



Syllabus Fall 2018

BIO 206L* (47550) LAB EXP BIO: STRC/FUNC ORG-FRI
 BIO 177** (49495) UNDERGRADUATE RESEARCH-FRI
 NSC 001S (numerous) NATURAL SCIENCES SEMINAR

*Course has Independent Inquiry Flag.

**Course has Writing Flag.

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Communication

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Lab Manager:	Allison Petronzio	
Office Hours:	By appointment and during "Helpful Research Chats"	
Meeting Times:	Lab - PAI 2.14: Daily 9a – 9p Class meeting: Tuesdays 4-5p in GDC 6.202 "Helpful Research Chat": Days and times to be determined Small group meetings (1 required) and leaders: M 3p, PAI 5.33 – Roma and Abhi M 4p, PAI 5.33 – Mo and Ted R. W 1p, PAI 5.33 – Ted S. and Haley W 4p, PAI 5.42 – Amarachi, Giovanna, and Jolyn	
Websites:	https://sites.google.com/site/friaptamerstream/ http://cns.utexas.edu/fri http://canvas.utexas.edu/	

Overview

This course is available to students who took the first semester of the FRI Aptamer Stream or participated in the Accelerated Research Initiative (ARI) over the summer. The focus of the Stream's fall semester is aptamer research, which includes aptamer selections, characterization, and application development. Related concepts and laboratory techniques were taught in the first semester. However, new concepts may be introduced. Students may opt to continue their research project from the spring or they may develop a new project. Students are responsible for conducting laboratory research (8 hrs/wk), attending class lecture (1 hr/wk), and attending small group meetings (1 hr/wk). Small student groups will meet weekly to continue or expand upon topics discussed during class or in lab.

Learning Objectives and Skills

In the process of completing this class, students will develop the five noted skills with the learning objectives noted below:

1. Skill: A fundamental awareness and early experience in scientific research, specifically in the field of aptamer development (oligonucleotide affinity reagent development). This involves an introduction to the terminology, technical concepts, and principles of the research. The learning objectives include:
 - a. Identify a creative, focused, and manageable research question or topic.
 - b. Design a methodology for answering a research question, perusing the project, or small-scale “troubleshooting” tests.
 - c. Demonstrate the understanding of the research implications and its translation to practical applications.
2. Skill: Teamwork
 - a. Brainstorm troubleshooting and/or problem-solving ideas with other students and/or mentors.
 - b. Make changes to work based on critical analysis of work and on peer review feedback.
3. Skill: Communication
 - a. Develop and practice scientific writing skills.
 - b. Develop science communication skills, as well as further develop their argumentation skills, including the connection between the problem and the solution.
4. Skill: Data Analysis
 - a. Construct a meaningful figure using research data, which includes appropriate controls and statistics, if appropriate.
 - b. Collect, interpret, evaluate, provide context, and rational conclusions for research data.
5. Skill: Resilience
 - a. Develop and implement mechanisms to overcome, bypass, and/or wade through setbacks.
 - b. Initiate projects or activities with set deadlines and sometimes incomplete information.

How will I learn? How is the course structured?

This course has multiple formats: Lecture/Large Group Meeting, Small Group Meeting, Helpful Research Chats, and Lab. The course is centered around the activities performed in lab and the additional formats are provided to interpret results, design additional research activities, and communicate research findings. Students perform aptamer research activities and collect data in lab. Then Helpful Research Chats, which are similar to traditional office hours, and independent study are used to analyze data and report findings, such as in a written lab report. Small Group Meetings are primarily used to practice verbal, PowerPoint, and poster communication practices, while the Lecture/Large Group Meetings are when the final presentations are provided.

