

RANCHO SANTIAGO COMMUNITY COLLEGE DISTRICT



Santiago Canyon College
8045 E. Chapman Ave.
Orange, CA 92869



Santa Ana College
1530 W. 17th Street
Santa Ana, CA 92706

ARTICULATION AGREEMENT

College: <u>Santa Ana College</u>	Secondary Partner: <u>Coastline ROP</u>
Contact: <u>Jeff Ash/Don Mahany/John Kalko</u>	Address: <u>1001 Presidio Square, Costa Mesa, 92626</u>
Phone: <u>(714) 564-6402</u>	Contact: <u>XXXXXXXX DAVE KEARLEY</u>
FAX #: <u>(714) 564-6850</u>	Phone: <u>714-429-3722</u>
	FAX #: <u>(714) 567-6812</u>

RSCCD Course FIRE TECHNOLOGY 101 (3 units) High School / ROP Course INTRODUCTION TO FIRE TECHNOLOGY (96 hours)

Articulation Agreement Effective Dates

20012 - 2013	2013 - 2014	2014 - 2015
<u>[Signature]</u> Signature, RSCCD Instructor <u>Jeff Ash</u> Print Name <u>9/2/2012</u> Date	_____ Signature, RSCCD Instructor _____ Print Name _____ Date	_____ Signature, RSCCD Instructor _____ Print Name _____ Date
<u>[Signature]</u> Signature, RSCCD Division Dean <u>Simon B. Hoffman</u> Print Name <u>9/17/12</u> Date	_____ Signature, RSCCD Division Dean _____ Print Name _____ Date	_____ Signature, RSCCD Division Dean _____ Print Name _____ Date
<u>[Signature]</u> Signature, HS/ROP Instructor <u>Dave Kearley</u> Print Name _____ Date	_____ Signature, HS/ROP Instructor _____ Print Name _____ Date	_____ Signature, HS/ROP Instructor _____ Print Name _____ Date
<u>[Signature]</u> Signature, HS/ROP Administrator/ <u>Articulations</u> <u>Merry Kim</u> Print Name <u>8/31/2012</u> Date	_____ Signature, HS/ROP Administrator _____ Print Name _____ Date	_____ Signature, HS/ROP Administrator _____ Print Name _____ Date

NAME OF STATEWIDE ACADEMIC SENATE TEMPLATE FOLLOWS:

#	TITLE:
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NAME OF STATEWIDE ACADEMIC SENATE TEMPLATE FOLLOWS:	
#	TITLE:

College Course Title Fire Technology Course #: 101	HS/ROP Course Title Introduction to Fire Technology Course #
General Course Description Survey of career opportunities in fire service and related fields, history of fire protection; fire loss analysis; public, quasi-public and private fire protection services; specific fire protection functions; fire chemistry and physics.	General Course Description This class provides an overview of Fire Technology. Individuals interested in a career as a firefighter or firefighter/paramedic will learn various aspects of the industry. Topics of instruction will include; requirements for the profession, required physical attributes, history of fire service, department organization, emergency medical services, facilities and equipment, character and behavior of fire, hazardous materials and fire communications.
College Units: 3 units	HS/ROP Hours: 96
College Prerequisite(s): None	HS/ROP Prerequisite(s): None
College Advisories/Recommendations:	HS/ROP Advisories/Recommendations: N/A

REQUIRED CONTENT FOR ARTICULATION

FIRE SERVICE HISTORY - 3 Lec Origins of the fire service, technological development in fire suppression equipment and techniques, notable historical figures.
CAREER OPPORTUNITIES IN FIRE PROTECTION - 3 Lec Course overview, history of fire service, development of paid fire department, development of insurance companies, modern methods of prevention and control, fire protection and defense. Careers in: fire protection, public education, sprinkler installation, private and public fire service firefighting, fire apparatus operation, paramedic service.

FIRE SAFETY FOR PEOPLE AND PROPERTY - 3 Lec

Life and property loss; fundamental building design, life safety codes, hazards occupancies, types of occupancies, industrial fire protection, public education and community relations.

CHARACTERISTICS AND BEHAVIOR OF FIRE - 3 Lec

Unpredictability of fire, sources of ignition, explosions, products of combustion.

FIRE HAZARDS OF MATERIALS - 3 Lec

Types of combustibles, solids, liquids, hazardous materials, flammable gases fire fighting and control.

