![University of Hawai'i Windward Community College logo]

ICS 184 (CRN 63312)
Introduction to Networking (3 credits)
Fall 2022 (22 August 2022 ~ 16 Dec 2022)
ONLINE

WINDWARD COMMUNITY COLLEGE MISSION STATEMENT

Windward Community College offers innovative programs in the arts and sciences and opportunities to gain knowledge and understanding of Hawai'i and its unique heritage. With a special commitment to support the access and educational needs of Native Hawaiians, we provide Ko'olau region of O'ahu and beyond with liberal arts, career and lifelong learning in a supportive and challenging environment — inspiring students to excellence.

Class Details

INSTRUCTOR: *Randal Pacheco*

OFFICE:	By Appointment	**OFFICE HOURS:** TBA
TELEPHONE:	808-225-2823	**EMAIL:** randalp@hawaii.edu

Office Hours: Since this class is online, any "office hours" will need to be coordinated ahead of time. I check email frequently during the day -). On all correspondence, please add the phrase "ICS 281 Fall 2022" to the subject line (this helps me sort and answer your email quicker). I endeavor to answer all emails within 2-4 hours during the regular work week (most times faster). Once coordinated, we can "meet" via skype or other application. I endeavor to answer all emails within 24 hours during the regular work week.

Key Dates: **Last Day to withdraw without a "W":** 13 Sept 2022
Last Day to Withdraw with a "W": 31 Oct 2022
Last Day of Instruction: 16 December 2022
Finals Week: 12 December to 16 December 2022
Holidays: Thanksgiving Nov 24-25 2022

ICS 184 Course Details

Welcome to ICS 184 – Introduction to Networking. In this course we will be knowing how to install, configure, and troubleshoot a computer network is a highly marketable and exciting skill. This course first introduces the fundamental building blocks that form a modern network, such as protocols, media, topologies, and hardware. It then provides in depth coverage of the most important concepts in contemporary networking, such as TCP/IP, Ethernet, wireless transmission, virtual networks, security, and troubleshooting. After completing this course and completing the exercises, you will be prepared to select the best network design, hardware, and software for your environment. You will also have the skills to build a network from scratch and maintain, upgrade, troubleshoot, and manage an existing network. Finally, you will be well-prepared to pass CompTIA's Network+ N10-006 certification exam. This course utilizes the online LABS.

Catalog/Course Description: This course provides the student with the knowledge and skills to manage, maintain, troubleshoot, install, operate, and configure basic network infrastructure, as well as to describe networking technologies, basic design principles, and adhere to wiring standards and use testing tools. The course also introduces the student to network security concepts. How Data Is Transported Over Networks • Structured Cabling and Networking Elements • Network Cabling • Industrial and Enterprise Networking • Basic Cryptography Outcomes: Students will be able to identify the elements of network components, configure them, be familiar with cryptographic protocols, differentiate between symmetric and asymmetric algorithms, common cryptographic uses, hash functions (MD4, MD5, SHA-1,2, and3)

Student Learning Outcomes: Upon completion of the course, the student will be able to:

- Manage networking projects as part of a team
- Discuss information security technologies such as cryptography, digital signatures, key management, and authentication as they relate to computer networks
- Describe the fundamental concepts, technologies, components, terminology, protocols, standards organizations, and business, legal, ethical, and security issues related to communications and data networks
- Describe a basic secure network architecture in accordance with current best practices given a specific need and set of hosts/clients
- Use current network tools to monitor, map and troubleshoot a network and to track and identify packets

ASSESSMENT TASKS, GRADING, AND SUBMISSION POLICIES

Course Outline: Course grading breaks down as follows using points: (*No plus or minus grades given, no "rounding"*) *because this course in designed using Mindtrap Cengage Online. Subject to change based on the course.*

Final	30 %
Projects/labs (7x)	42 %
Chapter review (14x)	28 %

90% - 100 %	"A"
80% - 89%	"B"
70% - 79%	"C"
60% - 69%	"D"
59% & below	"F"

Exams format: The final (which is cumulative) will include short answer and true/false type questions. The questions will be based on material presented/covered online. This can include questions that require math calculations and possible drawings. It will be administered via Laulima. The final (will be completing the online course). Because this course is designed around an online structure, you should complete the full course. You must pass the final to pass the course. *No more than 15% of the class will receive an "A".*

Projects/Labs: There will be projects that will be released during this class; specific requirements will be placed on the Laulima site. Project could be focused on the media view of IT security and Information Warfare. Other projects will be a group project based looking at a controversial issue within the IT world. Projects will require independent research.

Returns: The instructor endeavors to return all graded assignments to the students within two weeks of receipt (most times its less than 1). Exams may take up to 2 weeks to grade and return.

