

University of Florida**College of Public Health & Health Professions Syllabus****Directed Research in Type 1 Diabetes****Undergraduate Course: HSC 490 (3 credits)****Graduate Course: PHC 6937 Section 434E (3 credits)**

Spring 2021

Delivery Format: Online (Canvas and Zoom)

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Teaching Assistant: Jennifer Maizel, MPH, CHESEmail Address: jmaizel@ufl.edu**Preferred Course Communications:** Direct email to UFL email address**Prerequisites**

None

PURPOSE AND OUTCOME**Course Overview**

This course provides an overview of different methodologies used in research on type 1 diabetes including surveys, interviews, experiments, longitudinal studies, and content analysis. Particular attention will be given to understanding the fundamentals of research design, assumptions of various methods, and ethical responsibilities surrounding conducting research

Relation to Program Outcomes

This course provides undergraduate and graduate students with a personal connection to type 1 diabetes (T1D) the opportunity to gain exposure to various research methodologies used in T1D. Above all, this course will allow students to discover how to turn their ‘burning questions’ about type 1 diabetes into an actual research proposal.

Course Objectives and/or Goals

Through this course, students will achieve:

1. Knowledge of major T1D research programs in the natural and social/behavioral sciences
2. Exposure to career trajectories in T1D research and clinical care
3. Recognition of ethical responsibilities in T1D research

4. Recognition of social disparities in T1D
5. Ability to develop and present an independent T1D research proposal

Instructional Methods

1. Assigned readings (book chapters and/or articles posted to eLearning)
2. Lectures
3. Student-facilitated discussion
4. Reflection memos

DESCRIPTION OF COURSE CONTENT

Topical Outline/Course Schedule

Week	Date(s)	Topic(s)	Readings
1	Jan. 13	Introduction to Course	<p>- Preface, Introduction, and Chapters 1-3 <i>The Discovery of Insulin</i></p> <p>- Walker, A., Cuttriss, N., Anez-Zabala, C., Yabut, K., Haller, M., & Maahs, D. (2020). The Neighborhood Deprivation Index and provider geocoding identify critical catchment areas for diabetes outreach. <i>Journal of Clinical Endocrinology and Metabolism</i>, 105(9), 1-7.</p> <p>- Walker, A., Haller, M., Gurka, M., Morris, H., Bruggeman, B., Miller, K., Foster, N., Anez-Zabala, C., & Schatz, D. (2020). Addressing health disparities in type 1 diabetes through peer mentorship. <i>Pediatric Diabetes</i>, 21, 120-127.</p>

Week	Date(s)	Topic(s)	Readings
2	Jan. 20	Guest Speaker: Sarah Westen, PhD	<ul style="list-style-type: none"> - Chapters 4-5 <i>The Discovery of Insulin</i> - Driscoll, K. A., Johnson, S. B., Hogan, J., Gill, E., Wright, N., & Deeb, L. C. (2013). Insulin bolusing software: the potential to optimize health outcomes in type 1 diabetes mellitus. <i>Journal of Diabetes Science and Technology</i>, 7(3), 646-652. - Hilliard, M. E., Wu, Y. P., Rausch, J., Dolan, L. M., & Hood, K. K. (2013). Predictors of deteriorations in diabetes management and control in adolescents with type 1 diabetes. <i>Journal of Adolescent Health</i>, 52(1), 28-34. - Westen, S. C., Warnick, J. L., Albanese-O'Neill, A., Schatz, D. A., Haller, M. J., Entessari, M., & Janicke, D. M. (2018). Objectively measured adherence in adolescents with type 1 diabetes on multiple daily injections and insulin pump therapy. <i>Journal of Pediatric Psychology</i>, 44(1), 21-31.
3	Jan. 27	Guest Speaker: Todd Brusko, PhD Memo #1 due on Jan. 27	<ul style="list-style-type: none"> - Chapters 6-7 <i>The Discovery of Insulin</i> - ELearning PDF: Jacobsen LM, Posgai A, Seay HR, Haller MJ, Brusko TM. T Cell Receptor Profiling in Type 1 Diabetes. <i>Current diabetes reports</i>. 2017 Nov 1;17(11):118. - Review Todd M. Brusko Laboratory Website: http://bruskolab.diabetes.ufl.edu. - Film: <i>Journey to a Miracle: Freedom from Insulin</i>

