C. C. New York	Oklahoma State University	Pasadena City College California	Racine Technical Inst. Wisconsin	Rio Hondo Jr. Col. California	Rowan Technical Inst. North Carolina	San Diego Jr. College California	San Jose City College California	College of San Mateo California	Santa Monica City Col. California	Santa Rosa Jr. College California	College of Sequoias California	Tacoma Voc. & Tech. Inst. Washington
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FIRE SCIENCE & ADMINISTRATION - CORE COURSES

Protection and Prevention	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fire Fighting- ics and Strategy	✓		✓		✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fire Investigation and Arson	✓		✓	✓		✓	✓				✓				✓	✓	✓		✓		✓	✓		✓		✓	✓	✓		✓
General Aspects of Fire Science		✓			✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓				✓
Organization and Procedure				✓		✓					✓		✓	✓	✓	✓	✓	✓		✓			✓				✓			
Leadership and Supervision	✓	✓		✓		✓											✓	✓						✓						
Industrial and Hazardous Materials	✓	✓	✓	✓		✓	✓	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓					
Hydraulic Technology	✓		✓		✓	✓	✓			✓	✓		✓	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓		✓	✓		✓
Equipment and Apparatus	✓		✓	✓	✓	✓	✓			✓	✓		✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

LIBERAL ARTS COURSES

Chemistry		✓	✓	✓	✓	✓					✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓		
Physics		✓			✓	✓	✓			✓			✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓				✓		
Math.		✓				✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓						
Social or Political Science	✓	✓		✓	✓		✓				✓		✓	✓	✓				✓		✓	✓	✓							
Statistics	✓									✓								✓												
English and Communications		✓		✓	✓	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

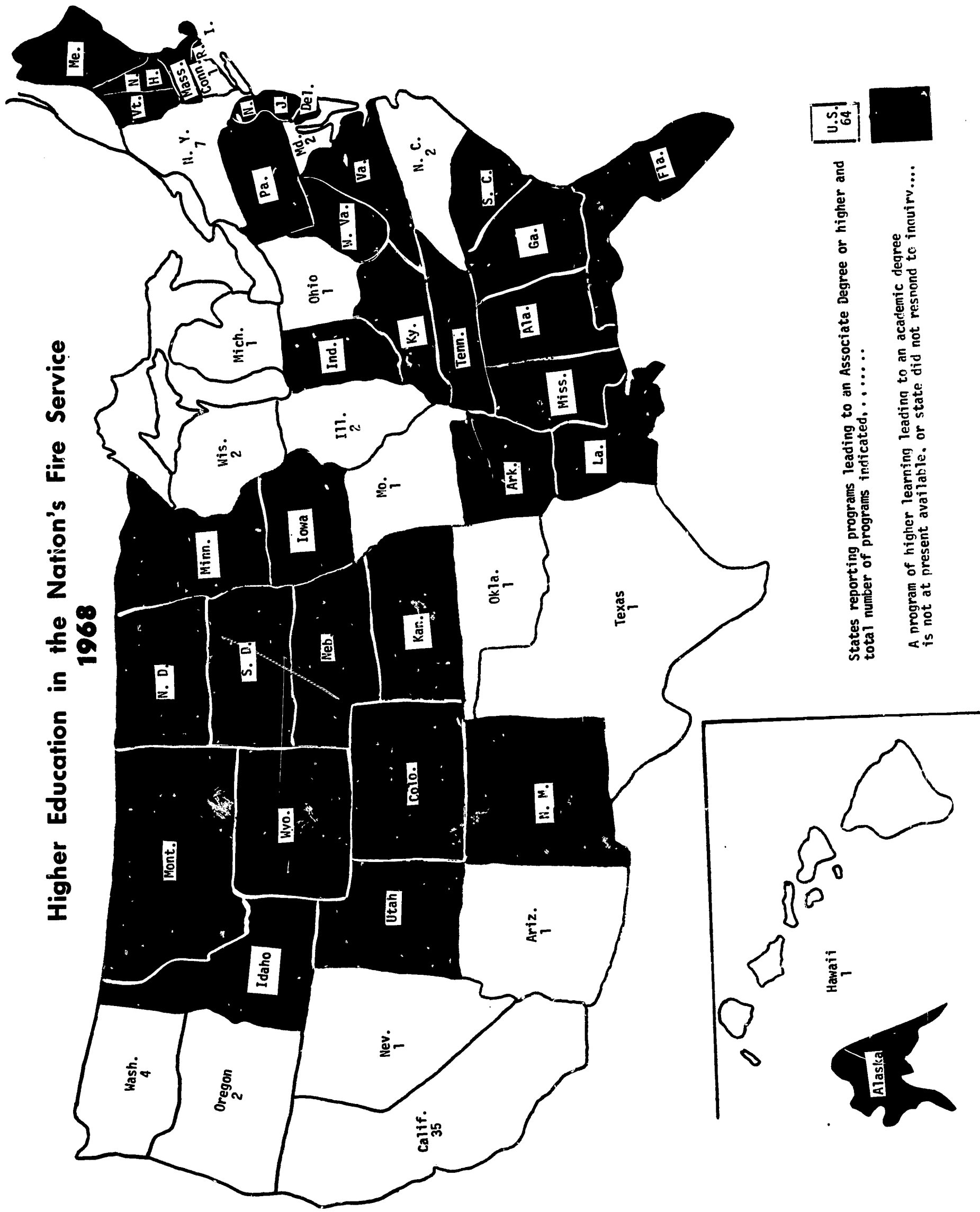
ELECTIVES

Psychology		✓		✓	✓					✓			✓	✓	✓			✓			✓	✓								
Public Relations											✓								✓			✓								
Teacher Training	✓																													
Economics							✓			✓																				

MISCELLANEOUS INFORMATION

Degree	AS	AAS	Non-Deg.	AA	AAS	AAS	AA	AA	Non-Deg.	BS	AS	AS	AS	BS	AAS	AS	AA	AAS	AS	AA	AAS	AA	AAS	AS	AA	Non-Deg.	AA	AA	AA
Number of Graduates	2	0	0	2	0	0	3	0	0	900	0	0	0	62	0	3	7	0	159	5	0	0	7	27	4	480	2	0	0
Number of Enrolled Students at 1/'68	28	30	32	146	30	181	49	37	88	197	60	180	80	68	89	40	225	125	39	85	20	100	150	279	300	175	69	128	80
Date Program Began	'64	'65	'61	'64	'66	'64	'65	'65	'67	'03	'67	'63	'64	'57	'64	'62	'57	'65	'37	'65	'65	'63	'64	'60	'58	—	'60	'62	'67

Higher Education in the Nation's Fire Service 1968



States reporting programs leading to an Associate Degree or higher and total number of programs indicated,

A program of higher learning leading to an academic degree is not at present available, or state did not respond to inquiry....

A R I Z O N A

Name of School Phoenix College Degree AA
1202 West Thomas Road
Address Phoenix, Arizona 85013 Semester Hours in Major 33
Program Director Mildred B. Bulpitt No. of Students Enrolled INA
Program Title Fire Science No. of Graduates To Date INA
Date Program Began INA No. of Instructors INA

C A L I F O R N I A

Name of School Allan Hancock College Degree Associate of Science Degree
800 South Bradley Road (AS)
Address Santa Maria, Calif. Semester Hours in Major 47
Program Director Brian McBride No. of Students Enrolled 28
Program Title Fire Science No. of Graduates To Date 2
Date Program Began Spring 1964 No. of Instructors 2 part-time

Name of School Antelope Valley College Degree Certificate
Address Lancaster, Calif. Semester Hours in Major 21
Program Director R. W. Lundak No. of Students Enrolled 32
Program Title Fire Science No. of Graduates To Date --
Date Program Began 1961 No. of Instructors 3

C A L I F O R N I A (Continued)

Name of School Butte Jr. College Degree AA and Certificate
District
Address 2060 3rd Street, Oroville Semester Hours in Major 42-45 quarter
hours
Program Director Earl P. McPhee No. of Students 60
Program Title Fire Science No. of Graduates To Date - -
Date Program Began September, 1967 No. of Instructors 3 part-time

Name of School Cabrillo College Degree AA and Certificate
6500 Soquel Drive
Address Aptos 95003 Semester Hours in Major 30
Program Director John R. Hinton No. of Students Enrolled None
Program Title Fire Science No. of Graduates To Date 0
Date Program Began September 1967 No. of Instructors 0