“Failure is on the Syllabus”

Because students in my class experience different forms of failure, please consider this article on “Failing Well.” Failing doesn’t have to be a bad thing: <https://www.nytimes.com/2017/06/24/fashion/fear-of-failure.html>

Evaluation and Grades

Students are welcome to discuss research progress and class performance at any time, although appointments are preferred for extended conversations. Plus and minus grades will be used for the final class grade and attendance will be used for determining the final class grade (described below). There is not a final exam for this class; however, there is a final lab report due at the end of the semester.

40%	Writing: Formal Lab Reports ¹
	5% Target proposal overview
	15% Target proposal
	5% Progress report
	15% Final Report
25%	Attendance
	15% Lab attendance, 8 hrs/wk
	5% Class meeting, 1 hr/wk
	5% Group meeting, 1 hr/wk
	0% “Helpful Research” chat, 1 hr/wk (counts toward lab hours)
10%	Writing: Lab Notebook
10%	Writing: “Moving it Forward:” a Reflection ^{1,2}
5%	Oral Presentation
5%	Safety Training and Policy Compliance
5%	Cleanliness, Organization, and Archiving ³

100% TOTAL

¹**Writings -- Late assignments** will be accepted within 7 days of the due date and incur a 5% reduction in points for that assignment each late day up to 25% total.

²**“Moving it Forward:” a Reflection** -- One of many things being a professional has taught me is that I must be accountable for my work and readily capable of recounting and effectively communicating my contributions. These forms of communication may be in the form of formal lab reports (traditionally provided 1-2 times a year), conversations, presentations, or perhaps the most frequent of all, short emails.

As part of this class, you, too, will prepare such short forms of communication (i.e. reflections). These reflections will be short writings, which convey the progress in the *in vitro* aptamer selection and other recent contributions (such as in the form of leadership activities, collaboration activities, follow-up experiments, and insightful control experiments).

Another thing I’ve learned through my years as a researcher is the importance of “moving it forward.” That is – as researchers, students are assessed on their research progress. However, such progress does not always occur in a linear fashion. In fact, many times, there is somewhat meandering route through research projects, which involves troubleshooting, control tests, side-projects in interesting areas or topics that arise, etc. Believe it or not, this is all part of research! This is research and these “nonlinear” activities are still considered “moving it forward,” as long as the main research objective is kept in mind.

In implementation, what does this mean? It means that approximately every 2 weeks, students will reflect on their research progress. Each reflection assignment is worth up to 1 point. Roughly, there are 9 steps in *in vitro* aptamer selections and each one of these steps is equivalent to 0.1 points (ccPCR counts 0.2 points). Other lab contributions (such as, follow-up experiments, insightful control experiments, leadership activities, collaboration activities, etc.) are also worth 0.1 point. That is - students are expected to perform the equivalent of one round of *in vitro* aptamer selection or the equivalent thereof every two weeks.

³**Cleanliness, Organization, and Archiving** -- You are expected to maintain a **clean** and organized working environment. This includes maintaining well organized reagent boxes and properly labeling your tubes and materials (e.g. tube side label: **N33 R2 dsDNA Lysozyme / GS 03/07/16**; top label: **R2 dsDNA Lys**). The “Archiving” part of this assignment group includes properly archiving and disposing of unwanted materials.

⁴**Bonus Points** -- There may be opportunities throughout the semester to earn extra points towards the calculation of your final grade. Some such opportunities may include the submission of photos showing “science in action” or “aptamer Stream students at play”. These points are awarded at my discretion and will not account for more than 5% of the final grade.

