

# Welcome!

## NET2000 – Intermediate Networking

Course Professor: Michael Anderson

Lectures: Mon 1 – 3pm T123  
Wed 10 – 11pm T123

Labs: A1 Mon 4 – 6pm T108  
A2 Wed 2 – 4pm T108  
A3 Wed noon – 2pm T108

### My Contact Info:

Office: T313

Office hours: As per schedule posted on course web site  
... and at other times by appointment or email

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Remember: your email address is: xxx@Algonquin**Live**.com but  
Algonquin employees are xxx@Algonquin**College**.com !

### Course Objectives:

- ◆ To deepen your understanding of L2 and L3 forwarding.
- ◆ To gain a solid understanding of protocols required to scale networks
- ◆ To increase your knowledge and hands-on skill with networking equipment.

For additional info on this course, please see the official **course outline**, as posted on the course web site. We'll look at a few items, including **schedule** (final week), textbooks, **tests**, marks allocation, and use of electronic devices in the classroom.

### Course Prerequisite

You must have passed both NET1002 and NET1006.

## Introductions

- Introduce myself, especially *Why do I teach?*
- *Have great confidence in me, but don't trust me*  
... Be sure to check it out for yourself!
- *My focus is on learning, not on marks*  
... This answers a lot of questions
- *TL;DR = F (guaranteed)*  
... I can guarantee you won't pass the course without reading the textbook
- *I would like to know everything about everything, but I don't*  
... Bring your work experience to the table and please share it during lectures.
- **NO** cell phones or laptops in lectures; **no** cell phones in labs  
Please see addendum notes for Wk01Day1.
- Quick review of some past course evaluations (though 1<sup>st</sup> time for NET2000)

## Bug Hunter Bonus

- Full credit for question, to 1<sup>st</sup> student to identify a mistake (email timestamp)

## Required Resources

- Course web site: <http://michaelanderson.ca/19F-NET2000-010/>
- Cisco account to access online course material and tests
- Lab book: hard-bound book with non-removable pages
  - created during the term; used in the SBA (same as always!)
- External HD or USB memory stick: for backups, etc.
- Printouts of lab instructions (on a week-by-week basis)
- Required textbook:
  - ✓ Scaling Networks V6: Companion Guide, Cisco Network Academy (Bob Vachon, Allan Johnson). ISBN-10: 1-58713-434-9 ISBN-13: 9781587134340.
  - ✓ **Buy a hardcopy**, like really!
  - ✓ If you're stuck, view it online using *Safari by O'Reilly*
  - ✓ Free, legal pdf copy of first three chapters:  
[http://www.ciscopress.com/content/images/9781587134340/samplepages/9781587134340\\_sample.pdf](http://www.ciscopress.com/content/images/9781587134340/samplepages/9781587134340_sample.pdf)

## Helpful Resources

- NetLab: book a session: <http://netlab.algonquincollege.com>  
documentation: <http://netlab.algonquincollege.com/docs>

## Time Commitment

- Expect to spend **at least 5 hrs/wk** on this course *outside the regularly scheduled lectures and labs*. (See program flow chart.)
- Never stay stuck on a problem for longer than 20-30 mins; you can't afford it! Ask a classmate or email the Prof for some ideas & tips of where you should be able to find the answer.
- Come prepared for labs: the 2hr time block may not be enough for you to finish labs if you haven't familiarized yourself with it beforehand.
- **Expect a quiz** (or an exercise) every week, starting *this* week

## Week 1: Assigned Readings & Lab work

- **Wk 1 Readings:** Chapter 1 (entire; by next Mon; expect a quiz)
  - **Exercise 1:** Due Fri Sep 6 @11:59pm Send an email to the Prof with the following info: (a) name as registered; (b) name you prefer (if different); (c) something interesting about yourself or something you're really good at.
  - **Lab 1:** PT exercise on static routing; must be completed by everyone this week (... yes, even the folks with a Mon lab section; sorry!)
  - **Lab 1 post-lab:** Complete post-Lab #1 before next Mon (Sep 9) @ **10am**
  - Software: you'll need Packet Tracer installed on your laptop; you can get a copy from the "Labs" section of NET2000 on BrightSpace
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- **Lab 2 pre-lab:** No pre-lab exercise for next week.

## New Material: Course Overview

- Most of what you've done so far has been *manual* (except for some RIP, OSPF)
- This course is a deeper dive into the protocols for scaling to larger networks:
  - L2: ①VTP, ②DTP, ③STP, ④LAG
  - L2+L3 client services: ⑤DHCP, ⑥FHRP, ⑦NAT, ⑧ACLs
  - L3: ⑨OSPF, ⑩EIGRP
- To get started, you'll need to have a good handle on
  - forwarding of frames at L2; switches
  - VLANs: purpose, implementation
  - Trunk links
  - forwarding of frames at L3; routers
  - static vs dynamic routing

Oh, and by the way, how much do you know about free firmware for your home router? e.g. Tomato or DD-WRT?

## Time Permitting: Cisco's Recent Updates

- You may have heard that Cisco has recently updated their certifications
- Professors at Algonquin are conducting a thorough study & analysis of changes
- Students in BIT-NET are mostly unaffected, since they continue on to CCNP-level networking