

University of North Carolina at Charlotte
College of Health and Human Services (CHHS) & School of Data Science (SDS)
Department of Public Health Sciences (PHS)
Fall 2022

Course Number HCIP 5376

Course Title Introduction to Programming for Health Informatics

Course Credit 3 Graduate Credits

Pre-requisites None

Course Day/Time/ Location/ Instructional Method Asynchronous Online Internet

Faculty

Laura H. Gunn, PhD (Pronouns: she/her/herself)
Associate Professor, Public Health Sciences
Director, CHHS Biostatistics Core
Affiliate Faculty, School of Data Science
E-mail: laura.gunn@uncc.edu

Virtual Office Hours for Dr. Laura Gunn

Fridays 2-4 pm (starting in Week 2 on Friday, September 2nd)
Week 1 office hours: Thursday, August 25th 2-4 pm
And by appointment
A Zoom link is provided in Canvas for accessing virtual office hours.

I am always happy to schedule a mutually convenient time outside of office hours if you cannot attend these days/times. I am also happy to address questions you may have via email.

I encourage you to send me (or the Instructional Assistant, IA; see details below) an email ahead of office hours particularly for any programming/coding/de-bugging questions you may have along with a detailed description of what you have tried and why it does not work (e.g., error messages you may be receiving, etc.). This will give me and/or the IA time to review and test your code to help you de-bug it. With the larger graduate class size that we have, there could be instances where multiple students are in the virtual office hours waiting room, so sending emails ahead of office hours will hopefully give me and/or the IA a chance to more efficiently assist you so as to hopefully mitigate any potentially longer waiting room times for you and/or your peers.

Instructional Assistant (IA)

Owen Smith

osmith19@uncc.edu

Virtual Office Hours for IA Owen Smith

Tuesdays 1-3 pm & Wednesdays 1-3 pm

And by appointment

A Zoom link is provided in Canvas for accessing Owen's virtual office hours.

Catalog Course Description (taken directly from the UNC Charlotte graduate catalog)

An introduction to the fundamentals of computer programming, the course provides students essential programming knowledge and skills to perform commonly encountered computational tasks in the field of health informatics. Prepares students for advanced programming and data science courses.

Course Objectives/Student Learning Outcomes (SLOs)

After successfully completing this course, students should be able to:

1. Read code such as that demonstrated using R.
2. Write code, in a commonly-used programming language in the public health and healthcare disciplines such as R, that can create standard concepts including variables, if statements, loops, and functions.
3. Interpret and modify code written by others to solve public health and healthcare questions.
4. Implement functions and call built-in functions, including those from external libraries.
5. Implement methods for reading, handling, and writing data through programming, including user-input data.
6. Design programming solutions to address public health and healthcare questions, including stratification by various sociodemographic factors that may demonstrate health disparities, using analytics and visualizations.

Required Materials & Suggested Texts

I have developed the course materials (slides, instructional videos, programming demonstrations of exercises and real-world public health and healthcare problems, etc.) to be all-inclusive and freely accessible to students enrolled in this class so that no text is formally required. However, for those who would like to supplement these materials with a suggested text, then the following text could serve as a supplemental reference. You could use this text to dive more in-depth for some of the covered topics in the course, as well as to learn about other topics beyond the scope of this course. It is a reader-friendly and relatively recent introductory book in R that combines programming, analytics, and visualization in R:

- Davies, T.M. *The Book of R: A First Course in Programming and Statistics*. No Starch Press; 2016. <https://www.amazon.com/Book-First-Course-Programming-Statistics/dp/1593276516>

Additionally, the following supplemental resources are freely available:

- The R Foundation. The R Project for Statistical Computing. Available at: <https://www.r-project.org>. Accessed: 13 August 2022.
Note: This reference also contains additional helpful resources/text recommendations.
- Lane, D. Online Statistics Education: An Interactive Multimedia Course of Study. Available at: <http://onlinestatbook.com>. Accessed: 13 August 2022.
Note: This reference provides additional statistical explanations and examples.
- Boston University School of Public Health. Boston University School of Public Health Writing Guide. Available at: <https://populationhealthexchange.org/teph-public-health-writing-guide>. Accessed: 13 August 2022.
Note: Although we will not be conducting a lot of writing in this course, this reference is a very useful resource for many different forms of writing – from email communications to reports and manuscripts. While the portions pertaining to writing topics such as email communications may be helpful for this online course, you may wish to use this resource for other classes, projects, etc. now and/or in the future.

