

# IT 280 – Computer Networking

## Course Syllabus and Calendar – Fall 2015

**Class:** MWF 08:40 to 09:40, Mon, Aug 03 to Wed, Oct 28, GCB 111

**Final Exam:** Fri, Oct 30, 07:00 to 09:50, GCB 111

*Professor Don Colton*  
Brigham Young University–Hawai‘i

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Certain content is required in all BYUH syllabi. Section 10 gives a convenient summary of that content.

You may find sections 1 through 5 to be immediately helpful in understanding this class and how it will be conducted. Read those first.

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### 1 Overview

It is hard to imagine a world without the Internet. Networking has made the sharing of information much faster than it was before. We get emails and instant messages with pictures attached instead of waiting days for postal delivery. We register “online” for classes instead of waiting “in line” to sign up in person. We buy worldwide from Amazon or eBay or locally using Craig’s List instead of visiting our local bricks-and-mortar store. We research on Google instead of at the library.

People love being connected. But sometimes networks break. The world needs workers with technical skills. This course is focused on those skills: creating the wiring, connecting the computers, and making networks.

This course is an introductory course that will prepare you to understand, set up, and operate your own home network, or small business, or maybe even Internet Café. You will understand the fundamentals of networking and what technical things are necessary for success with those activities.

This course lays the foundation to prepare you to take other courses in the IT major, such as:

**IT 426**, Computer Network Services: Installation, configuration, and management of network services such as file servers and directory services with an emphasis on Microsoft Windows.

**IT 480**, Computer Network Design: Networking of computers and configuration of managed networking equipment including switches and routers, with special emphasis on Cisco equipment and protocols.

**IT 481**, Information Assurance and Security: Introduction to information security providing a foundation of computer security concepts, including general security, communication security, infrastructure security, basics of cryptography, and operational and organizational security.

## 1.1 Expected Proficiencies

As you begin this course, we assume you have no special networking experience whatsoever. We expect you can read, type, send and receive email, and visit web sites. We will teach you everything else you need to know.

Ideally you will have your own personal computer, probably a laptop. You will probably also have a Wi-Fi enabled device such as a smart phone.

## 2 Course and Faculty

### 2.1 Course Information

- **Title:** Computer Networking
- **Course Number:** IT 280
- **Course Description:** (from the catalog) End-user fundamentals including local area networks, home networks, wireless networks, routers, firewalls, ports, address sharing, dynamic host configuration, OSI model, IPv4, net-masks, subnets, and troubleshooting.
- **Prerequisites:** none
- **Semester/Year:** Fall 2015
- **Semester Code:** 2155
- **Meeting Time:** MWF 08:40 to 09:40
- **Location:** GCB 111
- **First Day of Instruction:** Mon, Aug 03
- **Last Day to Withdraw:** Mon, Sep 28
- **Last Day of Instruction:** Wed, Oct 28
- **Final Exam:** Fri, Oct 30, 07:00 to 09:50

### 2.2 Faculty Information

- **Instructor:** Don Colton
- **Office Location:** GCB 128
- **Office Hours:** (In GCB 111) MWF 12:10-12:40 and 14:30-15:00, TuTh 15:30-16:00.
- **Email:** doncolton2@gmail.com

- **Campus Homepage:**

<http://byuh.doncolton.com/> is my campus homepage. It has my calendar and links to the homepages for each of my classes.

- **Off-Campus Homepage:**

<http://doncolton.com/> is my off-campus homepage.

I have reserved GCB 111 on MWF from 12:10 to 13:10 and 14:30 to 15:30 (right after my CIS 101 classes) and on TuTh from 15:30 to 17:00 (right after my IT 240 class) so my students (and others) can study in a lab setting and meet with me and each other. I will be there at the start of those hours, and normally I stay as long as students are asking me questions. I also allow the room as an Open Lab for your use either individually or in groups, for my class or for other classes.

### 2.3 Course Readings and Materials

- **Textbook:** (free!) <http://n101.tk/> Networking 101, An Introduction To Networking, covering Internet Basics, Home Networks, Wi-Fi, Security, and IPv4. By Don Colton.
- **Learning Management System:** <https://dcquiz.byuh.edu/> is the learning management system for my courses.
- **Course Homepage:** <http://byuh.doncolton.com/it280/> is my course homepage. It has links to many things including the syllabus, study guide, and textbook.
- **Study Guide:** <http://byuh.doncolton.com/it280/2155/sguide.pdf> is the study guide for this course this semester. It is fairly well indexed and includes a copy of the main parts of this syllabus. The study guide may be updated throughout the semester as assignments are made and deadlines are established or updated.

