



Plumbing Foundation

Handbook for Comox Valley Plumbing Foundation Students

Instructor:

Rob Hughes
Nick Charette
Josh Stull



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Welcome to the Comox Valley Campus of North Island College!

Faculty, Staff and Administration are delighted you have chosen to study at North Island College and hope your studies are both challenging and rewarding for you.

This Handbook is designed to assist you and to help you become familiar with the many services and facilities available to you on the Comox Valley Campus.

Given the short time frame for Foundation Training, the amount of material you must learn during your classes requires that you are on top of your studies from the first day, and that you keep up with homework assignments. If you need help to do so, please ask for assistance right away. In addition to your instructor, NIC also provides a range of services including help with Math or Reading, which can be tailored directly to your in-class requirements. Contact information to access this assistance is described in this handbook.

All who work at the Comox Valley Campus are committed to your success and are available to answer any questions you may have.

Our desire is to continuously improve what we do to ensure you receive the best possible training. To this end, please let us know about ways in which you believe we can improve our service to you.

We hope your time at North Island College will be successful and does form the solid foundation required as you advance in your trade.

Sincerely,

A handwritten signature in black ink that reads "Don Gillingham". The signature is written in a cursive style with a large, stylized initial "D".

Don Gillingham
Dean, Trades, Technical & Tourism Programs

Welcome to Plumbing Foundation Training at NIC

Thank you for your application to Plumbing Foundation Training at North Island College. We look forward to having you study with us!

Our goal is to help you become the best Plumber you can be. Our desire is for you to learn the required skills and knowledge of the trade so well, that writing the exams is not the barrier they may first appear to be. If your goal is to fully understand the whys of the trade, and not to focus on memorizing responses to exam questions, you will have taken a first key step to success. By taking this approach you will find that writing exams will be much easier as you will understand more completely the situations you face and will know how to apply your knowledge in a more comprehensive way.

The information in this package is intended to help you become familiar with what you will study, how to prepare for school and to provide you with information about NIC's services. It includes a math self-test, which you can use to assess your current abilities in math and if needed, information about where and how to get help. Also included is a list of materials you will require for your sessions and a list of topics for the year.

We look forward to helping you learn your trade and successfully complete your training.

General Program Information

The Plumbing Apprenticeship Training Program at North Island follows the provincial program outline that was prepared with advice and direction from an industry Steering Committee convened by the British Columbia Construction Association with funding support from the Industry Training Authority. The Steering Committee's key function was to:

- Help to ensure that learning outcomes / course competencies and objectives continue to meet both the requirements of the workplace and the National Occupational Standards (Red Seal);
- Identify, and advise about desired practices and training emphasis that will help to ensure the effectiveness of program graduates in the workplace;
- Act as the voice of industry in communicating plumber training requirements to the ITA and the community.

Program Outline

Training follows the current BC Program Outline for Plumber Foundation, which was last revised by the Province in 2006.

Preparation for School

Your first step should be to have your current knowledge of both Math and English assessed at the College. This can be done through any campus of NIC. The professionals who provide these assessments can best advise you about recommended review or upgrading that is available to assist you. At NIC we recognize that a good understanding of mathematics and physics will improve your chances of success.

Personal Protection and Classroom Supply List Plumber Training

Steel Toed Boots or Shoes

Gloves

Coveralls

Hard hat

25' tape measure

Metric Conversion Calculator e.g. Sharp EL520-WBBK

Drafting Set

LEARNING RESOURCES

All text books and Classroom Supplies are available through the North Island College bookstore. To obtain the most recent book list, please contact the bookstore at 250-334-5013 or conduct a book search via the following link:

http://www.nic.bc.ca/services/campusinfo/book_search.aspx

Program Profile Plumbing Foundation Technical Training

TECHNICAL TRAINING CONTENT
Mathematics
Science
Safety
Tools
Pipes, valves, and fittings
Rigging
Cutting, soldering and brazing
Drafting and blueprint reading

For more detailed program profile information visit:

<http://www.itabc.ca/AssetFactory.aspx?did=659>

Plumbing Apprenticeship Math Pre-Test

Level One Plumbing students should use this pre-test as an indicator of their current math skills. If you have problems completing any part of this test you should purchase the review book *Pre-Apprentice Training: A Test Preparation Manual for the Skilled Trades* by Jack Martin and Mary Serich. ISBN# 0964953013, available at the NIC bookstore in Campbell River and review any problem areas prior to your level one training.