Required Equipment

1. Laptop/personal computer (PC)
2. Access to internet with secure connection and virus protection
3. R programming language (freely available download – see Canvas for details)
4. Microsoft Office (all assignments must be turned in as a .doc or .docx)

Course Overview

This course serves as a required course in the: Master of Public Health (MPH) in Population Health Analytics; Master of Science in Health Informatics and Analytics (MS-HIAN); and Graduate Certificate in Health Informatics and Analytics programs. It is designed to provide a foundation in programming and analytics/statistics for subsequent courses taken throughout these programs involving informatics and analytics. The course also prepares you for some of the programming you will need within the professional workforce.

Course Conduct

This asynchronous online course is designed as a compilation of modules in which each module covers multiple topics. The course topic schedule/outline communicates the

expected course modules, topics, and assessments along with their scheduled timelines/due dates. In the event that timelines and/or assessment due dates need to be modified, such changes will be communicated via a Canvas announcement and updated in the Canvas assignment-specific link.

Modules will be posted no later than the weekend before the module start date (and, as we progress throughout the semester, I anticipate that modules will be posted even further in advance) so that you will have **at least** a full week to work within each module. Modules are self-paced so that you can complete each module within the assigned week's period.

Graduate Grading Scale

This course uses the standard graduate decile grading system:

A = 90-100%

B = 80-89%

C = 70-79%

U = <70%.

Evaluation Methods/Assessments

Course assessments will include the following:

- Assignments: 45% (3 assignments at 15% each)
- Quizzes: 30% (4 quizzes at 7.5% each)
- Final exam: 25%

Student Learning Outcomes (SLOs) Covered by Assessment						
	SLO1	SLO2	SLO3	SLO4	SLO5	SLO6
Quiz 1	X	X				
Assignment 1	X	X				X
Quiz 2	X	X	X	X	X	
Assignment 2	X	X	X	X	X	X
Quiz 3	X	X	X	X	X	
Assignment 3	X	X	X	X	X	X
Quiz 4	X	X	X	X	X	
Final Exam	X	X	X	X	X	X

Programming requires students to learn concepts cumulatively, building on prior concepts covered in the materials. Thus, you will be expected to demonstrate the cumulative knowledge and skills gained throughout this course via the different evaluative assessments of your work.

- While content covered in assignments and the final exam will be more cumulative in nature to reflect this, quizzes will emphasize content within the modules covered since the previous quiz.
- All evaluative assessments of your work are due after the corresponding content has been covered based on the schedule in the table further below.

When the evaluative assessment requires you to produce code, it is your responsibility to ensure that the code is spelled correctly in the submission (including lowercase versus uppercase). If the code does not work or does not produce the correct results as submitted, then points will be deducted. For example, if the code you provide as part of your work includes the command “Print”, even if it is the first word and it would be grammatically correct to use uppercase, it needs to be written as “print” in order to correctly function. Thus, points would be deducted from this assignment in this example if “Print” is submitted instead of “print”. **Please also refer to assessment instructions and rubrics provided in the course Canvas site.**

Individual & Team Work

- Quizzes and the final exam must be completed individually.
- However, you may work in teams (and are encouraged to do so), if you would like, on the three assignments.
- If you choose to work in teams on assignments, then each individual must submit their own assignment, as you will be evaluated on the individual assignment that you submit.
- If you work with others on assignments, then please include the names of those with whom you worked for each assignment.