## 3 Calendar

Items marked u1, u2, u3, etc., pertain to unit 1, 2, or 3, etc. Items marked chNN or chNNNN pertain to chapters (probably tests). The first two digits are the first chapter involved, and the last two digits are the last chapter.

Mon Aug 03 First Day of Instruction  
 Wed Aug 05 u1 ch01 pretake (no credit)  
 Fri Aug 07 u1 ch01  
 Mon Aug 10 u1 ch01 retake  
 Wed Aug 12 u1 ch0203  
 Fri Aug 14 u1 ch0203 retake  
 Mon Aug 17 u1 ch0405, u3 L1 Cables  
 Wed Aug 19 u1 ch0405 retake  
 Fri Aug 21 u2 ch06, SN prep  
 Mon Aug 24 u2 ch06 retake  
 Wed Aug 26 u2 ch0911, SN prep  
 Fri Aug 28 u2 ch0911 retake  
 Mon Aug 31 L2 Dia Network Diagram  
 Wed Sep 02 u2 SN(ch08)  
 Fri Sep 04 u3 ch12, L2 due  
 Mon Sep 07 Labor Day Holiday  
 Wed Sep 09 u3 ch12 retake  
 Fri Sep 11 u3 ch13, L3 Router prep  
 Mon Sep 14 u3 ch13 retake  
 Wed Sep 16 u3 ch1418, L3 Router  
 Fri Sep 18 u3 ch1418 retake  
 Mon Sep 21 u4 ch1920, SS prep  
 Wed Sep 23 u4 ch1920 retake  
 Fri Sep 25 u5 ch2123, SS prep  
 Mon Sep 28 u5 ch2123 retake, Last Day to Withdraw  
 Wed Sep 30 u5 ch2425, SV prep  
 Fri Oct 02 u5 ch2425 retake  
 Mon Oct 05 u6 SS SV (ch2829)  
 Wed Oct 07  
 Fri Oct 09 u6 ch26, L3  
 Mon Oct 12 u6 ch26 retake  
 Wed Oct 14 u6 ch27, L4 Passwords, SS SV review  
 Fri Oct 16 u6 ch27 retake  
 Mon Oct 19 u6 ch2830, SS SV review  
 Wed Oct 21 u6 ch2830 retake  
 Fri Oct 23 u7 ch31, SS SV retake, L4 due  
 Mon Oct 26 u7 ch31 retake  
 Wed Oct 28 u7 ch3233, L3 last chance  
 Fri Oct 30 Final, 07:00 to 09:50, GCB 111

We meet 38 times including the final exam.

All tests are closed-book, closed-notes, closed-neighbor, etc. You can bring blank paper.

## 4 Grading

I use a 60/70/80/90 model based on 1000 points.

### Based on 1000 points

930+	A	900+	A-	870+	B+
830+	B	800+	B-	770+	C+
730+	C	700+	C-	670+	D+
630+	D	600+	D-	0+	F

The 1000+ points are divided up as follows.

- Attendance 38 points.
- Chapter Tests 620 points.
- Skills Tests 180 points.
- Labs 160 points.

### 4.1 IT 280 Grade Books

In my Learning Management System (DCQuiz), I keep several online grade books so you can see how your points are coming along. This lets you compare yourself with other students in the class (without seeing their names).

**2155 IT 280 Overall Grade Book:** This includes the totals from all the other grade books. This is where you can find your final grade at the end of the course.

**2155 IT 280 (whatever) Grade Book** shows your points in the (whatever) category. (whatever) is Chapter or Attendance.

### 4.2 Attendance (38 points)

Each day in class starts with the “daily update” (DU). It is my way of reminding you of due dates and deadlines, sharing updates and news, and taking roll. It is your way of saying something anonymously to each other and to me. It must be taken in class at a classroom computer during a window of time that starts a few minutes before class and ends 5 minutes into class.

**Attendance Policy:** You must attend to complete the Daily Update and thereby earn the Attendance points. You must attend to take the Chapter Tests and thereby earn the Chapter Test points. You must attend to take the Skills Tests and thereby earn the Skills Test points. Besides that, there is no penalty for being late or lack of attendance. It is possible to earn the Lab points without attending.

**2155 IT 280 Attendance Grade Book** shows your attendance points, one point per day, for 38 days. You get one point for each time you do the

daily update. If you arrive too late to complete the daily update, you will not receive the attendance points for that day.

**Tardiness:** My tardiness policy is that you should arrive in time to complete the daily update. Generally if you are less than four minutes late, you will have time to complete the daily update before the deadline.

