



# ONTARIO FIRE COLLEGE OFMEM

## NFPA 1002 Apparatus Equipped with a Fire Pump (Chapter 5)

### Pre-Class

Mar 2020/V8



Office of the Fire Marshal  
and Emergency Management



Ontario Fire College

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## **Course Information**

### **Program Title:**

NFPA 1002 Apparatus Equipped with a Fire Pump (Chapter 5)

### **Program Outline:**

This course is designed to enhance students' abilities to perform the necessary skillsets to meet the intent of the job performance requirements (JPRs) met under Chapter 5 of the NFPA 1002 Standard for Fire apparatus Driver – Operator Professional Qualifications, 2017 Edition. Upon successful completion of this course each student will understand and be able to demonstrate the operation of a fire department pumper from both a static and pressurized source of water.

Access instructions will be sent to all registered students through their department Fire Chief or Designate, a minimum of 5 weeks prior to the course commencement. Departments are required to forward this information and redemption code to the student in a timely manner.

Once signed in, students will have the option of downloading the printed version, however they must keep in touch with the instructor on their progress or they can do the online version. Students should begin their program 30 days prior to the classroom portion of the course start date. Please note: if a student does not complete all assignments and coursework listed, he/she will not be eligible to attend the in-class portion of the program and will receive a "fail" grade.

### **Credit Status:**

This course meets the knowledge and skill requisites established by Chapter 5 of the NFPA 1002 Standard for Fire Apparatus Driver – Operator Professional Qualifications, 2017 Edition.

### **Prerequisites:**

- Member of an Ontario Municipal fire department
- NFPA 1001 Fire Fighter I or NFPA 1001 Fire Fighter I Recruit
- The student shall Operate a fire/apparatus vehicle on a predetermined route and on public way that incorporates maneuvers and features that a Driver Operator is expected to encounter during normal operation, that driver is operated in compliance with applicable state and local laws and department rules regulation
- Chapter 4 section 4.3.1

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## **Recommended Skills/Knowledge:**

In preparation for NFPA 1002 Apparatus Equipped with a Fire Pump (Chapter 5), read the complete Pre-Class package and listed chapters from IFSTA, Pumping Apparatus Driver/Operator Handbook, 3<sup>rd</sup> Edition.

**Note:** Information contained in the Pre-Class reading assignment may be included in the written knowledge test.

## **Modes of Delivery:**

- Blended Delivery: A combination of practical work and course assignments both online and in the classroom setting.
- The blended course delivery consists of a pre-class that **begins 30 days prior** to the first in-class session, followed by an in-class session.
- The course utilizes the pre-class , lectures, open discussions, and skills practice to achieve the learning objectives. Every student is expected to:
  - a) come to course prepared to actively participate in discussions;
  - b) complete all assignments;
  - c) respect the beliefs, opinions, and values of other students; and
  - d) have an open mind about the issues being discussed.

## **Modes of Evaluation:**

Pre-class reading, written knowledge testing, and practical skills.

**Note:** Completing this program does not grant certification; it prepares students for certification testing.

## **Resources:**

### **Required Book(s)/Resources:**

Students are required to have the required textbook:

- IFSTA, Pumping Apparatus Driver/Operator Handbook, 3<sup>rd</sup> Edition

### **Additional Resource Textbook(s):**

- Standard for Fire Apparatus Driver/Operator Professional Qualifications, 2017 Edition.

## **Contact:**

If you have any questions, please contact us at:

[Askofc@ontario.ca](mailto:Askofc@ontario.ca)

or 705-687-2294 Ext. 9656

## **Course Preparation**

Dear Student:

Welcome to NFPA 1002 Apparatus Equipped with a Fire Pump (Chapter 5). Prior to your arrival for this course, print and read over this information package. This package contains information and pre-class material that will help you get the most out of your course while you are at the Ontario Fire College (OFC).

### **Attention:**

Start time for OFC Pump Operator courses held at the OFC Gravenhurst will be at 08:00 hrs.

## **Instructions for Students**

1. Upon your arrival at the OFC sign in with security who will assign you a room for the duration of your course.
2. Students travelling a distance to the OFC are welcome to arrive/stay the night prior to the course; however, no meals will be available until the day the course begins.
3. Bunker gear is not allowed in the student residence. The fire hall will be open for you to place your rescue gear until the start of class on the first day. A locker will be assigned to you at the start of the first day of classes.
4. Review the list of "Required Equipment" and use the checklist provided in this document so that you do not forget anything.

## **Required Equipment**

- Protective Clothing:
  - a) Bunker Coat
  - b) Helmet,
  - c) Gloves, if able students are encouraged to bring a 2<sup>nd</sup> pair of gloves

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- Approved safety toed shoes or boots for use in and around the Fire Hall
    - a) Sandals are not permitted to be worn in the Fire Hall, in the Fire Hall classroom, to and from the fire ground, or on the fire ground
  - No shorts are permitted during any training evolution
  - Suitable clothing to wear while attending classroom sessions and Fire Hall activities as per OFC dress code
  - Suitable clothing to wear under your bunker gear or coveralls; no sleeveless shirts are permitted
  - Personal toiletries and personal items
  - Sports clothing/shoes
  - Binder, pen, pencil, notepad, and calculator
  - Laptop or tablet (optional)

## **Checklist**

### **Course Needs (Mandatory):**

- Helmet or approved hard hat
- 2 Pairs of Gloves
- Coveralls (optional)
- Safety Toed shoes/boots for work in/around the fire hall
- Calculator
- Completed pre-course package – All **online** Quizzes **MUST** be completed
- If taking the Blended Online Edition of this course, all electronic quizzes and assignments must be completed

## **Required Readings & Assignment**

The required text for the NFPA 1002 Apparatus Equipped with a Fire Pump (Chapter 5) program at the OFC is ***IFSTA, Pumping Apparatus Driver/Operator Handbook, 3<sup>rd</sup> Edition.***

Review the chapters listed below and complete the chapter quizzes using the resource. Be prepared to discuss your answers in class.