Do not use a calculator for questions 1-13

1. Add the following numbers, 14, 108, 1027, 6, 339 Ans. _____

2. Add the following numbers, 1.06, 113.94, 0.642, 2.009 Ans. _____

3. Subtract 1026 from 2003 Ans. _____

4. Subtract 56.078 from 87.64 Ans. _____

5. Multiply 43 by 7 Ans. _____

6. Multiply 1137 by 56

Ans. _____

7. Multiply 11.007 by 108.2

Ans. _____

8. Divide 1064 by 8

Ans. _____

9. Divide 109.86 by 10.3

Ans. _____

10. Add the following fractions, $\frac{1}{4} + \frac{1}{8} + \frac{3}{16} + \frac{1}{2}$

Ans. _____

11. Multiply the following fractions $\frac{3}{7}$ by $\frac{5}{9}$ by $\frac{1}{2}$

Ans. _____

12. Divide the following fractions $\frac{1}{4}$ by $\frac{1}{2}$

Ans. _____

13. Divide $\frac{3}{16}$ by $\frac{1}{8}$

Ans. _____

14. A right angle triangle contains one angle of 46° ; calculate the size of the other small angle.

Ans. _____

15. Convert $\frac{5}{8}$ to its decimal equivalent, round your answer to three decimal places.

Ans. _____

16. The number of millimeters in a meter is _____

Ans. _____

17. One imperial gallon is equal to how many liters _____

Ans. _____

18. A plumber cuts three sections of pipe from a 12' length of ABS pipe, the lengths of the sections are $33 \frac{3}{8}$ ", $56 \frac{5}{8}$ " and $39 \frac{7}{8}$ ". What is left over from the full length, if the saw cut is $\frac{1}{8}$ " wide?

Ans. _____

19. What is the radius of a circle having a diameter of 1.06 meters? Answer in millimeters

Ans. _____

20. What is the circumference of a circle having a diameter of 12 feet?

Ans. _____

21. What is the area of a circle having a diameter of 4.5 feet?

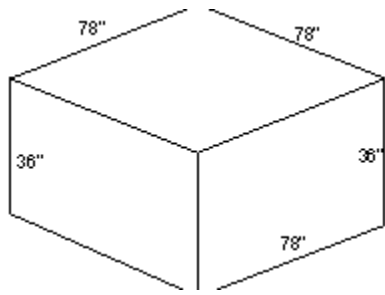
Ans. _____

22. What the area of a right angle triangle having a base dimension of 3 feet and a height of 4 feet.

Ans. _____

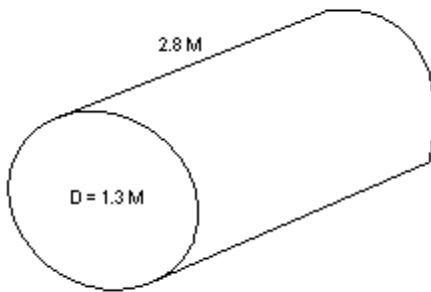
23. Calculate the surface area of this enclosed box. Answer in square inches