Week	Date(s)	Topic(s)	Readings
4	Feb. 3	Guest Speaker: Michael Haller, MD Memo #2 due on Feb. 3	- Chapters 8-10 <i>The Discovery of Insulin</i> - ELearning PDF: Haller MJ, Gitelman SE, Gottlieb PA, et al. Antithymocyte Globulin Plus G-CSF Combination Therapy Leads to Sustained Immunomodulatory and Metabolic Effects in a Subset of Responders With Established Type 1 Diabetes. <i>Diabetes</i> . 2016;65(12):3765-3775. - ELearning PDF: Skyler JS. Immune therapy for treating type 1 diabetes: challenging existing paradigms. 2015;125(1):94-96.
5	Feb. 10	Guest Speaker: Mark Atkinson, PhD Memo #3 due on Feb. 10	TBD (focus on COVID-19 research)
6	Feb. 17	Guest Speaker: Jennifer Maizel, MPH, CHES	- ELearning PDF: American Diabetes Association 79th Scientific Sessions Report. - ELearning PDF: This Is Diabetes: American Diabetes Association 2016 Annual Report.
7	Feb. 24	Guest Speaker: Kimberly Driscoll, PhD	TBD
8	March 3	Guest Speaker: Cherie Stabler, PhD	TBD
9	March 10	Guest Speaker: Desmond Schatz, MD Memo #4 due on March 10	- ELearning PDF: Schatz D, Krischer J, She JX. To screen or not to screen for pre-type 1 diabetes?. <i>Hormone Research in Paediatrics</i> . 2002;57(Suppl. 1):12-7. - ELearning PDF: Vehik K, Cuthbertson D, Ruhlig H, Schatz D, Peakman M, Krischer J. Long-Term Outcome of Individuals Treated With Oral Insulin. <i>Diabetes Care</i> [serial online]. July 2011;34(7):1585-1590.
10	March 17	Guest Speaker: Mollie Huber Memo #5 due on March 17	TBD

Week	Date(s)	Topic(s)	Readings
11	March 24	Guest Speaker: Allison O’Kell, DVM, MS, DACVIM(SAIM)	- ELearning PDF: O’Kell AL, Wasserfall C, Catchpole B, Davison LJ, Hess RS, Kushner JA, Atkinson MA. Comparative pathogenesis of autoimmune diabetes in humans, NOD mice, and canines: has a valuable animal model of type 1 diabetes been overlooked? <i>Diabetes</i> . 2017 Jun 1;66(6):1443-52.
12	March 31	Guest Speaker: Eleni Sheehan, APRN, FNP-BC, CDE Memo #6 due on March 31	- NIH Human Subjects Training - Bloodborne Pathogens Training
13	Apr. 7	Guest Speaker: Laura Jacobson, MD Memo #7 due on Apr. 7	- ELearning PDF: Jacobsen LM, Bocchino L, Evans-Molina C, DiMeglio L, Goland R, Wilson DM, Atkinson MA, Aye T, Russell WE, Wentworth JM, Boulware D, Geyer S, Sosenko JM. The risk of progression to type 1 diabetes is highly variable in individuals with multiple autoantibodies following screening. <i>Diabetologia</i> 2020 Mar;63(3):588-596.
14	Apr. 14	Pre-Course Wrap-Up	TBD
15	Apr. 21	Guest Speaker: David Maahs, MD, PhD	TBD

Course Materials and Technology

Required Book: Bliss, Michael. *The Discovery of Insulin*. 2007. University of Chicago Press: Chicago, IL.

Additional Required Readings: Posted on the course website (Canvas) in PDF form.

Course Website: The course website is available on Canvas and can be accessed through the [eLearning @ UF](#) website. You will log into the course website using your GatorLink ID and password; if you have trouble logging in, please contact the Help Desk at 352-392-HELP.

Submitting Course Materials: Course assignments should be turned into the eLearning site prior to the beginning of class each week.

Announcements: Course announcements will be made through the announcements tool in Canvas. You are responsible for all information in these announcements. Please update your settings so that you are notified of announcements.

For technical support for this class, please contact the UF Help Desk at:

- Learning-support@ufl.edu
- (352) 392-HELP - select option 2
- <https://lss.at.ufl.edu/help.shtml>