What you Earn <i>Percentage</i>	What I assign <i>Letter Grade</i>	UT Credit <i>Grade Points</i>	What you Earn <i>Percentage</i>	What I assign <i>Letter Grade</i>	UT Credit <i>Grade Points</i>
> 90	A	4.00	> 70	C	2.00
> 86.67	A-	3.67	> 66.67	C-	1.67
> 83.33	B+	3.33	> 63.33	D+	1.33
> 80	B	3.00	> 60	D	1.00
> 76.67	B-	2.67	>= 56.67	D-	0.67
> 73.33	C+	2.33	< 53.33	F	0.00

Schedule

#	Lecture Date	Lecture Topic, Tues at 4p	Small Group Topic, M or W	Lab Activities	Assignment (Due Date)	Notes
#1 8/27/18	No lecture	N/A	N/A	Lab is closed		
#2 9/3/18	9/4/18	Syllabus Overview; Site-Specific Training (complete worksheet before class)	Monday groups – meeting will occur; see mentors for day and time. Jump Start Lab Work! Meet in lab and get to work on your research!	1 round of mock aptamer selection, unless worked over the summer, then you may resume research. 6 lab hrs (4 x 1.6 hrs/day)	Overview/Extended Abstract (9/9/18); Target identified on Google Doc (9/9/18); Site-Specific Training (9/9/18)	Mon, 9/3 - Labor Day
#3 9/10/18	9/11/18	How to Give and Receive Feedback; Presentation Overview; Peer Review Notebooks	Peer Review Notebooks; "M 3-4" group practice talk(s)	1 round of mock aptamer selection, unless worked over the summer, then you may resume research. 8 lab hrs (5 x 1.6 hrs/day)	Research Contract & Talent Release (9/11/18); Notebooks-Peer Reviews (9/11/18); Overview-Peer Reviews (9/12/18); Reflection (9/14/18)	9/12/18 - Gulf Coast Undergraduate Research Symposium application due. FRI Open Houses (9/8-9/19/18)
#4 9/17/18	9/18/18	"M 3-4" Group Presentations	Research Update - "Short Talks, but Big Ideas"	1 round of mock aptamer selection, unless worked over the summer, then you may resume research. 8 lab hrs (5 x 1.6 hrs/day)	Overview - Final version (9/19/18); Notebook check #1 (9/21/18); Box check #1 (9/21/18)	FRI Open Houses (9/8-9/19/18)
#5 9/24/18	9/25/18	Peer Review: Proposals	Journal Club; "M 4-5" group practice talk(s)	Begin or cont. <i>in vitro</i> aptamer selection against your target. 8 lab hrs (5 x 1.6 hrs/day)	Proposal-draft (9/24/18); Proposals-Peer Reviews(9/26/18); Reflection (9/28/18)	FRI Open Houses (9/8-9/19/18)
#6 10/1/18	10/2/18	"M 4-5" Group Presentations	"Elevator Talk"; "W 1-2" group practice talk(s)	<i>In vitro</i> aptamer selection against your target. 8 lab hrs (5 x 1.6 hrs/day)	Revised Proposal (10/1/18)	10/6/18 - Gulf Coast Undergraduate Research Symposium at Rice.
#7 10/8/18	10/9/18	"W 1-2" Group Presentations	Journal Club; "W 4-5" group practice talk(s)	<i>In vitro</i> aptamer selection against your target. 8 lab hrs (5 x 1.6 hrs/day)	Reflection (10/12/18)	

