

BINF 4900/5900 - Principals of Team Science

Syllabus Spring 2023



Instructor: Dr. Richard Allen White III

Office Hours: TH 5:15-6:15 pm EST or by appointment

Contact: rwhit101@uncc.edu

Website for the course: <https://github.com/raw-lab/BINF4900-5900>

CANVAS weblink: <https://uncc.instructure.com/courses/194223/>

Essential course details:

- *Credits:* 3 credit class
- *Meeting times:* T/TH 4:00-5:15
- *Office Hours:* TH 5:15-6:15 pm EST
- *Semester:* Spring - January 10th to May 12th, 2022
- *Location:* Main/Uptown Center Campus - Bioinformatics building 217
- *Style of instruction:* Hybrid - F2F & Online (Sync) Instructional Method

Course description

Introduction of appropriate project design, implementation, and management skills needed to function as a small team solving typical problems in Bioinformatics and Genomics. Students are given realistic problems and are required to develop specifications, deliverables, timelines, and costs. Under faculty supervision, the group

assigns roles, responsibilities, and deadlines to complete the project and then execute the project. At the end of the course, the group produces a written document with deliverables and makes a formal presentation.

Course expectations

Classroom expectation

Carefully read the syllabus; it is your complete guide of the expectations of the course. The policies and expectations are intended to create a productive learning environment for all students.

Syllabus changes

The standards and requirements outlined in this syllabus may be modified at any time by the course instructor. Notice of such changes will be announced in class email notice and changes to this syllabus posted on the course **CANVAS** and github website at (<https://github.com/raw-lab/BINF4900-5900>).

Course introduction

This course is designed to stimulate a 'start-up' software technology company environment. This course will teach you the mindset and skills required to work in a start-up and show you how to start your own. You will learn various skills, including logic, vision, conflict management, team evaluation, customer discovery, collaboration, funding research, and product development. BINF 4900-5900 will build on all the knowledge you have learned throughout your graduate career.

You will form teams of at least three members to build a product, service, or tool related to computation, bioinformatics, or genomics. Other disciplines are possible with approval by the instructor but must contain a computational component. You form your team (your quasi-company) as a for-profit or non-profit. You will independently develop a product, service, and tool, but the instructor must approve it. Your team will have a unique name, a unique Github page, an optional website, and a logo.

Team members will elect officers a CEO (Chief Executive Officer - the prominent leader of the team), CTO (Chief Technology/Technical Officer - leads all technology development), and CFO (Chief Financial Officer - leads all sales and outreach for the project). All team members are responsible for specifications, deliverables, timelines,

and work required to reach overall team goals. You and your team will have to work together, work beyond classroom times, and stay on task to reach goals.

Each team goes through three-panel rounds (pre, mid and final). These will be oral presentations. These panels will mimic a 'Shark Tank' business pitch evaluation. The pre-evaluation will be with your teammates and instructor only to pitch your company (e.g., team). This preliminary pitch (oral presentation 1) will happen the second week of classes in both a written (i.e., commonly called pre-read materials for your investors/grant panel) and oral presentation format (i.e., the pitch). The mid and final evaluation will be a panel of three professionals from business and science that will score your oral presentation. These panel pitches with written materials (i.e., pre-reads, oral, and poster) represent 70% of your total grade.

As an individual you will provide an independent project with write-up related to your team project. This is where you will go into greater detail that will help your team and your professional career such as CV building, individual Github page, a coding project, and present your results (oral and written).

Deliverables for the course

- Product, service, tool related to bioinformatics, genomics, or computation
- Team name
- Team logo
- Team Github page
- Team formation structure (For-profit vs. Non-profit)
- Team formation documents
- Team corporate structure assignment (CEO, CTO, CFO assignment)
- 3 Pre-read documents (Preliminary, mid, and final), submitted 48 h before the oral presentation
- 3 Oral presentations (Preliminary, mid, and final)
- 1 Individual Github
- 1 Poster presentation (end of semester)

Grading

Grades are scaled on 100% total possible, where 100 to 90% is an A, 89 to 80% is a B, 79 to 70% is a C, and below 69 is a U. Pass or No credit with a grade of satisfactory (S) or unsatisfactory (U) are available. To exercise this option, the student must declare their intention to take a Pass/No Credit option by completing the appropriate form at the

Office of the Registrar by the end of the eighth calendar day in the semester; this form requires the approval of the chair of the student's major department. Courses completed with the grade of Honors or Pass will count toward the hours needed for graduation, but they will not be considered in the computation of the grade point average. For further information on grading policy, please refer to this website(<https://provost.uncc.edu/policies-procedures/academic-policies-and-procedures/grading-effective-until-fall-2021>).