Name of School Chaffey College Degree AA
Address Alta Loma, California Semester Hours in Major 20
Program Director R. L. Custer No. of Students Enrolled 146
Program Title Fire Science No. of Graduates To Date 2
Date Program Began 1964 No. of Instructors 20

C A L I F O R N I A (Continued)

Name of School City College of San Francisco Degree AA
Address So. Phelan Ave., San Francisco Semester Hours in Major 38
Program Director Alexander Potter No. of Students Enrolled 165- 98 pre-employment, 67 in-service
Program Title Fire Science No. of Graduates To Date - -
Date Program Began Fall 1966 No. of Instructors 6

Name of School College of the Desert Degree AS
43-500 Monterey Ave.
Address Palm Desert, California Semester Hours in Major 23
Program Director Don Welty No. of Students Enrolled 47
Program Title Fire Science No. of Graduates To Date - -
Date Program Began Sept. 1963 No. of Instructors 2

Name of School College of Marin Degree AS
Address Kentfield Semester Hours in Major 30
Program Director Joseph Berruezo No. of Students Enrolled 80
Program Title Fire Science No. of Graduates To Date - -
Date Program Began 1964 No. of Instructors part-time

C A L I F O R N I A (Continued)

Name of School <u>College of San Mateo</u>	Degree <u>Non-degree</u>
Address _____	Semester Hours in Major _____
Program Director <u>Bernard Gjerdrun</u>	No. of Students Enrolled <u>175</u>
Program Title <u>Fire Science Training</u>	No. of Graduates To Date <u>480</u>
Date Program Began _____	No. of Instructors _____

Name of School <u>College of Sequoias</u>	Degree <u>AA or Certificate</u>
Address <u>Mooney Blvd., Visalia, Calif.</u>	Semester Hours in Major <u>24</u>
Program Director <u>S. W. Eggleston</u>	No. of Students Enrolled <u>80</u>
Program Title <u>Fire Technology</u>	No. of Graduates To Date <u>0</u>
Date Program Began <u>September 1967</u>	No. of Instructors <u>1</u>

Name of School <u>Columbia Junior College</u>	Degree <u>AA</u>
Address <u>Sonora, California</u>	Semester Hours in Major <u>30</u>
Program Director <u>R. W. Deal</u>	No. of Students Enrolled <u>- -</u>
Program Title <u>Fire Science</u>	No. of Graduates To Date <u>- -</u>
Date Program Began <u>January 29, 1968</u>	No. of Instructors <u>3 (proposed)</u>

C A L I F O R N I A (Continued)

Name of School Compton College Degree AAS
Address 1111 E. Artesia Blvd.
Compton, Calif. Semester Hours in Major 20
Program Director Don A. Yowell No. of Students Enrolled 30
Program Title Dept. of Fire Science No. of Graduates To Date - -
Date Program Began Sept. 1966 No. of Instructors 10

Name of School Diablo Valley College Degree AA
Address Diablo Valley
Pleasant Hill, Calif. Semester Hours in Major 24
Program Director Ward L. Cockerton No. of Students Enrolled 115
Program Title Fire Science No. of Graduates To Date 5
Date Program Began June 1, 1953 No. of Instructors 15

Name of School Fresno City College Degree AS
Address 1101 University Ave.
Fresno Semester Hours in Major 32
Program Director C. E. Lackey No. of Students Enrolled 73
Program Title Fire Science No. of Graduates To Date 3
Date Program Began 1960 No. of Instructors 2

C A L I F O R N I A (Continued)

Name of School Glendale College Degree AA
Address Glendale, Calif. Semester Hours in Major 20
Program Director David C. Leek No. of Students Enrolled 37
Program Title Fire Science No. of Graduates To Date - -
Date Program Began 1965 No. of Instructors 1 (usually 3)

Name of School Hartnell College Degree AA and certificate
Address 156 Homestead
Salinas Semester Hours in Major 20
Program Director Lyman C. Fowler No. of Students Enrolled 40
Program Title Fire Science No. of Graduates To Date 80
Date Program Began Fall 1966 No. of Instructors 2

Name of School Long Beach City College Degree AA, AS, and certificate
Address Business & Technology Campus
130 S.E. Pacific Coast Hwy. Semester Hours in Major 20
Program Director Dale E. Taylor No. of Students Enrolled 180
Program Title Fire Science No. of Graduates To Date - -
Date Program Began Sept. 1963 No. of Instructors 4

C A L I F O R N I A (Continued)

Name of School Los Angeles Harbor College Degree AA
Address 1111 Figueroa Place, Wilmington Semester Hours in Major _____
Program Director Nicholas Zorotovich No. of Students Enrolled 240
Program Title Fire Science No. of Graduates To Date 100
Date Program Began 1958 No. of Instructors 5

Name of School Merced College Degree AA
3600 M Street
Address Merced, Calif. Semester Hours in Major 20
Program Director John Mehrens No. of Students Enrolled 30
Program Title Fire Science No. of Graduates To Date None
Date Program Began 1964 No. of Instructors 2

Name of School Modesto Junior College Degree AA and Certificate
Address Modesto, Calif. Semester Hours in Major 30
Program Director Louis A. Schwank No. of Students Enrolled 40
Program Title Fire Science No. of Graduates To Date 0
Date Program Began 1966 No. of Instructors 3

C A L I F O R N I A (Continued)

Name of School <u>Monterey Peninsula College</u>	Degree <u>AS</u>
Address <u>980 Fremont</u>	Semester Hours in Major <u>22</u>
Program Director <u>Stephen A. James</u>	No. of Students Enrolled <u>40</u>
Program Title <u>Fire Science</u>	No. of Graduates To Date <u>3</u>
Date Program Began <u>1962</u>	No. of Instructors <u>2</u>

Name of School <u>Mt. San Antonio College</u>	Degree <u>AA</u>
Address <u>1100 N. Grand Ave. Walnut Calif. 91789</u>	Semester Hours in Major <u>20</u>
Program Director <u>Dr. Gilbert B. Stuckey</u>	No. of Students Enrolled <u>225: 200 in-service, 25 pre-service</u>
Program Title <u>& Service Dept. of Public Safety/</u>	No. of Graduates To Date <u>7</u>
Date Program Began <u>1957</u>	No. of Instructors <u>5</u>

Name of School <u>Palomar College</u>	Degree <u>AA</u>
Address <u>San Marcos, Calif.</u>	Semester Hours in Major <u>20</u>
Program Director <u>James Soulas</u>	No. of Students Enrolled <u>32</u>
Program Title <u>Fire Science</u>	No. of Graduates To Date <u>1</u>
Date Program Began <u>1958</u>	No. of Instructors <u>2</u>

C A L I F O R N I A (Continued)

Name of School Pasadena City College Degree AA
Address 1570 E. Colorado Semester Hours in Major _____
Program Director Victor E. Stephens No. of Students Enrolled 85
Program Title Fire Science No. of Graduates To Date 5
Date Program Began Sept. 1965 No. of Instructors 25

Name of School Rio Hondo Jr. College Degree AA
Address 3600 Workman Mill Rd. Semester Hours in Major 20
Program Director W. W. Lorbeer No. of Students Enrolled 100
Program Title Fire Science No. of Graduates To Date 0
Date Program Began Sept. 1963 No. of Instructors 4

Name of School Riverside City College Degree AA and certificate
3650 Fairfax Ave.
Address Riverside, Calif. 92506 Semester Hours In Major 20
Program Director Cecil D. Green No. of Students Enrolled _____
Program Title Fire Science No. of Graduates To Date 0
Date Program Began 1957 No. of Instructors varies

C A L I F O R N I A (Continued)

Name of School San Bernardino Valley/ College Degree AA
Address 701 So. Mt. Vernon Ave.
San Bernardino, Calif. Semester Hours in Major 3-6/semester
Program Director Thurston B. Swartz No. of Students Enrolled 100
Program Title Fire Science No. of Graduates To Date - -
Date Program Began 1961 No. of Instructors 10

Name of School San Diego Jr. Colleges Degree AS and certificate
Address 835-12th, San Diego Semester Hours in Major 28
Program Director Kenneth Fawcett No. of Students Enrolled 279
Program Title Fire Science No. of Graduates To Date 27
Date Program Began Fall 1960 No. of Instructors 2 full time
5 evenings

