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Math 6410 - 1 Ordinary Differential Equations

Aug 3, 2023

Credit Hours: Three

Meeting Time: M, W, F 10:45 - 11:35 am, JWB 308

Zoom: MWF lectures will be held in person and simultaneously zoomed.  
Zoomed sessions will be recorded and made available on Canvas.  
Contact info both for lectures and problem sessions:

Contact information is in the syllabus available through Canvas.

Homepage: <http://www.math.utah.edu/~treiberg/M6418.html>

Canvas Page: <https://utah.instructure.com/courses/890285>

Instructor: Prof. A. Treibergs (he/him/his)  
Campus Office JWB 224, 581 - 8350.  
Office Hours: MWF 11:45 AM - 12:45 PM (tent.) and by appt.

E-mail: [treiberg@math.utah.edu](mailto:treiberg@math.utah.edu)

Prerequisites: Math 5210, its equivalent or consent of instructor.

Main Text: Marcelo Viana and Jose M. Espinar, Differential Equations:  
A Dynamical Systems Approach to Theory and Practice, Graduate  
Studies in mathematics 212, American Mathematical Society,  
Providence, 2021. ISBN 9781470451141 (hardcover);  
ISBN 9781470465407 (paperback); ISBN 9781470465384 (ebook)  
Available via Inclusive Access (Bookshelf tab in Canvas)

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\* COVID INFORMATION

According to the CDC, wearing a mask remains an effective means of preventing infection for both unvaccinated and vaccinated people. Regardless of what someone chooses (mask or no mask), the university seeks to foster a sense of community and asks everyone on campus to be respectful of individual decisions on mask wearing. While Utah law prohibits state universities from requiring COVID-19 vaccinations, all members of the University of Utah community are encouraged to receive a COVID-19 vaccine.

University leadership has urged all faculty, students, and staff to model the vaccination, testing, and masking behaviors we want to see in our campus community. These include:

- Vaccination
- Masking indoors
- If unvaccinated, getting weekly asymptomatic coronavirus testing

#### Vaccination

Get a COVID-19 vaccination if you have not already done so. Vaccination is proving highly effective in preventing severe COVID-19 symptoms, hospitalization and death from coronavirus. Vaccination is the single best way to stop this COVID resurgence in its tracks. Many in the campus community already have gotten vaccinated:

More than 80% of U. employees  
Over 70% of U. students

Visit <http://mychart.med.utah.edu/>, <http://alert.utah.edu/covid/vaccine>, or <http://vaccines.gov/> to schedule your vaccination.

#### Masking

While masks are no longer required outside of Health Sciences facilities, UTA buses and campus shuttles, CDC guidelines now call for everyone to wear face masks indoors.

Check the CDC website periodically for masking updates—  
<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/fully-vaccinated-guidance.html>

Treat masks like seasonal clothing (i.e. during community surges in COVID transmission, masks are strongly encouraged indoors and in close groups outside).

#### Testing

If you are not yet vaccinated, get weekly asymptomatic coronavirus tests. This is a helpful way to protect yourself and those around you because asymptomatic individuals can unknowingly spread the coronavirus to others

Asymptomatic testing centers are open and convenient:

Online scheduling  
Saliva test (no nasal swabs)  
Free to all students returning to campus (required for students in University housing)  
Results often within 24 hours  
Visit [alert.utah.edu/covid/testing](http://alert.utah.edu/covid/testing)

Remember: Students must self-report if they test positive for COVID-19 via this website: <https://coronavirus.utah.edu/>.

Students are encouraged to be vaccinated

- > Vaccination is proving highly effective in preventing severe COVID-19 symptoms, hospitalization, and death from coronavirus.
- > Vaccinations are available to everyone 12 years and older. Appointments open in the U of U Health system for patients as well as additional vaccine providers throughout Utah. For up-to-date campus vaccination information go to: <https://alert.utah.edu/covid/vaccine/>

#### Testing and Exposure

The university will continue to follow guidance from the CDC for testing, contact tracing and exposure management. When an exposure is reported, the contact tracing team will engage and advise next steps. Please note that vaccination status is part of the contact tracing protocol.

Students are encouraged (undergraduate and graduate) to take advantage of university COVID-19 testing services: <https://alert.utah.edu/covid-19-testing/>. Voluntary asymptomatic testing will continue to be available weekly for all members of the campus community. To schedule a COVID-19 test, <https://alert.utah.edu/covid-19-testing/>

- > Reminder: students must self-report if they test positive for COVID-19 via this website: <https://coronavirus.utah.edu/>.
- > If you have been exposed, or are experiencing symptoms, self-report and follow university guidelines for exposure.