ACADEMIC REQUIREMENTS AND GRADING

Assignments

1. **Readings:** For each weekly module, you will be assigned book chapters and/or specified journal articles to read. Please complete the reading for a particular day prior to that class session.
2. **Weekly Memos and Assignments:** 40% of grade. There will be weekly memos for this class. These memos will allow you an opportunity to apply concepts covered in class to your own world and reality. Memos are to be 2 to 4 pages, typed, doubled spaced, with 12-point font and standard margins. When citing work other than your own, you must provide a works cited page and reference that content appropriately throughout your assignment (MLA, AMA, APA or ASA style). Memos are due prior to the beginning of class each week and should be submitted via our campus Canvas site. Please see the list of weekly memo topic options on the “Memo Guidelines” handout.
3. **Research Proposal:** 40% of grade. For the ‘final’ project, students will complete a PowerPoint on a proposal for a research project they would like to conduct in Type 1 diabetes. A research proposal contains several elements like the research question, a review of existing literature on this question, proposed methods to study your question, possible risks/benefits of your research, and the instruments you will use to complete your research (for example, a survey). Specific guidelines for this project will be distributed in class.
4. **Participation:** 20% of grade. Punctual class attendance is vital to this portion of your final “S/U” grade for the course Attendance will be taken every class as a record of your participation. Also, active contributions to class (including asking questions, answering questions and so on) that demonstrate your ability to be a critical thinker will factor into your participation grade as well. Given that this class only meets once a week – there are only two excused absences. Beyond that, a student will be docked for participation and could receive a “U” at the discretion of the professor.

Grading

Requirement	Due date	% of final grade
Memos	Ongoing	40%
Research Proposal	April 28	40%
Participation	Ongoing	20%
Total		100%

Point System Used

Percentage Earned	Letter Grade
93-100	A
90-92	A-
87-89	B+
83-86	B
80-82	B-
77-79	C+
73-76	C
70-72	C-
67-69	D+
63-66	D
60-62	D-
Below 60	E

Please be aware that a C- is not an acceptable grade for graduate students. The GPA for graduate students must be 3.0 based on 5000 level courses and above to graduate. A grade of C counts toward a graduate degree only if based on credits in courses numbered 5000 or higher that have been earned with a B+ or higher. In addition, the Bachelor of Health Science and Bachelor of Public Health Programs do not use C- grades.

Letter Grade	Grade Points
A	4.0
A-	3.67
B+	3.33
B	3.0
B-	2.67
C+	2.33
C	2.0
C-	1.67
D+	1.33
D	1.0
D-	0.67
E	0.0
WF	0.0
I	0.0
NG	0.0
S-U	0.0

More information on UF grading policy may be found at:

<http://gradcatalog.ufl.edu/content.php?catoid=10&navoid=2020#grades> (graduate students)

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx> (undergraduate students)

Policy Related to Make up Exams or Other Work

Late assignments are not accepted unless arrangements have been made ahead of the due date with the instructor. If you have a scheduling conflict that prevents you from fulfilling a certain course requirement, please contact the instructor as soon as possible.

Please note: Any requests for make-ups due to technical issues **MUST** be accompanied by the UF Computing help desk (<http://helpdesk.ufl.edu/>) correspondence. You **MUST** e-mail me within 24 hours of the technical difficulty if you wish to request a make-up.

Policy Related to Required Class Attendance

Please note all faculty are bound by the UF policy for excused absences. For information regarding the UF Attendance Policy see the Registrar website for additional details:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

For graduate students, excused absences must be consistent with university policies in the Graduate Catalog (<http://gradcatalog.ufl.edu/content.php?catoid=10&navoid=2020#attendance>).

STUDENT EXPECTATIONS, ROLES, AND OPPORTUNITIES FOR INPUT

Expectations Regarding Course Behavior

What is expected of you?

You are expected to actively engage in the course throughout the semester. You must come to class prepared by completing all out-of-class assignments. This preparation gives you the knowledge or practice needed to engage in higher levels of learning during the live class sessions. If you are not prepared for the face-to-face sessions, you may struggle to keep pace with the activities occurring in the live sessions, and it is unlikely that you will reach the higher learning goals of the course. Similarly, you are expected to actively participate in the live class. Your participation fosters a rich course experience for you and your peers that facilitates overall mastery of the course objectives.

Communication Guidelines

All course communications should follow UF's Netiquette Guidelines: <https://teach.ufl.edu/wp-content/uploads/2020/04/NetiquetteGuideforOnlineCourses.docx>

Academic Integrity

Students are expected to act in accordance with the University of Florida policy on academic integrity. As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge:

“We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.”

You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied:

“On my honor, I have neither given nor received unauthorized aid in doing this assignment.”

It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For additional information regarding Academic Integrity, please see Student Conduct and Honor Code or the Graduate Student Website for additional details:

<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>

<http://gradschool.ufl.edu/students/introduction.html>

Please remember cheating, lying, misrepresentation, or plagiarism in any form is unacceptable and inexcusable behavior.

Online Faculty Course Evaluation Process

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

On Campus Face-to-Face

We will have face-to-face instructional sessions to accomplish the student learning objectives of this course. In response to COVID-19, the following policies and requirements are in place to maintain your learning environment and to enhance the safety of our in-classroom interactions.