#8	10/15/18	10/16/18	"W 4-5" Group Presentations	Research Update	<i>In vitro</i> aptamer selection against your target.	8 lab hrs (5 x 1.6 hrs/day)	Presentation Reflection (10/16/18)	
#9	10/22/18	10/23/18	Poster Presentations	Journal Club; "M 3-4" group practice talk(s)	<i>In vitro</i> aptamer selection against your target.	8 lab hrs (5 x 1.6 hrs/day)	Reflection (10/26/18); Progress report - draft (10/28/18)	
#10	10/29/18	10/30/18	"M 3-4" Group Presentations	Peer Review Progress Report; "M 4-5" group practice talk(s)	<i>In vitro</i> aptamer selection against your target.	8 lab hrs (5 x 1.6 hrs/day)	Progress Report-Peer Reviews (10/31/18)	Wed, 10/31/17 - Halloween
#11	11/5/18	11/6/18	"M 4-5" Group Presentations	Journal Club; "W 1-2" group practice talk(s)	<i>In vitro</i> aptamer selection against your target.	8 lab hrs (5 x 1.6 hrs/day)	Progress Report-final (11/5/18); Reflection (11/9/18)	
#12	11/12/18	11/13/18	"W 1-2" Group Presentations	"Hot Seat": Interviewing coping techniques; "W 4-5" group practice talk(s)	<i>In vitro</i> aptamer selection against your target.	8 lab hrs (5 x 1.6 hrs/day)	Notebook check #2 (10/16/18); Box check #2 (10/16/18)	
#13	11/19/18	11/20/18	Writing and Peer Review Session	Writing and Peer Review; Wednesday group - won't meet, but participants are responsible for material covered.	<i>In vitro</i> aptamer selection against your target.	8 lab hrs (5 x 1.6 hrs/day)		11/22 - 11/26/17 Thanksgiving Holiday
#14	11/26/18	11/27/18	"W 4-5" Group Presentations	Research Update	<i>In vitro</i> aptamer selection against your target.	1 lab hrs (1 x 1.6 hrs/day)	Presentation Reflection (11/27/18)	
#15	12/3/18	12/4/18	CIS and class party	Highs? Lows? Improvements?	<i>In vitro</i> aptamer selection against your target.	3 lab hrs (2 x 1.6 hrs/day) 1.5 hrs lab clean-up 1 hr archive materials	Final Report (12/4/18); Reflection (12/5/18); Lab Clean-up and Archive (12/10/18)	Last Day of Classes - Mon, 12/10, but no small group meetings will be held at this time

The calendar is subject to change.

Organization and Procedures

Laboratory Research

- Students are required to work in lab 8 hrs/wk (averaged over ~2-3 weeks).
- Students must work alongside another safety trained student/researcher (i.e. fellow student in Aptamer Stream or other FRI stream), who has completed the required safety classes and is trained on all equipment, procedures, and regulations.
- Students are expected to sign attendance logs when entering and leaving lab. At least once a week, a mentor must sign each student out of lab.
- To access the locked door, please use key code: XXXX

Class Meetings (aka Class “Lectures”) and Oral Presentations

- Students are required to attend the weekly class meetings on Tuesdays at 4pm in GDC 6.202.
- Students are expected to participate in the discussion and to give feedback on experimental/lab issues, if they have any. Students should not hesitate to voice their opinions about a certain lab issue, whether about cleanliness or about problems in experiments.
- Working as a group, students are required to give a research presentation to the class.
 - Because of the large group size, it may be necessary for a student to play a more supportive role in the presentation team, such as by generating slides, figures, content, etc. However, each student must serve as an oral presenter at least once during the semester.
 - The student audience is required to participate and critically critique the presentations, offering feedback on the strengths and the weakness of the presentation.
- “Lecture” misnomer – No, I will not lecture most of the time! ☺

Small Group Meetings

- Students will participate in weekly small group meetings (1 hr/wk). If possible, the small groups will be organized around research interests.
- The primary focus of these meetings will be for students to develop, practice, and review science communication skills.
- Led by peer mentors, this small group meeting involves the following:
 - Consolidation of ideas ("1-min Research Updates," "Elevator Talks," etc.),
 - Construction of arguments; connection between techniques and applications (scientific report, various dialogues),
 - Cooperative research troubleshooting,
 - Dissection of relevant journal articles ("How to read ...," journal clubs, etc.), and
 - Peer review in various forms (such as notebooks, reports, practice talks, etc.).

“Helpful Research” Chats (optional, up to 1 hr/wk toward lab hrs)

- These are informal discussions focused on troubleshooting and deducing the next steps of the research, as well time to obtain assistance reviewing and revising lab reports and other lab assignments.
- HRC attendance provides up to 1 hr/wk of student’s required lab hours.
- Please bring your notebook and critical thinking skills.
- Be prepared to discuss the latest challenges in your work (if any) and next steps in your research, as well as help others with their research challenges and developing a plan for their research.