<https://coronavirus.utah.edu/wp-content/uploads/sites/2/2020/11/COVID-19-Guidance-for-Suspect-or-Confirmed-Cases-and-Close-Contacts-April-27-2021.pdf>

- > Follow the Exposure Management Guidelines

<https://coronavirus.utah.edu/wp-content/uploads/sites/2/2020/11/Faculty-Response-for-Student-Report-of-COVID-19-V5.pdf>

for responding to and managing student reports of COVID-19 infection—including contact tracing and reporting exposure to college and department leaders

#### A. COURSE DESCRIPTION

Three credits. Prerequisites: "C" or better in MATH 4210 or instructor's consent. This is the first of two graduate courses in differential equations that prepare the student for the written qualifying examinations. Under the new department graduate policy, receiving grades 'A' or 'B+' in this course will count as passing the Written Mathematics Graduate Preliminary Examination in Ordinary Differential Equations. As a result, exams and homework assignments will be rigorously graded.

We shall follow Vianna and Espinar's text covering the behavior of solutions: existence and uniqueness, continuous dependence on data; and dynamical systems. We shall discuss as many applications as we can. Topics include (depending on time):

- Introduction to ODE. Applications. Review of calculus.
- Linear systems and stability.
- Existence, uniqueness and continuity theorems.
- Qualitative theory, Lipunov stability, Limit sets and attractors.
- Applications to physical / biological systems.
  - Charged particle, coupled pendula, planetary motion.
  - Invariant manifolds. Hartman-Grobman theorem.

Planar flows. Poincaré-Bendixon theory.  
Periodic solutions and their stability.  
Sturm-Liouville Theory.  
Bifurcation Theory.  
Chaos.  
Perturbation Methods

## B. COURSE DETAILS

> Course Type: In person.

> Location & Meeting Times:  
JWB 308. M, W, F 10:45 - 11:35 am - - - In person.

> Optional office hours and problem sessions may be conducted via ZOOM.

> Attendance & Punctuality:

It is strongly recommended that students attend class at the scheduled class time. Exams will take place during these times. Since we will strive to encourage class discussion, it is a matter of courtesy to be on time.

> Zoom Broadcast:

There will be a CANVAS page associated to this class. It will be used to post exam scores and grades and to make video material available. You will be able to access the zoom lectures and problem sessions of this class via Canvas.

> COVID-19 Considerations:

Students must self-report if they test positive for COVID-19 via [coronavirus.utah.edu](https://coronavirus.utah.edu).

> Instructional Support Team:

The instructor will grade the weekly homework and exams.

> Course Materials:

Textbook: Marcelo Viana and Jose M. Espinar, *Differential Equations: A Dynamical Systems Approach to Theory and Practice*, Graduate Studies in mathematics 212, American Mathematical Society, Providence, 2021.  
ISBN 9781470451141 (hardcover); ISBN 9781470465407 (paperback);  
ISBN 9781470465384 (ebook) Available via Inclusive Access (Bookshelf tab in Canvas) Course materials other than the textbook will be available on line at the course webpage and in canvas.

> Technical requirements:

Students are expected to be computer literate and Canvas and zoom navigation skills are expected. Knowledge and navigation of canvas and zoom is critical to access all features and resources of this course. It is expected that students log into Zoom for class with audio and video enabled.

A strong internet connection and adequate bandwidth is needed.

Exams will be taken in class at the scheduled times.

Additional software/computing requirements: students will be asked to solve differential equations numerically. It does not matter which software is used, but students should start to familiarize themselves with software. e.g., Maple or Macintosh's Grapher solve ODE systems. Free software SLOPES is available for the ipad.

For technical assistance, review the Canvas Getting Started Guide for Students and/or contact TLT, Knowledge Commons.

> Syllabus subject to change:

This syllabus is meant to serve as an outline and guide for our course. Please note that I may modify it with reasonable notice to you. I may also modify the Course Schedule to accommodate the needs of our class. Any changes will be announced in class and posted on Canvas.

### C. CONTENT OVERVIEW

We shall follow Viana and Espinar's text covering the behavior of solutions: existence and uniqueness, continuous dependence on data; and dynamical systems properties: long time existence, stability theory, Floquet theory, invariant manifolds and bifurcation theory. We shall discuss as many applications as we can. Topics include (depending on time):

Introduction to ODE. Applications. Review of calculus.

Linear systems and stability.

Existence, uniqueness and continuity theorems.

Qualitative theory, Lipunov stability, Limit sets and attractors.