Ans. _____



24. Calculate the volume of this cylinder. Answer in Cubic metre

Ans. _____



25. What is 12% of 63?

Ans. _____

26. 17 is what percent of 26

Ans. _____

27. 12.9 is 15% of what number

Ans. _____

28. An item sells for \$63.59. What is the total cost for that item after 7% GST and 6% PST have been applied?

Ans. _____

29. Find the square of 11.

Ans. _____

30. Find the cube of 5.

Ans. _____

31. Find the square root of 49.

Ans. _____

32. Find the cube root 216.

Ans. _____

33. Write 16% as a decimal number and a fraction. (reduce to lowest terms)

Ans. _____

34. Convert 1,000,000 to scientific notation.

Ans. _____

35. Convert 0.00001 to scientific notation

Ans. _____

36. Solve this equation

Ans. _____

$$\sqrt{16} + (9 + 16)^2 =$$

Answer Key

1. 1494
2. 117.651
3. 977
4. 31.56
5. 301
6. 63672
7. 1190.96
8. 133
9. 10.666
10. $17/16$ or $1-1/16$
11. $15/126$ or $5/42$
12. $\frac{1}{2}$
13. $1-1/2$
14. 44 degrees
15. 0.625
16. 1000
17. 4.54
18. $13 \frac{3}{4}$ "
19. 530 mm
20. 37.68 feet
21. 15.9 square feet
22. 6 square feet
23. 23 400
24. 3.718 cubic metres (or if 3.14 is used for Π the answer is closer to 3.715)
25. 7.56
26. 65%
27. 86
28. \$71.86
29. 121
30. 125
31. 7
32. 216
33. 0.16 and $4/25$
34. 10^6
35. 1^{-5}
36. 629

COURTENAY CAMPUS HOURS OF OPERATION

Note: The following are general hours of operation of the Campus. Your instructor will provide you with a specific timetable for your course.

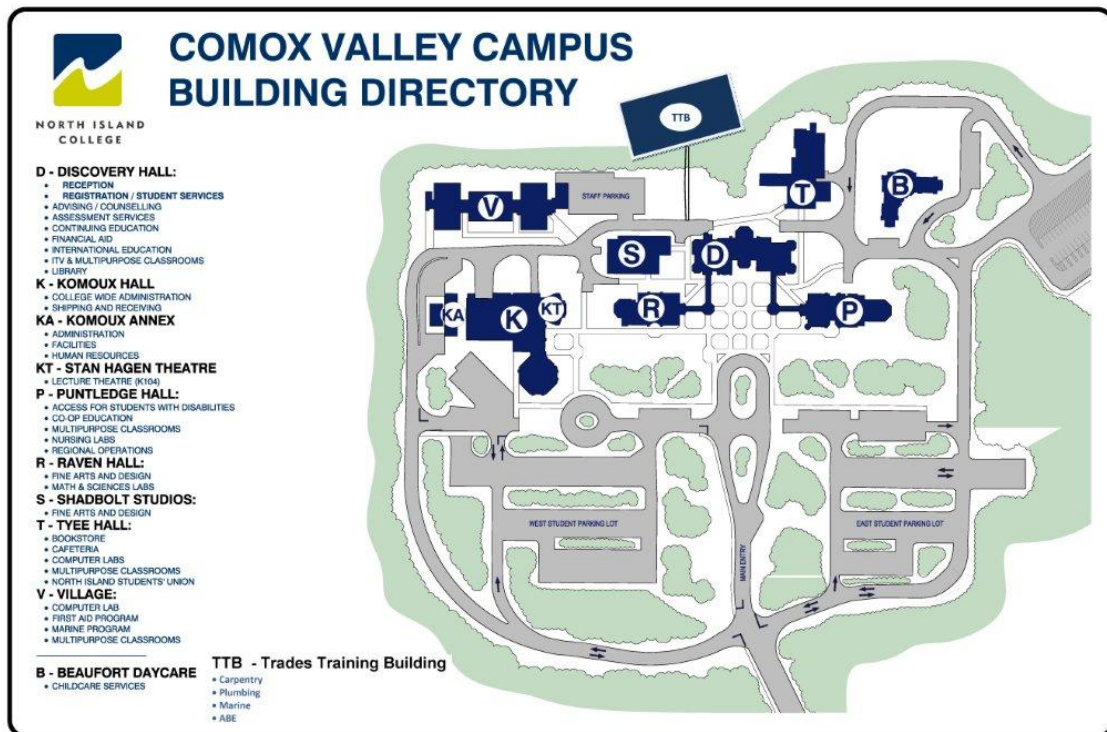
MAIN CAMPUS

2300 Ryan Road
Courtenay, BC V9N 8N6

Phone: 334-5000

Hours of Operation – Effective September 7 th 2010			
Reception	250-334-5000 250-334-5018 Fax	8:30 am – 4:30 pm	M-F
Registration	250-334-5000 250-334-5018 Fax	9:00 am – 4:00 pm 9:00 am – 6:00 pm	M, T, TH & F W
Library	250-334-5037	8:00 – 9:00 pm 8:00 – 4:00 pm	M-T F

COURTENAY CAMPUS MAP



CAMPUS SERVICES

ATM MACHINE

Bank machines are located on-campus near the Campus Store or cafeteria.