### 4.3 Tests

All tests, quizzes, and exams are closed-book, closed-notes, closed-neighbor, etc. You can bring blank paper. **Some memorization is required.**

The midterms (if any) and final each consist of an opportunity to retake some or all of the chapter tests and skills tests previously given. If you are already satisfied with your scores, you can skip class or leave early. There may be other opportunities to retake tests.

The Final Exam time is Fri, Oct 30, 07:00 to 09:50. The final exam time provides a chance to retake any or all chapter tests and skills tests.

### 4.4 Chapter Tests (620 points)

There are assigned readings. These are listed in the course calendar. Right after prayer on most days (not exam days), there will be a short test (about ten to 15 minutes) based on the assigned readings. It will consist of about 25 questions (but could be more or less).

Chapter tests are labeled in the calendar with ch followed by two or four digits. The first two digits identify the first chapter being tested, and the last two digits identify the last chapter being tested. Thus, ch0203 would cover the questions from chapter 2 through chapter 3.

The chapter tests are mostly about knowing answers to common questions, and involve memorizing facts and terminology.

For each chapter test you have several opportunities. Each test has a day on which it is given in class, right after the opening prayer. On that first day, any score you earn is granted a ten percent bonus. And it has the day when the final exam is scheduled. There may be other opportunities, but that is not guaranteed.

You can take each test as many times as it is offered. We will keep your highest score.

Typically each test question is worth two “chapter test” points, which, after scaling, is about 1.4 overall points. The total number of chapter test points is about 910, but it could end up being more or less. We will mathematically scale those points to be 620 overall points toward the final grade.

The chapter tests are “closed book,” by which I mean that you are not allowed to look up answers while you are taking the test.

Your scores from these Chapter Tests will be recorded in **2155 IT 280 Chapter Grade Book**. The total from this grade book will be rescaled so the full-credit values add up to 620 points.

### 4.5 Three Skills Tests (180 pts)

**SN:** (60 pts) q25 Skill with Numbers. 40 questions.

**SS:** (60 pts) q50 Skill with Subnets. 40 questions.

**SV:** (60 pts) q51 VLMS Subnets. About 10 questions.

These skills-based exams are based on skills taught in the book and in class. Practice tests are available after each test has been introduced, or by request.

**Retakes:** You can retake skills tests on any retake day, and your highest score will be kept.

### 4.6 Four Labs (160 pts)

**L1:** (50 pts) Lab 1: Ethernet Cables

**L2:** (30 pts) Lab 2: Dia Network Diagram

**L3:** (50 pts) Lab 3: Router Configuration

**L4:** (30 pts) Lab 4: Password Report

### 4.7 Other Extra Credit

I give extra credit if you are the first to report an error in my formal communications (the published materials I provide), so I can fix it. Send me an email. Cut and paste what I said (enough so I can easily find it). Tell me why you think it is wrong, or what it should be.

In this class, the formal materials include the following:

- The course website, parts relating to this semester.
- The course syllabus.
- The course study guide.
- The course textbook, since I wrote it.

Each error reported can earn you extra credit.

Syllabus errors are normally fixed only in the study guide. Check there before reporting them.

## 5 Communication

We communicate with each other both **formally** and **informally**.

Formal communication is official, carefully worded, and normally in writing. Formal is for anything truly important, like grades.

Informal communication is casual and impromptu. It is meant to be helpful and efficient. Reminders are informal. Explanations are usually informal.

Email is a special case.

If the formal and the informal do not agree with each other, trust the formal but also let me know so I can correct any errors.

### 5.1 From Me to You, Formal

I communicate formally, in writing, through (a) the syllabus, (b) the study guide, and (c) the learning management system.

**(a) Syllabus:** <http://byuh.doncolton.com/it280/2155/syl.pdf> is the syllabus for this course. It tells our learning objectives and how you will be graded overall. You can rely on the syllabus. After class begins, it is almost never changed except to fix major errors.

**(b) Study Guide:** <http://byuh.doncolton.com/it280/2155/sguide.pdf> is the study guide for this course. It includes a copy of the syllabus. The study guide may be updated during the semester, as assignments are made and deadlines are established or updated.

**(b1) Calendar:** The study guide tells when things will happen. It contains specific due dates.

**(b2) Assignments:** The study guide tells what assignments have been made and how you will be graded, item by item. It provides current details and specific helps for each assignment. It provides guidance for taking the exams.

**(c) DCQuiz:** <https://dcquiz.byuh.edu/> is my learning management system. I use it to give tests. I use it to show you my grade books.

