

Northwest Career & Technical Academy

Fire Science & EMS

2026–2027 Course Syllabus

NCTA Educational Philosophy

NCTA provides career and technical education that connects active learning, real-world expectations, technical skill development, and employability skills. Students are expected to develop a work ethic, perseverance, problem-solving, a positive attitude, teamwork and commitment while preparing for further education, industry credentials and high-demand careers.

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Course Hours	AM 0800–1030 PM 1130–1400
Location	Mount Vernon Campus Room 250A Whatcom Campus, Meridian High School
CIP / Framework	430203 — Fire Science and Emergency Services
School Year	2026–2027

Course at a Glance

Program: Fire Science & EMS

Program Length: One year with ability to return as a second year student

Primary Curriculum: IFSTA Essentials of Firefighting 8th Edition; EMS resources and instructor-provided materials.

Career Focus: Firefighter, EMT/EMS, emergency services, dispatch, public safety, and related pathways.

Course Delivery: Classroom instruction, skills/drill-ground training, physical training, scenarios, projects, guest instruction, and off-site/worksite learning.

Certification/Credential Opportunities: FEMA 100, 200, 700 & 800, First Aid & CPR, NFA Q0460 ICS for the Fire Service, NFA Q0130 Firefighter Health & Safety, NFA Q0361 Community Risk Reduction

Dual Credit: Skagit Valley College (SVC) CTE Dual Credit

1. Course Description & Purpose

Fire Science & EMS prepares students for entry-level knowledge and skills in fire and emergency medical services while developing the professional behaviors expected in public safety careers. Students develop cognitive, psychomotor, communication, teamwork, and decision-making skills through classroom learning, hands-on training, scenario-based practice, and authentic industry experiences.

The program is designed to prepare students for Washington State fire service certification pathways and for continued education or employment in fire and emergency services. The course emphasizes safety, professionalism, accountability, service to others, and the ability to function effectively as part of a team.

Learning Outcomes

- Explain fire service organization, roles, terminology, safety practices, and incident management principles.
- Relate building construction, fire behavior, and fire dynamics to firefighter safety and tactical decision-making.
- Identify and safely use common firefighting tools, equipment, PPE, hose, ladders, ropes, and related systems.
- Demonstrate selected Firefighter I & II skills aligned with applicable Washington State Patrol IFSAC skill sheets.
- Recognize hazardous materials and describe appropriate awareness/operations-level response concepts.
- Perform basic emergency medical assessment and patient-care skills within the student's level of training.

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- Demonstrate teamwork, leadership, communication, accountability, professionalism, and coachability.
- Apply safety principles during classroom, physical training, drill-ground, field, and worksite activities.
- Communicate professionally with instructors, peers, guest instructors, agencies, and community partners.
- Evaluate career and postsecondary opportunities within fire science, EMS, and related public safety fields.

Program Standards / Alignment

- Washington State CTE Framework/CIP: 430203 Fire Science and Emergency Services.
- High school credits received
 - Year One Students - 1 credit of Occupational Education, Science and Physical Education
 - Year Two Students - 1 credit of Occupational Education, English and Physical Education
- Firefighter certification preparation: Washington State Patrol IFSAC Fire Service Certification requirements and applicable skill sheets.
- Primary fire text: IFSTA Essentials of Firefighting and Fire Department Operations, 8th Edition.
- EMS content: AAOS Emergency Care & Transportation of the Sick and Injured, 12th Edition.
- College alignment: Skagit Valley College CTE Dual Credit articulation, where applicable.