Lab Notebook

- Students are required to maintain a well-organized and updated laboratory notebook. Please continue using the same notebook used in the previous semester.
- Notebooks must stay in lab. However, there are a couple of exceptions:
 - Notebooks may be taken home over the weekend to prepare a laboratory report, as long as the notebooks are returned to lab by 9a Monday morning.
 - Students should bring their lab notebooks to their weekly group meetings and “Helpful Research” Chats, then promptly return the notebooks to the lab after the meeting.
- Notebooks are the property of the Aptamer Stream and must be left in the laboratory upon the conclusion of the course and/or research.

- In transferring electronic results/images from the computer to the notebook, students will save their files on a personal electronic device. A couple of items of note:
 - With file transfers, email with a short description works fairly well.
 - All files should ultimately be saved on the student's personal electronic device. A backed-up server is preferred.
 - File names should be systematic, such as "20150821 agarose gel – FGF8b R1ccPCR v01."

Safety & Waste Disposal

All Aptamer Stream researchers are required to adhere to the UT EHS policies for biological laboratories, including, but not limited to the strict dress code. Long pants, closed-toed shoes, and gloves must be worn at all times.

Upon completing the required safety courses listed below, print off your training record via the "Training History" link on the txclass website (<https://utdirect.utexas.edu/txclass/index.WBX>) and/or UTLearn (https://utexas.csod.com/LMS/catalog/Welcome.aspx?tab_page_id=-67&tab_id=-1). Students are responsible for submitting this history to the Canvas assignment.

Please visit this website (<http://ehs.utexas.edu/training/training-courses.php>) or follow the class-specific URL to complete the required classes:

OH 101 Hazard Communication Online Training

OH 102 Site-specific Training (In lab, led on your first day in lab.)

OH 201 Laboratory Safety Online Training (OH238 refresher course required every 3 years upon completion.)

OH 202 Hazardous Waste Management Online Training

FF 205 Fire Safety Training (classroom; provided monthly)

OH 207 Biological Safety Online Training

OH 301 Basic Radiological Health (*required, if performing radioactive binding assays, but optional otherwise.*)

Flags

The University's new core curriculum, which is now being implemented by each of the colleges and schools, will require all undergraduates to earn credit for flag courses in six areas. Refer to this website for more information: <http://www.utexas.edu/ugs/teaching/flags>.

- **Independent Inquiry Flag**

This course carries the Independent Inquiry flag. Independent Inquiry courses are designed to engage you in the process of inquiry over the course of a semester, providing you with the opportunity for independent investigation of a question, problem, or project related to your major. You should therefore expect a substantial portion of your grade to come from the independent investigation and presentation of your own work.

- **Writing Flag**

This course carries the Writing Flag. Writing Flag courses are designed to give students experience with writing in an academic discipline. In this class, you can expect to write regularly during the semester, complete substantial writing projects, and receive feedback from your instructor to help you improve your writing. You will also have the opportunity to revise one or more assignments, and you may be asked to read and discuss your peers' work. You should therefore expect a substantial portion of your grade to come from your written work. Writing Flag classes meet the Core Communications objectives of Critical Thinking, Communication, Teamwork, and Personal Responsibility, established by the Texas Higher Education Coordinating Board.

- **Writing Center** – Students are strongly encourage you to use the University Writing Center (PCL 2.330, 471-6222, uwc.utexas.edu). The University Writing Center offers free, individualized help with writing for any UT undergraduate, by appointment or on a drop-in basis. They work with students from every department on campus, for both academic and non-academic writing. This service is not just for writing with "problems." Getting feedback from an informed audience is a normal part of a successful writing project. The UWC consultants are trained to work with you on your writing in ways that preserve the integrity of your work and help you become a stronger, more independent writer.