This programming course is demonstrated using R programming language, which is widely used within the public health/healthcare domain and, for many, is the language of choice for health data analytics. Therefore, submitted coursework will be expected in R and using the concepts learned throughout this course. While there are more efficient ways to code in R using tools specifically developed in R, it is important that you master the concepts learned in this course using the code demonstrated throughout the modules, which were selected to align with other programming languages (e.g., Python) and to help you transition seamlessly from one programming language to another.

While you may be able to go quickly through the slides within each module, it is important that you master the skills through practicing coding and replicating all demonstrations provided throughout the course materials, rather than simply having a theoretical understanding of concepts. Most programming expertise is developed through practice (as well as some trial and error!). I encourage you to dedicate multiple hours a week creating your own variations of the sample code provided in each module, testing your own mastery of concepts through increasingly complex problems, and exploring additional materials, which I provide as supplementary references above and throughout the modules, that you may find useful based on your professional goals. Note that this course focuses on breadth of knowledge to succinctly cover most key concepts within programming, including programming for public health and healthcare analytics. I encourage you to explore particular topics of interest to you more in depth.

Due Dates

Scheduled due dates for course assessments are provided in the course topic and schedule table below and will also be posted in the Canvas course site. Please plan your

time accordingly. On average, graduate courses are expected to take about 9 hours per week of your time for reading materials, practicing programming/coding, completing assignments, etc. Depending on your learning pace, as well as experience and/or comfort with programming and/or analytics/statistics, you may need more or less time than expected.

Late Policy for Evaluative Assessments

My 'standard' late policy is the following (**unless you have contacted me ahead of the due time informing me of any delays due to understandable circumstances and which I have approved an extension**):

- Any late evaluative assessment will incur a 10-point deduction for each day it is late, until I post grades for that assessment.
- If your work is submitted late on the actual due date (i.e., after the due time – e.g., submitted at 6 pm when it was due at 5 pm), then there will be a 5-point deduction to the grade.
- I will not accept late assessments after I post grades except for approved extenuating circumstances communicated with me.
- ***With this said, please reach out to me in advance of the due date/time if you are unable to meet it, and we can discuss whether a reasonable extension is appropriate.***

Please contact me as soon as possible if you do not think you will be able to submit your work on time due to extenuating circumstances. I realize that there can always be unknown life circumstances that arise that may shift your schedules, time commitments, etc. And, we are still in the midst of a global pandemic that is also still affecting our daily way of life. Therefore, please communicate with me in advance of the due date/time if you think you may need extra time to complete an assessment. I will do my best to accommodate extension requests as-needed due to extenuating/special circumstances or any disruptions that may result from the continued pandemic. Note: For personal events (e.g., attending a wedding, taking a 3-day weekend trip), you will need to submit your work ahead of the due date if you will be away during the due date, as I will not approve extensions for these kinds of events. As mentioned above, you will have at least a week to complete each module, and as we progress throughout the semester, I anticipate modules will be available much earlier than this.

Course Schedule

A preliminary schedule (by week) of modules, topics, and assessment due dates is provided below. Please also refer to the UNC Charlotte Academic Calendar (<https://registrar.charlotte.edu/printable-calendar>) for other important dates (e.g., last day to drop/add, last day to withdraw, etc.) throughout the semester.

Note 1: Public health and healthcare applications/examples are provided within each module to demonstrate programming concepts.

Note 2: There may be modifications to this schedule. If this occurs, I will communicate any such modifications via Canvas announcements.

Week	Dates	Module & Topics	Assignments <u>Due</u>
1	8/22-8/26	Module 1: Introduction to HCIP 5376 Communications with instructor & TA Installing R/RStudio and resources in canvas Course description Coursework description: Preparing for this course	Self-Introduction Due by 8/28, 5 pm
2	8/29-9/2	Module 2: Introduction to programming Programming versus point-and-click Advantages of programming Relevance in the job market Starting R Script and command windows First lines of code Help menu General syntax Comments and separators	
3	9/5-9/9	September 5 (Labor Day) Module 3: Variables Variables What is a variable? Variable name limitations Some common variable types Mathematical operations Introduction to mathematical operations Numbers versus numerical strings Some common mathematical operators Comparisons and logical variables Other mathematical operators Coercion Variable vectors What is a vector? Initializing vectors Sequences and repetitions Vector operations Introducing 'Not available' content Vector operations with logical statements Matrices, arrays, and higher dimensional data structures Other variable types Data frames Revisiting factor variables Build your own data type: Classes Accessing content in user-defined classes	Quiz 1 (7.5%) [Covers Mods. 1-3] Due by 9/11, 5pm
4	9/12-9/16	Module 4: Functions and libraries Functions Writing your own functions Void functions Nested functions and modular programming Methods and classes What are methods? How do methods link to class types? Libraries	Assignment 1 (15%) [Covers Mods. 1-4] Due by 9/21, 5pm