### 5.2 From Me to You, Informal

My main informal channels to you are (a) word of mouth and (b) email.

**(a) Word of Mouth, including Lecture:** Class time is meant to be informative and helpful. But if I say anything truly crucial, I will also put it into the study guide.

**(b) Email:** My emails to you are meant to be helpful. But if I say anything truly crucial, I will also put it into the study guide. Normally I put IT 280 at the front of the subject line in each email I send.

### 5.3 From You to Me, Email

**Rule 1:** Send emails to [doncolton2@gmail.com](mailto:doncolton2@gmail.com)

**Rule 2:** Put **it280** in your email subject line.

I must confess, I sometimes get buried in email, especially at the end of the semester. I do not want to overlook your email to me, or have it end up caught in my spam filter. And for my own sanity I want to be able to find and deal with all the email related to this class at the same time. This is especially true for large classes.

My solution is to have you put **it280** (exactly, with no spaces in it) in your email subject line, preferably as the first word. If you do this, my email system will immediately and automatically respond to you, telling you that I got your email and it is in my queue.

If you fail to do this, you will not get an immediate reply and your email will end up in some other queue in my work flow. Your email will not be noticed when I am grading for this class. In the best case I will eventually handle your email. In the worst case

your email will be in my spam folder and I will never even see it.

## 5.4 From You to Me, Formal

Your formal channels to me, specifically how you turn in class work, are mainly via (a) the learning management system, (b) email, and (c) specifically requested projects.

**(a) DCQuiz:** To use my learning management system, you must log into it. Then, you can respond to questions I have posted. Each day there will be a “daily update”. I say more on that elsewhere. Tests will also be given using DCQuiz.

**(b) Email:** You will use formal email messages to submit some of the work you create and to tell me certain other things. The study guide tells how to send formal emails, including where to send them, what subject line to use, and what to put in the body of the message.

## 5.5 From You to Me, Informal

Your informal channels to me, typically how you ask questions and get assistance, are mainly face to face and by email or chat.

**Face to Face:** If you need help with your class work, I am happy to look at it and offer assistance. Often this happens during class, during open labs, or during office hours. Often I will have you put your work on your computer screen, and then I will take a look at it while we talk face to face.

**Email / Chat:** You can also get assistance by sending me an email or doing a chat. I will do my best to respond to it in a reasonable and helpful way. If you want something formal, use the formal rules.

If you are writing about several different things you will usually get a faster response if you break it up into several smaller emails instead of one big email. I try to respond to a whole email at once, and not just part of it. I usually answer smaller and simpler emails faster than big ones.

# 6 Instructional Methods

**Tests** (chapter tests and skills tests) happen on most

days. They are typically short. Tests are an instructional method that brings you, the student, face to face with information you should know and challenges you should be able to solve.

**Lecture** happens as a side-effect of the grading of the chapter tests. This happens immediately after the test ends. I openly grade and discuss the answers that were submitted to help you learn.

Some days I may spend the whole class period lecturing about a current topic, and there is no test that day. I review material that was assigned from the text book and do what I can to make it clear and interesting. These can take up most of the class hour, and happen more often at the start of the course than they do later on.

**Activity** days present a lab situation where we work to create something.

## 6.1 BYUH Learning Framework

I agree with the BYUH Framework for Learning. If we follow it, class will be better for everyone.

## 6.2 Prepare for IT 280

**Prepare:** Before class, study the course material and develop a solid understanding of it. Try to construct an understanding of the big picture and how each of the ideas and concepts relate to each other. Where appropriate use study groups to improve your and others’ understanding of the material.

**In IT 280:** Do the readings for each chapter before the chapter test. There is more than we could cover in class because we all learn at different rates. Our in-class time is better spent doing activities and answering your questions than listening to me lecture.

## 6.3 Engage in IT 280

**Engage:** When attending class actively participate in discussions and ask questions. Test your ideas out with others and be open to their ideas and insights as well. As you leave class ask yourself, “Was class better because I was there today?”

**In IT 280:** Participate in the in-class activities. Those that finish first are encouraged to help those

that want assistance. It is amazing what you can learn by trying to help someone else.

## 6.4 Improve at IT 280

**Improve:** Reflect on learning experiences and allow them to shape you into a more complete person: be willing to change your position or perspective on a certain subject. Take new risks and seek further opportunities to learn.

**In IT 280:** After each exam, I usually allow you to see every score and every comment and every answer submitted for every question. To improve your understanding, review your answers and those of other students. See how your answers could be improved. If you feel lost, study the assigned readings again and ask questions.