Academic Integrity

University of Texas Honor Code

The core values of The University of Texas at Austin are learning, discovery, freedom, leadership, individual opportunity, and responsibility. Each member of the university is expected to uphold these values through integrity, honesty, trust, fairness, and respect toward peers and community.

Each student in this course is expected to abide by the University of Texas Honor Code. See the UT Honor Code above. Any work submitted by a student in this course for academic credit will be the student's own work.

Students are encouraged to study together and to discuss information and concepts covered in lecture and the sections with other students. You can give "consulting" help to or receive "consulting" help from such students. However, this permissible cooperation should never involve one student having possession of a copy of all or part of work done by someone else, in the form of an e-mail, an e-mail attachment file, a diskette, or a hard copy.

Should copying occur, both the student who copied work from another student and the student who gave material to be copied may receive a zero for the assignment. Penalty for violation of this Code can also be extended to include failure of the course and University disciplinary action.

During examinations, students must do your own work. Talking or discussion is not permitted during the examinations, nor may you compare papers, copy from others, or collaborate in any way. Any collaborative behavior during the examinations will result in failure of the exam, and may lead to failure of the course and University disciplinary action.

TurnItIn

All assignments in this course may be processed by TurnItIn, a tool that compares submitted material to an archived database of published work to check for potential plagiarism. Other methods may also be used to determine if a paper is the student's original work. Regardless of the results of any TurnItIn submission, the faculty member will make the final determination as to whether or not a paper has been plagiarized.

Appeals

The TA and I will make decisions concerning grades, attendance, and other policy matters. Should you disagree with the TA, you are welcome to take the matter to me (the course instructor) or an assistant director of the FRI.

University Notices and Polices

Student Rights & Responsibilities

- You have a right to a learning environment that supports mental and physical wellness.
- You have a right to respect.
- You have a right to be assessed and graded fairly.
- You have a right to freedom of opinion and expression.
- You have a right to privacy and confidentiality.
- You have a right to meaningful and equal participation, to self-organize groups to improve your learning environment.
- You have a right to learn in an environment that is welcoming to all people. No student shall be isolated, excluded or diminished in any way.

With these rights come responsibilities:

- You are responsible for taking care of yourself, managing your time, and communicating with the teaching team and with others if things start to feel out of control or overwhelming.
- You are responsible for acting in a way that is worthy of respect and always respectful of others.
- Your experience with this course is directly related to the quality of the energy that you bring to it, and your energy shapes the quality of your peers' experiences.
- You are responsible for creating an inclusive environment and for speaking up when someone is excluded.
- You are responsible for holding yourself accountable to these standards, holding each other to these standards, and holding the teaching team accountable as well.

Use of E-mail for Official Correspondence to Students

All students should become familiar with the University's official e-mail student notification policy. It is the student's responsibility to keep the University informed as to changes in his or her e-mail address. Students are expected to check e-mail on a frequent and regular basis in order to stay current with University-related communications, recognizing that certain communications may be time-critical. It is recommended that e-mail be checked daily, but at a minimum, twice per week. The complete text of this policy and instructions for updating your e-mail address are available at <http://www.utexas.edu/its/help/utmail/1564>.

Documented Disability Statement

Any student with a documented disability who requires academic accommodations should contact Services for Students with Disabilities (SSD) at (512) 471-6259 (voice) or 1-866-329-3986 (video phone). Faculty are not required to provide accommodations without an official accommodation letter from SSD. (Note to Faculty: Details of a student's disability are confidential. Faculty should not ask questions related to a student's condition or diagnosis when receiving an official accommodation letter.)