Name of School San Joaquin Delta Jr. Degree AA
College
Address 3301 Kensington Way
Stockton, Calif. Semester Hours in Major 24
Program Director E. T. Barnett No. of Students Enrolled 120
Program Title Fire Science No. of Graduates To Date 0
Date Program Began 1967 No. of Instructors 3

C A L I F O R N I A (Continued)

Name of School San Jose City College Degree AA and certificate
Address 2100 Moorpark Ave.
San Jose, 95114 Semester Hours in Major 29
Program Director Howard Biebesheimer No. of Students Enrolled 300
Program Title Fire Service No. of Graduates To Date 26
Date Program Began 1958 No. of Instructors 5

Name of School Santa Ana College Degree AA
Address 1530 W. 17 St.
Santa Ana, Calif. 90712 Semester Hours 21
Program Director Edwin M. Norvell No. of Students Enrolled 168
Program Title Fire Science No. of Graduates To Date 50
Date Program Began Sept. 1958 No. of Instructors 5

Name of School Santa Monica City College Degree AA
Address 1815 Pearl St.
Santa Monica, Calif. 90406 Semester Hours in Major 40
Program Director Fred S. Brierley No. of Students Enrolled 69
Program Title Fire Science No. of Graduates To Date 2
Date Program Began 1960 No. of Instructors 5

C A L I F O R N I A (Continued)

Name of School Santa Rose Jr. College Degree AA or certificate
1501 Mendocino Ave.
Address Santa Rosa, 95401 Semester Hours in Major 17
Program Director John J. Healy No. of Students Enrolled 128
Program Title Fire Science No. of Graduates To Date unknown
Date Program Began 1962 No. of Instructors 5

Name of School Shasta College Degree AA
Address Redding, Calif. Semester Hours in Major 30
Program Director Lloyd Livingston No. of Students Enrolled 60
Program Title Fire Science No. of Graduates To Date 0
Date Program Began Spring No. of Instructors 1

Name of School Yuba College Degree AA
North Beale Rd.
Address Marysville, Calif. Semester Hours in Major 20
Program Director Dan R. Dillon No. of Students Enrolled 25
Program Title Fire Science No. of Graduates To Date - -
Date Program Began Spring, 1966 No. of Instructors 4

C O N N E C T I C U T

Name of School	<u>State Technical/</u>	College	Degree	<u>AAS</u>
Address	<u>401 Flatbush Ave.</u>		Semester Hours in Major	<u>38</u>
	<u>Hartford, Conn. 06106</u>			
Program Director	<u>Lucian Lombardi</u>		No. of Students Enrolled	<u>181</u>
Program Title	<u>Fire Technology and</u>		No. of Graduates to Date	<u>- -</u>
	<u>Administration</u>			
Date Program Began	<u>Sept. 1964</u>		No. of Instructors	<u>6</u>

H A W A I I

Name of School	<u>Honolulu Community/</u>	College	Degree	<u>AAS</u>
Address	<u>874 Dillingham Blvd.</u>		Semester Hours in Major	<u>30</u>
	<u>Honolulu, Hawaii 96817</u>			
Program Director	<u>Richard K. Miyashiro</u>		No. of Students Enrolled	<u>110</u>
Program Title	<u>Fire Science</u>		No. of Graduates To Date	<u>0</u>
Date Program Began	<u>Sept. 1967</u>		No. of Instructors	<u>3</u>

I L L I N O I S

Name of School	<u>Illinois Institute of/</u>	Technology	Degree	<u>BS and certificate</u>
Address	<u>Tech. Center</u>		Semester Hours in Major	<u>34</u>
	<u>Chicago 60616</u>			
Program Director	<u>Dr. R. H. Jensen</u>		No. of Students Enrolled	<u>197</u>
Program Title	<u>Fire Protection Engi-</u>		No. of Graduates To Date	<u>900</u>
	<u>neering</u>			
Date Program Began	<u>1903</u>		No. of Instructors	<u>6</u>

I L L I N O I S (Continued)

Name of School	<u>Rock Valley College</u>	Degree	<u>AS</u>
	<u>3301 N. Mulford Rd.</u>		
Address	<u>Rockville, Ill.</u>	Semester Hours in Major	<u>48</u>
Program Director	<u>Al Andrews</u>	No. of Students Enrolled	<u>67</u>
Program Title	<u>Fire Science</u>	No. of Graduates To Date	<u>- -</u>
Date Program Began	<u>1967</u>	No. of Instructors	<u>1</u>

M A R Y L A N D

Name of School	<u>University of Maryland</u>	Degree	<u>BS</u>
Address	<u>College Park, Md. 20740</u>	Semester Hours in Major	<u>30</u>
Program Director	<u>Dr. John L. Bryan</u>	No. of Students Enrolled	<u>68</u>
Program Title	<u>Fire Protection Curri- culum</u>	No. of Graduates To Date	<u>62</u>
Date Program Began	<u>1957</u>	No. of Instructors	<u>3</u>

Name of School	<u>Montgomery Jr. College</u>	Degree	<u>AA</u>
Address	<u>Rockville, Maryland 20850</u>	Semester Hours in Major	<u>27</u>
Program Director	<u>H. C. Boyle</u>	No. of Students Enrolled	<u>100</u>
Program Title	<u>Fire Science</u>	No. of Graduates To Date	<u>0</u>
Date Program Began	<u>1967</u>	No. of Instructors	<u>3</u>

M I C H I G A N

	College	
Name of School	<u>Lansing Community /</u>	Degree <u>AS and certificate</u>
	<u>419 N. Capitol Ave.</u>	
Address	<u>Lansing, Mich.</u>	Quarter Hours in Major <u>57</u>
Program Director	<u>Edwin C. Bergmann</u>	No. of Students Enrolled <u>60</u>
Program Title	<u>Fire Science Technology</u>	No. of Graduates To Date <u>- -</u>
Date Program Began	<u>Jan. 1967</u>	No. of Instructors <u>one</u>

M I S S O U R I

	College	
Name of School	<u>Forest Park Community/</u>	Degree <u>AA and certificate</u>
	<u>5600 Oakland Ave.</u>	<u>18-certificate</u>
Address	<u>St. Louis, Mo. 63110</u>	Semester Hours in Major <u>40-AA</u>
Program Director	<u>Victor Reef</u>	No. of Students Enrolled <u>49</u>
Program Title	<u>Fire Protection Tech-</u> <u>nology</u>	No. of Graduates To Date <u>3</u>
Date Program Began	<u>1965</u>	No. of Instructors <u>4</u>

N E V A D A

	iversity	
Name of School	<u>Nevada Southern Uni-/</u>	Degree <u>AS</u>
Address	<u>Las Vegas, Nevada</u>	Semester Hours in Major <u>21</u>
Program Director	<u>Kenneth O. Johnson</u>	No. of Students Enrolled <u>45</u>
Program Title	<u>Fire Science</u>	No. of Graduates To Date <u>- -</u>
Date Program Began	<u>Sept. 1967</u>	No. of Instructors <u>2</u>

NEW YORK

Name of School Auburn Community College Degree AAS
Address Auburn, New York Semester Hours in Major 24
Program Director Robert R. Gallo No. of Students Enrolled 30
Program Title Fire Science No. of Graduates To Date - -
Date Program Began Fall 1965 No. of Instructors 2

Name of School Hudson Valley C. C. Degree Certificate
Address 80 Vandenburg Ave. Semester Hours in Major - -
Program Director A. Granito No. of Students Enrolled 88
F. McGarry
Program Title Intro. to Fire Science No. of Graduates To Date None
Date Program Began Sept. 1967 No. of Instructors 2

New York City Community College of
Name of School the City University of Degree AAS
300 Say St. New York
Address Brooklyn, N. Y. 11201 Semester Hours in Major 22
Program Director Sylvan P. Stern No. of Students Enrolled 125
Program Title Fire Science No. of Graduates To Date None
Date Program Began Sept. 1965-evening No. of Instructors 6
Sept. 1966-day

NEW YORK

Name of School Evening Division
Onondaga Community College Degree Certificate
Address 700 E. Water St., Syracuse, N.Y. Semester Hours in Major - -
Program Director E. W. Flansburg No. of Students Enrolled 60
Program Title Fire Science No. of Graduates To Date None
Date Program Began Fall 1966-67 No. of Instructors 4