COMPUTER ACCESS

Library - Available during normal operating hours for word processing and library catalogue searches.

Computer Labs Tyee 121 – Monday – Wednesday 2:30 – 4:30 pm and Friday 9:00 am – 1:00 pm.

DAYCARE

The Pacific Care Society (child care resource and referral services) provides information and referrals for any parents seeking child care. Their toll-free number is 1-888-480-CARE. Pamphlets about this agency are available in Student Services.

In addition, our beautiful Beaufort Child Care Centre, an on-site Daycare facility, is available for students with children. For further information please contact 250-897-1233.

FOOD SERVICES

Cafeteria Service – (breakfast, snacks, lunch): Located in Tyee Hall. Hours of operation: 8 am-4 pm

LEARNING ASSISTANCE

If you are having difficulty with your studies, the first step is to always ask your instructor for help. In addition, a range of additional opportunities for assistance are available to you. These include:

Flex classes: These are held in the afternoons and evenings. You can sign up for additional help with Math or English, specific to the work in your course. Ask your instructor or anyone in Student Services about assessment testing to access these supports.

Learning Accommodations: If you have a learning disability, a range of accommodations can be made for you. If you are not sure whether you have a disability, the Access for Students with Disabilities Department provides assessment services. Contact student services at 334-5000 to book an appointment to discuss accommodations or assessment.

LOST AND FOUND

Located at the North Island College Reception desk.

NIC STUDENT UNION

Office located in Tyee 111, Phone: 250-334-5050

PARKING

There is no fee for parking on campus, but there are a few rules to obey. Parking is available in any unmarked parking space. There is not an excess of parking spaces. However, those who arrive early tend not to have any problems finding a space. Parking is not permitted in areas with specific designation. Please respect the following parking areas:

Parking for those with disabilities - reserved for students or employees with disabilities
- must display an appropriate parking sticker

Red curb - no stopping
- this is a bus zone and must be kept clear at all times

Service vehicles only - reserved for service vehicles (e.g. maintenance, courier services)

Yellow curb - no parking

- these areas must be kept clear for buses and emergency vehicles

Staff Parking only – reserved for North Island College

PHOTOCOPYING

The photocopier for student use is located in the library. The cost is .15 per copy.

STUDENT STUDY ROOMS

Group study space is available in the Library.

STUDENT SERVICES STAFF

Janet Beggs, Counselor

Doris Funk, Senior Financial Aid Advisor
Jane Larsen, Educational Advisor
Kelly Shopland, Aboriginal Education Advisor

Sharon Bouchard, Admissions Advisor
Patti Tewinkle, Admissions Assistant

Brenda Vivian/Jennifer Barth, Registration Assistant
Susan Turner, Registration Assistant
Jane Hay, Registration Assistant

Judy Moore, Lead Students Services Officer

Sheila Doncaster, Service for Students with Disabilities
Wendy Harris, Learning Specialist

Sue Billie, Assessment Clerk

Darin Bellham – Assistant Registrar

SERVICES WE PROVIDE

- Admissions
- Assessment Testing
- Awards and Bursary Program
- Career Search Information
- Crisis Counselling
- Educational Advising
- Financial Aid Information & Advising
- Housing Bulletin Board
- Job Postings
- Registration
- Services to Students with Disabilities

Student Rights and Responsibilities

North Island College is committed to consistent and appropriate decision making through the development, maintenance and review of College policies and procedures. Policies and procedures are for the guidance of College employees and students. The complete NIC Policy Manual is available for viewing on the NIC website at www.nic.bc.ca

The following summary provides an overview of some key policies that may influence your studies while at North Island College:

a. Academic Progress (See North Island College Policy, #3-01)