- Please notify me as quickly as possible if the material being presented in class is not accessible (e.g., instructional videos need captioning, course packets are not readable for proper alternative text conversion, etc.).
- Please notify me as early in the semester as possible if disability-related accommodations for field trips are required. Advanced notice will permit the arrangement of accommodations on the given day (e.g., transportation, site accessibility, etc.).
- Contact Services for Students with Disabilities at 471-6259 (voice) or 1-866-329-3986 (video phone) or reference SSD's website for more disability-related information: http://www.utexas.edu/diversity/ddce/ssd/for_cstudents.php

Q drop Policy

The State of Texas has enacted a law that limits the number of course drops for academic reasons to six (6). As stated in Senate Bill 1231: "Beginning with the fall 2007 academic term, an institution of higher education may not permit an undergraduate student a total of more than six dropped courses, including any course a transfer student has dropped at another institution of higher education, unless the student shows good cause for dropping more than that number."

For more information, see: <http://www.utexas.edu/ugs/csacc/academic/adddrop/qdrop>

Emergency Evacuation Policy

The following recommendations regarding emergency evacuation from the Office of Campus Safety and Security, 512-471-5767, <http://www.utexas.edu/safety/>

Occupants of buildings on The University of Texas at Austin campus are required to evacuate buildings when an alarm or alert is activated. Alarm activation or announcement requires exiting and assembling outside, unless told otherwise by an official representative.

- Familiarize yourself with all exit doors of each classroom and building you may occupy. Remember that the nearest exit door may not be the one you used when entering the building.
- Students requiring assistance in evacuation shall inform their instructor in writing during the first week of class.
- In the event of an evacuation, follow the instruction of faculty or class instructors. Do not re-enter a building unless given instructions by the following: Austin Fire Department, The University of Texas at Austin Police Department, or Fire Prevention Services office.
- Link to information regarding emergency evacuation routes and emergency procedures can be found at: www.utexas.edu/emergency

University Resources for Students

Your success in this class is important to me. We will all need accommodations because we all learn differently. If there are aspects of this course that prevent you from learning or exclude you, please let me know as soon as possible. Together we'll develop strategies to meet both your needs and the requirements of the course. There are also a range of resources on campus:

Services for Students with Disabilities

This class respects and welcomes students of all backgrounds, identities, and abilities. If there are circumstances that make our learning environment and activities difficult, if you have medical information that you need to share with me, or if you need specific arrangements in case the building needs to be evacuated, please let me know. I am committed to creating an effective learning environment for all students, but I can only do so if you discuss your needs with me as early as possible. I promise to maintain the confidentiality of these discussions. If appropriate, also contact Services for Students with Disabilities, 512-471-6259 (voice) or 1-866-329- 3986 (video phone). <http://ddce.utexas.edu/disability/about/>

Counseling and Mental Health Center

Do your best to maintain a healthy lifestyle this semester by eating well, exercising, avoiding drugs and alcohol, getting enough sleep and taking some time to relax. This will help you achieve your goals and cope with stress.

All of us benefit from support during times of struggle. You are not alone. There are many helpful resources available on campus and an important part of the college experience is learning how to ask for help. Asking for support sooner rather than later is often helpful.

If you or anyone you know experiences any academic stress, difficult life events, or feelings like anxiety or depression, we strongly encourage you to seek support. <http://www.cmhc.utexas.edu/individualcounseling.html>

Behavior Concerns Advice Line (BCAL)

If you are worried about someone who is acting differently, you may use the Behavior Concerns Advice Line to discuss by phone your concerns about another individual's behavior. This service is provided through a partnership among the Office of the Dean of Students, the Counseling and Mental Health Center (CMHC), the Employee Assistance Program (EAP), and The University of Texas Police Department (UTPD). Call 512-232-5050 or visit <http://www.utexas.edu/safety/bcal>.

The Sanger Learning Center

Did you know that more than one-third of UT undergraduate students use the Sanger Learning Center each year to improve their academic performance? All students are welcome to take advantage of Sanger Center's classes and workshops, private learning specialist appointments, peer academic coaching, and tutoring for more than 70 courses in 15 different subject areas. For more information, please visit <http://www.utexas.edu/ugs/slc> or call 512-471-3614 (JES A332).