Bioinformatic internship requirement waiver

Students who take BINF 5900 will not need to take BINF 6400 internship to satisfy degree requirements.

Grading rubric

Pre-read Initial - 50 pts

Oral pitch Initial - 50 pts

Pre-read Mid - 50 pts

Oral pitch Mid - 50 pts

Pre-read Final - 50 pts

Oral pitch Final - 50 pts

Formation documents - 50 pts

Github page (group) - 50 pts

Github page (individual) - 50 pts

Group Poster Presentation - 50 pts

Total points - 500

Based on points for grading

500 - 450 pts (100-90%) = A

445 - 400 pts (89-80%) = B

395 - 350 pts (79-70%) = C

<345 (<69%) = U

Any grade in-between will be rounded to the next highest grade. For example, 89.1 or 89.6% would be an A. While grades are important, and you should strive to get the highest marks. The knowledge you take with you and gain will last a lifetime.

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. Definitions and examples of plagiarism are outlined in the Code. The Code is available from the Dean of Students Office or [online \(https://legal.uncc.edu/policies/up-407\)](https://legal.uncc.edu/policies/up-407).

Extra credit

Extra credit may be provided at the instructor's discretion. There are no guarantees of extra credit. It is not recommended to rely on extra credit to improve or pass the course.

Attendance

Attendance and participation are critical to reaching your team goals and deliverables successfully. To be successful, you will have to work with your team beyond regular classroom hours to prepare for oral and written presentations. Low attendance can hurt not only your grade but your team as well. Students that miss class is expected to consult with their team to complete their deliverables. Students are encouraged to work directly with the instructor regarding class absences for medical appointments, sickness, military/court orders, or personal and family emergencies, such as a death in the immediate family, where a student can provide an instructor with appropriate supporting documentation of the absence.

Instructor absences or tardiness

If I am late in arriving to class, you must wait a full 20 minutes after the start of class before you may leave without being counted absent, or you must follow any written instructions I may give you about my anticipated tardiness. The instructor will provide a surrogate instructor on his behalf in an emergency, which will be announced via email, Canvas website and on the course website (<https://github.com/raw-lab/BINF4900-5900>).

Withdrawing from the course

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 essential to make an appointment to speak with the instructor as soon as possible. The University policy on withdrawal allows students only a limited number of opportunities available to withdraw from courses. You must understand the financial and academic consequences that may result from course withdrawal (<https://provost.uncc.edu/policies-procedures/academic-policies-and-procedures/withdrawal-and-cancellation-enrollment-policy>).

An environment of non-discrimination and diversity

All students and the instructor are expected to engage with each other respectfully. Unwelcome conduct directed toward another person based upon that person's actual or perceived race, actual or perceived gender, color, religion, age, national origin, ethnicity, disability, or veteran status, or for any other reason, may constitute a violation of University Policy 406, The Code of Student Responsibility (<https://legal.uncc.edu/policies/up-406>). Any student suspected of engaging in such conduct will be referred to the Office of Student Conduct.

This course affirms people of all gender expressions and gender identities. If you prefer to be called a different name than what is indicated on the class roster, please let me know. Feel free to correct me on your preferred gender pronoun. If you have any questions or concerns, please do not hesitate to contact me.

Mental healthcare and positive self-care

Mental health concerns or stressful events may reduce your ability to participate in daily activities or diminish academic performance. It is common for college 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 can learn more about the broad range of confidential mental health services available on campus via the Counseling and Psychological Services (CAPS) website at caps.uncc.edu.

Title IX reporting of sexual harassment or other related reporting

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) have 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 civil protective orders, and more.

Please be aware that all UNC Charlotte employees, including faculty members, are expected 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, the instructor is expected to [report the information to the Title IX Coordinator](https://cm.maxient.com/reportingform.php?UNCCCharlotte&layout_id=125) (https://cm.maxient.com/reportingform.php?UNCCCharlotte&layout_id=125). Although the instructor expected 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 the following on-campus resources, which are not required to report the incident to the Title IX Coordinator: (1) University Counseling Center (counselingcenter.uncc.edu 7-0311); or (2) Student Health Center (studenthealth.uncc.edu 7-7400). Additional information about your options is also available at titleix.uncc.edu under the “Students” tab.

Disability accommodations

Students in this course seeking accommodations for disabilities must first consult with the Office of Disability Services and follow the instructions of that Office for obtaining accommodations. Accommodations will be provided to students presenting documentation from the Office Of Disability Services (ODS). Please check the ODS website (<https://ds.uncc.edu/>) for more details.