## 6.5 Support

The major forms of support are (a) open lab, (b) study groups, and (c) tutoring.

If you still need help, please find me, even outside my posted office hours.

## 6.6 Open Lab / Office Hour

As mentioned above, I have reserved GCB 111 on MWF from 12:10 to 13:10 and 14:30 to 15:30 (right after my CIS 101 classes) and on TuTh from 15:30 to 17:00 (right after my IT 240 class) so my students (and others) can study in a lab setting and meet with me and each other. I will be there at the start of those hours, and normally I stay as long as students are asking me questions. I also allow the room as an Open Lab for your use either individually or in groups, for my class or for other classes.

The CIS department operates an open lab with tutors in GCB 111 most afternoons and evenings.

## 6.7 Study Groups

You are encouraged to form a study group. If you are smart, being in a study group will give you the opportunity to assist others. By assisting others you will be exposed to ideas and approaches (and errors)

that you might never have considered on your own. You will benefit.

If you are struggling, being in a study group will give you the opportunity to ask questions from someone that remembers what it is like to be totally new at this subject. They are more likely to understand your questions because they sat through the same classes you did, took the same tests as you did, and probably thought about the same questions that you did.

Most of us are smart some of the time, and struggling some of the time. Study groups are good.

## 6.8 Tutoring

The CIS department provides tutoring in GCB 111, Monday through Friday, typically starting around 5 PM and ending around 11 PM (but earlier on Fridays). Normally a schedule is posted on one of the doors of GCB 111.

Tutors can be identified by the red vests they wear when they are on duty.

There are networking-savvy student workers in GCB 119. They are not dedicated tutors like the 111 tutors. Instead, they work on building the CIS network and maintaining the CIS labs. But they are sometimes available to answer questions.

If you still need help, please come and see me, even outside my posted office hours.

## 7 Course Policies

**Subject to Change:** Like all courses I teach, I will be keeping an eye out for ways this one could be improved. Changes generally take the form of opportunities for extra credit, so nobody gets hurt and some people may be helped. If I make a change to the course and it seems unfair to you, let me know and I will try to correct it. If you still think it is unfair, you can appeal to the department chair or the dean. Also, you are welcome to suggest ways you think the class could be improved.

**Digital Recording by me:** I may digitally record the audio of my lectures some days. This is to help me improve my teaching materials.

**Digital Recording by you:** Almost everyone has

a smart phone these days. I assume students will freely record what goes on in class, and take pictures of what is on the white board to aid in their studies. I simply ask that you not embarrass anyone.

## 7.1 Special Treatment

There are many good reasons why students request special treatment. These include, for example, illness, field trips, performances, athletic events, and special needs. Instead of dealing with these as they arise, based on my past experience, I have adopted general policies that are intended to accommodate all but the most difficult cases, and thereby avoid the need for special treatment.

## 7.2 Reasonable Accommodation

This section covers special needs, including qualified special needs, as well as all other requests for special treatment.

I have carefully designed each of my classes to provide what I believe to be reasonable accommodation to those with special needs. Beyond that, further accommodation is usually considered to be unreasonable but may happen in extreme cases. Please see the paragraph on “Accommodating Special Needs” below for more information.

**Ample Time:** Specifically, I allow ample time on tests so that a well-prepared student can typically finish each test in half of the time allowed. This gives everyone essentially double the amount of time that should normally be needed.

**Exam Retakes:** Each exam is given several times and I keep the highest score that was earned. This handles the case of persons that are unable to attend class or function at their best on any given day.

I consider the first attempt to be routine. The first time the exam is given, a bonus of 10% is added to your score. This is to encourage you to prepare well before each exam.

I consider the other opportunities to be an accommodation for anyone that might need it. The scheduled final exam is Fri, Oct 30, 07:00 to 09:50. The final consists of one last opportunity to retake **any** exam that was offered during the semester. If you are happy enough with your previous scores, **you can skip the final.**

As a side effect of this several-tries approach to exams, it is also true that any student can miss any one or two days of class for any reason without messing up their grade.

On the other hand, the retakes are limited. If you have issues every single time the test is given, I do draw the line, and I will not give additional chances. Additional retakes are not considered to be a “reasonable” accommodation. Additional retakes or make-ups are not offered except in highly unusual circumstances.

**Extra Credit:** I have built some extra credit into the grading so you can miss a few points here or there and make them up elsewhere.

**Deadlines:** Most labs are due very soon after they are discussed, but I normally allow late work at full credit for another week.