- You are required to wear approved face coverings at all times during class and within buildings. Following and enforcing these policies and requirements are all of our responsibility. Failure to do so will lead to a report to the Office of Student Conduct and Conflict Resolution.
- This course has been assigned a physical classroom with enough capacity to maintain physical distancing (6 feet between individuals) requirements. Please utilize designated seats and maintain appropriate spacing between students. Please do not move desks or stations.
- Sanitizing supplies are available in the classroom if you wish to wipe down your desks prior to sitting down and at the end of the class.
- Follow your instructor's guidance on how to enter and exit the classroom. Practice physical distancing to the extent possible when entering and exiting the classroom.
- If you are experiencing COVID-19 symptoms (<https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>), please use the UF Health screening system (<https://coronavirus.ufhealth.org/screen-test-protect/covid-19-exposure-and-symptoms-who-do-i-call-if/>) and follow the instructions on whether you are able to attend class.
 - Course materials will be provided to you with an excused absence, and you will be given a reasonable amount of time to make up work (<https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>).

Online Synchronous Sessions:

Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

Policy Related to Guests Attending Class:

Only registered students are permitted to attend class. However, we recognize that students who are caretakers may face occasional unexpected challenges creating attendance barriers. Therefore, by exception, a department chair or his or her designee (e.g., instructors) may grant a student permission to bring a guest(s) for a total of two class sessions per semester. This is two sessions total across all courses. No further extensions will be granted. Please note that guests are **not** permitted to attend either cadaver or wet labs. Students are responsible for course material regardless of attendance. For additional information, please review the Classroom Guests of Students policy in its entirety. Link to full policy:

<http://facstaff.php.ufl.edu/services/resourceguide/getstarted.htm>

SUPPORT SERVICES

Accommodations for Students with Disabilities

If you require classroom accommodation because of a disability, it is strongly recommended you register with the Dean of Students Office <http://www.dso.ufl.edu> within the first week of class or as soon as you believe you might be eligible for accommodations. The Dean of Students Office will provide documentation of accommodations to you, which you must then give to me as the instructor of the course to receive accommodations. Please do this as soon as possible after you receive the letter. Students with disabilities should follow this procedure as early as possible in the semester. The College is committed to providing reasonable accommodations to assist students in their coursework.

Counseling and Student Health

Students sometimes experience stress from academic expectations and/or personal and interpersonal issues that may interfere with their academic performance. If you find yourself facing issues that have the potential to or are already negatively affecting your coursework, you are encouraged to talk with an instructor and/or seek help through University resources available to you.

- The Counseling and Wellness Center 352-392-1575 offers a variety of support services such as psychological assessment and intervention and assistance for math and test anxiety. Visit their web site for more information: <http://www.counseling.ufl.edu>. On line and in person assistance is available.
- You Matter We Care website: <http://www.umatter.ufl.edu/>. If you are feeling overwhelmed or stressed, you can reach out for help through the You Matter We Care website, which is staffed by Dean of Students and Counseling Center personnel.
- The Student Health Care Center at Shands is a satellite clinic of the main Student Health Care Center located on Fletcher Drive on campus. Student Health at Shands offers a variety of clinical services. The clinic is located on the second floor of the Dental Tower in the

Health Science Center. For more information, contact the clinic at 392-0627 or check out the web site at: <https://shcc.ufl.edu/>

- Crisis intervention is always available 24/7 from:
Alachua County Crisis Center:
(352) 264-6789
<http://www.alachuacounty.us/DEPTS/CSS/CRISISCENTER/Pages/CrisisCenter.aspx>

Do not wait until you reach a crisis to come in and talk with us. We have helped many students through stressful situations impacting their academic performance. You are not alone so do not be afraid to ask for assistance.

Inclusive Learning Environment

Public health and health professions are based on the belief in human dignity and on respect for the individual. As we share our personal beliefs inside or outside of the classroom, it is always with the understanding that we value and respect diversity of background, experience, and opinion, where every individual feels valued. We believe in, and promote, openness and tolerance of differences in ethnicity and culture, and we respect differing personal, spiritual, religious and political values. We further believe that celebrating such diversity enriches the quality of the educational experiences we provide our students and enhances our own personal and professional relationships. We embrace The University of Florida's Non-Discrimination Policy, which reads, "The University shall actively promote equal opportunity policies and practices conforming to laws against discrimination. The University is committed to non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinions or affiliations, genetic information and veteran status as protected under the Vietnam Era Veterans' Readjustment Assistance Act." If you have questions or concerns about your rights and responsibilities for inclusive learning environment, please see your instructor or refer to the Office of Multicultural & Diversity Affairs website: www.multicultural.ufl.edu