Late Policy: If a student will miss a deadline or due date due to work, deployment, medical or personal problems, etc., they MUST notify the instructor ahead of time. All missed deliverables will be given a grade of zero unless prior arrangements are made with the instructor. This should NOT be a common occurrence.

Incompletes: No *Incompletes* or *N* grades will be given except in the most extreme of emergencies (at the instructor's discretion – e.g.: death in the family).

Access: You should be logging into Laulima at least once a week and completing the required weekly assignments. It is possible to get ahead, but you should still endeavor to log in at least weekly. Students bordering on in-between grades will be given the higher grade if in the opinion of the instructor have been showing a regular presence on the Laulima system.

Quizzes: There will be quizzes covering the book material – these will be online and done electronically within the Course.

Papers: There will be papers that will be required in this class – Papers could be on current event items found in the news (you will be able to select the articles that interest you). Another paper will be a short "how to" article that you will write for use by others. Exact requirements will be released during class.

COURSE PLAN

Schedule A schedule of assignments and due dates will be posted during the first week of class on the Laulima site.

Handouts: There may be various handouts given to students during the semester. These items will be emailed and posted to Laulima. These handouts cover material that could be covered on an exam.

LEARNING RESOURCES

All assignments will be due on **Sunday nights at 11:55 pm**.

MindTap: In this course we will be using Cengage's MindTap tool as our digital textbook. There will be a direct link to MindTap from our Laulima site. A score of 5979 (Subject to change) points will earn you full credit for MindTap assignments.

Learning Exercises: The Learning Exercises for Security+ will be simulations that you will complete in MindTap. For other topics, there will be videos/presentations that you will following with and either submit a file or answer some questions. These Learning Exercises are to help you learn the various skills or concepts of the topics we are covering.

Homework Assignments: The Homework Assignments for Security+ will be Simulation in MindTap. Other topics will have a set of instructions for you to complete with a file to submit, or questions to answer.

I will also upload to Laulima other sources for you to look over. Check the schedule for chapters covered and timing.

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Laulima: Laulima is an online course management system and will be used extensively in this course. The class schedule, assignments, and announcements will be posted and administered through Laulima. (https://laulima.hawaii.edu/portal). The class *Announcements* will also include the *Due Dates* for any course work that may be due at the end of each week. It is CRUCIAL to check your *email*, the *Course Schedule*, and the *Announcements* page regularly to make sure you are keeping up with the requirements and pace of the course

Required software and System. No special software is required for this course beyond MS office (or equivalent) 2013 or higher. This class may include submission of papers and other assignments requiring use of a word processor, possibly spreadsheet software (e.g. Excel), and regular, internet access to browser websites for research. You can download free versions of Office 365 (available to WCC students) through special programs with Microsoft – contact the instructor or the WCC bookstore if you wish to avail yourself of this. Windward Community College also provides computers for your use in the library, lab, and in specific areas in Hale Pãlanakila. You may have to download specific software for use on your system for labs/research.

Class book:

Network+ Guide to Networks Eighth Edition

By Jill West Jean Andrews Tamara Dean

Quick Links:

Windward Community College	http://www.wcc.hawaii.edu OR http://windward.hawaii.edu
WCC account activation (to use local systems)	https://accounts.wcc.hawaii.edu/secure/index.php
Laulima	https://laulima.hawaii.edu
Library Learning Commons	http://library.wcc.hawaii.edu
WCC (Map)	https://windward.hawaii.edu/About_WCC/Campus_Map.php
WCC Calendar of Events	https://windward.hawaii.edu/Calendar/

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Instructor Expectations and Principles:

1) It is your personal responsibility as an online student to ensure that you have access to a reliable computer with the Internet connection.

2) It is the burden of the student to demonstrate mastery of course material to the instructor.

3) If you are having problems – ask! Don't let confusion grow. I will assist you as needed, but you still must get the correct solution before you get credit – I will not do your thinking for you.

4) You can work with others, But ensure you must submit your own work - do not "work together" on a solution then make copies for each person to turn in. If you "work together" to gain understanding, ensure you separate before you prepare your submission – if the submissions look too similar you may be asked to prove that it is your work.

5) Don't let other students copy – it is your responsibility to ensure that your work is not made available to others. Academic dishonesty "F" s often times comes in pairs.

6) Any activity that diminishes the instructor's ability to analyze and rate a student's individual knowledge of course material is prohibited.

7) Complete assignments on time. Assignments should be professional and meet the highest standards with regards to: logic, research, and content, grammar, and spelling.

8) Be prepared for tests and exams. This can be accomplished by working all assignments and reading ahead.

9) Think before putting pen to paper (or fingers to keyboard). Analysis is key; thinking and understanding prior to attempting to solve a problem is critical.