		<ul style="list-style-type: none"> What is a library? Installing and accessing external libraries A practical public health example 	
5	9/19-9/23	Module 5: Logical statements and loops <ul style="list-style-type: none"> Logical statements <ul style="list-style-type: none"> If-then-else statements Nested logical statements Loops <ul style="list-style-type: none"> For loops Nested for loops While loops Infinite loops Break statements 	
6	9/26-9/30	Module 6: File input/output <ul style="list-style-type: none"> File handling <ul style="list-style-type: none"> Inputting/reading external data Exporting/writing data and outcomes Handling different file formats 	Quiz 2 (7.5%) [Covers Mods. 4-6] Due by 10/2, 5pm
7	10/3-10/7	Module 7: Programming in data analytics <ul style="list-style-type: none"> Introduction to descriptive statistics <ul style="list-style-type: none"> Describing your data through summary statistics Adjusting statistical analyses to your audience Absolute versus relative risks example Introduction to inferential statistics <ul style="list-style-type: none"> Hypothesis testing Simple linear regression Simple logistic regression Adjustments in regressions 	
Fall Break	10/10-10/11	Fall break	
8 & 9	10/12-10/21	Module 8: Data visualization <ul style="list-style-type: none"> 1-dimensional visualizations <ul style="list-style-type: none"> Histograms Density plots Pie charts & bar plots 2-dimensional visualizations <ul style="list-style-type: none"> Scatterplots Boxplots 3-dimensional visualizations <ul style="list-style-type: none"> Surface plots Heatmaps Inputs for enhanced visualizations <ul style="list-style-type: none"> Colors Legends Advanced libraries: ggplot <ul style="list-style-type: none"> Introduction to ggplot syntax Comparison with base library visualizations Other visualization tools <ul style="list-style-type: none"> Comprehensive visualization library Introduction to dynamic and interactive visualizations 	Assignment 2 (15%) [Covers Mods. 1-6] Due by 10/12, 5pm
10	10/24-10/28	Module 9: Imputation and optimization <ul style="list-style-type: none"> Imputation <ul style="list-style-type: none"> Missing data Missingness completely at random Single versus multiple imputation Complete case analysis 	Quiz 3 (7.5%) [Covers Mods. 7-9] Due by 10/30, 5pm

		<ul style="list-style-type: none"> Imputation and pooling Optimization <ul style="list-style-type: none"> Univariate optimization Multivariate optimization 	
11	10/31-11/4	Module 10: Object-oriented programming (OOP) <ul style="list-style-type: none"> Object definition <ul style="list-style-type: none"> Standard object types Creating your own object type Objects, methods, and functions Concepts around OOP <ul style="list-style-type: none"> Encapsulation Inheritance Polymorphism 	Assignment 3 (15%) [Covers Mods. 1-9] Due by 11/6, 5pm
12	11/7-11/11	Module 11: Debugging and testing <ul style="list-style-type: none"> Debugging <ul style="list-style-type: none"> Mistyping Calculation errors Warnings versus errors Try-catch statements Modularity and debugging Other tools: Browser function Other tools: Breakpoints and tracebacks Testing <ul style="list-style-type: none"> Why do we test? Libraries for testing 	
13-15	11/14-11/30	Module 12: Introduction to advanced topics <ul style="list-style-type: none"> Tidyverse <ul style="list-style-type: none"> What is tidyverse? Practical applications of tidyverse Advanced uses of ggplot Rshiny apps and dashboards APIs and data retrieval from external sources Textual data processing <ul style="list-style-type: none"> Corpus Tokens and stems Lemmatization Lowercasing and stop words Textual data visualization <ul style="list-style-type: none"> Document term matrix Word clouds Other concepts in text analysis <ul style="list-style-type: none"> Regular expressions (regex) Lists & dictionaries Pairs, triples, & tuples 	
14	11/23-11/25	Thanksgiving break	
15	11/28-11/30	Module 12 (Continued)	Quiz 4 (7.5%) [Covers Mods. 10-12] Due by 11/30, 5pm
15-16	12/1-12/7	Review <ul style="list-style-type: none"> Review of materials Open Q&A Sessions (Schedule TBD) & Discussion Posts 	
Final Exam	12/9-12/11	Final comprehensive exam	Final exam (25%) [Covers Mods. 1-12] Due by 12/11, 5pm

