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# 2023-24 SYLLABUS

## PART ONE:

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### Syllabus Specifics

**Course Title and Course Number:**

CPSC/ECE 3520: Programming Systems

**Term:**

Summer 2023. More information is available at [Clemson Academic Calendar](#).

**Class Meeting Time and Place:**

No fixed time and place, self-paced learning, June 26 – Aug 1.

**Information on Modality:**

Asynchronous online

**Instructor Name:**

Yongkai Wu (Instructor, [yongkaw@clemson.edu](mailto:yongkaw@clemson.edu))

**Instructor Email:**

[yongkaw@clemson.edu](mailto:yongkaw@clemson.edu)

The instructor does the best to respond to email inquiries within 48 hours, excluding weekends and university holidays.

**University Office Phone:**

864-656-1623

**Office Address/Office Number:**

Zoom

## Office Hours:

Wednesday and Friday 9:00 – 11:00 am

## Course Description:

An advanced course in programming languages and systems for computer engineering and computer science majors. The course objective is to enable a more complete understanding of programming topics and related supporting tools, including philosophy, methodology, formal syntax and semantics, and examples of programming paradigms, languages, and development approaches.

## Prerequisites:

- ECE 2230 or CPSC 2120 and CPSC2150, each with a C or better.
- CONCURRENT ENROLLEMENT: CPSC 2070 or MATH 4190, each with a C or better.

## Learning Objectives / Outcomes:

Upon completion of this course, students should be able to:

- Understand a variety of programming philosophies and methodologies.
- Understand formal syntax and semantics.
- Explain and use a variety of programming paradigms, languages, and development approaches.
- Understand professional and ethical responsibility.

## Required Materials

Laptop with Linux, MacOS, or Windows or a suitable alternative approved by the instructor that supports the free software development environments recommended in the textbook.

Some means of storing working files on an SD card or USB stick in order to transfer course files and **Back Them Up**. Students are responsible for their files and computing system. Very little slack will be given for “lost my work” or “broke my laptop” excuses.

The course Canvas page contains a page with a more detailed ‘Calendar of CPSC/ECE 3520 Lectures’ PDF indicating posted day-by-day lectures, deliverables and significant course activities. It is of utmost importance to be either in sync or slightly ahead of the lecture pace indicated by this Course Master Calendar.

## How to Be Successful in this Course

### Your Responsibility as a Student

- Be prepared for all classes.
- Be respectful of others.

### My Responsibility as an Instructor

- Be prepared for all classes.
- Evaluate all fairly and equally.

- Actively contribute to the learning activities in class
- Abide by the University Academic Integrity Policy
- Be respectful of all students.
- Create and facilitate meaningful learning activities.
- Behave according to university codes of conduct

Students are expected to communicate via Canvas and/or email, you should check these daily for announcements and/or assignments. As they are also required to attend lectures, announcements may also be made during class.

## Tentative Topical Outline:

The instructor may adjust the content based on student's feedback and course progress.

- Introduction
- Grammars, syntax, and semantics
- Parsing
- Declarative programming in Prolog
- Functional programming in OCaml
- Scripting and markup languages
- Challenges in computing and programming

## Assessment

### Major Assessment/Grading Activities:

The assessments and wights are tentative. The instructor will finalize this part before the class begins.

Assessment	Weight/Points
Test1	20%
Test2	20%
Test3	20%
SDE1	20%
SDE2	20%

### Grading System:

Letter	Points/Percentages
A	90-100
B	80-89.99
C	70-79.99
D	60-69.99
F	0-59.99

## Grading Policies:

- Exams, Tests, or Quizzes: Given using Canvas and Respondus LockDown Browser.
- Students are required to complete **ALL** projects on time and submit all codes to receive a passing grade in the course. NO EXCEPTIONS!!!!
- Grades of A, B, C, D, and F will be given for this class. The instructor guarantees an A for a combined score of 90-100, a B for 80-89, and a C for 70-79 BUT might adjust the ranges in the student's (collective) favor based on grade distributions.
- A grade of I (incomplete) will only be given if a student must complete a project after the semester has ended and only by prior arrangement with the instructor. A suitable explanation will be required. Missing grades, quizzes, and projects will be treated as 0 points.

## Late Work:

Late work is not accepted and graded as zero immediately due to the tight teaching and learning schedule in Summer.

## Attendance Policy

- The format of this class is Traditional. Class lectures are delivered in class at the specified time for this class. A copy of the lecture slides used are provided on Canvas. Students are responsible for all lectures. Each lecture is about 1 hr. 15 min.
- Tests are scheduled on a specific day and time noted on Canvas and cover the material presented previous to that Test in the schedule.
- Tests 1 and 2 have “pre-tests” or practice tests that offer the opportunity to see the type of questions that will be asked. These do not count towards your grade. Tests 1 and 3 have a list of topics covered on the test provided on Canvas.
- Tests can only be made up by prior arrangement. This means you must contact me, explain the proposed absence, and have it approved by me in writing, otherwise you will get a zero for the test. I might excuse an emergency provided it was dire and documented.
- Students must use the Notification of Absence module in Canvas or email to inform the instructor of unavoidable or planned student absences.
- Office hours are optional. If there are no attendees and/or questions I will end the session. Come to office hours with questions, I cannot repeat multiple lectures, but I will gladly explain anything from the lectures or pre-tests to improve your understanding. Of course you may come to office hours just to listen, but if there are no questions, there will be nothing to listen to.
- This is a programming class, and experience has shown that when it comes to questions about your code, the best approach is for you to email me your question, your code, and the output in question. I can answer most questions by email, and if not, I will schedule a private session. I prefer we do not discuss your code in office hours. When sending your code, the best method is to simply attach the file with your code to the email. You can usually cut and paste error messages from the screen right into your email. Screenshots

work in a pinch, but are often hard to read, and best avoided. I usually can't tell much from 1 or 2 lines; I need your entire code.

