

Course Information

Course Number: CSCE 314
Course Title: Programming Languages
Section: 500
Time: MWF 12:40-1:30 p.m.
Location: HRBB 124
Credit Hours: 3

Instructor Details

Instructor: Prof. Dr. Hyunyoung Lee
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Office Hours: Tuesdays 10:00-11:00 a.m. and Thursdays 1:00-2:00 p.m. (or by appointment)
Office Hour Location: Zoom (Meeting ID: 604-184-8110, logon using TAMU account or via Canvas)

Teaching Assistant: Ms. Vedangi Bengali
Office: Zoom (Meeting ID: TBA on Canvas)
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Office Hours: TBA on Canvas

Course Description

This course explores the design space of programming languages via an in-depth study of two programming languages, one functional (Haskell) and one object-oriented (Java). It focuses on idiomatic uses of each language, and on features characteristic for each language.

Course Prerequisites

Grade of C or better in CSCE 221, or concurrent enrollment; or approval of instructor.

Special Course Designation

None.

Course Learning Outcomes

At the end of the course, students will be able to use modern programming languages more effectively and be able to learn new programming languages more easily. They will get a broader understanding of language constructs, common abstraction mechanisms, and efficiency considerations.

Textbook and/or Resource Materials

Required textbook 1: Graham Hutton, *Programming in Haskell, 2nd Ed.*, Cambridge University Press. ISBN 978-1316626221.

Required textbook 2: Ken Arnold, James Gosling, and David Holmes, *The Java Programming Language, 4th Ed.*, Addison-Wesley Professional. ISBN-13: 978-0-321-34980-4.

Course homepage: Canvas course page <https://canvas.tamu.edu>. Check the Canvas course page daily. It is the student's responsibility to be aware of the announcements, lecture schedule, and any assignments and their deadlines, and whether the assignment is held/submitted in-class or online.

Grading Policy

- Graded items and their weights are as follows:
 - Exams 60%: There will be two midterm exams each worth 20% and one *comprehensive* final exam also worth 20%. The exams are closed book and closed notes.
 - Homework 20%: All homework assignments will be announced and posted on Canvas.
 - Quizzes 10%: Your one lowest quiz grade will be dropped.
 - Exercises 10%: There will be in-class activities and exercises. Your one lowest exercise grade will be dropped.
- Final grades will be assigned according to this scale based on the weighted final average:
A: 90 and above, B: [80, 90), C: [70, 80), D: [60, 70), F: below 60
The scale may be adjusted by the instructor to reflect score variations.

Attendance and Make-Up Policy

- Class attendance is strongly recommended. If you miss class for any reason, it is your responsibility to find out what lecture contents/assignments/announcements you missed.
- Make-ups for homework assignments, quizzes, exercises, and exams will be given only under circumstances beyond student's control (a university sanctioned excuse). Prior arrangements with the instructor must be made when feasible and official verification of circumstances necessitating the absence will be required.
- Any make-up work must be completed before the solutions are discussed or posted or the graded results become available to the students, whichever occurs first. Please refer to [Student Rule 7](#) for more information.

Submission of Work and Late Work Policy

- All assignments (including exams, homework, quizzes, and exercises) must be submitted by the due date and time specified for the assignment. E-mail submissions will not be accepted (they will be ignored without notice).
- In general, no late submission beyond the deadline will be accepted. Partial credit will be given based on the work submitted by the deadline.

Course Conduct and Academic Integrity

Each assignment (including exam, homework, quiz, and exercise) will be done individually, unless otherwise instructed. Note the following acceptable/unacceptable collaborations.

- Acceptable collaboration includes: (1) discussing the assigned problems to understand their meaning or (2) discussing possible approaches to assigned problems. However, you must explicitly acknowledge any help received from someone and reference every source you use, whether it is a person, a book, a paper, a solution set, a web page or whatever.
- Unacceptable collaboration includes: (1) copying (verbatim use) of physical papers or computer files (including program files), (2) submission of solutions that are jointly authored, or authored either wholly or in part by other individual, or (3) providing physical papers or computer files (including program files) of your (or third-party) solutions to other individuals.

In general, you may discuss the strategy and approach of solutions with others, but you must construct and write up *all final answers in your own words*, and you must not share the final product in any way. You should make sure all your files are properly secured since you may be responsible if someone copies your files. Should questions arise while working on a problem, immediately contact the instructor.

Course Schedule

Tentative schedule; please refer to the Canvas course page for more details and up-to-date information. (For reading: [H] Haskell textbook, [J] Java textbook)

Week	Dates	Topics	Reading
1	1/18 – 1/21	Introduction; Haskell and Functional Programming Basics	[H] Ch. 1,2
2	1/24 – 1/28	Haskell Types, Currying, Polymorphism; Functions	[H] Ch. 3, 4, 15
3	1/31 – 2/4	List Comprehensions; Recursive Functions	[H] Ch. 5, 6, 16
4	2/7 – 2/11	Higher-Order Functions; Declaring Types and Classes	[H] Ch. 7, 8
5	2/14 – 2/18	Declaring Types and Classes; Exam 1 (Friday, 2/18)	
6	2/21 – 2/25	IO; Monads	[H] Ch. 10, 12
7	2/28 – 3/4	Monadic Parsing; Syntax and Semantics	[H] Ch. 13, 17
8	3/7 – 3/11	PL Implementation; Syntactic Analysis	(Start reading
	3/14 – 3/18	Spring Break	Java textbook)
9	3/21 – 3/25	Java and OO Programming Basics	[J] Ch. 1-10
10	3/28 – 4/1	Java Basics (Cont.); Java Generics	[J] Ch. 11
11	4/4 – 4/8	Java Generics (Cont.); Exam 2 (Wednesday, 4/6)	
12	4/11 – 4/15	Java Concurrency	[J] Ch. 14
13	4/18 – 4/22	Reflection	[J] Ch. 16
14	4/25 – 4/29	JVM	[J] Ch. 17
15	5/2 – 5/3	Final Review	

Final exam: Friday, May 6, 2022, during 10:30 a.m. – 12:30 p.m.