10) Time goes by very quickly and there is a lot of work to be accomplished. You will likely be putting in anywhere from 10-12 hours a week doing assignments, reading, or doing research. Unexpected things happen often in life – do your best to get ahead so you can more easily deal with these events.   Good time management and study discipline will be critical for keeping up in the class and doing well.

11) Communicate early and often with the instructor – and discussions of material (not exams) with other students is highly encouraged.

12) If you have problems or issues (e.g. illness, housing, death in the family, etc.) during the semester, let me know as soon as possible; we can work together to get your through this class. But I can't help you if I don't know about it.

Conduct and Academic Dishonesty Policies

Online Conduct: Everything done electronically on the university systems or via email can be considered public record and you are part of the larger, global, online community. As such, it is expected that all students demonstrate appropriate language, behavior, respect, and understanding that would prevail in any campus situation. All students should do their part to ensure a pleasant and safe online environment for others – including:

a) Watching for virii, worms, bots, etc. Do not allow these items, or any other type of code that disrupts or interrupts/interferes with other users' use of the online environment.
b) Showing respect for all faculty, students, staff regardless of age, race, gender, religion, national origin, veteran's status, disabilities, sexual orientation, etc.
c) Being honest. Misrepresentation of any kind will not be tolerated. This includes any type of identity theft or intentional electronic "fakery" (spoofing, relaying, etc.)
d) Being polite. Ensure that any content submitted electronically is free from harmful, threatening, libelous, and abusive content. This also includes profanity.

Submissions   The Internet is a great research tool and it should be utilized as often as possible as a study aid; but please ensure that you **DO YOUR OWN WORK.**   Turning in material that is plagiarized is a serious offense. Study and use the information found on the internet (and any other sources) to help you understand, but when it comes time to do your work – use your own words, and do not copy, cite, or attempt to "paraphrase" or "rephrase" someone else's work. If you truly understand the material, you will be able to use your own words and examples. . Also, consider your source when reading information on the Internet – not everything out there would be considered a "reputable" source. Be aware that all submitted items can be run through academic tools which scan for and can catch, plagiarism attempts

Academic Dishonesty: The penalties for academic dishonesty are explicitly noted in the Windward Community College student conduct code. Students are expected to maintain the highest moral and ethical standards. Any student, who cheats, lends assistance to others or hands in work that is not his/her own, will be penalized as outlined in the student conduct code. Furthermore, each student is responsible for ensuring that their work is not made available to others for study or duplication. Ignorance of this policy is no excuse of any academic dishonesty. Ensure your work is your own.
Students can upload papers to http://www.TurnItIn.com to have papers checked for authenticity, highlighting where the paper potentially fails to appropriately reference sources. Copyright infringement or violation of patent, trademark, proprietary information, and/or confidentiality agreements will not be tolerated.

Consequences include (but are not limited to)
        1st offense – a "0" for the assignment for all involved and a written warning
        2nd offence – an "F" for the class

The instructor reserves the right to notify the administrative offices (Vice Chancellor for Student Affairs) of any academic dishonesty violations – this can incur separate consequences such as probation or worse.

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DISABILITIES ACCOMMODATION STATEMENT

If you have a physical, sensory, health, cognitive, or mental health disability that could limit your ability to fully participate in this class, you are encouraged to contact the Disability Specialist Counselor to discuss reasonable accommodations that will help you succeed in this class. Ann Lemke can be reached at 235-7448, lemke@hawaii.edu, or you may stop by Hale ʻAkoakoa 213 for more information.

TITLE IX

Title IX prohibits discrimination on the basis of sex in education programs and activities that receive federal financial assistance. Specifically, Title IX prohibits sex discrimination; sexual harassment and gender-based harassment, including harassment based on actual or perceived sex, gender, sexual orientation, gender identity, or gender expression; sexual assault; sexual exploitation; domestic violence; dating violence; and stalking. For more information regarding your rights under Title IX, please visit: https://windward.hawaii.edu/Title_IX/.

Windward Community College is committed to the pursuit of equal education. If you or someone you know has experienced sex discrimination or gender-based violence, Windward CC has resources to support you. To speak with someone confidentially, contact Karla Silva-Park, Mental Health Counselor, at 808-235- 7468 or karlas@hawaii.edu or Kaahu Alo, Designated Confidential Advocate for Students, at 808-235- 7354 or kaahualo@hawaii.edu. To make a formal report, contact the Title IX Coordinator at 808-235-7393 or wcctix@hawaii.edu.

ALTERNATE CONTACT INFORMATION

If you are unable to contact the instructor, have questions that your instructor cannot answer, or for any other issues, please contact the Academic Affairs Office:

Location: Alakai 121
Phone: 808-235-7422
Email: wccaa@hawaii.edu

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