Students who are considered by the instructor to be at risk for not meeting the learning outcomes of a particular course or program may be required to undergo a performance review. At the end of the review period the student's ongoing status in the course or program will be determined. Each program area will establish and communicate in writing the learning outcomes and performance criteria required to successfully complete the course or program.

b. Student Conduct (See North Island College Policy #3-06)

All members of the North Island College community have the right to work and study in an environment where they feel safe and are treated with respect. All members are responsible for creating and upholding a safe and respectful learning environment. Students are expected to behave responsibly, with due consideration for the setting, and to respect the rights of all members of the college community.

The College reserves the right to take appropriate actions, including legal action or suspension (under the authority of the College and Institute Act), when student behaviour conflicts with these expectations.

Students have a responsibility to become informed about college policies and to ensure their academic and personal conduct does not adversely affect the learning environment.

c. Attendance and Performance in Courses and Programs

As per NIC Policy #3-19 *Attendance and Performance in Courses and Programs*

Students are expected to attend every training class, and to be ready for class prior to the posted start time each day. Classes require full participation and engagement by all students. When you are absent you will miss information and important concepts that may not arise again at any other time during your training. Often these may be concepts that are fundamental to understanding other elements you will be learning in future years.

Student absences tend to slow the pace and disrupt others' learning. It is not the expectation of instructors to put in extra time to help you learn what you may have missed, nor is it fair to delay progression of others in your class by asking questions about information you would know if you had been present.

If you have extraordinary reasons why you must be absent from class, notify and discuss with your instructor well in advance.

A qualifying statement of expectations will be provided by the instructor at the beginning of your program.

d. Human Rights (North Island College Policy #2-08)

North Island College is committed to the principle that all members of the College community have the right to work and study in an environment which is free from harassment. The College does not condone and will not tolerate harassing behaviour which may undermine the dignity, self-esteem, or productivity of any student or employee, and will make every reasonable effort to ensure that no employee or student will be subjected to harassing behaviour.

The College considers any form of harassment of an individual involved in College activities to be a serious violation of that individual's fundamental rights. Such a violation is a serious offence which may be subject to a range of resolutions including, in certain circumstances, disciplinary measures up to and including expulsion in the case of a student, or termination in the case of an employee.

HOUSING

Off-campus housing lists are available through four principle sources:

1. The North Island Student Union maintains a housing registry that can be accessed using the following link: <http://www.nisu.ca/>
2. In addition, there are a variety of commercial motel accommodations available. Please check in the local yellow pages.
3. Accommodations may also be found in the local newspapers: Comox Valley Echo and the Comox Valley Record.

KEY DATES – 2011/2012

HOLIDAYS

North Island College is closed for all Statutory Holidays. If you are normally required to work on these days you may be required to make arrangements with your employer.

Oct. 10	Thanksgiving, College closed
Nov. 11	Remembrance Day, College closed
Dec. 24–Jan 2	Christmas Break, College closed
Apr. 6 & 9	Good Friday & Easter Monday, College closed
May 21	Victoria Day, College closed
July 1	Canada Day, College closed
Aug. 1	BC Day, College closed

LIBRARY SERVICES

Library orientations are scheduled during September, October and January. Check for times at the circulation desk. Please register in advance.

Library Hours: (Hours change from May - August)

Monday to Thursday 8:00 am to 9:00 pm
Friday 8:00 am to 4:00 pm

Library Staff:

Mary Anne Guenther- Coordinator of Library Services
Lynette Gallant- Public Services Librarian
Gwenda Bryan- Cataloguer/Tech Services
Dalys Johnson- Acquisitions/Tech Services
Paula MacKenzie- Circulation/Campus Supervisor
Elizabeth Harvey-Library Assistant

NIC Library Offers:

- General Collection
- Reference Collection Reserve Collection
- Periodical Collection
- Video Collection
- NIC on-line library catalogue
- Access to BC University & Public Library Catalogues
- Inter-Library Loans
- Full text journal articles
- Computers for word processing and internet access
- Photocopying - self serve at 15 cents a page
- Paid printing for students at .10 cents a page
- Library orientations
- Research and information guides
- Community borrowing

