

**NEWTEC**

PROGRAM ARTICULATION AGREEMENT

College Program: Fire Science Technology
Career Pathway: Emergency and Fire Management Services
Career Cluster: Law, Public Safety, Corrections and Security

CIP: 43.0203

The purpose of this agreement is to grant college credit to high school students who have achieved the level of knowledge and skill required for the college-equivalent entry-level course(s) identified in this agreement. Upon successful completion of the identified course competencies with a grade of 'B' (3.0) or higher and the high school teacher's endorsement that the competency requirements have been met, articulated credit will be granted.

The following Spokane Community College course(s) have been approved for Tech Prep articulation with Newport School District high school course(s) as listed below:

High School / Course Title	College / Course Title	Credits
Newport HS Fire Science 1 (<i>one year</i>) (CIP 430203)	SCC FS 177 Wildland Operations	3
Fire Science 1 and 2 (<i>two years</i>)	FS 211 Introduction to Fire Science FS 212 Fire Science Applications I FS 233 Professional Development	4 6 2

**see attached list(s) of competencies for articulated courses*

Student Articulation Procedure:

1. Be enrolled in the required high school class.
2. Register for Tech Prep/Dual Credit articulated course during the same academic year the high school class is completed. If a series of courses are involved in the articulation, students register for credit during the same academic year the last course in the series is completed. **Students cannot earn "retroactive credit" for courses taken in previous years.**
3. Earn a grade of 'B' (3.0) or better in all courses required under the articulation agreement.
4. Complete all required skills as identified on the competency profile.
5. If an exam or review of completed work is required under the terms of this agreement, students must receive a passing score (determined by college or industry certification) to earn college credit (*see competency list for requirements*).

High School Instructors:

1. Ensure all students receive a copy of the course syllabus outlining information about Tech Prep, the college course competencies and the process required to earn college credit.
2. Hold students accountable for the same competency standard and course expectations as required by the college-equivalent course (*see competency list attached*).
3. If required for articulation, ensure students are prepared to take industry certification exams, complete a professional portfolio documenting their work, or take a final exam to measure their level of skill and competence in the coursework.
4. Submit final grades for all students registered to earn Tech Prep college credit no later than June of the current academic year.
5. Attend scheduled meetings, workshops or in-service activities that enhance the high school/college partnership & support implementation of the Tech Prep articulated program.

Articulation Review and Renewal:

The designated program facilitators, college administrators and/or instructors and high school faculty will meet regularly to revise or discuss the articulation agreement. Agreements must be reviewed/updated and re-signed by college faculty/deans and CTE directors/HS teachers on a schedule, not to exceed a three (3) year rotation, or as deemed necessary due to changes in HS/college course content or structure. Individual teacher verification forms must be signed and submitted annually. Minor revisions can be made via phone calls, correspondence or e-mail.


**PROGRAM ARTICULATION AGREEMENT
Fire Science Technology**

**PARTICIPATING INSTITUTIONS
Newport School District and Spokane Community College**

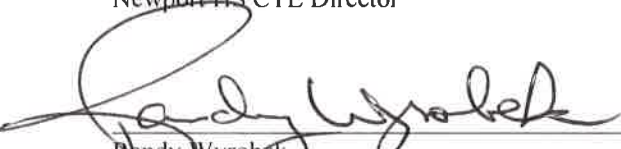
We the undersigned representatives of the Northeast Washington Technical Education Consortium (NEWTEC), agree to all provisions of the articulation program/course agreement, have reviewed the course competencies, and understand the process to which students may be granted college credit through the Tech Prep program. We commit staff time and resources to ensure successful program implementation.




Steve Shumski, Date
Newport HS CTE Director

 12/9/14

Cindy Walters, Date
SCC Faculty



Randy Wyrobek, Date
Newport HS Teacher

 12/10/14

Dave Cox, Date
SCC Program Dean

 3-5-15

Nancy Fair-Szoljan, Date
Provost, Community Colleges of Spokane

Original 06/04/07
Renewed 12/04/08
Renewed/revised 11/30/10
Renewed 11/18/14

Course Objectives/Course Outline

Spokane Community College

Course Title: Wildland Fire Operations

Prefix and Course Number: FS 177

Course Description: FS 177 — Wildland Fire Operations (3 cr)

This course is designed to prepare the student to fight wildland fires. It includes information on safety practices and initial control strategies, and meets the NWCG requirements for S-130/S-190, L-180 and I-100. Prerequisite: Volunteer or career firefighter or acceptance by special permission. (SCC)

Learning/Performance Expectations: (e.g., outcomes, performance objectives, competencies, etc.)