You must complete the Pre-Class readings and accompanying quizzes. Information contained in the Pre-Class reading assignment may be included in the written knowledge test.

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**Students who have not completed these assignments may be sent home.**

**NOTE:**

The student shall come to class with the pre required knowledge and being able to Don and Doff Personal Protective Clothing and SCBA in accordance to NFPA 1001-2013-5.1.2 and 5.3.1 skill sheets 7 and 8 from Firefighter level one.

The Fire Chief or Training officer will be responsible to make sure you have them signed off on those skill before coming to class. You have copies for 1st day of class.

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## Required Pre-Class Readings

### Resources:

IFSTA, Pumping Apparatus Driver/Operator Handbook, 3rd Edition

Chapter	Subject	Page Number
Chapter 1	Types of Fire Apparatus	13-25
Chapter 4	Positioning Apparatus	135-155
Chapter 5	Principles of Water	167-189
Chapter 6	Fire Hose Nozzles & Flow Rates	193-204
Chapter 7	Theoretical Pressure Calculations (Metric)	209-220
Chapter 8	Fire Ground Hydraulics	281-289
Chapter 9	Fire Pump Theory	295-330
Chapter 10	Operating a Fire Pump	335-367
Chapter 11	Static Water Supply Sources Read and be prepared to discuss	400-419
Chapter 12	Relay Pumping Read and be prepared to discuss	422-436
Chapter 14	Foam Equipment & Systems	477- 511
Chapter 15	Apparatus Testing Read and be prepared to discuss	512-536

The balance of the chapters in this text will not be specifically covered in this course but is information that would be useful to know, and we would suggest you read the entire textbook.

## In-Class 5 Day Schedule

Times	Day 1	Day 2	Day 3	Day 4	Day 5
08:30 to 12:00	OFC Class opener Instructors Introductions Student Introductions	Questions from Day 1 Perform Daily Pump Checks (as a group)	Questions from Day 2 Perform Daily Pump Checks (as a group)	Questions from Day 3 Perform Daily Pump Checks (as a group)	Questions from Day 4
	Classroom Review areas of concern from Workbook and Blended portion of NFPA 1002 Pump Ops  Refer students to OFC Skill Sheets in Workbook to cover pumping activities	<b>Fireground Pumping - 2 Lines Flow</b>  Group 1: Static Source & Drafting Group 2: Hydrant/Pressurized Source  <b>ROTATE</b>  Group 1: Hydrant/Pressurized Source Group 2: Static Source & Drafting	<b>Fireground Pumping</b>  Group 1: Hydrant/Pressurized Source Troubleshooting & Standpipes OPS Group 2: Static Source Draft with Foam  <b>ROTATE</b>  Group 1: Static Source Draft with Foam Group 2: Hydrant/Pressurized Source Troubleshooting & Standpipes OPS	Group 1 & 2 Two apparatus Relay  Relay Troubleshooting	<b>AS&amp;E NFPA 1002 Practical Skill Testing</b> Clean-up & Review  Class Climate Evaluation <b>(OFC &amp; RTC ONLY)</b>  Closing remarks
12:00 to 13:00	<b>Lunch</b>	<b>Lunch</b>	<b>Lunch</b>	<b>Lunch</b>	<b>Lunch</b>
13:00 to 16:00	Group 1: Apparatus Maintenance Group 2 Pumps OPS Hydraulics practical evolutions Basic  <b>ROTATE</b>  Group 1: Pumps OPS Hydraulics Group 2: Apparatus Maintenance practical evolutions Basic	<b>Fireground Pumping - 3 Lines Flow</b>  Group 1: Hydrant/Pressurized Source Observe Safe Residual Pressures  Group 2: Static Source & Drafting Observe Safe Drafting Low Pressure  <b>ROTATE</b>  Group 1: Static Source & Drafting Observe Safe Drafting Low Pressure  Group 2: Hydrant/Pressurized Source Observe Safe Residual Pressures	Group 1 & 2 Relay Operations with more time and troubleshooting  Refer to lesson plan	<b>Course Testing</b>  Group 1: OFC Skill Sheets/Testing Group 2: Review Inside/Queue  <b>ROTATE</b>  Group 1: Review Inside/Queue Group 2: OFC Skill Sheets/Testing  <b>All Students OFC knowledge test</b>	12:45 head to written test area  AS&E NFPA 1002 CHAPTER 5 THEORY CERTIFICATION TEST
	Daily Review/ Release Students	Daily Review/ Release Students	Daily Review/ Release Student	Daily Review/ Release Students	