Regrading Policy

A student can request regrading of any graded material following the guidelines below, if the student believes that the points assigned are inconsistent with the quality and merits of the submitted work.

- Regrading requests must be submitted to the instructor within one week after the graded results have been returned to the student (physically on paper or electronically on Canvas). After this time limit no regrading requests will be honored.
- Regrading requests must be in a written form (email to the instructor), accompanied by a reasonable amount of specific justification and documentation.

Copyrights

All materials used in this course are copyrighted. Materials generated for this class include but are not limited to syllabi, in-class materials, class notes, solutions provided by the instructor, exams, review sheets, and problem sets. Because these materials are copyrighted, you do not have the right to copy or post such handouts, unless the author expressly grants permission.

University Policies

COVID-19 Statement

To help protect Aggieland and stop the spread of COVID-19, Texas A&M University urges students to be vaccinated and to wear masks in classrooms and all other academic facilities on campus, including labs. Doing so exemplifies the Aggie Core Values of respect, leadership, integrity, and selfless service by putting community concerns above individual preferences. COVID-19 vaccines and masking — regardless of vaccination status — have been shown to be safe and effective at reducing spread to others, infection, hospitalization, and death.

Attendance Policy

The university views class attendance and participation as an individual student responsibility. Students are expected to attend class and to complete all assignments.

Please refer to [Student Rule 7](#) in its entirety for information about excused absences, including definitions, and related documentation and timelines.

Makeup Work Policy

Students will be excused from attending class on the day of a graded activity or when attendance contributes to a student's grade, for the reasons stated in Student Rule 7, or other reason deemed appropriate by the instructor.

Please refer to [Student Rule 7](#) in its entirety for information about makeup work, including definitions, and related documentation and timelines.

Absences related to Title IX of the Education Amendments of 1972 may necessitate a period of more than 30 days for make-up work, and the timeframe for make-up work should be agreed upon by the student and instructor” ([Student Rule 7, Section 7.4.1](#)).

“The instructor is under no obligation to provide an opportunity for the student to make up work missed because of an unexcused absence” ([Student Rule 7, Section 7.4.2](#)).

Students who request an excused absence are expected to uphold the Aggie Honor Code and Student Conduct Code. (See [Student Rule 24](#).)

Academic Integrity Statement and Policy

“An Aggie does not lie, cheat or steal, or tolerate those who do.”

“Texas A&M University students are responsible for authenticating all work submitted to an instructor. If asked, students must be able to produce proof that the item submitted is indeed the work of that student. Students must keep appropriate records at all times. The inability to authenticate one’s work, should the instructor request it, may be sufficient grounds to initiate an academic misconduct case” ([Section 20.1.2.3, Student Rule 20](#)).

You can learn more about the Aggie Honor System Office Rules and Procedures, academic integrity, and your rights and responsibilities at aggiehonor.tamu.edu.

Americans with Disabilities Act (ADA) Policy

Texas A&M University is committed to providing equitable access to learning opportunities for all students. If you experience barriers to your education due to a disability or think you may have a disability, please contact Disability Resources office located in the Student Services Building or at (979) 845-1637 or visit disability.tamu.edu. Disabilities may include, but are not limited to attentional, learning, mental health, sensory, physical, or chronic health conditions. All students are encouraged to discuss their disability related needs with Disability Resources and their instructors as soon as possible.

Title IX and Statement on Limits to Confidentiality

Texas A&M University is committed to fostering a learning environment that is safe and productive for all. University policies and federal and state laws prohibit gender-based discrimination and sexual harassment, including sexual assault, sexual exploitation, domestic violence, dating violence, and stalking.

With the exception of some medical and mental health providers, all university employees (including full and part-time faculty, staff, paid graduate assistants, student workers, etc.) are Mandatory Reporters and must report to the Title IX Office if the employee experiences, observes, or becomes aware of an incident that meets the following conditions (see [University Rule 08.01.01.M1](#)):

- The incident is reasonably believed to be discrimination or harassment.
- The incident is alleged to have been committed by or against a person who, at the time of the incident, was (1) a student enrolled at the University or (2) an employee of the University.

Mandatory Reporters must file a report regardless of how the information comes to their attention – including but not limited to face-to-face conversations, a written class assignment or paper, class discussion, email, text, or social media post. Although Mandatory Reporters must file a report, in most instances, a person who is subjected to the alleged conduct will be able to control how the report is handled, including whether or not to pursue a formal investigation. The University’s goal is to make sure you are aware of the range of options available to you and to ensure access to the resources you need.

Students wishing to discuss concerns in a confidential setting are encouraged to make an appointment with [Counseling and Psychological Services](#) (CAPS).

Students can learn more about filing a report, accessing supportive resources, and navigating the Title IX investigation and resolution process on the University’s [Title IX webpage](#).

Statement on Mental Health and Wellness

Texas A&M University recognizes that mental health and wellness are critical factors that influence a student’s academic success and overall wellbeing. Students are encouraged to engage in healthy self-care by utilizing the resources and services available from Counseling & Psychological Services (CAPS). Students who need someone to talk to can call the TAMU Helpline (979-845-2700) from 4:00 p.m. to 8:00 a.m. weekdays and 24 hours on weekends. 24-hour emergency help is also available through the National Suicide Prevention Hotline (800-273-8255) or at suicidepreventionlifeline.org.