INVESTIGATING THE FIRE LOSS PROBLEM - 3 Lec

Need for investigation, recording the fire problem, analyzing fire losses.

FIRE SAFE BUILDING DESIGN CONSTRUCTION - 3 Lec

Fundamentals of fire safety design, building and site planning for fire safety, exposure protection, confinement of smoke and fire.

MID TERM - 3 Lec

Evaluate the learning process for above topics.

FIRE PROTECTION SYSTEMS AND EQUIPMENT - 3 Lec

Water as an extinguishing agent, sprinkler systems, foam extinguishing system carbon dioxide systems, dry chemical systems, extinguishing systems for combustible metal, portable fire extinguishers.

ALARM DETECTION SYSTEMS AND DEVICES - 3 Lec

Public fire service communications, automatic and manual protective signaling devices, fire detection mechanisms and devices.

MUTUAL FIRE DEFENSES - 3 Lec

Evaluation and planning of public fire protection, master planning for fire protection, water for fire protection, water distribution systems.

FIRE DEPARTMENT ORGANIZATION, ADMINISTRATION AND OPERATION - 3 Lec

Fire department organization, administration and management, fire suppression operations, fire prevention operations, public education, fire code enforcement.

FIRE PROTECTION ORGANIZATION INFORMATION SOURCES AND CAREER OPPORTUNITIES, THE SCOPE OF FIRE PROTECTION ORGANIZATIONS - 3 Lec

Various organizations that effect fire department operations from federal, state, county and local jurisdictions.

CODES AND STANDARDS - 3 Lec

Development of fire protection regulations, formation and types of codes and standards, fire safety standards making organizations. The National Professional Qualifications system established by the Joint Council of National Fire Service Organizations including 101, 102, 1021, 1031, 1041, etc.

ESTABLISHMENT OF NATIONAL STANDARDS OF PROFESSIONAL COMPETENCE FOR THE FIRE SERVICE - 1 Lec

Physical ability for firefighters, preparing for physical ability, the meaning of physical fitness, measuring physical fitness.

FINAL - 3 Lec

A comprehensive evaluation of learning process.

INITIALS



INITIALS



COMPETENCIES AND SKILL REQUIREMENTS REQUIRED FOR ARTICULATION

(Use additional pages as necessary) Where appropriate, please incorporate standards being used (e.g. CTE standards). At the conclusion of this course, the student should be able to:

- Demonstrate awareness of industry standards, including those for sanitation.
- Compare the sources of training available between a fire department, county and state agencies and the post secondary educational system.
- Determine the origin, process and impact of a residential fire; identify burns; explain toxicity of smoke.
- Demonstrate the ability to discuss all aspects of safety and safety procedures utilized by fire fighters.
- Demonstrate the procedures for reporting a fire and receiving an alarm.
- Understand the importance of education programs and community support; visit a local facility
- Discuss the history of fire service listing fires that have national and international interest.
- Describe the oral, written, physical and physical agility testing exams for the fire service.
- Describe the chain of command within the fire department; and pre-incident planning procedures.
- Discuss the roles of first responders, EMTs, and paramedics; compare their scopes of practice.
- Describe the various fire service facilities and the functions of firefighting equipment.
- Describe the makeup and dynamics of a wild land fire; define wild land interface.
- Describe procedures for handling hazardous materials and for Standard Precautions.
- Define Class A and Class B fires; explain the portable extinguisher rating system.
- Describe the mental and physical fitness requirements a fire fighter must maintain.

MEASUREMENT METHODS

(Includes any industry certification or licensure):

Projects
Tests/Quizzes
Presentations
Practice demonstrations
Performance evaluations by instructor and site supervisor
Group activities
Written assignments

A Certificate of Completion is issued to students who successfully complete the course and meet the Student Competencies.