Name of School State University at Farm- Degree Certificate
ingdale
Address Farmingdale, Long Island, N. Y. Semester Hours in Major - -
Program Director William H. Hewitt No. of Students Enrolled 100
Program Title Fire Science No. of Graduates To Date none
Date Program Began September, 1966 No. of Instructors 9

Name of School Suffolk C.C. College Degree AAS and certificate
533 College Rd.
Address Selden, N. Y. 11784 Semester Hours in Major 39
Compiled by Peter A. Spina No. of Students Enrolled 50
Program Title Fire Science No. of Graduates To Date none
Date Program Began Feb. 1967 No. of Instructors 2 to 3

NEW YORK (Continued)

Name of School Westchester C. C. Degree AAS
Address 75 Grasslands Road
Valhalla, N. Y. Semester Hours in Major 20
Program Director Allen R. Fales No. of Students Enrolled 50
Program Title Fire Science No. of Graduates To Date 0
Date Program Began Sept. 1966 No. of Instructors 4

NORTH CAROLINA

Name of School Richmond Technical Inst. Degree AAS
Address P.O. Box 1189, Hamlet, N. C. Quarter Hours in Major 37 + 22 in lab.
Program Director Joe Nanny No. of Students Enrolled 31
Program Title Science Fire Technology No. of Graduates To Date None
Date Program Began Feb. 1967 No. of Instructors 5

Name of School Rowan Technical/ Institute Degree AAS
Address P. O. Box #1555
Salisbury, N. C. Semester Hours in Major 44
Program Director R. G. McIntyre No. of Students Enrolled 150
Program Title Fire & Safety Engineer- No. of Graduates To Date 7
ing Tech. & Fire Science Tech.
Date Program Began Sept. 1, 1964 No. of Instructors 3 - full
8 - part time

O H I O

Name of School Cuyahoga Community Col. Degree AS
2214 E. 14th St.
Address Cleveland, Ohio 44115 Semester Hours in Major 29
Program Director Dr. Fred C. Sutton No. of Students Enrolled 77
Program Title Fire Technology No. of Graduates To Date none
Date Program Began Sept. 1965 No. of Instructors 4

O K L A H O M A

Name of School Oklahoma St. University
The Technical Institute Degree AS
Address Stillwater, Oklahoma Semester Hours in Major 20
Program Director D. W. Brown No. of Students Enrolled 39
Program Title Fire Protection Tech. No. of Graduates To Date 159
Date Program Began 1937 No. of Instructors 2

O R E G O N

Name of School College
Portland Community/ Degree AS
Address Portland, Oregon Quarter Hours in Major 67 - 79
Program Director Donald Uppendahl No. of Students Enrolled 40
Program Title Fire Protection Tech. No. of Graduates To Date None
Date Program Began 1966 No. of Instructors 6

OREGON

Name of School Salem Technical Vocational Community College Degree Associate Degree
Address 4389 Satter Drive, N. E.
Salem, Oregon 97303 Semester Hours in Major 49
Program Director Willard B. "Skip" Emerson No. of Students Enrolled 15
Program Title Fire Protection Technology No. of Graduates To Date 5
Date Program Began Sept. 1965 No. of Instructors 4

T E X A S

Name of School South Texas Jr. College Degree AA
Address #1 Main St.
Houston, Texas 77002 Semester Hours in Major 24
Program Director Alcus Greer No. of Students Enrolled 40
Program Title Fire Administration & Tech. No. of Graduates To Date none
Date Program Began Sept. 1965 No. of Instructors 10

U T A H

Name of School Utah Technical College Degree AS
Address 1395 North 150 East
Provo, Utah 84601 Semester Hours in Major INA
Program Director Roger B. Honeyman No. of Students Enrolled INA
Program Title Fire Science No. of Graduates To Date 0
Date Program Began Anticipate Fall 1968 No. of Instructors INA

W A S H I N G T O N

Name of School College
Big Bend Community/ Degree Non degree, AAS applied for
Address Moses Lake, Wash. 98837 Quarter Hours in Major 40 hrs./qrtr.
Program Director Geo. E. Conatore No. of Students Enrolled 15
Program Title Fire Service Training No. of Graduates To Date none
Date Program Began Sept. 1965 No. of Instructors 1

W A S H I N G T O N

Name of School	<u>Clark College</u>	Degree	<u>AAS</u>
Address	<u>Vancouver, Wash.</u>	Semester Hours in Major	<u>- - - -</u>
Program Director	<u>- - - -</u>	No. of Students Enrolled	<u>- - - -</u>
Program Title	<u>- - - -</u>	No. of Graduates To Date	<u>- - - -</u>
Date Program Began	<u>In planning stage</u>	No. of Instructors	<u>- - - -</u>

Name of School	<u>Spokane Community/</u> <u>E. 3403 Mission</u>	Degree	<u>AS</u>
Address	<u>Spokane, 99202</u>	Quarter Hours in Major	<u>60</u>
Program Director	<u>H. C. Hunter</u>	No. of Students Enrolled	<u>75</u>
Program Title	<u>Fire Science</u>	No. of Graduates To Date	<u>none</u>
Date Program Began	<u>Jan. 1964</u>	No. of Instructors	<u>varied - 6</u>

Name of School	<u>Tacoma Vocational-/</u> <u>1101 S. Yakima</u>	Degree	<u>AA</u>
Address	<u>98405</u>	Semester Hours in Major	<u>81</u>
Program Director	<u>Paul K. Parkhurst</u>	No. of Students Enrolled	<u>14</u>
Program Title	<u>Fire Service Training</u>	No. of Graduates To Date	<u>20</u>
Date Program Began	<u>2/1/65</u>	No. of Instructors	<u>- - - -</u>

W I S C O N S I N

Name of School Milwaukee Inst. of Technology Degree AAS
Address 1015 No. 6th St. Semester Hours in Major 25
Program Director Edwin Taibl No. of Students Enrolled 89
Program Title Fire Technology No. of Graduates To Date - - -
Date Program Began Sept. 1964 No. of Instructors 4

Name of School Racine Technical Inst. Degree AAS
Address 620 Lake Ave. Semester Hours in Major 28
Program Director Mr. Howard Heigl No. of Students Enrolled 20
Program Title Fire Technology No. of Graduates To Date none
Date Program Began Sept. 1965 No. of Instructors 3

SELECTED CURRICULA

FOURTEEN PROGRAMS

FIRE ADMINISTRATION

FIRE SCIENCE TECHNOLOGY

**Auburn Community College
Auburn, New York**

Program Title: Fire Science Program
Director: Robert Gallo, Director
Degree: A A S
Date Program Began: Fall 1965

Major

Credit Hours

Introduction to Fire Science
Building Construction and Materials
Essentials of Fire Prevention
Municipal Water Supplies
Fire Administration
Fire Administration and Law

6
6
3
3
3
3
3
24

Non-major

Freshman English
Effective Speech
Introduction to Chemistry
Technical Physics
Essentials of American National Government
Principles of Human Behavior
Freshman Mathematics I
Electives

6
3
6
8
3
3
3
4
4
36

**City University of New York
New York Community College of Applied Arts and Sciences
300 Say Street
Brooklyn, New York**

Program Title: Fire Science
Director: Sylvan P. Stern
Degree: A A S
Date Program Began: September 1965

Major

Credit Hours

Systems of Construction
Building and Fire Codes
Fire Hazards and Controls I & II
Hydraulics
Fire Department Administration

3
3
6
4
3

19

Non-major

English Composition
Mathematical Analysis I & II
Physics I & II
Introduction to Psychology
General Chemistry I & II
Personnel Psychology
Effective Speaking or)
Voice and Diction)
Statistics
Chemistry of Hazardous Materials
Electives

3
8
8
3
8
3

3
3
3
9

51

**Compton College
1111 E. Artesia Boulevard
Compton, California**

Program Title: Department of Fire Science
Director: Don A. Yowell
Degree: A.A.S.
Date Program Began: September, 1966

Major

Credit Hours

Introduction to Fire Protection
Introduction to Fire Supression
Fundamentals of Fire Prevention
Fire Fighting Tactics and Strategy
Fire Protection and Equipment Systems
Related Codes and Ordinances
Fire Hydraulics
Fire Apparatus and Equipment
Fire Company Organization and Procedure
Rescue Practices