Loan Periods:

- General Collection - 2 weeks
- Reserve Articles – 2 hours
- Reserve Books – 1-7 days or In Library Use
- Periodicals - In Library Use Only
- Reference - In Library Use Only
- Videos/DVDs – 3 days

OVERDUE LIBRARY FINES

.25 cents/day regular loans
\$1.00/day inter-library loans
\$1.00/hour reserve articles
\$5.00/day other reserve items
➔ Replacement & processing
charges will be levied for lost &
damaged books. ←

If a student card has not been issued, a current Registration receipt may be presented as an alternative. You are responsible for all materials borrowed on your card and failure to return them will result in a suspension of borrowing privileges. Your student record will also be flagged preventing release of transcripts and registration in further courses.

For the most current information visit our website at
Visit our website at <http://library.nic.bc.ca>

CAMPUS BOOKSTORE

NORTH ISLAND COLLEGE

Campbell River ♦ Comox Valley ♦ Port Alberni

READY WHEN
YOU ARE

From the NIC web site (<http://www.nic.bc.ca>) follow the Student Services/Bookstore link to view online book lists, current prices¹, and our refund policy.



Our Commitment

Every possible effort is made to ensure the availability of all required texts no later than two weeks prior to the commencement of classes.

Should publications be delayed, notification will be posted in the bookstore.



Campus stores revenue contributes to the provision of additional NIC services to learners.

HOURS OF OPERATION

Campbell River Campus

Phone: (250) 923-9705

*Monday – Friday
9:00 – 4:00 p.m.*

Comox Valley Campus

Phone: (250) 334-5013

*Monday – Friday
9:00 – 4:00 p.m.*

Port Alberni Campus

Phone: (250) 724-8720

*Monday - Thursday
9:30 – 2:00 p.m.
Closed 11:30 - Noon*

Friday

10:30 – 1:00 p.m.

SUMMER HOURS

**CAMPBELL RIVER AND PORT
ALBERNI STORES ARE
CLOSED**

End of June– mid- August

**COMOX VALLEY STORE
OPEN**

**End of June – mid-August
Monday – Thursday
10:30 – 2:00**

More Than Textbooks!

Campus stores are open from mid-August through the end of June to provide learners and other members of the College community with convenient, on-site access to a wide variety of products and services.

Reference Titles

Stationery & Supplies

Calculators,
Computer Disks, Batteries

Art Supplies

Snacks

Gifts

NIC “Logo” Clothing,
Coffee mugs, etc.

¹ *prices subject to change

BUS SERVICE

North Island College students have been offered a monthly transit pass or a semester pass at a 20% discount. Semester passes are available in early September and January only. Bus passes may be purchased at the Bookstore.

Bus schedules are available at the Bookstore and at the Registration office (located at the front entrance to the College). The most up-to-date schedule information can be obtained by calling Comox Valley Transit at 250-339-5453 or searching the following link:

<http://www.busonline.ca/regions/com/schedules/map.cfm?>

Emergency Phone Numbers COMOX VALLEY CAMPUS

(Updated June 2010)

	COLLEGE PHONE	PAY PHONE - 50¢
College Switchboard	Dial 0 Monday to Friday, 9:00-4:00	250-334-5000 Monday to Friday, 9:00-4:00
First Aid Attendant	##11 Monday to Friday, 8:30-4:30	250-897-8811
AFTER HOURS		
Ambulance	9-911	911, no charge
Fire	9-911	911, no charge
Police	9-911	911, no charge
Security/First Aid	##24	250-334-7206
Price's Alarm Monitoring	##25	1-888-817-8415

When reporting First Aid emergencies *Stay on the Line!*

Walk-in Clinics and Hospital contact information

Clinic hours vary. Phone or visit for more information.

- Washington Park Medical Clinic, 2nd Floor Superstore, 757 Ryan Rd.
250-334-9241
- Comox Valley Medical Clinic, Suite 19-1599 Cliffe Ave.
250-898-0202

Hospital

- St. Joseph's General Hospital 2137 Comox Ave 250-339-2242