2. Course Scope / Year 1 & Year 2

Year / Level	Major Content	Major Skills / Assessments
Year 1	Fire service fundamentals; scene safety; communications; construction; fire behavior; PPE; extinguishers; ropes/knots; ladders; forcible entry; search/rescue; ventilation; hose; suppression; overhaul/property conservation; first aid/EMS fundamentals.	Washington State Patrol skill sheet check offs DOH EMS skill sheet check offs FEMA 100 & 200 First Aid & CPR
Year 2	Advanced fire service topics; Firefighter II content; fire origin/cause; wildland/WUI; advanced hose/streams; fire control; safety/survival; advanced EMS topics; leadership/career preparation. Hazmat awareness and operations.	Washington State Patrol skill sheet check offs DOH EMS skill sheet check offs FEMA 700 & 800

3. Curriculum & Course Resources

Resource / Material	Provided By	Notes / Link
IFSTA Essentials of Firefighting and Fire, 8th Edition	NCTA	Primary fire curriculum
EMS textbook / course materials	NCTA	EMR / EMT level curriculum
Notebook / binder / writing supplies	Classroom	Used for notes, task sheets, and handouts
PPE / training gear	NCTA	Use only as directed; inspect and report damaged equipment
Athletic clothing / appropriate footwear	Student	Required for PT and training activities
Additional HazMat / EMS resources	NCTA	Instructor-provided materials

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4. CTE Dual Credit — Skagit Valley College

This course is eligible for CTE Dual Credit through Skagit Valley College when the course and student meet the current articulation and enrollment requirements. CTE Dual Credit is earned through an approved high school CTE course and requires students to complete the college's registration/enrollment process within the required timeline. Students should not assume that completing the high school course automatically places credit on a college transcript.

High School Course	SVC Course	Credits	Eligibility
Fire Science	FIRE 100 — Principles of Emergency Services	4	Final grade of B (3.0) or higher and completion of applicable competency requirements.
High School Equivalency Credits	High School Equivalency Area	Credits	WA State Transcript Course Designator
Fire Sc. Phy Ed (Y1/2)	Phys Ed	1	CTE Dual Credit (Tech Prep) CADR and Science Lab CADR
Fire Sc. Occ Ed (Y1/2)	Occ Ed	1	
Fire Sc. Science (Y1)	Science	1	
Fire Sc. English (Y2)	Technical English	1	

Student/Family Action: Students who want SVC credit should follow the current SVC CTE Dual Credit application and enrollment instructions. We will complete this in class, together to ensure students are able to complete the process.

5. Evaluation & Grading

NCTA Fire Science & EMS grades should measure both technical learning and professional performance. Students are evaluated on knowledge, skills, safety, employability habits, participation, and completion of required work.

Category	What It Measures
Technical / Skills	Skills demonstrations, drill-ground performance, practical assessments, technical competencies, and/or summative assessments.
Employability / Professional Practice	Attendance, preparedness, teamwork, communication, initiative, work ethic, responsibility, attitude, coachability, and professional conduct.

NCTA Course Grade Scale

Grade	Percent	Grade	Percent
A	93%+	C	73–77.9%
A-	90–92.9%	C-	70–72.9%
B+	88–89.9%	D+	68–69.9%
B	83–87.9%	D	60–67.9%
B-	80–82.9%	NC	59.9% and below
C+	78–79.9%		

Dual-credit minimum: Students must earn a B (3.0) or higher and meet applicable SVC competency/enrollment requirements

6. Attendance & Professional Expectations

NCTA views attendance and professional behavior through the lens of business and industry. Students are professionals-in-training and are expected to attend regularly, arrive prepared, communicate appropriately, participate fully, and contribute to a safe and productive team environment. We will cover the NCTA Professionalism Rubric further in class = a brief overview can be seen here.

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Expectation	Student Standard
Communicative	Stay in touch, ask for help, communicate absences/concerns appropriately, and use professional language.
Motivated	Give your best effort, participate, meet deadlines, and remain engaged during instruction and training.
Reliable	Attend regularly, arrive on time, and be ready to participate at the scheduled start time.
Responsible	Stay focused, care for equipment and facilities, keep work areas orderly, and follow procedures.
Team Member	Work well with others, support teammates, show a positive attitude, and follow the chain of command when applicable.
Trustworthy	Act with honesty and integrity, use technology appropriately, and take responsibility for your actions.
Coachable	Receive feedback professionally, ask questions when unsure, and use feedback to improve.