3
3
3
3
2
3
3
3
3
3
3
29

Non-Major

Reading and Composition
Political and Social History of the U. S.
Chemistry
Introduction to Physics
Health Education
Body Building
Introduction to Life Science
General Psychology
Public Speaking
English Literature
Introduction to Philosophy
Physical Education

6
6
5
3
2
1
4
3
3
3
3
3
1
1
40

**Cuyahoga Community College
Brownell Science and Technology Building
2214 E. 14 Street
Cleveland, Ohio**

Program Title: Fire Technology
Director: Dr. Fred C. Sutton
Degree: Associate Degree
Date Program Began: September, 1965

Major

Credit Hours

Organization for Fire Protection
Fire Fighting Tactics
Fire Protection Systems
Fire Fighting Tactics and Command
Chemistry of Hazardous Materials
Fire Prevention Practices
Fire Investigation Methods
Fire Hydraulics
Municipal Public Relations
Personnel Training Methods

2
3
3
3
4
4
2
3
2
3
29

Non-major

English
Intermediate Algebra
Social Science
Introductory Physics
Practical Psychology for Supervision
Principles of Public Speaking
Introductory Chemistry
Health or Physical Education
Humanities or Social Science

3
3
6
4
3
3
4
2
6
34

**Illinois Institute of Technology
Chicago, Illinois**

Program Title: Fire Protection Engineering
Director: Rolf Jensen
Degree: Bachelor of Science in Fire Protection Engineering
Date Program Began: 1903

Major

Credit Hours

Fire Insurance Schedule Rating
Fire Protection Engineering Laboratory
Property Insurance
Fire Protection
Casualty Insurance
Public Fire Protection
Industrial Hazard Control
Electrical Hazard Control
Extinguishing and Detection Circuit
Fire Protection Engineering Application

4
4
2
3
2
3
6
3
6
1

34

Non-Major

Analy. & Calculus
Electricity and Magnetism
Principles of Economics
Thermodynamics
Differential Equations
Atomic Physics
Statics and Dynamics
Strength of Materials
Organic Chemistry
Programming for Digital Computer
Fluid Mechanics
Electronic Processes in Materials
Heat & Mass Tran.
American Constitutional System
Liberal Studies Elective
Electrical Circuit Analysis
Humanities Elective
Engineering Electronics
Liberal Arts Elective

4
4
6
4
4
3
4
4
4
2
3
3
3
3
3
3
3
4
3

67

Milwaukee Institute of Technology
1015 North Sixth Street
Milwaukee, Wisconsin

Program Title: Fire Technology
Director: Edwin S. Taibl
Degree: Associate in Applied Science
Date Program Began: September 1964

Major:

Credit Hours

Fire Protection Organization
Fire Fighting Tactics and Strategy
Chemistry of Hazardous Materials
Building Construction and Fire Ordinances
Fire Investigation
Fire Prevention
Fire Protection Equipment and Systems
Methods and Practices
Fluid Power Fundamentals

2
6
3
3
3
3
3
3
4

30

Non-major

Communication Skills
Technical Mathematics
Chemistry I
American Institutions
Technical Science
Mechanics of Materials
Psychology of Human Relations
Business and Industrial Relations
Physical Education

6
8
5
3
6
3
3
3
1

38

Montgomery Junior College
Rockville, Maryland 20850

Program Title: Fire Science
Director: H. C. Boyce
Degree: A A
Date Program Began: 1967

Major

Credit Hours

Orientation
Fire Protection Organization
Fundamentals of Fire Suppression
Fire Service Administration
Building Codes and Construction
Fire Prevention and Inspections
Hazardous Materials
Fire Service Hydraulics and Water Supply
Advanced Fire Tactics and Strategy
Fire Detection and Suppression Systems

1
3
3
3
3
3
3
3
3
3
3
28

Non-Major

General Chemistry
Techniques of Reading and Writing
Math
Physical Education
Political Science
General Psychology
Fundamentals of Speech
Human Relations in Management
Humanities

8
6
3
4
6
3
3
3
3
3
39

Oklahoma State University
The Technical Institute
Stillwater, Oklahoma

Program Title: Fire Protection Technology
Director: D. W. Brown
Degree: Associate Degree in Fire Protection Technology
Date Program Began: 1937

Major

Credit Hours

Fire Hazards and Causes
Principles of Fire Inspection
Fire Protection
Fire Codes and Standards
Industrial Fire Hazards
Fire Protection Hydraulics
Fire Extinguishing and Alarm Systems
Automatic Sprinklers
Water Supply Analysis
Fire Inspection Practices

2
2
2
2
2
2
2
2
2
2
2
20

Non-major

Technical Mathematics
General Chemistry
Architectural Drawing and Plan Reading
Personal and Occupational Guidance
Freshman Composition
Basic Electricity Codes and Inspections
Industrial Safety Engineering
General Insurance
Challenge in American Democratic Life
Applied Physics
American Industrial Development
Introduction to Public Speaking
Property and Casualty Insurance

5
8
4
1
6
3
2
3
4
4
2
3
3
3
48

**Racine Technical Institute
620 Lake Avenue
Racine, Wisconsin**

**Program Title: Fire Technology
Director: Mr. Howard Heigl
Degree: A A S
Date Program Began: September, 1965**

Major

Credit Hours

**Fire Protection Organization
Fire Fighting Tactics and Strategy I
Chemistry of Hazardous Materials
Fire Fighting Tactics & Strategy II
Building Construction & Fire Ordinances
Fire Investigation
Fire Prevention
Fire Protection Equipment & Systems
Methods and Practices
Industrial Hydraulics**

**2
3
3
3
3
3
2
3
3
4

29**

Non-major

**Technical Math. 1 and 2
Communication Skills
Chemistry
American Institutions
Technical Readings & Reprints
Technical Physics 1 and 2
Mechanics of Materials
Psychology of Human Relations
Business & Industrial Relations
Physical Education**

**8
3
5
3
3
7
3
3
3
1

39**

Rowan Technical Institute
Interstate Highway 85 at Klumac Road
Post Office Box 1555
Salisbury, North Carolina

Program Title: Fire Safety Engineering Technology
Director: R. G. McIntyre
Degree: Associate in Applied Science
Date Program Began: September 3, 1964

Major

Credit Hours

Introduction to Fire Protection Hazards
Municipal Fire Protection
General Insurance
Construction Codes and Material Rating
Fire Fighting Strategy
Chemistry of Flammable Materials
Insurance Grading Schedules
Industrial Hazards and Fire Prevention
Multiple Line Insurance and Rating Schedules
Hydraulics & Water Distribution
Inspection Principles & Practices
Fire Protection Law
Sprinkler and Standpipe Systems
Automatic Alarm & Extinguishing System
Chemical and Radiation Hazards
Industrial Safety and Security

3
3
3
5
3
4
3
4
4
4
5
3
4
4
4
3
59

Non-major

Grammar
Technical Mathematics
Physics: Properties of Matter
Technical Drafting
Composition
Physics: Work, Energy, Power
Report Writing
Physics: Electricity
Chemistry
Oral Communications
Social Science I and II

3
10
4
4
3
4
3
4
5
3
6
49

Salem Technical Vocational Community College
4389 Satter Drive N. E.
Salem, Oregon

Program Title: Fire Protection
Director: Willard B. "Skip" Emerson
Degree: Associate in Science

Major

Credit Hours

Introduction to Fire Protection
Fire Apparatus and Equipment
Blueprint Reading for Firemen
Physical Science for Firemen
Fundamentals of Fire Prevention
Firefighting Skills I
Hazardous Materials I
Firefighting Skills II
Hazardous Materials II
Rescue and Emergency Care
Fire Department Hydraulics
Fire Company Organization and Duty Assignments
Pump Operations and Practical Hydraulics
Introduction to Fire Department Administration
Fixed Systems and Extinguishers
Firefighting Tactics and Strategy
Communications and Alerting Systems
Water Distribution Systems
Fire Investigation
Building Construction for Fire Protection

3
3
3
4
3
3
3
3
3
4
4
3
3
3
3
3
3
4
3

64

Non-major

Introduction to Psychology
Mathematics
Communication
The Physical World
Communication Skills
Psychology of Human Relations
American Institutions
Technical Report Writing

3
6
3
6
3
3
3
3
3

30

South Texas Junior College
#1 Main Street
Houston, Texas 77002

Program Title: Fire Administration and Technology
Director: Alcus Greer
Degree: Associate in Arts
Date Program Began: September 1965