Policies related to COVID-19

It is UNC Charlotte's policy for the Spring 2021 (started in Fall 2020) semester that as a condition of on-campus enrollment, all students are required to engage in safe behaviors to avoid the spread of COVID-19 in the 49er community. Such behaviors specifically include the requirement that all students properly wear [CDC-compliant face coverings](https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/how-to-wear-cloth-face-coverings.html) (<https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/how-to-wear-cloth-face-coverings.html>) while in buildings, including in classrooms and labs.

Failure to comply with this policy in the classroom or lab may result in dismissal from the current class session. If the student refuses to leave the classroom or lab after being dismissed, the student may be referred to the Office of Student Conduct and Academic Integrity for charges under the [Code of Student Responsibility](https://legal.uncc.edu/policies/up-406) (<https://legal.uncc.edu/policies/up-406>).

Students are expected to attend every class and remain in class for the duration of the session when it is safe to do so under university guidance regarding COVID-19. Failure to attend class or arriving late may impact your ability to achieve course objectives, affecting your course grade. An absence, excused or unexcused, does not relieve a student of any course requirement. Regular class attendance is a student's obligation, as is a responsibility for all the work of class meetings, including tests and written tasks. Any unexcused absence or excessive tardiness may result in a loss of participation points.

Students are encouraged to work directly with their instructors regarding their absence(s). For absences related to COVID-19, please adhere to the following:

- **Complete your Niner Health Check**
(<https://emergency.uncc.edu/covid-19/niner-health-check>) each morning.
- **Do not come to class if you are sick.** Please protect your health and the health of others by staying home. Contact your healthcare provider if you believe you are ill.
- **If you are sick:** If you test positive or are evaluated by a healthcare provider for [symptoms of COVID-19](#), (https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fabout%2Fsymptoms.html) indicate so on your [Niner Health Check](#) to alert the University. Submit a copy of your Niner Health Check notification email to your instructors. Upon learning that you have tested positive or have been diagnosed for symptoms of COVID-19, either from your reporting or from Student health Center testing or diagnosis, representatives from Emergency Management and/or the Student Health Center will follow up with you, and your instructors will be notified of the need for accommodations, as necessary.
- **If you have been exposed** to COVID-19 positive individuals and/or have been notified to self-quarantine due to exposure, indicate so on your [Niner Health Check](#) to alert the University. Representatives from Emergency Management and/or the Student Health Center will follow up with you as necessary. Submit a copy

of your Niner Health Check notification email to your instructors. If you need any additional support verifying your absence after communicating with your professors, contact [Student Assistance and Support Services](https://sass.uncc.edu/).
(<https://sass.uncc.edu/>)

To return to class after being absent due to a self-quarantine period, students should submit a copy of their Niner Health Check clearance email to their instructor(s). To return to class after being absent due to a COVID-19 diagnosis, students should submit an online request form to Student Assistance and Support Services (SASS). Supporting documentation can be attached directly to the request form. It should be from a student's health care provider or the Student Health Center, clearly indicating the dates of absences and the date the student can return to class. Instructors will be notified of such absences.

If you are absent from class due to a COVID-19 diagnosis or quarantine, as the instructor, I will do the following to help you continue to make progress in the course: Provide lecture slides or any other materials needed to facilitate learning on a CASE-BY CASE BASIS. As this is a team related course, teammates should discuss deliverables required to reach goals. The instructor determines the final decision for approval of all absences and missed work.

FERPA Notification

In establishing University Policy 402, Student Education Records, UNC Charlotte adheres to a policy of compliance with the Family Educational Rights and Privacy Act of 1974, also known as FERPA. This federal law affords students the following rights concerning their education records. For details, see the FERPA Annual Notification posted on the Office of Legal Affairs website. All questions concerning this FERPA Annual Notification may be directed to the Office of the Registrar's attention.

Tentative Course Schedule

Week of	Lecture Topic	Due dates (Thursday)
Jan 10 th	Introduction to the course	
Jan 17 th	Team Building 101	Team formation + Topic ideas
Jan 24 th	Customer Discovery 101	Team formation documents
Jan 31 st	Product development 101	
Feb 7th	Preliminary Oral presentations	Pre-read/Oral pitch 1
Feb 14 th	Advertising 101	
Feb 21 st	Managing Research Teams	
Feb 27th	Spring break - no classes	
March 7th	Mid-term Oral presentations	Pre-read/Oral pitch 2
March 14 th	Collaboration in Science	
March 21 st	Conflict Management	
March 28 th	Logic in Science	
April 4 th	Intellectual Property	
April 11 th	Entrepreneurship in tech	
April 18 th	Detecting Misinformation I	
April 25 th	Detecting Misinformation II	
May 2nd	Final Oral presentations	Pre-read/Oral pitch 3

As a note topics may change without notice for lectures. Dates for assignments will not change without emergency prior notice.