Attendance Procedures

- If you know you will be absent, notify the instructor as early as possible and follow the NCTA/district attendance process.
- For late arrival or early departure, follow the applicable office/check-in/check-out procedure.
- Because this is a hands-on course, students are responsible for making up missed instruction, skills, assessments, and required work.
- Some training activities cannot be fully replicated after an absence; alternative make-up activities may be assigned when appropriate.
- Chronic absence, repeated tardiness, or failure to communicate may affect employability/professionalism grades and may be addressed through NCTA procedures.

7. Safety, PPE & Training Requirements

Safety is the highest priority in all Fire Science & EMS activities. Students must follow instructor direction, training-site rules, PPE requirements, and applicable NCTA/school procedures.

- Students may be removed from a training activity for unsafe behavior, horseplay, failure to follow instructions, or improper PPE.
- Report injuries, hazards, damaged equipment, or unsafe conditions immediately.
- Use tools and equipment only as instructed and for their intended purpose.
- Inspect assigned equipment before use and report damaged or missing equipment.
- Required PPE and training clothing will be communicated before each activity.
- Live-fire and other high-risk training will follow applicable safety procedures and instructor direction.
- Students must disclose relevant participation limitations to the appropriate school/instructor personnel so reasonable accommodations and safe participation can be addressed.
- No personal phones or earbuds are permitted on the drill ground or during training unless specifically authorized for instruction.

8. Dress / Uniform / Equipment

- Uniform: red uniform shirt daily to class
- Physical training: athletic clothing and appropriate athletic shoes.
- Drill ground: PPE levels vary depending on task and location - Instructor will advise
- Program-issued equipment: students are responsible for proper care, cleaning, storage, and reporting damage.

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9. Technology & Electronic Devices

Phones, earbuds, smartwatches, and other personal electronics **must be secured** during instruction, drill-ground, physical training, and field activities unless the instructor specifically authorizes their use. School-issued computers may be used when they support the lesson. Personal devices may be used for an instructional purpose only when directed.

10. Academic Integrity & Generative AI

Students are expected to submit their own work and avoid cheating, plagiarism, fabrication, unauthorized collaboration, or other academic dishonesty. Students are responsible for understanding assignment-specific directions regarding collaboration and technology. Generative AI tools may be used only when the instructor permits them for a specific assignment or purpose. When AI use is permitted, students remain responsible for accuracy, originality, appropriate attribution, and the quality of the final work. AI may not replace required student thinking, skill performance, or assessment work.

11. Late Work, Missed Assessments & Retakes

- Late work: students are expected to turn in all work by the due date.
- Missed assessments: students are expected to complete missing work within a reasonable amount of time unless otherwise stated in an IEP / 504.
- Skills assessments: students are responsible for reaching out to their instructor to set a time up for skills assessment if missed or if needing reassessment.
- Students are responsible for communicating early when circumstances may affect completion.

12. Guest Instructors, Field Trips & Worksite Learning

The program may use guest instructors, active fire stations, training centers, agencies, and other community partners to provide authentic learning experiences. Students are expected to represent themselves, NCTA, and the program professionally.

- Follow the host agency's rules and instructor directions.
- Arrive prepared with required clothing, PPE, materials, and identification.
- Use professional communication and behavior at all times.
- Ask thoughtful, respectful questions and remain engaged.
- Follow all transportation, permission, and supervision requirements for off-campus activities.
- Do not photograph, record, or post information about training sites, patients, incidents, or personnel unless specifically authorized.

13. Communication, Support & Accessibility

Accessibility & Accommodations Mount Vernon High School

Participation, Teamwork, and Accessibility in the Fire and EMS Class

Learning in Fire Science & EMS requires teamwork, independent focus and communication. In this class, you will work on hands-on skills, collaborate in teams, and participate in regular group and class reading and presentations. Because everyone learns and works differently, participation in this classroom looks like many things: actively moving, helping a teammate, listening closely, or contributing to a skills session.