Even though I truly believe that these methods provide reasonable accommodation for almost everyone in almost every case, you might have a highly unusual situation for which I can and should do even more. You are welcome to see me about your situation.

## 8 Learning Outcomes

Outcomes (sometimes called objectives) are stated at several levels: Institutional (ILO), Program (PLO), and Course (CLO). In this section we set forward these outcomes and tell how they are aligned with one another.

### 8.1 ILOs: Institutional Outcomes

**ILO:** Institutional Learning Outcomes (ILOs) summarize the goals and outcomes for all graduates of BYUH.

Brigham Young University Institutional Learning Objectives (ILOs) Revised 24 February 2014

Graduates of Brigham Young University–Hawai‘i will:

**Knowledge:** Have a breadth of knowledge typically gained through general education and religious educations, and will have a depth of knowledge in their particular discipline.

**Inquiry:** Demonstrate information literacy and



critical thinking to understand, use, and evaluate evidence and sources.

**Analysis:** Use critical thinking to analyze arguments, solve problems, and reason quantitatively.

**Communication:** Communicate effectively in both written and oral form, with integrity, good logic, and appropriate evidence.

**Integrity:** Integrate spiritual and secular learning and behave ethically.

**Stewardship:** Use knowledge, reasoning, and research to take responsibility for and make wise decisions about the use of resources.

**Service:** Use knowledge, reasoning, and research to solve problems and serve others.

## 8.2 PLOs: Program Outcomes

**PLO:** Program Learning Outcomes (PLOs) summarize the goals and outcomes for graduates in programs for which this course is a requirement or an elective. These support the ILOs, but are more specific.

At the end of this section, we include the relevant page from the CIS Program Outcomes Matrix, dated April 2011.

The following outcomes are pursued at the levels indicated.

Medium: **Practiced with Feedback**

(a) An ability to apply knowledge of computing and mathematics appropriate to the discipline.

Medium: **Practiced with Feedback**

(b) An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution.

Medium: **Practiced with Feedback**

(c) An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs.

Medium: **Practiced with Feedback**

(e) An understanding of professional, ethical, legal, security and social issues and responsibilities.

Medium: **Practiced with Feedback**

(f) An ability to communicate effectively with a range of audiences.

Low: **Introduced**

(h) Recognition of the need for and an ability to engage in continuing professional development.

Medium: **Practiced with Feedback**

(i) An ability to use current techniques, skills, and tools necessary for computing practice.

Medium: **Practiced with Feedback**

(IT j) An ability to use and apply current technical concepts and practices in the core information technologies.

Low: **Introduced**

(IT k) An ability to identify and analyze user needs and take them into account in the selection, creation, evaluation and administration of computer-based systems.

Low: **Introduced**

(IT l) An ability to effectively integrate IT-based solutions into the user environment.

## 8.3 CLOs: Course Outcomes

**CLO:** Course Learning Outcomes (CLOs, also called Student Learning Outcomes, or SLOs) summarize the goals and outcomes for students who successfully complete this course. These support the PLOs, but are more specific.

Course Goals and Student Learning Outcomes are as follows:

By the conclusion of this course, students will do the following:

**Internet:** Explain how the Internet works. This includes topics such as connecting to the Internet, using the domain name system and using dynamic host configuration.

**Home Networking:** Properly set up a home network. List and explain the different objects, media, and devices used in a home network that is connected to the Internet through an ISP. Design, install, configure, and manage a simple LAN, install services, and connect the LAN to the Internet.

**Wireless Networking:** Design, install, configure, and manage a simple wireless LAN. This includes channel selection, WEP/WPA, SSID, and antenna considerations.

**Security:** Explain what security typically exists and how to get more. Includes password selection, firewalls, and issues with opening up ports for gam-

ing.

**Theory:** Explain the following basic concepts: OSI 7-layer stack, protocol data units (packets, frames, etc.), udp, tcp, arp, and ports.

**IPv4 Addressing:** Explain network masks, subnetting, address classes, private IP addresses, MAC addresses, collision domains, broadcast domains, and what a LAN is.

**Power Tools:** Demonstrate the use of common network applications and utilities including ping, traceroute, ipconfig, dig, nmap, ssh, telnet, ftp, and Wireshark.



## 9 General University Policies

### 9.1 Academic Integrity

Brigham Young University–Hawai‘i is committed to upholding a policy of academic integrity among administrators, faculty, staff, and students. Basically we are talking about cheating here. We tell you what is acceptable and what is not.

#### 9.1.1 Plagiarism

We learn by watching others and then doing something similar.

