# ICS 184 (CRN 61509)
## Introduction to Networking (3 credits)
### Fall 2017 (21 August 2017 ~ 15 December 2017)
### Thursdays 1600-1715, Hale Pālanakia 122

## 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 Oʻahu's Koʻolau region and beyond with liberal arts, career and lifelong learning in a supportive and challenging environment — inspiring students to excellence.*

## Class Details

**INSTRUCTOR**: *John Oshiro*

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| **OFFICE:** | Hale Alaka'i, Rm 131 | **OFFICE HOURS:** TBA |
| **TELEPHONE:** | 808-236-9290 | **EMAIL:** oshiroje@hawaii.edu |

**Office Hours**: I will release office hours during the first week of class via the laulima site. If you need to meet with me outside of the scheduled hours, let me know via email and we can schedule other meeting times. You can reach me during the day at 236-9290 OR 542-6541, please leave a message if I do not answer. You can also reach me via e-mail (given above). On all correspondence, please add the phrase "ICS 184" to the subject line. I endeavor to answer all emails within 24 hours during the regular work week.

**Key Dates:**     **Last Day to withdraw without a "W":** 12 September 2017
**Last Day to Withdraw with a "W":** 30 October 2017
**Last Day of Instruction:** 7 December 2017
**Finals Week:** December 9 ~ December 15 2017
**Holidays:**
    Labor Day – 4 September 2017
    Veterans Day – 10 November 2017
    Thanksgiving – 23 November 2017
    Non-Instructional Day – 24 November 2017

## ICS 184 Course Details

Welcome to ICS 184 – Introduction to Networking. In this course we will be exploring the tools, techniques, and principles of computer network design and management. Because this class is part of the computer security certification, we will also be spending time connecting and exploring the role and impact of network design & administration on overall computer security. You will be spending a lot of time doing independent research on topics covered by the instructor. In addition, there will be hands-on work required (both in class and on your own time) to learn about network device configuration. This class will require that students be pro-active and disciplined in keeping with the proposed schedule and due dates.

**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.

**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: (*No plus or minus grades given, no "rounding"*)

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|---|---|
| Final | 30 % |
| Projects/labs (3x) | 30 % |
| Quizzes | 25 % |
| Class Participation | 15 % |

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

**Exams format:**  The final (which is cumulative) and quizzes will include short answer and true/false type questions.  The questions will be based on material presented/covered in class and found on Laulima.

**Projects**:    There are 3 projects that will be released during this class – they will be discussed in class and requirements placed on Laulima site

**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).

**Attendance**:  Attendance in class is expected, but I do understand that life happens and you can't always control everything.  So, if you have to miss class, please let me know as soon as possible.  You may have to communicate with your classmates to get lecture notes.  In addition to coming to class, it is advisable that you log into Laulima periodically to get the latest handouts or resources.  Classroom attendance will affect the class participation portion of the final grade.

## COURSE PLAN

**Schedule**  A schedule of assignments and due dates will be discussed in class, and posted 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

**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). It is IMPORTANT to check your *email*, the *Course Schedule*, and the *Announcements* page regularly.

**Required software and System**.  This course was designed to be completed using a PC (because of the software available for Windows).  However, any network enabled device (wired & wireless enabled preferred, but wireless at a minimum), including Android/Linux based systems (tablets, laptops, etc.) can be used (phones/note systems are not recommended).  Your system should also be able to handle word documents and pdf files (generally Microsoft word & Adobe Reader – but compatible software is acceptable with the understanding that you must be able to troubleshoot the software issues yourself.  We will go over your systems of choice (and potential options) during the first week of class.  Windward Community College does have systems that you may use for most of the assignments in the class.

**Additional Software/Applications/Tools**.  During the class, we will be discussing and using software (free, open source, or trial versions) to do specific assignments and to study.  However, keep in mind that certain Operating Systems (e.g. Mac) may not have as many available tools & applications available that will support our activities – you may be asked to work with another student OR work with the instructor to figure out another way to complete the assignments.
\*\* **NOTE**. \*\* *Since we will be working with open source software, the student should be aware that the university and/or the instructor is not responsible or liable for any issues that occur on personal systems.  Every effort is made to ensure that the applications used are safe, however, since the software is not created here nor is it "sold", students must accept a reasonable level of risk when installing the software.  Mitigating actions will be discussed during the first week of class*.

**Tool Use Agreement**.  During the class, we will be studying and using tools to assist with our network troubleshooting and administration – these tools if used maliciously or improperly can affect and potentially damage normal network operations – students will be asked to sign an agreement to use the tools, techniques, and procedures learned in this class in an ethical, professional manner.

**Quick Links:**

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| --- | --- |
| **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 a student in the ICS discipline and this class to ensure that you have an 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.  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 of any academic dishonesty violations – this can incur separate consequences such as probation or worse.*

## 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 'Akoakoa 213 for more information.*