Relevant University, College, & Course Policies

Code of Student Responsibility (taken directly from the introductory statement on the UNC Charlotte brochure about the Code of Student Responsibility)

The UNC Charlotte Code of Student Responsibility (the Code) sets forth certain rights and responsibilities in matters of student discipline. The Code defines these responsibilities and guarantees you certain rights that ensure your protection from unjust imposition of disciplinary penalties. You should familiarize yourself with the provisions and procedures of the Code. The entire Code may be found at: <https://legal.charlotte.edu/policies/up-406>.

Academic Integrity

All students are required to read and abide by the Code of Student Academic Integrity. Violations of the Code of Student Academic Integrity, including plagiarism, will result in disciplinary action as provided in the Code. Students are expected to submit their own work, either as individuals or contributors to a team assignment. Definitions and examples of plagiarism and other violations are set forth in the Code. The Code is available from the Dean of Students Office or online at: <https://legal.charlotte.edu/policies/up-407> (or see the following for the pdf version: https://legal.charlotte.edu/sites/legal.charlotte.edu/files/media/2021-08-31_UP-407-CodeOfStudentAcademicIntegrity.pdf).

Faculty may ask students to produce identification at examinations and may require students to demonstrate that graded assignments completed outside of class are their own work.

Plagiarism Detection

As a condition of taking this course, any assignments that the instructor in good faith suspects are in whole or in part plagiarized may be subject to submission for textual similarity review to SimCheck or another service for the detection of plagiarism. Such works will be included as source documents in the SimCheck or other plagiarism detection service reference database solely for the purpose of detecting plagiarism of such materials. No student assignments will be submitted to SimCheck or other plagiarism detection service without a student's written consent and permission. If a student does not provide such written consent and permission, the instructor may: (i) require a short reflection paper on research methodology; (ii) require a draft bibliography prior to submission of the assignment; or (iii) require the cover page and first cited page of each reference source to be photocopied and submitted with the assignment.

Note about plagiarism: Plagiarism can refer to not citing content from other publications as well as not citing them appropriately. For example, you cannot copy and paste a sentence from another publication and then provide the citation unless you place that sentence in quotations or italicize it and specify that it is taken directly from the identified citation, etc. However, it's generally best practice to *paraphrase* content from other

references rather than using word-for-word excerpts in quotations. If you have any questions about citations and/or plagiarism, please do not hesitate to reach out and ask me.

Title IX Reporting Obligations Regarding Incidents of Sexual Harassment, Sexual Assault, Dating Violence, Domestic Violence, or Stalking

UNC Charlotte is committed to providing an environment free of all forms of discrimination and sexual harassment, including sexual assault, domestic violence, dating violence, and stalking. If you (or someone you know) has experienced or experiences any of these incidents, know that you are not alone. UNC Charlotte has staff members trained to support you in navigating campus life, accessing health and counseling services, providing academic and housing accommodations, helping with legal protective orders, and more.