Your safety and success in this classroom are my top priorities. If you ever feel that a project format, skill request, or environment creates a barrier to your learning or safety, please talk to me right away. Whether you have an official accommodation plan (like an IEP or 504) or just need a different way to demonstrate what you know, I will work with you to ensure you can participate safely and fully.

More information on Accessibility: <https://mvhs.mountvernonschools.org/accessibility>

SVC Disability Access Services:

Students with disabilities or access needs should use the applicable school/district process to request accommodations. Students seeking SVC college credit should also review SVC's disability-access requirements because high-school accommodations may not automatically transfer to a college-credit course. Contact SVC Disability Access Services for college-specific guidance.

More information on SVC: <https://www.skagit.edu/student-resources/disability-access-services/>

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14. Program-Specific Certifications & Credentials

Certification / Credential	Year / Course	Provider / Notes
FEMA 100	Y1	Online test for completion
FEMA 200	Y1	Online test for completion
FEMA 700	Y2	Online test for completion
FEMA 800	Y2	Online test for completion
First Aid & CPR	Y1 & Y2	Must be present for certification

15. Course Topics & Learning Experiences

- Fire service organization, history, and culture
- Fire behavior and fire dynamics
- Building construction
- Personal protective equipment and SCBA's
- Firefighter safety and survival
- Hose, nozzles, and water supply
- Ladders, ropes, knots, and tools
- Search and rescue
- Forcible entry
- Ventilation
- Fire suppression and overhaul
- Hazardous materials
- Emergency medical services and patient assessment
- Trauma and medical emergencies
- Incident command and emergency communications
- Professionalism, teamwork, leadership, and career preparation
- Wildland/WUI fire topics
- Firefighter certification preparation

Course topics and sequence may vary based on student needs, training opportunities, weather, agency partnerships, certification requirements, and the program calendar.

16. What Students Should Expect

- A professional, team-centered learning environment.
- Regular classroom learning combined with hands-on skills and scenario-based training.
- Physical activity that supports safe participation in the fire service.
- High expectations for safety, attendance, preparedness, communication, and professional conduct.
- Opportunities to learn from firefighters, EMTs, paramedics, instructors, and other emergency-service professionals.
- Opportunities for industry credentials and SVC dual credit when eligibility and requirements are met.
- A pathway that can lead toward employment, further technical education, college, and public-service careers.

17. Syllabus Changes

This syllabus is intended to provide a clear overview of course expectations. The instructor may make reasonable changes to schedules, sequence, assignments, training locations, resources, or procedures as needed to meet instructional, safety, school, or industry requirements. Significant changes will be communicated to students.

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18. Sensitive Issues

The program uses various videos, movies, current news and industry documents as part of the course curriculum. While all efforts are made to screen the content, any opinions expressed in this content belong to those who created it and don't necessarily reflect the views of the school, class or instructor. Students are encouraged to discuss both the opinion of the content creator, but also the opposing view to gain a greater understanding and appreciation of the issues being discussed. Additionally, some media may contain violence and/or gruesome images. While all efforts are made to minimize such material, it is sometimes unavoidable in the course of addressing some course content (i.e. auto accidents). Never is such material used in a gratuitous manner. Parents are encouraged to discuss any concerns with the instructor.

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19. Student / Parent-Guardian Acknowledgment

By signing below, the student and parent/guardian acknowledge that they have reviewed this syllabus and understand the course expectations, safety requirements, grading practices, attendance expectations, technology rules, and dual-credit information applicable to the course.

This acknowledgment does not replace the NCTA student handbook, district policies, field-trip permissions, medical forms, PPE requirements, or other documents that may be required for participation in Fire Science & EMS.

Student Name: _____

Student Signature & Date: _____

Parent / Guardian Name: _____

Parent / Guardian Signature & Date: _____