By the end of this course, a student should:

- Describe the fire behavior factors affecting the start and spread of wildland fire.
- Describe the weather elements that affect wildland fire.
- Describe the steps the firefighter should take to prepare for the extended attack phase of the fire.
- Describe those factors that will ensure firefighter safety.
- Identify the appropriate hand tools and firing devices that are used on wildland fires.
- Describe how to secure a control line around a fire.
- Describe how to patrol and scout a fire.
- Describe the specific elements of size-up.
- Demonstrate size-up.
- Describe the priorities in initial strategy.
- Demonstrate how to create an action plan.

Course Outline:

- I. Fire Behavior Factors of Wildland Fires
 - A. Fire Triangle
 - B. Methods of Heat Transfer
 - C. Environmental Elements
 - D. Fuels
 - E. Weather
 - F. Wind
 - G. Slope
 - H. Topography
 - I. Dangerous Conditions
- II. Fire Weather
 - A. Indicators of Cold Fronts
 - B. Foehn Wind Conditions
 - C. Thunderstorms
 - D. Daily Cycle of Slope and Valley Winds
 - E. Relative Humidity
 - F. Fire Environment Indicators
- III. Firefighter Preparedness
 - A. Personal Gear
 - B. Personal Protective Equipment
 - C. Firefighter Accountability
- IV. Safety
 - A. Definition
 - B. Potential Hazards
 - C. LCES
- V. Standards for Survival
 - A. Common Denominators on Fatal Fires
 - B. Watchout Situations
 - C. Fire Orders
 - D. Function of the Fire Shelter

- E. Deployment of the Fire Shelter
- F. Care and Inspection of Fire Shelter
- VI. Use of Tools and Equipment
 - A. Maintenance of Hand Tools
 - B. Carrying and Passing Tools
 - C. Proper Spacing
 - D. Place of Fireline
- VII. Firing Devices
 - A. Hazards of Fuses
 - B. Hazards of Drip Torches
 - C. Use of Drip Torches
 - D. Care of Drip Torches
 - E. Methods of Igniting Wildland Fires
- VIII. Securing the Control Line
 - A. Extinguish Burning Material by Chopping, Scraping, and Mixing with Soil
 - B. Precautions When Applying Water
 - C. Systematic Mop-up
 - D. Senses and Burning Materials
 - E. Breaking Up and Dispersing Machine Piles
 - F. Cold Trailing
 - G. Factors that Affect Water or Retardant Line
- IX. Scouting and Patrolling
 - A. Responsibilities of a Lookout
 - B. Considerations when Patrolling a Fire
 - C. Locating Spot Fires
 - D. Communication among Designated Personnel
- XI. Size-Up
 - A. Size-Up Information
 - B. Resources
 - C. Size-up Reports
- XII. Initial Strategy and Action Plan
 - A. Priorities of Strategic Goals
 - B. Operational Modes
 - C. Factors of Resource Ordering
 - D. Briefing and Deploying Resources
- XIII. Structure Triage
 - A. Structural Triage Categories
 - B. Triage Decisions
 - C. Hopeless Situations
- XIV. Tactics
 - A. Arrival Operations
 - B. Structure Preparation
 - C. Defending Structures
- XV. Action Plan Assessment
 - A. Assessing the Effectiveness of the Action Plan
- XVI. Public Relations and Follow-Up
 - A. Steps before Leaving
 - B. Dealing with the Public
 - C. Demobilization Plan
 - D. After the Fire
 - E. Minimizing Damage
 - F. Responsibility to Post Incident Management

Course Objectives/Course Outline

Spokane Community College

Course Title: Introduction to Fire Science

Prefix and Course Number: FS 211

Course Description: FS 211 — Introduction to Fire Science (4 cr) (44 hrs lecture)

This course introduces students to the basics of firefighting. Topics include safety, fire behavior, personal protective equipment, portable extinguishers, search and rescue, ropes and knots, hoses, ladders, and emergency vehicle accident prevention. Prerequisite: Successful completion of first year general education requirements and concurrent enrollment in FS 212. (SCC)

Learning/Performance Expectations (e.g., outcomes, performance objectives, competencies, etc.)