Please be aware that many UNC Charlotte employees, including all faculty members, are considered responsible employees who are required to relay any information or reports of sexual misconduct they receive to the Title IX Coordinator. **This means that if you tell me about a situation involving sexual harassment, sexual assault, dating violence, domestic violence, or stalking, I must report the information to the Title IX Coordinator.** Although I have to report the situation, you will still have options about how your case will be handled, including whether or not you wish to pursue a formal complaint. Our goal is to make sure you are aware of the range of options available to you and have access to the resources you need.

If you wish to speak to someone confidentially, you can contact any of the following on-campus resources, who are not required to report the incident to the Title IX Coordinator: (1) University Counseling Center (<https://counselingcenter.charlotte.edu>, 7-0311); (2) Student Health Center (<https://studenthealth.charlotte.edu>, 7-7400); or (3) Center for Wellness Promotion (<https://wellness.charlotte.edu>, 7-7407). Additional information about your options is also available at <https://civilrights.charlotte.edu> under the “Students” tab.

Please also see: [Clery Center/Campus SaVE](#)

All students are required to abide by the UNC Charlotte Sexual Harassment Policy (<https://legal.charlotte.edu/policies/up-502>) and the policy on Responsible Use of University Computing and Electronic Communication Resources (<https://oneit.charlotte.edu/iso/standard-responsible-use>). Sexual harassment, as defined in the UNC Charlotte Sexual Harassment Policy, is prohibited, including when carried out through computers or other electronic communications systems, including course-based chat rooms or message boards.

Course Credit Workload

This 3-credit graduate course requires 3 hours of ‘class or direct faculty instruction’ and approximately 6 hours of ‘out-of-class’ student work each week for approximately 15

weeks. 'Out-of-class' work may include but is not limited to: reading course materials; practicing programming/coding exercises; completing assignments; etc. Therefore, on average, graduate courses are expected to take about 9 hours per week of your time. Depending on your learning pace, as well as experience and/or comfort with programming and/or analytics/statistics, some students may need more or less time than expected.

Disability Accommodations (Taken directly from UNC Charlotte's Office of Disability Services)

UNC Charlotte is committed to access to education. If you have a disability and need academic accommodations, please send me your accommodation letter as early as possible. You are encouraged to meet with me to discuss the accommodations outlined in your letter. For more information on accommodations, contact the Office of Disability Services at 704-687-0040, disability@uncc.edu, or Fretwell 230 (on campus).

Please also visit their website: <https://ds.charlotte.edu>

Religious Accommodation

It is the obligation of students to provide faculty with reasonable notice of the dates of religious observances on which they will be absent by submitting a Request for Accommodation for Religious Observance form (<https://legal.uncc.edu/sites/legal.charlotte.edu/files/media/UP409-ReligiousAccommodationForStudents.pdf>) to their instructor prior to the census date for enrollment for a given semester (<http://legal.charlotte.edu/policies/up-409>). The census date for each semester (typically the tenth day of instruction) can be found in UNC Charlotte's Academic Calendar (<https://registrar.charlotte.edu/printable-calendar>).

Diversity, Equity, & Inclusion

UNC Charlotte strives to create an academic climate in which the dignity of all individuals is respected and maintained. Therefore, we celebrate diversity that includes, but is not limited to ability/disability, age, culture, ethnicity, gender, language, race, religion, sexual orientation, and socio-economic status.

The College of Health & Human Services (CHHS) values human diversity in all its richly complex and multi-faceted forms, whether expressed through, but not limited to, race and ethnicity, culture, political and social views, religious and spiritual beliefs, language and geographic characteristics, gender, gender identities and sexual orientations, learning and physical abilities, age, and social or economic classes. It is the intent of CHHS that students from all diverse backgrounds and perspectives be well served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength, and benefit. For more information on diversity and inclusion please visit diversity.charlotte.edu.

Names & Pronouns

Many individuals have and/or use preferred names in daily life that are different from their legal name. In this class, we seek to refer to individuals by their preferred names.