Undergraduate Writing Center: <http://uwc.utexas.edu/>

Libraries: <http://www.lib.utexas.edu/>

ITS: <http://www.utexas.edu/its/>

Student Emergency Services: <http://deanofstudents.utexas.edu/emergency/>

Independent Research Contract

The Aptamer Stream contract describes the class safety policy, preservation of a “Culture of Safety,” as well as the general policies of the class and laboratory. While this document provides some specific details and framework to maintain a safe environment, *common sense* and *good judgement* are far more thorough, better, and more effective at preserving a safe atmosphere. Please read, sign and date (on Canvas), and comply with the following requirements listed in this “Independent Research Contract.”

- Attendance requirements:
 - Laboratory research, 8 hrs/wk
 - Class meeting, 1 hr/wk – 4p Tues
 - Group meeting, 1 hr/wk
 - “Helpful Research” chat, 1 hr/wk (optional)
- When working in the laboratory:
 - Students must NOT be alone in the lab under any circumstances.
 - Students are expected to sign attendance logs.
 - Students must maintain an accurate and updated lab notebook.
 - Waste must be appropriately discarded.
 - Preserve the professional, yet informal environment. Conversation, volume, music and vocabulary should be appropriate at all times. Respect, courtesy, and clear communication with research staff, mentors and peers is expected.
- Students must maintain a culture of safety in the lab. This includes, but is not limited to:
 - Gloves, closed-toe shoes, and pants must be worn at all times.
 - Safety classes must be completed by the assigned deadlines.
 - ALL accidents must be immediately reported to onsite staff and to the instructor.
 - No food or beverages are permitted in lab.
- Students are responsible for maintaining a clean working environment. This includes, but is not limited to:
 - Appropriately storing and returning reagents/equipment (e.g. ice buckets) when finished.
 - Students must keep the aisles clear of book bags and personal belongs. Personal belongings may be stored on storage hooks, in drawers, in cabinets, or under desks.
- Students are ultimately the manager/PI of their research. This means (partial list):
 - Productivity and time management is the student’s responsibility.
 - Collaboration is highly encouraged.
 - Students are held to strict deadlines (not too unlike deadlines held by funding agencies)
- Grades and Evaluations:
 - Students are responsible for understanding how grades are assigned, as described in the syllabus and the assignments.
 - The grading scale is on a plus/minus system.
 - Extra credit will not be assigned increase grades.
- Weapons of any kind are not permitted in the laboratory, classroom, or areas of student gatherings.
- Academic Integrity is paramount and dishonesty (including plagiarism) will be dealt with severely at The University level. Disregarding the honor code will have a negative impact in medical and professional school acceptance.

I have read the above Laboratory Research Contract. I have read the entire syllabus and agree to abide by the standards set forth for independent research in the Aptamer Stream. I understand that my continued participation in the stream and my course grade are directly tied to my adherence to guidelines set forth in this document and those of the FRI program.

I have read and agree to comply with all matters of policy and safety communicated in this course syllabus.

EID: _____ Date: _____

Signed: _____ Printed Name: _____

Talent Release Form

Completing the release is optional.



WHAT STARTS HERE CHANGES THE WORLD

Talent Release Form

For valuable consideration, I do hereby authorize The University of Texas, and those acting pursuant to its authority to:

- a. Record my participation and appearance on videotape, audiotape, film, photograph or any other medium.
- b. Use my name, likeness, voice and biographical material in connection with these recordings.
- c. Exhibit or distribute such recording in whole or in part without restrictions or limitation for any educational or promotional purpose which The University of Texas, and those acting pursuant to its authority, deem appropriate.

Name: _____

Address: _____

Phone Number: _____

Email Address: _____

Signature: _____

Witness Signature: _____

Parent/Guardian Signature: _____

If under 18: _____

Date: _____