By the end of this course, a student should:

- Explain fire behavior
- Identify firefighting equipment
- Describe search and rescue techniques
- Describe salvage and overhaul methods

Course Outline

- I. Essentials of Firefighting
 - A. Ropes and Knots
 - B. Ladders
 - C. Hoses
 - D. Breathing apparatus
 - E. Search and Rescue
 - F. Extinguishers
 - G. Ventilation
 - H. Forcible Entry
 - I. Salvage and Overhaul
 - J. Sprinklers
 - K. Safety
 - L. Fire Behavior
 - M. Basic Fire Streams

- II. Prevention
 - A. Emergency Vehicle Accident Prevention
 - B. Introduction to Fire Prevention

Course Objectives/Course Outline

Spokane Community College

Course Title: Fire Science Applications I

Prefix and Course Number: FS 212

Course Description: FS 212 — Fire Science Applications I (6 cr) (132 hrs lab)

Practical applications using firefighting equipment including personal protective equipment, hoses, ladders and extinguishers are emphasized. Emergency vehicle accident prevention methods also are included. (SCC)

Learning/Performance Expectations (e.g., outcomes, performance objectives, competencies, etc.)

By the end of this course, a student should:

- Utilize a variety of firefighting equipment
- Demonstrate search and rescue methods
- Practice salvage and overhaul techniques
- Create a practical prevention project

Course Outline

I. Equipment

- A. Ropes and Knots
- B. Ladders
- C. Hoses
- D. Breathing Apparatus
- E. Search and Rescue
- F. Extinguishers
- G. Ventilation
- H. Forcible Entry
- I. Salvage and Overhaul
- J. Sprinklers
- K. Safety
- L. Fire Behavior
- M. Basic Fire Streams

II. Prevention

- A. Emergency Vehicle Accident Prevention
- B. Introduction to Fire Prevention

Course Objectives/Course Outline

Spokane Community College

Course Title: Fire Science Administration

Prefix and Course Number: FS 233

Course Description: FS 233 — Professional Development (2 cr) (22 hrs lecture)

This course explores a variety of self-development activities that assist students in gaining employment after graduation. These activities include practice civil service examinations, both written and oral, in addition to exercises in professional demeanor as appropriate to fire fighters. This course is required in one of the student's last two quarters prior to graduation. (SCC)

Learning/Performance Expectations (e.g., outcomes, performance objectives, competencies, etc.)

By the end of this course, a student should:

- Describe the unique role of the fire department administrator in the fire service.
- Describe effective leadership and the relationship of power and authority to leadership.
- Demonstrate how to tailor fire department services to meet community needs and expectations.
- Describe how branches of federal and state government impact fire service administration.
- Describe the role of collective bargaining in the fire service.
- Identify state and federal laws that impact administration in the fire service.
- Demonstrate the ability to develop a job analysis and understand the process of hiring and recruiting.
- Identify how motivation and discipline are used to improve and maintain operational effectiveness.
- Describe the role of the administrator in working with other administrators and department heads.
- Demonstrate the effectiveness of information management.
- Demonstrate the ability to analyze and identify the service demands of a community.
- Demonstrate the ability to engage in departmental planning and how to develop a mission statement.
- Describe the role of contemporary ethics in government service and the future of fire service administration.

Course Outline

- I. Leadership and Culture
 - A. Effectiveness vs. Efficiency
 - B. Styles
 - C. Legal Constraints
 - D. Styles
 - E. Roles
 - F. Barriers
 - G. Training
- II. State and Federal Laws
 - A. American Governmental Structure
 - B. Washington State Law
 - C. Federal Laws
- III. Human Resource Management
 - A. Legal Requirements
 - B. Collective Bargaining for Public Employees
 - C. Wage and Hour Laws
 - D. Health and Safety

- E. Workers' Compensation
 - G. Civil Rights Legislation
 - H. Substance Abuse and EAP
 - I. Family Medical Leave Act
- IV. Hiring Practices
- A. Job Analysis
 - B. Job Descriptions
 - C. Process
 - D. Recruiting
- V. Motivation and Discipline
- A. Motivating Employees
 - B. Importance of Discipline
- VI. Interacting with Other Public Administrators
- A. Role of the Department Head
 - B. Working with Department Heads
- VII. Information Management and Needs Assessment
- A. Use of Information
 - B. Internal and External Needs Assessments
- VIII. Planning
- A. Delineation of Line and Staff Activities
 - B. Goal Statements and Action Plans
 - C. Techniques
- IX. Budgeting
- A. Budget Cycles
 - B. Capital Budgets
 - C. Priority Rating Matrix
 - D. Types
 - E. Sources of Revenue
 - F. Departmental Budgets
- X. Ethics
- A. Definition
 - B. Role
 - C. Situational Ethics
 - D. Accountability and Responsibility