ICS 211 (CRN 61408)
Introduction to Computer Science II (3 credits)
Fall 2023 (21 August 2023 ~ 15 Decmber 2023)
Online (Distance Learning)

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 O'ahu's Ko'olau region and beyond with liberal arts, career and lifelong learning in a supportive and challenging environment — inspiring students to excellence.

Instructor Details

INSTRUCTOR: *John Oshiro*

OFFICE:	Hale Palanakila 119	**OFFICE HOURS:** TBA
TELEPHONE:	808.542.6541	**EMAIL:** oshiroje@hawaii.edu

Office Hours: Available by appointment You can reach me during the day at 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 211" to the subject line, if you do not, responses *may* be delayed. I endeavor to answer all emails within 24 hours during the regular work week.

Background Mr. Oshiro has over 35 years in different segments of the Computer Science industry; primarily working with the US Government. He has extensive experience with systems security, multi-lateral (international) and enterprise-level information systems, and managing systems and software development. Mr. Oshiro has taught at the college level for over 21 years.

ICS 211 Course Details

Course Description: Students advance problem solving and programming skills by learning to separate solutions for computation problems into two fundamental parts: algorithm and data structure. Extensive programming assignments to create, implement, use, and modify programs that manipulate standard abstract data structures which will reinforce and strengthen problem-solving skills. This course will also introduce more software development practices and standards. Topics include: abstract data types, Big-O complexity, linked lists, stacks, queues trees binary search trees, heaps, heapsort, hashing, and recursion. Prerequisite: A grade of C or better in ICS 111 or consent of instructor.

Methods of Instruction: This is an online class. Students will read and study on their own time/schedule. This class will require students to be pro-active and disciplined in keeping with the proposed schedule and due dates. Returned graded material will allow the student to gauge progress and understanding; any issues and questions can be rectified immediately.

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

1. Use and implement abstract data types such as lists, stacks, queues, and trees.
2. Select the appropriate searching or sorting algorithm based on the algorithm's behavior.
3. Develop recursive algorithms and programs.
4. Use standard libraries or packages as well as advanced object-oriented programming techniques (polymorphism, inheritance, and encapsulation).
5. Produce robust and secure programs using exception handling and extensive program testing.

Text Books: (1) *Introduction to Java Programming, C*omprehensive Version, 12th Edition by Y. Daniel Liang (ISBN: 9780135945476) [10th and 11th edition are also fine]

(2) Main, Michael. *Data Structures & Other Objects Using Java*, 4th Edition. Pearson Education, Inc.: Upper Saddle River, NJ. ISBN-13: 978-0132576246 ****Additional Resource only – not required**

Class Procedures: This course will be delivered online. All material will reside on the Laulima system. This syllabus is a living document and as such, the students are requested to check it weekly (you are required to log into the site weekly). This syllabus is provided to act as a guideline and agenda for the class

Communications: All questions related to this course are welcomed by the instructor. I will allow student to use the discussion groups to discuss problems and questions, but you are not allowed to pass or give answers for any assignments. Discussion groups WILL NOT be routinely checked by the instructor – do not use it as an area to communicate with the instructor; send email instead.

Online Requirements. It is your personal responsibility as an online student to ensure that you have an access to a reliable computer with the Internet connection and standard office tools (browser, Microsoft Office applications, Adobe Reader, and Media Player software) installed on your computer. Generally, the instructor will only consider systems issues on the university side (Laulima) as an excuse for late or missed submissions if no prior communication from the student is sent.

Software Requirements: Students will need access to a java compiler and development environment. Any tool, environment, or compiler is acceptable as long as it produces executable code useable in a standard Windows based environment utilizing the latest JRE. Use whatever development environment that you are most comfortable with – this class focuses on problem solving and data structures – not java programming. Students should be aware that support from the instructor will not be provided for software use, especially for add-ons or other tools. It is expected that students come into this course knowing how to create basic code, compile, and run java applications – see instructor expectations below.

ASSESSMENT TASKS, GRADING, AND SUBMISSION POLICIES

Course Outline: Course grading breaks down as follows: (*No plus or minus grades given, no "rounding"*)

Final	30 %
Homeworks (8x)	40 %
Programs (4x)	30 %

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

To prevent grade inflation and to encourage individual achievement, the maximum # of A grades will not exceed 20% per class.

Exams format: The final (which is cumulative) will include short answer and true/false type questions. The questions will be based on assignments, handouts and any material presented/covered on Laulima. **You must pass the final to pass the course.

Projects: Placed on Laulima with all requirements within

Returns: The instructor endeavors to return all graded assignments to the students within two weeks of receipt (most times its less than 1). Exams and projects may take up to 3 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: Online asynchronous students may join in on the synchronous sessions at their convenience, but attendance is NOT required.. You ARE required to log into laulima at least weekly to check to see if there are any additions/changes; it is your responsibility to know what is going on and to keep up.

Schedule A schedule of assignments and due dates will be posted (and updated if need be) 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.

Submission requirements: There are 3 levels of requirements

a) Program/project specific requirements
b) Code requirements
c) Class level requirements

Program/Project specific requirements will be contained in the assignment form itself. Ensure you read through each assignment carefully before you launch off into solving it.

Code Requirements will be in a file on the class website available to you anytime during the course. This file will specify the requirements for documentation, output presentation, and any specific submission requirements in addition to those covered in (a) and (c).

Class Level Requirements are covered below (next page)

Class Level Req. This list covers requirements for every project/program.

1) **All projects/programs are due on dates/times indicated.** If you are going to be late, notify me ahead of time and as soon as possible. Telling me the day its due that you will be late doesn't cut it. The real world has deadlines, and catastrophes happen – plan accordingly. Late assignments (up to 1 week) will be accepted at 80% of original grade, after that a zero is recorded.

2) **Meet requirements first.** If the program doesn't meet the basic requirements, having extra credit items (some assignments will have extra credit options) will not count.

3) **Make sure you get credit**. All items being submitted should include your name and class Number – this is especially critical on output(s) from your projects. Use of headers/footers is acceptable. Source code documentation and file name conventions will be covered in the *Code Requirements* documentation. Failure to follow this can result in lost points. If I cannot figure out owns the submission, you may end up with a "0" for the grade (or a lower grade because it will be considered submitted late).

4) **Ensure your submissions are accurate.** All submission requirements will be stated in the assignment – make sure you turn them all in. Some projects will require screen captures, others simply code + executable. Do not turn in what is not asked for.

5) **Watch submission methods.** In almost every case, the submissions will be done via Laulima – however, it may be necessary to certain files (especially executables) via email –

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. There are additional supporting tools/applications that can be used in your specific development environment; feel free to use any add-ons you see fit, 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**. ** *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.*.

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/

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 email/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 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.