**Plagiarism:** Sometimes it is said that plagiarism is copying from one person, and research is “copying” from lots of people.

When you are having trouble with an assignment, I encourage you to look at not just one, but many examples of work done by others. Study the examples. See what you can learn from them. Do not automatically trust that they are right. They may be wrong.

<http://en.wikipedia.org/wiki/Plagiarism> has a wonderful article on plagiarism. Read it if you are not familiar with the term. Essentially, plagiarism is when you present the intellectual work of other people as though it were your own. This may happen by cut-and-paste from a website, or by group work on homework. In some cases, plagiarism may also create a violation of copyright law. If you borrow wording from someone else, identify the source.

Intentional plagiarism is a form of intellectual theft that violates widely recognized principles of academic integrity as well as the Honor Code. Such plagiarism may subject the student to appropriate disciplinary action administered through the university Honor Code Office, in addition to academic sanctions that may be applied by an instructor.

Inadvertent plagiarism, whereas not in violation of the Honor Code, is nevertheless a form of intellectual carelessness that is unacceptable in the academic community. Plagiarism of any kind is completely contrary to the established practices of higher education, where all members of the university are expected to acknowledge the original intellectual work of others that is included in one’s own work.

Faculty are responsible to establish and communi-

cate to students their expectations of behavior with respect to academic honesty and student conduct in the course. Observations and reports of academic dishonesty shall be investigated by the instructor, who will determine and take appropriate action, and report to the Honor Code Office the final disposition of any incident of academic dishonesty by completing an Academic Dishonesty Student Violation Report. If the incident of academic dishonesty involves the violation of a public law, e.g., breaking and entering into an office or stealing an examination, the act should also be reported to University Police. If an affected student disagrees with the determination or action and is unable to resolve the matter to the mutual satisfaction of the student and the instructor, the student may have the matter reviewed through the university’s grievance process.

#### 9.1.2 Specific Rules For IT 280

On exams you are required to work from personal memory, using only the resources that are normally present on your computer. This means the exams are closed book and closed notes.

#### 9.1.3 Applicable Actions

<http://honorcode.byuh.edu/> details the university honor code. In the section entitled “Applicable Actions” the following are listed.

Examples of possible actions include but are not limited to the following, for instructors, programs, departments, and colleges:

- Reprimanding the student orally or in writing.
- Requiring work affected by the academic dishonesty to be redone.
- Administering a lower or failing grade on the affected assignment, test, or course.
- Removing the student from the course.
- Recommending probation, suspension, or dismissal.

Depending on the specifics of the offense, any of these responses may be possible.

Cheating on exams is the most common form of dishonesty that I normally encounter. Normally this happens when students bring in notes that include answers to past exam questions. I approve the studying of past exams, and bringing in of “memories” based on study, but not the access to written

notes, including notes retrieved from other exams or stored on cell phones or other devices. Any such activity, if caught, can result in failure of the entire course.

Cheating on activities is almost impossible to detect because I allow students to collaborate and assist each other. Copy and paste is not allowed, but it is difficult to detect and prove, so I normally do not bother. You should try to understand the work you submit because it helps you prepare for the exams and future courses.

## 9.2 Unlawful Discrimination

Brigham Young University–Hawai‘i is committed to a policy of nondiscrimination on the basis of race, color, sex (including pregnancy), religion, national origin, ancestry, age, disability, genetic information, or veteran status in admissions, employment, or in any of its educational programs or activities.

## 9.3 Title IX and Sexual Misconduct

Brigham Young University–Hawai‘i is committed to promoting and maintaining a safe and respectful environment for the campus community. In the USA, Title IX (Title 9) of the Education Amendments of 1972 prohibits all sexual misconduct against any participant in an educational program or activity.

Sexual Misconduct includes:

**Sexual Harassment**, which is unwelcome speech or conduct of a sexual nature. It includes unwelcome sexual advances, requests for sexual advances, requests for sexual favors, and other verbal, non-verbal, or physical conduct that is not requested or invited.

**Stalking**, which is repeatedly following, monitoring, harassing, threatening or intimidating another by phone, mail, electronic communication or social media without legitimate purpose.

**Domestic and Dating Violence**, which is a pattern of abusive behavior in any relationship that is used by one partner to control another partner. This includes behaviors that intimidate, manipulate, humiliate, isolate, frighten, terrorize, coerce threaten, blame, hurt, injure, or wound.

**Sexual Violence / Assault**, which is actual or at-

tempted sexual contact with another person without that person’s consent.