TEXTBOOKS OR OTHER SUPPORT MATERIALS (Including Software):

College	High School / ROP
Introduction to Fire Protection 3 rd Edition ISBN#1-4180-0177-5 \$105.25	Essentials of Fire Fighting. 4 th Edition Int'l Fire Service Training Association. ISBN# 087939149-9

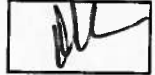
COMMENTS:

College	High School / ROP

INITIALS



INITIALS



COASTLINE ROP COURSE OUTLINE

Course Title: Introduction to Fire Technology **Date Revised:** 6/29/05
Total Course Hours: 96 Hours
CBEDS Title: Firefighting **CBEDS#** 5833
Job Title(s): Firefighter
Prerequisites: none

Course Description:

This class provides an overview of Fire Technology. Individuals interested in a career as a firefighter or firefighter/paramedic will learn various aspects of the industry. Topics of instruction will include; requirements for the profession, required physical attributes, history of fire service, department organization, emergency medical services, facilities and equipment, character and behavior of fire, hazardous materials and fire communications.

CLASS HOURS

COURSE OUTLINE

Upon completion of this course, the student will be able to perform the competencies stated below.

3

1.0 INTRODUCTION AND ORIENTATION

- Demonstrate awareness of course objectives and competencies.
- Demonstrate understanding of course requirements and student expectations.
- Demonstrate awareness of the industry standards and career opportunities.
- Portray a professional image.

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2.0 HISTORY OF FIRE SERVICE

- Discuss the history of fire service in England and early America listing fires that have an historic aspect.
- Describe the early fire service and the equipment that was used.
- Compare the regular service with a volunteer fire service.

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3.0 CAREER IN FIRE SERVICE

- Compare the sources of training available between a fire department, county or state agencies or the post secondary system.
- State the responsibility of the firefighter as a role model in the community.
- List the professional associations for firefighters and the requirements they have for certification: National Fire Academy, National Professional Qualifications Board and Interaction Fire Service Accreditation Congress.

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4.0 ENTRY INTO FIRE SERVICE

- Discuss the application process for the fire service.
- Develop a portfolio.
- List the entrance requirements for the fire service including education level, experience, and physical requirements.
- Describe the testing process for the fire service: oral and written examinations, physical exam and physical agility testing.

9	<p>5.0 FIRE DEPARTMENT ORGANIZATION AND STRUCTURE</p> <ul style="list-style-type: none"> • Describe the chain of command/organizational structure within the fire department. • Explain the various departments within local government: Fire commission, City council, Mayor and Board of Supervisors. • Differentiate between the different types of fire departments and the factors that determine type: volunteer, paid and combination. • Review the policies and procedures for a local fire department. • Relate the system for communications within the department. • Discuss incident management systems. • Describe acceptable professional conduct for a firefighter. • Analyze the system for determining work schedules and overtime duty. • Describe the discipline procedure within the department. • Identify uniform and dress code requirements for fire fighters. • Explain the procedures for department, mutual aid and pre-incident planning.
3	<p>6.0 EMERGENCY MEDICAL SERVICES-HOSPITAL CARE IN FIRE SERVICE</p> <ul style="list-style-type: none"> • Discuss the role of the first responder, the EMT and the Paramedic. • Compare the difference in scope of practice for each of the above professions.
9	<p>7.0 FIRE DEPARTMENT FACILITIES AND EQUIPMENT</p> <ul style="list-style-type: none"> • Describe various Fire service facilities and the functions they perform; fire stations, administration, dispatch center, training center, and maintenance facility. • Define the function of fire fighting equipment and when they would be used; pumper, pumper to water tower, initial attachment, mobile water supply, wildland fire apparatus, quintuple aerial, rescue, aircraft rescue, fire fighting. • Describe the function of the fire boat, air and light unit and the mobile fire investigation unit.
12	<p>8.0 CHARACTER AND BEHAVIOR OF FIRE</p> <ul style="list-style-type: none"> • Define fire and identify the common causes of fire. • Describe a fire triangle and tetrahedron. • Discuss optimal conditions that promote fire. • Identify products of combustion that are life threatening. • Explain methods of heat transfer. • Name the burn classifications and state the extent of each burn. • Explain flashover, backdraft and ignition temperature. • Determine the origin, process and impact of a residential fire. • Discuss the importance of timeliness in a fire. • Explain toxicity of smoke. • Describe the role of carbon monoxide in fire. • Discuss the role of fire personnel in community awareness and education.
4	<p>9.0 WILDLAND INTERFACE</p> <ul style="list-style-type: none"> • Identify the basic components of fire in the wildlands. • Name the three main influences on wildfires: weather, fuel and topography. • Describe the make up of a wildland fire. • Discuss the dynamics of a wildland fire. • Describe what wildland interface means. • Identify the progression of fire into surrounding neighborhoods. • Describe the characteristics of home and surrounding structures. • Identify when additional units would be dispatched for protection of homes.

