



Self-Paced Online Courses

UNI / University of Northern Iowa.
Online & Distance Education

Course Syllabus

Introduction to Computing CS 1510

Instructor Contact Information

Instructor	Mark Fienup
Phone	319 266-5379
Office hours and location	By appointment setup via email Zoom: https://uni.zoom.us/j/3192735918 Zoom Password: UNI
Email Address	mark.fienup@uni.edu
Class Delivery	Online / Blackboard Learn Ultra
Preferred Communication	I will primarily communicate with students via email. Email to request an appointment by Zoom.

Course Information

Credit Hours: 4 hours

The aggregation of time on tasks, assignments, and interactions in an online course will reflect rigor and expectations equivalent to the federal definition of the credit hour—15 hours of direct faculty instruction and a minimum of 30 hours of out-of-class student work for each credit hour awarded.

Course Description

Introduction to software development through algorithmic problem solving and procedural abstraction. Programming in the small. Fundamental control structures, data modeling, and file processing. Significant emphasis on program design and style. Prerequisites: none.

Purpose of the course: This is the first computer programming course for Computer Science majors or minors at the University of Northern Iowa. It assumes no previous programming experience so it starts with the individual

programming statements and how to combine them to write bigger programs. Being able to design, test, and write computer programs utilizing a modular style is a fundamental skill of all computer scientists.

Learning Objectives

University Level Outcomes:

- **Critical Thinking:** Students will demonstrate critical thinking through the ability to evaluate, analyze, and integrate information from a variety of sources in order to develop reasoned positions and solutions to problems.
- **Communication:** Students will display competence in oral, written, and visual communication, as appropriate for their discipline.
- **Program Content Knowledge:** Students will demonstrate discipline-specific knowledge and skills in their major fields of study.

Program Level Objectives:

1. Students should be able design, implement, and test efficient programs.

Course Level Objectives:

1. Students can analyze a programming problem and create a programming solution using the basics of programming:
 - a. actions (input, processing, output)
 - b. control structures (selection, repetition)
 - c. basic data structures (strings, arrays/lists, hash tables/dictionaries)
 - d. modularization (student-written procedures/functions)
 - e. data persistence (file input and output)
2. Students will increase their problem solving skills by creating programming solutions to solve real world problems.
3. Students will increase their communication skills by writing readable programs suitable for collaboration with others.

Course Content Requirements

Required Textbook: (Free on-line textbook on Runestone Academy)

- **First-time register yourself on Runestone Academy at:**
<https://runestone.academy/runestone/default/user/register>

NOTE: In the Course Name box enter:

UNI_SPOC_CS_1510

This textbook is “Python for Everybody – Interactive.” It allows you to read the textbook, but it also allows you to practice writing Python code online and check your understanding with embedded multiple-choice questions. These textbook

activities are not part of your course grade, but are highly encouraged to help you learn this material.

Software Tools: You will need to download and install the free Python development package (latest version 3.x) from the Python Web-site: <http://www.python.org/>.

Instructional Methods

This Self-Paced Online Course (SPOC) is designed to achieve the same learning outcomes as the traditional semester-based course. Even though you have 9 months to complete the SPOC course, you should start immediately after enrolling and set aside time to make weekly progress toward completion.

Required Instructor and Learner Interactions: In the Start Here folder on Blackboard, please read the Meet Your Instructor and Getting Started text to learn a bit about your instructor. Plus, complete the Get to Know You survey so the instructor can learn a little about you. Of course, you can always email (mark.fienup@uni.edu) questions, or email to arrange a Zoom meeting with your instructor.

This course consists of the following activities and assessments to assist you in achieving the course and instructional units' objectives. For each unit you will complete various combinations of readings, laboratory activities, online quizzes, and programming projects in preparation of an exam. Additionally, optional supplemental videos from the instructor's face-to-face classes are included with each unit and might aid in learning the material.

Each unit corresponds to several textbook chapters. You will complete chapters sequentially from chapters 1 to 11. For each chapter, you should follow these steps:

- 1) read the chapter thoroughly. Readings are an independent means of providing concrete experience to prepare you for each quiz, laboratory assignment, or programming project.
- 2) work through the laboratory assignment related to the chapter
- 3) take the True/False and Multiple Choice chapter quiz on the eLearning system.
- 4) complete the programming project(s) associated with one or more chapters.