Pronouns can also be a way to affirm someone's gender identity: pronouns are a public way in which people are referred to in place of their name (e.g., he, she, they, etc.). In this class, you are invited (if you would like) to share your preferred name and/or pronouns, and we seek to refer to individuals using their preferred names and pronouns that they share. Please refer to the University's Office of Identity, Equity, & Engagement (<https://identity.charlotte.edu>) for more details.

UNC Charlotte's Official Notice of Nondiscrimination (taken directly from the Office of Legal Affairs)

UNC Charlotte seeks to promote a fair, humane and respectful environment for its faculty, staff, students, contractors and visitors. The University prohibits discrimination and harassment on the basis of race, color, religion, age, national origin, physical or mental disability, political affiliation, veteran status, genetic information, sex, sexual orientation, gender expression, or gender identity in its programs and activities, and in its employment and educational decisions.

For more information, please visit: <https://legal.charlotte.edu/policies/up-501>

College of Health & Human Services Laptop Policy

ALL STUDENTS, graduate and undergraduate, taking CHHS courses, are required to possess a laptop with webcam and microphone. Our courses may require a laptop or other compliant device for in-class assignments. Please note that Chromebooks won't satisfy this policy. NinerTech offers compliant models at student discounted pricing that may represent a savings over regular commercial purchase.

Students may avail themselves of loaner equipment such as that provided via Atkins Library, but should not rely on that option for all of their computing needs. This requirement extends to non-majors, pre-majors, and postbac students enrolling in any of our CHHS courses and to students enrolling in courses delivered by CHHS faculty under a designation or cross-list not associated with one of our programs.

Wellness Statement/Counseling Center

Graduate school, and life experiences outside of graduate studies, can be stressful at times. It is common for students to experience challenges that may interfere with academic success such as academic stress, sleep problems, juggling responsibilities, life events, relationship concerns, or feelings of anxiety, hopelessness, or depression. If you or a friend is struggling, we strongly encourage you to seek support. Helpful, effective resources are available on campus at no additional cost. You may find it helpful to chat with someone at the University's Center for Counseling and Psychological Services (CAPS) (<https://caps.charlotte.edu>), which is free for students. CAPS is staffed with qualified professional counselors who are trained to support and guide students through difficult transitions, experiences, and feelings. Please do not hesitate to contact them any time:

- Phone Number: 704-687-0311 (After-hours crisis support is also available through this phone number.)

- Location: The office is located in the Christine F. Price Center for Counseling & Psychological Services (CAPS) – behind the Student Health Center (corner of Mary Alexander Rd. & Cameron Blvd.)
- Office Hours: Monday - Friday 8 am - 5 pm, with evening hours available by appointment
- For emergencies after hours, you can call Campus Police & Public Safety (704-687-2200).

If you are struggling academically with this class, please visit me during office hours or contact me by email at laura.gunn@uncc.edu.

Meet with your academic advisor if you are struggling academically in multiple classes, unsure whether you are making the most of your time at UNC Charlotte, or unsure what academic resources are available at UNC Charlotte.

Prohibition of Recordings (taken directly from the Office of Legal Affairs)

Electronic video, image capture, and/or audio recording is not permitted during class, whether conducted in person or online, unless the student obtains permission from the instructor. If permission is granted, any distribution of the recording is prohibited. Students with specific electronic recording accommodations authorized by the Office of Disability Services do not require instructor permission; however, the instructor must be notified of any such accommodation prior to recording. Any distribution of such recordings is prohibited.

All students are prohibited from copying and sharing old exams, course notes, tests, slides, assignments, or online content on any other website, device, student groups, etc., as this infringes on the professor's rights and is a copyright infringement. Sharing any content without explicit permission of the instructor will result in an Academic Integrity Violation.

Last Date of Attendance

The United States Department of Education requires UNC Charlotte's Office of Financial Aid to determine if a student who receives financial aid and fails to earn a passing grade in a course has actually attended and/or completed the course. Because this is an online course and there will not be any attendance to take for this course, the date I will report as your last date of attendance will be the latest of the following:

- The date you last submitted an assignment;
- The date you last participated online via Canvas (e.g., via discussion/activity); or
- The date you last initiated contact with me to ask a question about the course or course content.