## **Absence:**

Students are expected to attend all lectures. Students who are not able to attend for some reason, the notification must be sent via the Notification of Absence module.

## **Notification of Absence:**

The **Notification of Absence module in Canvas** allows students to quickly notify instructors (via an email) of an absence from class and provides for the following categories: court attendance, death of immediate family member, illness, illness of family member, injury, military duty, religious observance, scheduled surgery, university function, unscheduled hospitalization, other anticipated absence, or other unanticipated absence.

The notification form requires a brief explanation, dates and times. Based on the dates and times indicated, instructors are automatically selected, but students may decide which instructors will receive the notification. This does not serve as an "excuse" from class. It is a request for an excused absence and students are encouraged to discuss the absence with instructors, as the instructor is the only person who can excuse an absence. If students are unable to report absences by computer, they may reach the Office of Advocacy and Success. Students with excessive absences who need academic or medical assistance can also contact the Office of Advocacy and Success.

## ***Inclement weather or emergency:***

Any exam that was scheduled at the time of a class cancellation due to inclement weather will be given at the next class meeting unless I contact you otherwise. Any assignments due at the time of a class cancellation due to inclement weather will be due at the next class meeting unless I contact you. And any extension or postponement of assignments or exams must be granted by me via email or Canvas within 24 hours of the weather-related cancellation.

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# STANDARD ACADEMIC POLICIES

**For standard academic policy language and up-to-date student resources, see the [University Policy and Student Support Syllabus Part 2](#). These four policies, however, are required:**

## Academic Integrity

As members of the Clemson University community, we have inherited Thomas Green Clemson's vision of this institution as a "high seminary of learning." Fundamental to this vision is a mutual commitment to truthfulness, honor, and responsibility, without which we cannot earn the trust and respect of others. Furthermore, we recognize that academic dishonesty detracts from the value of a Clemson degree. Therefore, we shall not tolerate lying, cheating, or stealing in any form.

All infractions of academic dishonesty by undergraduates must be reported to Undergraduate Studies for resolution through that office. In cases of plagiarism instructors may use the Plagiarism Resolution Form.

See the [Undergraduate Academic Integrity Policy](#) website for additional information and [the current catalogue](#) for the policy. For graduate students, see the current [Graduate School Handbook](#) for all policies and procedures.

## Accessibility

Clemson University values the diversity of our student body as a strength and a critical component of our dynamic community. Students with disabilities or temporary injuries/conditions may require accommodations due to barriers in the structure of facilities, course design, technology used for curricular purposes, or other campus resources. Students who experience a barrier to full access to this class should let the instructor know and make an appointment to meet with a staff member in Student Accessibility Services as soon as possible. You can make an appointment by calling 864-656-6848, by emailing [studentaccess@lists.clemson.edu](mailto:studentaccess@lists.clemson.edu), or by visiting Suite 239 in the Academic Success Center building. Appointments are strongly encouraged – drop-ins will be seen, if at all possible, but there could be a significant wait due to scheduled appointments. Students who have accommodations are strongly encouraged to request, obtain and send these to their instructors [through the AIM portal](#) as early in the semester as possible so that accommodations can be made in a timely manner. It is the student's responsibility to follow this process each semester.

You can access further information at the [Student Accessibility website](#). Other information is at the university's [Accessibility Portal](#).

## The Clemson University Title IX Statement Regarding Non-Discrimination

The Clemson University Title IX statement: Clemson University is committed to a policy of equal opportunity for all persons and does not discriminate on the basis of race, color, religion, sex,

sexual orientation, gender, pregnancy, national origin, age, disability, veteran's status, genetic information or protected activity in employment, educational programs and activities, admissions and financial aid. This includes a prohibition against sexual harassment and sexual violence as mandated by Title IX of the Education Amendments of 1972. This [Title IX policy](#) is located on the Campus Life website. Ms. Alesia Smith is the Clemson University Title IX Coordinator, and the Executive Director of Equity Compliance. Her office is located at 223 Brackett Hall, 864-656-0620. Remember, email is not a fully secured method of communication and should not be used to discuss Title IX issues.

*Clemson University aspires to create a diverse community that welcomes people of different races, cultures, ages, genders, sexual orientation, religions, socioeconomic levels, political perspectives, abilities, opinions, values and preferences.*

## Emergency Preparation

Emergency procedures have been posted in all buildings and on all elevators. Students should be reminded to review these procedures for their own safety. All students and employees should be familiar with guidelines from the Clemson University Police Department. [Visit here for information about safety.](#)

Clemson University is committed to providing a safe campus environment for students, faculty, staff, and visitors. As members of the community, we encourage you to take the following actions to be better prepared in case of an emergency:

1. Ensure you are signed up for [emergency alerts](#)
2. Download the [Rave Guardian app](#) to your phone (<https://www.clemson.edu/cusafety/cupd/rave-guardian/>)
3. Learn what you can do to [prepare yourself](#) in the event of an active threat (<http://www.clemson.edu/cusafety/EmergencyManagement/>)