Programming projects require you to write larger, complete programs so you can improve your program design, implementation, and testing skills.

Evaluation Methods

Laboratory Assignments: Each chapter typically has a lab to provide you practice on chapter related skills. Each lab will consist of short-answer questions and programming exercises where you will be modifying and writing small sections of Python code. Using a word processor program (Word, Open-Office, etc.), save your short-answer responses to a file as a Word (docx) or in Rich-text format (.rtf) format. Alternatively, you can print

the labs and hand-write your answers and submit an electronic scan (.pdf) or image (.jpg) format. Zip your answer file and your Python programming files together and submit the .zip file via **Lab # Submission** link on eLearning system.

Chapter Quizzes: Each chapter has an associated True/False and Multiple Choice **chapter quiz** on the eLearning system.

Programming Projects: Programming projects require you to write larger, complete programs so you can improve your program design, implementation, and testing skills. Each programming project includes a grading rubric used for its evaluation.

Examinations: There will be two exams: a mid-term exam and a comprehensive final exam. Examinations are taken on the eLearning system after satisfactory completion of all labs, quizzes, and programming projects covered on the examination according to the below course schedule. Examination questions will be a combination of True/False, Multiple Choice, fill-in the blank, short essay, and includes writing short Python code segments.

Course Schedule:

Unit	Chapter	Topics	Lab Assignments	Projects
1	1	Installing Python and running programs	Lab 1	Project 1
	2	Variables, types, operators, assignment, input and print statements	Lab 2	
	3	Debugging and error messages	Lab 3	
2	4	Conditional Execution (if's) and try-except	Lab 4	Project 2
	5	Functions	Lab 5	Project 3
	6	Looping and iteration	Lab 6	Project 4
Mid-Term Exam				
3	7	Strings: operations and methods	Lab 7	Project 5
	8	Files: Text files and CSV files	Lab 8	
4	9	Lists	Lab 9	Project 6
	10	Dictionaries	Lab 10	Project 7
	11	Tuples	Lab 11	
Final Exam				

Determination of Grades:

Course components are weighted as:

Chapter quizzes:	10 %
Laboratories:	20 %
Programming Projects:	20 %
Mid-term exam:	25 %
Final exam:	25 %

Course grades will be assigned based on the following grading scale:

100-90	A
89 - 80	B
79 - 70	C
69 - 60	D

Below 59 F

Plus and minus grades will be assigned for scores within two percentage points from a grade cutoff (e.g., 91.9 to 90 is an A-, and 89.9 to 88 is a B+).

Feedback on labs, programming projects, and examinations is generally provided within a couple days of submission.

Important UNI Policies and Statements

Academic In Academic Integrity:

To ensure academic integrity and to follow UNI policies on Student Academic Ethics (see: IV. Academic Ethics Violations), students will not plagiarize, misrepresent, fabricate, or cheat. Unless otherwise instructed and approved by the instructor, students will take quizzes and exams individually, without collaboration with other parties and/or using notes or other texts. Similarly, students will submit work (papers, presentations, and other assessments) that is their own work (in regard to violations of these ethics policies, see: V. Academic Ethics Sanctions). (<https://policies.uni.edu/301>).

Artificial Intelligence (AI) Tools:

AI is rapidly changing the face of software engineering. Artificial Intelligence tools (e.g. chatGPT and Bard) are rapidly developing that can generate full programs or act as a "copilot" by suggesting lines of code as you are writing. These tools hold great promise to increase your future productivity as a programmer, but only if you are a proficient enough programmer to assess the correctness and quality of code that the AI produces.

To achieve programming proficiency, you need to put in the practice. You will not get any better at programming by having an AI tool write code for you. Thus, in this course you must write all of your own code for programming homework without the use of AI.