If you earn a U grade, your last date of attendance will be reported to the United States Department of Education. This may require you to pay back any financial aid funds received for this course. For additional information, see Last Date of Attendance FAQs (<https://registrar.charlotte.edu/gradingholds/last-date-attendance/last-date-attendance-faqs>) on the Registrar's website.

Withdrawal Policy

Students are expected to complete all courses for which they are registered at the close of the add/drop period. If you are concerned about your ability to succeed in this course, it is important to make an appointment to speak with me as soon as possible. The University policy on withdrawal allows students only 16 credit hours to withdraw from courses. It is important for you to understand the financial and academic consequences that may result from course withdrawal:

<https://provost.charlotte.edu/policies-procedures/academic-policies-and-procedures/withdrawal-and-cancellation-enrollment-policy>

Final Grade Appeal Policy

The university has a policy and procedure for student appeals of final course grades, which can be found at: <https://legal.charlotte.edu/policies/up-410>.

Additional Available University Resources

University Writing Resources Center

For those of you who may need or wish to seek assistance with improving your writing, I encourage you to visit the University Writing Resources Center (WRC) for free tutoring and assistance (they have both face-to-face and e-visits). To learn more, visit their website: <https://writing.charlotte.edu/writing-resources-center>.

Atkins Library

The Atkins library also has resources regarding programming/coding and statistics available to guide you throughout this course. To learn more, visit their website: <https://library.charlotte.edu>.

Safety and Security Information

UNC Charlotte's Department of Safety and Security offers the following safety tips:

- Ensure your cell phone number is in the Banner Self-Serve system (Emergency Text Phone Number box) to receive text message NinerAlerts. NinerAlerts are sent via a variety of methods when there is a threat to campus safety or a change in operating condition.
- For every NinerAlert that is issued, an action directive is also included in the body of the message. Action Directives can include run, hide, fight; seek shelter; or evacuate. Visit emergency.charlotte.edu for more information on what each directive means.
- Download the Livesafe app. This connects you to campus police via phone or text 24/7.

- 911 dialed from a mobile phone connects to CMPD and can slow down response.
- Alternatively, you can put the UNC Charlotte Police emergency number in your phone: 704-687-2200.
- Always be aware of your surroundings and know the quickest escape routes: exit doors, windows, etc.
- Safety and Security offers a variety of trainings to students. For more information, visit: <https://police.charlotte.edu/crime-prevention-safety>
- Remember: Personal pepper spray is allowed on campus. However, guns and knives are not.

Action Directives included in NinerAlerts:

Run-Hide-Fight is the action directive for an active assailant.

- **RUN:** If outside or in a building and it is safe to flee, run and leave the campus if possible.
- **HIDE:** If you are in a building and unsure of where the threat is, find the closest room in which to hide. Close, lock and/or barricade doors if they do not lock. Do not huddle in one location. Remain quiet.
- **FIGHT:** This is a last-resort option. Do not seek the assailant. If you come into direct contact with the individual, use any means necessary to defend yourself.

A **Seek Shelter** directive is normally issued during severe weather or hazardous material releases. If a Seek Shelter is ordered:

- Stay inside if you are indoors.
- If outside, quickly go to the nearest building.
- Once indoors, find a space in the building to shelter. Stay away from windows.
- In a tornado, go to the lowest floor of the building and find an interior room or hallway to shelter in. Stay away from windows.

An **Evacuation** can be for either a single building, area, or the entire campus. Further information and direction will be included in the NinerAlert.

Syllabus Revisions/Changes to Course Plan

The contents of this syllabus are as complete and accurate as possible at this time. However, there may be adjustments as needed (e.g., as a result of unanticipated pandemic-related issues, depending on progress we make toward our course goals and objectives, etc.). I will inform you via Canvas announcements of any changes as they may occur throughout the semester. However, it is your responsibility, as the student, to keep track of announced changes that have been made in order to successfully complete the requirements of the course.