<u>Major</u>	<u>Credit Hours</u>
F Ad. 131 Fire Administration I	3
F.Ad. 132 Fire Administration II	3
F.Ad. 133 Fire Protection Equip. and Alarm Systems	3
F.Ad. 231 Fire Prevention and Investigation	3
F.Ad. 233 Fire Fighting Tactics	3
F.Ad. 134 Supervision and Organization	3
F.Ad. 232 Fundamentals of Fire Insurance	3
	<u>21</u>

Non-major

Eng. 131 Rhetoric and Composition	3
Hist. 135 U. S. History	3
Psy. 131 Effective Reading and Study	3
E. Dr. 121 Engineering Graphics	2
Eng. 132 Rhetoric and Composition	3
Hist. 136 U. S. History	3
Spch. 131 Fundamentals of Speech	3
Math. 130 Intermediate Algebra	3
E. Dr. 122 Descriptive Geometry	2
Eng. 231 English Literature or Equivalent	3
Gov. 233 American Government	3
Gov. 234 American Government	3
Spch. 132 Public Speaking	3
D. P. 131 Introduction to Data Processing	3
	<u>40</u>

Tacoma Vocational and Technical Institute
1101 South Yakima Avenue
Tacoma, Washington 98405

Program Title: Fire Science Technology
Director: Bruce Brennan
Degree: Associate Degree in Technical Arts
Date Program Began: February, 1965

<u>Major</u>	<u>Credit Hours</u>
Fire Service History and Organization	60
Apparatus and Equipment	70
Water Distribution Systems	15
Fire Prevention	150
Fire Fighting Tactics	200
Fire Protection Equipment and Systems	30
Fire Hydraulics	60
Fire Science	60
Fire Alarm Systems and Communications	20
Radiological Hazards	15
Fire Investigation and Detection	30
	<u>710</u>
 <u>Practical Instruction</u>	
Fire Department Equipment Practices	820
Rescue Evolutions	60
Portable Fire Extinguishers	8
Fixed Fire Protection Systems	10
Fire Alarm Systems and Communications	30
Radiological and Hydrocarbon Detection Devices	16
Safe Driving Practices	60
Fire Investigation and Detection	10
	<u>1014</u>
 <u>Non-Major</u>	
Safety and First Aid	30
Oral and Written Communications	35
Human Relations	35
	<u>100</u>

University of Maryland
College Park, Maryland
Revised Curriculum effective February 1, 1968

Program Title: Fire Protection
Director: John L. Bryan
Degree: Bachelor of Science
Date Program Began: September 1967

		Semester	
		I	II
<u>Freshman Year</u>			
MATH 19	Elementary Analysis	4	
MATH 20	Calculus I		4
CHEM. 1, 3	General Chemistry	4	4
ENES 1	Introductory Engineering Science	3	
ENES 10	Mechanics		3
PHYS 30	General Physics I		3
	General Education Requirement	3	3
HLTH 2	Personal and Community Health	2	
	Physical Activities	1	1
TOTALS		17	18
<u>Sophomore Year</u>			
	General Education Requirement	3	3
MATH 21,22	Calculus II, III	4	4
PHYS 31,32	General Physics II, III	4	4
ENES 20	Mechanics of Materials		3
ENES 21	Dynamics	3	
ENFP 80	Fire Protection Organization	3	
ENFP 90	Essentials of Fire Protection		3
TOTALS		17	17
<u>Junior Year</u>			
	General Education Requirement	3	3
ENEE 50	Fundamentals of Electrical Engineering		3
ENES 30	Materials Science or	3	
ENCE 50	Fundamentals of Engineering Materials		
ENCE 112	Applied Mathematics in Engineering or	3	
MATH 66	Differential Equations		
ENCE 105	Fluid Mechanics		3
ENFP 110	Installations and Equipment	3	
ENFP 112	Fire Protection Fluids and Systems		3
ENFP 115	Water Suppression Systems		3
ENFP 120	Construction Fundamentals and Ins. Sched.	3	
	Approved Electives*	2-3	2-3
TOTALS		17-18	17-18

*Note 1: Approved Electives may be Technical Electives or approved upper division courses from the Department of Psychology, Sociology, Economics, Business and Public Administration, or Industrial Education.

University of Maryland (Continued)

		<u>Senior Year</u>		<u>Semester</u>	
				<u>I</u>	<u>II</u>
	General Education Requirement			3	3
BSAD 191	Property Insurance				3
ENME 100	Thermodynamics			3	
ENCE 100	Engineering Analysis & Computer Program			3	
ENCH 142	Environmental Consideration of Nuclear Eng.				3
ENFP 111	Process and Transportation Hazards				3
ENFP 114	Fire Analysis			3	
ENFP 116	Problem Synthesis and Design			3	
ENFP 117	Technical Projects				3
	Approved Technical Electives **			3	3
		TOTALS		<u>18</u>	<u>18</u>

****Note 2:** Approved Technical Electives must be upper division courses offered in the College of Engineering, mathematics, or physics.
Total credit hours required for graduation, excluding physical education and health: 135-137.

COLLEGE AND UNIVERSITY PHILOSOPHY AND POLICY REGARDING NEW CURRICULA

Rapid developments in all fields have over the last ten years increased astonishingly the requests of various groups for recognition of their educational needs in the nation's institutions of higher learning. The scope of collegiate instruction, research and service thus has expanded more since World War II than during any previous 25 year period. New publics, new programs and new policies characterize and dramatize the change. The general array of curricula and courses presented here gives simple testimony.

However, many community colleges, particularly, the senior colleges, and the graduate schools have been hard pressed to find resources, facilities and personnel to respond. At the same time they have in many places found it difficult to revise the concepts of higher education which have given direction to choice to what they will do over recent decades, not to speak of centuries. Wherein there are gaps, then, in areas or institutional types in this report, there are doubtless many and good reasons.

At the same time, one must recognize institutions of higher learning have on the whole not adapted easily to the needs of the application world, and those who would obtain recognition have not seldom found the route to approved courses and programs and degrees an easy one. Those who control most collegiate institutions, the faculties in the respected disciplines, have not yielded to a broad spectrum of petitioners without careful consideration and intensive searching. They have tended to guard jealously the limits of the subject matter appropriate and to require full evidence that competence for certain vocational and semi-professional tasks cannot be acquired under other auspices.

Albeit, the new breed of professor in institutions of higher learning is quite aware of the growing demand for higher skill, increased judgment, and more theoretical foundation for effective performance in many old and many more new areas of service. He is, as well, aware of the impact of further education upon the economic and human condition of the society. He is sympathetic to the upward reach of the technicians and the quasi-professionals and is particularly conscious of the general swell of ambition to be further educated, specially and generally, in vast numbers, not only of our youth, but of those who have but recently launched upon lifelong commitment.

Yet, the decision making bodies in most institutions rely upon relatively common reference points in acting upon requests which come to them from groups who feel the time has come for collegiate recognition. As those who would improve the fire service and would obtain collegiate cognizance of their need prepare proposals, it should be useful for them to keep in mind that

1. Generally, courses of study and curricula in collegiate institutions require a basis in theory and employ a teaching method which calls

upon the intellectual processes for critical examination of this theory and for appraisal of possible alternatives in application. Although selected disciplines rely heavily upon demonstration and require the development of skills appropriate to higher order application, the usual sentiment is opposed to programs which are essentially focused upon the development of manual skills.