Free Speech Syllabus Statement:

As per the Board of Regents - State of Iowa, the Syllabus Free Speech Statement will be reviewed at the beginning of each course. (Approved by UNI Faculty Senate: April 26, 2021)

The University of Northern Iowa supports and upholds the First Amendment protection of freedom of speech and the principles of academic and artistic freedom. We encourage the free and responsible exchange of diverse ideas on our campus. The University is committed to open inquiry and the spirited and thoughtful debate of such ideas.

Discrimination, Harassment, and Sexual Misconduct Policy:

The University is committed to achieving fairness and equity in all aspects of the educational enterprise and therefore prohibits discrimination, harassment, sexual misconduct, and retaliation under this policy. This policy applies regardless of the status of the parties involved and includes students, student organizations, visitors, faculty, administrators, and staff. [Discrimination, Harassment, and Sexual Misconduct Policy webpage](https://policies.uni.edu/1302) (<https://policies.uni.edu/1302>).

If you are aware of or witness discrimination, harassment, sexual misconduct, or retaliation **report the incident** to the Title IX Coordinator or designee in accordance with [Policy 13.02](https://policies.uni.edu/sites/default/files/13.02.pdf). (<https://policies.uni.edu/sites/default/files/13.02.pdf>) Refer to safety.uni.edu

(<https://safety.uni.edu/>) for additional information on resources and reporting options, including online reporting. Please take the time to acquaint yourself with your **mandatory reporting responsibilities**. Reporting does not launch an investigation but rather allows us to provide resources and options, such as advocacy services. Riverview Center serves as our primary provider of **advocacy services** for survivors of sexual assault and has an on-campus presence.

For those looking for sexual assault **prevention activities**, including classroom speakers and presentations for student organizations, please call OCEM at 3.2846, or email <mailto:equity@uni.edu> and we will be glad to make arrangements for you.

Our online educational program related to this policy is available at training.uni.edu. Sign in with your CAT ID and passphrase to view the specific training program(s) assigned to you. It is recommended that you complete the online training or attend an OCEM-sponsored training at least once every other year. You will receive an email to alert you of assigned programs.

Non-discrimination in Employment or Education:

Content in this class has the potential to be disturbing to some individuals based on life experiences. If you ever feel the need to step out of the classroom or decline participation in an activity, please request an alternative learning experience.

UNI Policy 13.02 Discrimination, Harassment, and Sexual Misconduct states: "The University is committed to providing a workplace and educational environment, as well as other benefits, programs, and activities, that are free from discrimination and harassment based on a protected class, as well as retaliation."

Policy 13.02 outlines prohibited conduct and reporting processes. All University employees who are aware of or witness discrimination, harassment, sexual

misconduct, or retaliation are required to promptly report to the Title IX Officer or Title IX Deputy Coordinator.

If you or someone you know has been harassed or assaulted, you can find the appropriate resources at safety.uni.edu and equity.uni.edu. Resources that provide free, confidential counseling are also detailed at safety.uni.edu.

For additional information, contact the Office of Compliance and Equity Management, 117 Gilchrist Hall, 273-2846, equity@uni.edu.

Equal Opportunity and Non-Discrimination Statement:

The United States Department of Education's Office for Civil Rights (OCR) requires that a notice of nondiscrimination be prominently displayed in any **publications used in connection with the recruitment** of students or employees. Please note that this applies to electronic formats as well. Refer to the policy to view the University's approved statement. [Equal Opportunity and Non-Discrimination Statement](https://policies.uni.edu/1303) webpage (<https://policies.uni.edu/1303>).

Accommodations of Disabilities Policy:

No qualified individual with a disability shall, by reason of such disability, be excluded from participation in or be denied the benefits of the services, programs, or activities of the University, or be subjected to unlawful discrimination by the University. This policy applies to all aspects of campus activities including employment, education, student programming, and services provided to the community at large. [Accommodations of Disabilities Policy](https://policies.uni.edu/1315) webpage (<https://policies.uni.edu/1315>).