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10.0 HAZARDOUS MATERIALS AND SPECIAL HAZARDS

- Define hazardous materials.
- Identify hazardous materials.
- Describe the handling of hazardous material call by specialists.
- List the typical calls that are seen.
- Define electrical and radiation hazards.
- Define infectious disease.
- Explain procedures for Standard Precautions.
- State the precautions used during medical aide calls.

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11.0 SAFETY

- Discuss the responsibilities of firefighters according to NFPA 1500.
- Demonstrate use of safety equipment when riding fire apparatus.
- Explain the safety procedures for mounting/dismounting and working around engines.
- Use protective clothing such as turnouts and PPE.
- Identify dangerous building conditions created by fire.
- Describe the actions that should be taken when trapped by a fire.
- Demonstrate safe use of lighting equipment.
- Shut off utilities to building.
- Identify common accidents and their causes.
- Recognize long term effects from products of combustion.

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12.0 FIRE EXTINGUISHERS/SPRINKLER SYSTEMS

- List the classification of fires.
- Explain the portable extinguisher rating system.
- Select a portable extinguisher.
- Define Class A and Class B fires.
- Discuss the value of automatic sprinkler systems.

3

13.0 FIRE COMMUNICATIONS

- State the procedure for reporting a fire.
- Receive an alarm from a citizen or dispatcher.
- Alert fire personnel.
- Differentiate between personal and business calls and state how they should be handled.
- Explain the appropriate use of the radio.

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14.0 FIREFIGHTER HEALTH AND FITNESS

- Indicate the physical demands of the job of firefighter.
- Maintain physical agility and fitness.
- Maintain medical fitness.
- Name the fitness programs available.
- Describe the responsibility of the company officer.
- Identify leading causes of illness and death.
- Discuss agility requirements for personnel.
- Demonstrate the components of an agility test.

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15.0 FIRE PREVENTION AND EDUCATION

- Discuss the importance of fire department inspections of public facilities and private dwellings.
- Discuss the importance of education programs and community support.

6	<p>16.0 FIELD TRIPS</p> <ul style="list-style-type: none"> • Visit a local fire department. • Visit a local training tower facility.
2	<p>17.0 EMPLOYMENT LITERACY</p> <ul style="list-style-type: none"> • Identify available positions in the industry through the use of the newspaper or the Internet. • Complete an application form correctly. • Prepare a written resume. • Participate in a simulated employment interview. • Prepare a portfolio.
3	<p>18.0 PERSONAL SKILLS RELATED TO EMPLOYMENT</p> <ul style="list-style-type: none"> • Be prompt, attend class regularly, and follow absence notification procedures • Develop and maintain acceptable working relations. • Manage time wisely. • Maintain a positive and cooperative attitude • Demonstrate values of honesty and integrity • Respect others • Dress in a professional manner according to industry standards • Use appropriate personal hygiene/grooming • Demonstrate responsibility by exerting a high level of effort and working toward a goal
3	<p>19.0 INTERPERSONAL SKILLS AND GROUP DYNAMICS</p> <ul style="list-style-type: none"> • Demonstrate the ability to work as a member of a team. • Identify proper procedures for handling harassment. • Demonstrate leadership skills by working independently, making appropriate decisions, working well with others, and accepting constructive criticism. • Demonstrate the ability to accept and work with individuals from various cultures.
4	<p>20.0 THINKING AND PROBLEM SOLVING SKILLS</p> <ul style="list-style-type: none"> • Utilize problem solving techniques. • Understand logical reasoning. • Demonstrate creative thinking. • Demonstrate ability to make sound decisions. • Demonstrate the ability to interpret information correctly.
4	<p>21.0 COMMUNICATION SKILLS</p> <ul style="list-style-type: none"> • Demonstrate effective verbal and written skills. • Read technical journals, and write technical reports using appropriate terminology. • Listen attentively, follow directions, and relay directions to others. • Demonstrate ability to research and retrieve information.

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ADDITIONAL COURSE INFORMATION

Career Pathway:	Public Services
Academic Credits:	One semester class – 5 credits
Articulation:	No