2. Recognition and specification of the theoretical base and emphasis upon competence in higher order intellectual skills have thus been sought by collegiate faculty in the proposals and materials presented by those who wish academic sponsorship. The stated objectives of courses and programs have been examined carefully by college curriculum committees and evidence of the level of instruction searched for in content outlines and recommended resources.
3. These items reveal in themselves the need for personnel authoritatively equipped to deal effectively with instructional level anticipated. It goes without saying that in an incipient professional group there are many with not only vocational knowledge and skills but substantial command of more esoteric and complex components of proper education of technicians and professionals. Unfortunately, such competence does not, as a rule, find acceptance in the university family. Faculties of collegiate institutions recognize the occasional lack in those who possess academic credentials in the form of degrees, but institutions of higher education seldom will compromise on their expectation to have degree holding instructors responsible for courses recognized as of collegiate quality. Those outside colleges and universities usually do not recognize this protective policy. Neither, of course, do they know that respectable and acceptable colleges are accredited and need to meet certain faculty standards before degrees will be accepted generally, and particularly for transfer to other institutions and to advanced programs. This fact of university life is indeed disturbing to some, yet there is also widespread recognition that it protects both quality and student.
4. Institutions are also concerned about the nature of the clientele to be served. After the Second World War higher educational institutions did find that thousands of G I's who had not finished high school could qualify for college attendance by examination. Since then most institutions have accepted a variety of alternatives to four year diplomas granted for high school attendance. The route is open. However, this does not mean that higher educational institutions are willing to accept those with less than capacity to do the intellectual tasks traditionally required. Programs are consequently examined in terms of what clientele is considered in the resource pool and evidence is requested with respect to the ability of prospective students to compete in

studentship with those registered in other programs offered. With this naturally goes the question of the extent and of the continued sufficiency of the resource pool. Many institutions have offered courses, employed instructors, and developed courses and materials only to find that the promised volume of ambitious students was not forthcoming. Such institutions are not easily convinced subsequently of the great appetite for further education in new plaintiffs.

5. Colleges and university staffs, as a result, expect the following procedures to be used in developing proposals for their consideration.
 - a - Accumulation of sound descriptive and statistical evidence that growth in complexity and technical demand in the special field clearly call for increased numbers of those upon whom there are requirements for the use of higher order intellectual attributes.
 - b - Detailed analyses and translation of those attributes (skills, knowledge, understanding, attitudes) into terms meaningful for course of study development and program organization at the college level.
 - c - Promotion of and attainment of widespread support in voluntary organizations representative of and related to the activity; e. g., International Association of Fire Chiefs, The Society of Fire Department Instructors, State Chiefs Organization, and Fire Fighter Unions and Associations.
 - d - Intensive involvement of official bodies and units vested with the responsibility for setting qualifications, establishing certification conditions, employing and promoting personnel; e. g. Board of Control, city managers, licensure agencies, accrediting groups.
 - e - Active participation of advisory groups in further developing conditions which will insure the employment and continued growth and promotion of those educated through the programs offered.

RECOMMENDATIONS FOR FIRE SCIENCE PROGRAM DEVELOPMENT AND IMPLEMENTATION

Recommended steps for the Fire Chief to follow in developing and implementing college level programs of higher education.

A. Determine the Need.

Before approaching the local educational authorities it is recommended that a survey of the community be conducted to ascertain both immediate needs and long range projections. The scope of the survey should cover organizations within a realistic commuting distance to the educational institution, usually a maximum of thirty miles. In addition to surveying, fire departments contact industrial organizations, hospitals, governmental agencies, etc. In industry, the Industrial Relations Manager, or the Director of Personnel, would be in a position to provide such information.

B. Instructional Personnel.

It is recommended that every effort be made to recruit instructors knowledgeable in the firematics and acceptable to the educational authorities. To qualify, the instructors should have a Bachelor's degree, preferably a Master's, in a related field. Industry is a prime source to provide these persons and is usually very willing to cooperate.

C. Schedule Exploratory Meeting with College.

The rapport between town and gown has increased significantly in recent years as the community college endeavors "to meet the education needs of the community." Therefore, a completed survey, reinforced with reliable information related to educational needs, and manpower utilization, etc. will provide an excellent frame of reference and setting for your first meeting with the college representatives.

D. Advisory Committee.

With the assistance of the educational representatives organize a Fire Science Advisory Committee. The Committee should be broad gauged and include representatives of the fire department, industry, education, interested community officials, etc. Limit the number to fifteen. The Advisory Committee can make a valuable contribution toward achieving the successful development and implementation of the program by: (1) creating interest in the project. (2) working closely with the college officials and faculty in developing the curriculum. (3) recommending the type of program i. e. Associate Degree, (A.A.S.) or Certificate Program to be developed and implemented. (4) Evaluating the program at periodic intervals.

E. Class Size.

The size of the class will be of prime importance to the college. It is recommended that if a degree program is to be implemented, the initial en-

rollment should be at least fifteen students. Also, it is very important for the community to provide similar enrollments in subsequent years. In the event your survey indicates that following the initial enrollment, additional enrollments of between 10-20 persons are not possible, it may not be economically advisable for the college to provide a degree program.

In this case, we recommend that you consider a certificate program, as this type of endeavor provides greater flexibility related to enrollments, educational qualifications of candidates, etc.

F. Time Factor.

Take your time! Develop the program with purpose. Design your program to meet your local needs. Think in terms of the future.

STATE FIRE TRAINING SUPERVISORS

Alabama: W. L. Rickard
Trade & Industrial Education
Box 2847, University, Ala.

Idaho: Steve Taylor
Fire Department, 520 Idaho St.
Boise, Idaho

Arizona: Jake Siken
State Training College
Phoenix Fire Department
10 North 3rd Ave.
Phoenix 85003

Illinois: W. J. Eckert, Head
Firemanship Training
University of Illinois
Champaign, Ill.

Arkansas: Whit Murphy
State Education Building
Little Rock, Arkansas 72201

Indiana: Harvey H. Hacker
Educational Director, State
Fire Marshal Dept.
502 State Office Building
Indianapolis, Indiana

California: Edward W. Bent
State Department of Education
721 Capitol Mall
Sacramento, Cal. 95814

Iowa: Keith Royer, Fire Service Ext.
Iowa State University
Ames, Iowa

Colorado: Anthony A. Pisciotta
State Board for Vocational Ed.
32 State Services Building
Denver, Colorado, 80203

Kansas: Edgar M. Munday, Asst. Chief
Johnson Co. Fire Dist. No. 2
Prairie Village, Kansas

Connecticut: Andrew J. Flanagan
State Department of Education
401 Flatbush Ave.
Hartford, Conn.

Kentucky: J. L. Thompson, Chairman
Kentucky Fire School Committee
940 Starks Building
Louisville, Kentucky 40202

Delaware: Leon F. Osinkski
Director of Vocational Educ.
Wilmington Public Schools
H. F. Brown Technical H. S.
14th & Market Sts.
Wilmington, Delaware, 19801

Louisiana: Julian A. Martin, Coordinator
Louisiana State University
Fireman's Program, General
Extension Div.
Baton Rouge, Louisiana

District of Columbia: Loyde N. Balcom
Fire Training Division
District Building
14th & E Streets, N. W.
Washington, D. C.

Maine: Donald Marchildon, Super.
Fire Service Training
Trade & Indust. Education
Department of Education
Augusta, Maine 04330

Florida: W. H. Barnett
Florida State Fire College
P. O. Box 785
Ocala, Florida 32670

Maryland: Rexford Wilson, Director
Fire Service Extension
University of Maryland
College Park, Maryland 20742

Georgia: Harold G. Thompson
Georgia Fire Institute
Industrial Education Dept.
Georgia Institute of Technol.
Atlanta, Georgia 30332

Massachusetts: William McConnell
Senior Supervisor
Department of Education
200 Newbury St.
Boston, Mass.

Michigan: Francais Hartman
Civil Defense & Disaster
Training Center
University of Michigan
North Campus
Ann Arbor, Mich. 48103

Minnesota: E. L. Weber, Asst. Comm.
Fire Marshal Division
State Office Building
St. Paul, Minnesota

Mississippi: J. W. Lewis
Trade & Industrial Education
Div. of Vocational Education
Box 771
Jackson 5, Miss.

Missouri: W. Bush Walden, Admin. Asst.
Firemanship Training
Fire Training Building
1001 Ashland Gravel Road
Columbia, Missouri

Montana: W. Lyle Roessler
Trade & Industrial Education
Vocational Educational Div.
State Dept. of Public Instruc-
tion
State Capitol Building
Helena, Montana 59601

Nebraska: William A. Berens, Chief
Fire Engineering Training
Instructor
Box 206
Gibben, Nebraska 68840

Nevada: H. B. Matherly
Fire Service Instructor
State of Nevada
Capitol Building
Carson City, Nevada

New Hampshire: Howard Swain, Director
Trades and Industrial Annex
State House
Concord, N. H.

New Jersey: Robert L. Tarbox, Director
Industrial & Fire Division
New Jersey State Safety Council
24 Branford Place
Newark, N. J. 07102

New Mexico: Jack Boulton
Assistant State Supervisor
Trade & Indust. Education
State Dept. of Education
Santa Fe, New Mexico

New York: Anthony R. Granito, Super-
visor of Fire Training
Office of Local Government
Division of Fire Safety
155 Washington Avenue
Albany 10, N. Y.