Student Accessibility Services:

The University of Northern Iowa (UNI) complies with the Americans with Disabilities Act Amendments Act of 2008 (ADAAA), Section 504 of the Rehabilitation Act of 1973, the Fair Housing Act, and other applicable federal and state laws and regulations that prohibit discrimination on the basis of disability. Students with disabilities experiencing a barrier to access should connect with Student Accessibility Services (SAS) to request accommodations. SAS views disabilities as an integral part of the rich diversity at UNI and works collaboratively with students, faculty, and staff to create an accessible educational environment for students. UNI faculty are not obligated to provide accommodations for students with disabilities without proper notification from SAS and the student. Students may initiate the accommodation process at any time. However, accommodations are not retroactive, and the process of getting connected takes time. Therefore, SAS staff always recommends that students initiate the process as soon as possible rather than wait for academic and social-emotional responsibilities to become overly stressful and/or overwhelming. For more information about the accommodation process, please contact SAS at

(319) 273-2677 Relay 711, accessibilityservices@uni.edu, or GIL 118. Additional information is also available at sas.uni.edu. ([https://sas.uni.edu/](https://sas.uni.edu)).

Affirmative Action Policy:

The University is committed to a policy of equal opportunity in employment, retention, and advancement of employees without regard to age, color, creed, disability, gender identity, national origin, race, religion, sex, sexual orientation, veteran status, or any other basis protected by federal and/or state law, except in rare instances where sex may be a bona fide occupational requirement, and to a policy of affirmative action for protected classes. Affirmative action entails special efforts by the University community to recruit and hire protected class members throughout the University, proportionate to their availability in the relative labor market. These policies apply to all positions in the University. [Affirmative Action](https://policies.uni.edu/1301) webpage (<https://policies.uni.edu/1301>).

Office of Compliance and Equity Management:

The University of Northern Iowa does not discriminate in employment or education. Visit [13.03 Equal Opportunity & Non-Discrimination Statement](https://policies.uni.edu/1303) for additional information. (<https://policies.uni.edu/1303>).

Diversity and Inclusion Statement:

The University of Northern Iowa advances work in diversity, equity, and inclusion through investigating our own biases and shortcomings, as well as through celebrating black, indigenous, and people of culture. We seek to create a movement that embraces culturally sustaining pedagogies, curricula, initiatives, and practices. As defined by [Django Paris and H. Samy Alim](https://tinyurl.com/4cu4shtj) (<https://tinyurl.com/4cu4shtj>), a culturally sustaining pedagogy (CSP) "has as its explicit goal supporting multilingualism and multiculturalism in practice and perspective for students and teachers. CSP seeks to perpetuate and foster linguistic, literate, and cultural pluralism as part of the democratic project of schooling and as a needed response to demographic and social change."

The Learning Center @ Rod Library:

The Learning Center @ Rod Library provides free tutoring for a variety of different areas (i.e. writing, math, science, business, Spanish, college reading, and learning strategies). The Learning Center @ Rod Library is open for walk-in assistance Monday-Thursday 10am-10pm and is free of charge for all UNI students. If you are unavailable during normal tutoring hours, online tutoring is also available through Smarthinking. You will need your CATID and passphrase to gain access. Access the [Smarthinking platform](https://tlc.uni.edu/online) (<https://tlc.uni.edu/online>). For more information, go to [The Learning Center](https://tlc.uni.edu) website (<https://tlc.uni.edu>), email TheLearningCenter@uni.edu, call 319-273-6023, or visit the TLC desk located on the main floor of Rod Library.

Course Communication and Technology

Online Component:

This course is completely online utilizing Blackboard Ultra for instruction, materials, submissions, and communication. This online component can be accessed through the [UNI eLearning Suite](http://elearning.uni.edu/) (<http://elearning.uni.edu/>)

All of the handouts and information for this course will be available in Blackboard Ultra. Students are advised to check the website and their email for communication. Students are responsible for learning how to use Blackboard Ultra for submission of assignments, taking quizzes and exams, and any other graded assessments. Blackboard Ultra tutorials are also available:

- [Blackboard Learn Help for Students Ultra Course View](https://help.blackboard.com/Learn/Student/Ultra) website (<https://help.blackboard.com/Learn/Student/Ultra>)

Communication with Instructor:

I will primarily communicate with students via email (mark.fienup@uni.edu), but I am available to meet via appointments arranged through email. Meeting can be via:

- Zoom at <https://uni.zoom.us/j/3192735918> with Zoom password: UNI
- telephone at 1-319-273-5918, or
- face-to-face in my UNI campus office located in CEEE hall room 010C

Generally, it will take me less than 24 hours to respond to emails, except on the weekends where it may take up to 48 hours. I will provide grading feedback on laboratory assignments, programming projects, or exam submissions online through Blackboard Learn within a couple days of their submission.