Consent cannot be obtained when someone is a minor, under the influence of drugs or alcohol, or has certain disability. In the absence of an outward demonstration, consent does not exist. If at any time it is reasonably apparent that either party is hesitant, confused, or uncertain, both parties should stop.

The following individual has been designated to handle reports of sexual harassment and other inquiries regarding BYUH compliance with Title IX:

Debbie Hippolite-Wright, PhD  
 Title IX Coordinator  
 Vice President, Student Development & Life  
 Lorenzo Snow Administration Building  
 55-220 Kulanui Street  
 Laie, Hawaii 96762  
 Office Phone: 808-675-4819  
 E-Mail: [titleix@byuh.edu](mailto:titleix@byuh.edu)  
 Sexual Harassment Hotline: 808-780-8875

BYUHs Office of Honor upholds a standard which states that parties can only engage in sexual activity freely within the legal bonds of marriage between a man and a woman. Consensual sexual activity outside the bonds of marriage is against the Honor Code and may result in probation, suspension, or dismissal from the University.

## 9.4 Services for Students with Special Needs

Brigham Young University–Hawai‘i is committed to providing a working and learning atmosphere, which reasonably accommodates qualified persons with disabilities. If you have a disability and need accommodations, you may wish to self-identify by contacting:

Services for Students with Special Needs  
 McKay 181  
 Phone: 808-675-3518 or 808-675-3999  
 Email address: [aunal@byuh.edu](mailto:aunal@byuh.edu)

The Coordinator for Students with Special Needs is Leilani A‘una.

Students with disabilities who are registered with the Special Needs Services should schedule an ap-

pointment with the instructor to discuss accommodations. If the student does not initiate this meeting, it is assumed no accommodations or modifications will be necessary to meet the requirements of this course. After registering with Services for Students with Special Needs, and with permission of the student, Letters of Accommodation will be sent to instructors.

## 10 Syllabus Summary

Brigham Young University–Hawai‘i has adopted certain requirements relating to the information that must be provided in syllabi. This section lists those requirements and for each item either provides the information directly or gives a link to where it is provided above.

**Course Information:** See section 2.1.

- **Title:** Computer Networking
- **Number:** IT 280
- **Semester/Year:** Fall 2015
- **Credits:** 3
- **Prerequisites:** none
- **Location:** GCB 111
- **Meeting Time:** MWF 08:40 to 09:40

**Faculty Information:** See section 2.2.

- **Name:** Don Colton
- **Office Location:** GCB 128
- **Office Hours:** (In GCB 111) MWF 12:10-12:40 and 14:30-15:00, TuTh 15:30-16:00.
- **Telephone:** 808-675-3478
- **Email:** doncolton2@gmail.com

**Course Readings/Materials:** See section 2.3 for a list of textbooks, supplementary readings, and supplies required.

**Course Description:** See section 2.1.

Expected Proficiencies:

See section 1.1 for the proficiencies you should have before undertaking the course.

**Course Goals and Student Learning Outcomes, including Alignment to Program (PLOs) and Institutional (ILOs) Learning Outcomes, and extent of coverage.**

See section 8 for learning outcomes, showing the content of the course and how it fits into the broader curriculum. A listing of the departmental learning outcomes is provided together with the ratings taken from department’s matrix assessment document representing the degree to which the course addresses each outcome.

**Instructional Methods:** See section 6.

Learning Management System:

<https://dcquiz.byuh.edu/> is the learning management system for my courses.

Framework for Student Learning:

See section 6.1 for a discussion of the student learning framework and how I use it.

**Course Calendar:** See section 3 for the calendar in general.

Here are some items of particular interest:

- **First Day of Instruction:** Mon, Aug 03
- **Last Day to Withdraw:** Mon, Sep 28
- **Last Day of Instruction:** Wed, Oct 28
- **Final Exam:** Fri, Oct 30, 07:00 to 09:50
- **Final Exam Location:** GCB 111

**Course Policies:** See section 7.

- **Attendance:** See section 4.2.
- **Tardiness:** See section 4.2.
- **Class Participation:** See section 6.3.
- **Make-Up Exams:** See section 7.2.
- **Plagiarism:** See section 9.1.1.
- **Academic Integrity:** See section 9.1.

**Evaluation (Grading):** See section 4.

**Academic Honesty:** See section 9.1.

**Unlawful Discrimination:** See section 9.2.

**Title IX and Sexual Misconduct:** See section 9.3.

**Grievances:** The university grievance policy states that the policies listed on the syllabus can act as a contract and will be considered if a student has a complaint about the instructor or the course.

**Services for Students with Special Needs:** See section 9.4.