North Carolina: Chief Cosmos L. Cox,
Director-Conductor
North Carolina Fire College
& Pump School
Fire Dept. Headquarters
Durham, North Carolina

North Dakota: G. H. Mowers, State Dir.
Trade & Indust. Education
State School of Science
Box A
Wahpeton, No. Dakota 58075

Ohio: Byrl R. Shoemaker, Director
Vocational Education
Dept. of Educ., Room 612
State Office Building
Columbus, Ohio 43215

Oklahoma: G. L. Sartain, Fire Pro-
tection Dept.
Oklahoma State University
Stillwater, Oklahoma

Oregon: R. P. Moblen, Fireman
Training Spec.
305 Public Service Bldg.
Salem, Oregon 97310

Pennsylvania: Clayton H. Canterbury, Supv.
Fire Service Training
Public Service Institute
Penna. State Fire School
Lewiston, Penna.

Rhode Island: Captain Michael Fox, State
Supvr. Fireman Training
East Providence, R. I.

<u>So. Carolina:</u>	H. B. Wells, South Carolina State Firemen's Ass'n. Fire Training Service Route 1, Box 149 Prosperity, So. Carolina 29127	<u>Wisconsin:</u>	William E. Clark, Supervisor, Fire Service Training State Board of Vocational and Adult Education Room 720, State Office Bldg. Madison, Wisconsin, 53702
<u>So. Dakota:</u>	Earl Hood, Director of Firemen's Training Spearfish, South Dakota	<u>Wyoming:</u>	Charles A. Kline, State Direct. Trade & Industrial and Technical Education, State Department of Education Vocational Division Capitol Building Cheyenne, Wyoming
<u>Tennessee:</u>	Homer S. Elkins, Director of State Fire Service School 215 Chesnut Street Chattanooga, Tenn.		
<u>Texas:</u>	H. D. Smith, Director, Firemens Training School Texas A. & M. College College Station, Texas		
<u>Utah:</u>	Von H. Robertson State Supervisor of Training, Trade & Indus- trial Education Salt Lake City, Utah		
<u>Vermont:</u>	Walter B. Read, Coordina- tor, Vermont State Firefighters" Association Office of the Coordinator East Dorset, Vermont		
<u>Virginia:</u>	R. Lawrence Oliver State Dept. of Education P. O. Box 654 Harrisonburg 22801		
<u>Washington:</u>	Lyle Goodrich, Supervisor Fire Training, State Board for Vocational Education Box 250, Olympia, Wash.		
<u>West Virginia:</u>	R. E. Hanna, Jr. Asst. Director, Fire Service Extension School West Virginia University Morgantown, W. Va. 26506		

STATE FIRE MARSHALS

<p><u>Alabama:</u> J. B. Kitchens Department of Insurance 400 State Administrative Bldg. Montgomery, Alabama 36104</p> <p><u>Alaska:</u> Robert Crouse, Dept. of Public Safety Box 2719 Juneau, Alaska</p> <p><u>Arizona:</u> G. A. Bushnell Director of Insurance 718 West Glenrosa Phoenix, Arizona</p> <p><u>Arkansas:</u> Capt. William C. Stuebing Arkansas State Police P. O. Box 1751 Little Rock, Arkansas</p> <p><u>California:</u> Glenn B. Vance 1025 P Street Sacramento 14, Calif.</p> <p><u>Colorado:</u> James A. Underwood Safety Inspection Div. Industrial Comm. of Colorado 150 East 13th Avenue Denver, Colorado 80203</p> <p><u>Connecticut:</u> Major Carroll E. Shaw Deputy State Fire Marshal Dept. of State Police 100 Washington Street Hartford, Conn.</p> <p><u>Delaware:</u> William R. Favinger P. O. Box 109 Dover, Delaware</p> <p><u>Dist. of Columbia:</u> Hugh A. Groves Fire Prevention Division Room 223, District Building 14th & E Sts. N. W. Washington, D. C.</p> <p><u>Florida:</u> Broward Williams State Capitol Tallahassee, Florida</p>	<p><u>Georgia:</u> John R. Gore, Jr. State Capitol, Room 132 Atlanta, Georgia</p> <p><u>Hawaii:</u> Sidney L. Hashimoto Dept. of Regulatory Agencies Honolulu, Hawaii</p> <p><u>Illinois:</u> William J. Cowley Div. of Fire Prevention 613 Armory Building Springfield, Ill.</p> <p><u>Indiana:</u> Norman M. Fesler 100 N. Senate Avenue 502 State Office Building Indianapolis, Indiana</p> <p><u>Iowa:</u> Wilbur R. Johnson New State Office Building Des Moines, Iowa</p> <p><u>Kansas:</u> Fred R. Farr State Office Building Topeka, Kansas</p> <p><u>Kentucky:</u> Harold L. Foster Dept. of Public Safety New State Office Building Frankford, Kentucky</p> <p><u>Louisiana:</u> Milton Stirr 106 State Office Building New Orleans, Louisiana</p> <p><u>Maine:</u> C. F. Rogan, Acting State Director for Fire Prevention State House Augusta, Maine</p> <p><u>Maryland:</u> James C. Robertson 301 W. Preston St., Rm. 805 Baltimore, Maryland</p> <p><u>Massachusetts:</u> Ralph L. Garrett Dept. of Public Safety 1010 Commonwealth Avenue Boston, Mass.</p>
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STATE FIRE MARSHALS
(Cont'd)

Michigan: Glenroy M. Walker, Chief
Fire Marshal Division
Michigan State Police
714 So. Harrison
East Lansing, Michigan, 48824

Minnesota: Cyrus E. Magnusson
Insurance Division
570 State Office Bldg.
St. Paul, Minn.

Mississippi: Walter Dell Davis, Comm.
Insurance Department
Jackson, Miss.

Montana: William A. Penttila
State Capitol Building
Helena, Montana

Nebraska: Joseph F. Divis
State Capitol
Lincoln, Nebraska

Nevada: Richard H. Bart
Carson City, Nevada 98701

New Hampshire: Aubrey G. Robinson
Concord, New Hampshire

New Mexico: R. F. Apodaca
P. O. Drawer 1269
Santa Fe, New Mexico

New York: George H. Proper, Director
Office of Local Government
Division of Fire Safety
155 Washington Avenue
Albany, N. Y. 12210

North Carolina: N. E. Canady
Insurance Department
Box 351, Labor Building
Raleigh, N. C.

North Dakota: Vance Arneson
Deputy State Fire Marshal
State Capitol
Bismarck, North Dakota

Ohio: George Schlotterbeck
21 West Broad Street
Columbus, 15, Ohio

Oklahoma: Jack C. Sanders
4040 North Lincoln
Oklahoma City, Oklahoma

Oregon: C. Walter Stickney
111 Labor & Industries Building
Salem, Oregon

Pennsylvania: Captain J. E. Sacriste
Pennsylvania State Police
Room 613, South Office Building
Harrisburg, Penn.

Rhode Island: Walter E. Stone
Rhode Island State Police
P. O. Box 185
North Scituate, Rhode Island

South Carolina: Charles W. Gambrell
Federal Land Bank Building
Columbia, South Carolina

South Dakota: J. P. Menning
State Capitol
Pierre, South Dakota

Tennessee: Floyd M. Murphy
Dept. of Insurance and Banking
State Office Building
Nashville 3, Tennessee

Texas: J. N. Nutt
State Board of Insurance
1110 San Jacinto Street
Austin 1, Texas

Utah: Robert A. Tanner
117 State Capitol
Salt Lake City, Utah

Vermont: Captain John L. Vergin
Dept. of Public Safety
Redstone Building
Montpelier, Vermont

STATE FIRE MARSHALS
(Cont'd)

Virginia: C. S. Mullen, Jr.
P. O. Box 1157
Richmond 9, Virginia

Washington: Lee I. Kueckelhan
Department of Insurance
Insurance Building
Olympia, Washington

West Virginia: Lewis E. Myles
Charleston, West Virginia

Wisconsin: Charles L. Manson
711 West Wells Street
Milwaukee 3, Wisconsin

Wyoming: Edwin P. Bradley
State Labor Department
301 Capitol Building
Cheyenne, Wyoming