Attendance, Late Work, and Makeup Work:

See UNI [Policy on Class Attendance and Makeup Work](https://policies.uni.edu/306) (<https://policies.uni.edu/306>)

Online Netiquette and Classroom Civility:

Because this is a fully online class, you will mostly be communicating with me and through email and other online communication. It is important to think of this communication as a formal dialogue. Be sure that in all communication you create an appropriate subject line, identify yourself, and craft professionally worded content. For example, shorthand messages from your cell phone are generally inappropriate. Always submit assignments through Blackboard and never via email.

Finally, read [Albion's Core Netiquette Rules](http://albion.com/netiquette/corerules.html) and always remember to address your professor and other students in a respectful manner. (<http://albion.com/netiquette/corerules.html>)

Best Practices for Taking Online Exams and Quizzes in Blackboard Ultra

1. Firefox or Chrome are recommended browsers for taking quizzes and exams.
2. **IMPORTANT:** The mobile app on your phone is NOT recommended for taking quizzes or exams. Students can experience errors in their answers and can be unable to submit tests.
3. If your quiz or exam is timed, plan to take the quiz or exam in a single sitting.
4. Please use a reliable (high-speed) internet connection. An ethernet connection is preferable to a wi-fi connection.
5. If you are enrolled in a course that uses a proctored exam, separate instructions will be provided by your instructor.

- For instructors using Blackboard Learn Ultra Course View, please see [Blackboard Help Tips for taking a test \(https://youtu.be/qztOnai9GZM\)](https://youtu.be/qztOnai9GZM)

If you experience technical difficulties when taking a test or quiz, immediately notify Online & Distance Education at 319-273-7740 or by emailing the name of the course, the instructor's name, and a description of the problem to: cesp-consult@uni.edu.

Technology Requirements and Digital Literacy:

Course Specific Software Tools are Free:

- You will need to download and install the free Python development package (latest version 3.x) from the Python Web-site: <http://www.python.org/>.

General Technology Literacy:

The following information has been provided to assist you in preparing to use technology successfully in this course. You are required to have access to and the ability to use:

- Blackboard Ultra
- UNI Gmail account
- Microsoft Office (UNI offers options for [Installing Microsoft Office on a Personal Computer](https://servicehub.uni.edu/docs/display/SH/Installing+Microsoft+Office+on+a+Personal+Computer) for free for current UNI students, faculty, and staff, using their CatID)
(<https://servicehub.uni.edu/docs/display/SH/Installing+Microsoft+Office+on+a+Personal+Computer>)
- Reliable (High-speed) internet connection. An ethernet connection is preferable to a wi-fi connection
- Firefox and Chrome browsers are recommended.

The following may be required for your course:

- Zoom
- YouTube, setting videos to “unlisted” in order to share links
- Panopto (Viewing and/or student submission)
- Google Drive and Google Apps (these are free with your UNI email account)

- Reliable equipment for video recording and storing recorded videos

Blackboard Ultra Support for Online Courses:

If you experience any technical problems with Blackboard or any tools used in Blackboard, please contact **Online & Distance Education** at 319-273-7740 (local), 800-772-1746 (toll-free) or cesp-consult@uni.edu. Course support is available Monday - Friday from 8:00 a.m. - 4:30 p.m.

Please note: When you contact the Division of Online Education and Individual Studies, **please provide the following so we may assist you with more speed and accuracy:**

1. name of your instructor
2. course name and number (i.e. MATH 1110)
3. section number.
4. You may also include the name of the assignment or test for which you need assistance.

For assistance with IBM SPSS or Citrix, please visit [Service Hub](https://servicehub.uni.edu/?format=portal) to request technology help or services and type in "SPSS" or "Citrix"
(<https://servicehub.uni.edu/?format=portal>)