Applications to physical / biological systems. Charged particle, coupled pendula, planets.

Invariant manifolds. Hartman-Grobman theorem.

Planar flows. Poincaré-Bendixon theory.

Periodic solutions and their stability.

Sturm-Liouville Theory.

Bifurcation Theory.

Chaos.

Perturbation Methods

### D. COURSE EXPECTED LEARNING OUTCOMES

At the end of the course the student is expected to master the theorems, methods and applications of

#### Local Theory

Proof of the Local Existence and Uniqueness Theorem for ODE's

Continuation of solutions

Gronwall's Inequality

Dependence of the solution on parameters

Contraction Mapping Principle

#### Linear Equations

Linear systems with constant coefficients

Jordan Normal Forms

Matrix exponential and logarithm, Fundamental Solution

Variation of Parameters Formula

Floquet Theory for periodic equations

Stability  
 Liapunov Stability, Assymptotic Stability of solutions  
 Liapunov Functions  
 Proof of the Linearized Stability for Rest Points  
 Grobman - Hartman Theorem  
 Stable and Center Manifold Theorems

Dynamical Systems  
 Omega limit sets and limit cycles  
 Poincaré-Bendixson Theorem  
 Poincaré Map and stability of periodic orbits

Bifurcation Theory  
 Persistence of periodic orbits  
 Normal forms for saddle-node, transcritical and  
 pitchfork bifurcations  
 Hopf Bifurcation

Perturbation Methods

#### E. COURSE DESIGN

Material will be presented in lectures and read from the text and internet sources. The instructor will lecture and guide discussions during class. Any supplementary materials will also be made available in canvas. All exams for this course will be held in person during class times. Students will prepare written solutions to daily homework.

#### F. EVALUATION METHODS AND GRADING

Homework: To be assigned daily. Assignments will be due in the third class meeting after the assignment.

Exams: Exams will be taken in person during class time.

Midterm: There will be one in-class 50 minute midterm exams on Wed., Oct. 4.

Final Exam: Fri., Dec. 15, 10:30 am - 12:30 pm.

Course grade: The homework will be weighted  $P = 25\% \text{ HW} + 25\% \text{ midterm} + 50\% \text{ final}$ .  
 If percentage of total score is at least P then grade will be

| P   | Grade |
|-----|-------|
| --- | ----- |
| 80% | A     |
| 70& | A-    |
| 60% | B+    |
| 55% | B     |
| 50% | B-    |
| 45% | C+    |
| 40% | C     |
| 35% | C-    |
| 30% | D+    |
| 25% | D     |

#### G. CLASS SCHEDULE & IMPORTANT DATES

Class meets at M, W, F from 10:45 - 11:35 am in person starting August 21

and ending December 6.

Last day to register is Aug. 25. Last day to drop class is Sept. 1. Until Oct. 20 you can withdraw from class with no approval at all. After that date you must petition your dean's office to be allowed to withdraw. Please check the academic calendar for more information pertaining to dropping and withdrawing from a course. Withdrawing from a course and other matters of registration are the student's responsibility.

Exam Dates: There will be one in-class 50 minute midterm exam on Wed. Oct. 4. The final exam is Fri., Dec. 15, 10:30 am - 12:30 pm. The final is at the University scheduled time.

Holidays: There will be no classes on Monday, September 4 (Labor Day). Oct. 8-15 (Fall Break) and November 23 (Thanksgiving Break).

#### H. COMMUNICATION

Clarification which forms of communication and responsibilities of students.

- The course syllabus, homework, and supplementary material such as old solved exams will be posted on the class website

<http://www.math.utah.edu/~treiberg/M6418.html>

The syllabus and course materials will be posted on canvas. Other sensitive materials such as grades and recordings of our meetings will also be available on the course canvas page for Math 6410-001.

<https://utah.instructure.com/courses/890285>

Class announcements will be done via email or through the Canvas Inbox. You will be responsible for any information contained in them as well as the information announced in class.

- It is your responsibility to also regularly check your Umail (make sure you set up forwarding if you do not check it regularly), your Umail is the only way for me to communicate privately with you, there will be occasions during the semester that we may need to reach out to you individually (e.g. regarding a grade or assignment) and it is in your best interest to respond promptly.

- Feel free to contact me by email for questions at

[treiberg@math.utah.edu](mailto:treiberg@math.utah.edu)

This is the only email address that I will respond to. I will do my best to answer emails sent to this address promptly. If you use the canvas Inbox it may take a week for me to respond. I would like to encourage you to email me only if it is something personal that requires individual attention. If instead you have questions about logistics of the class, course material and assignments, and anything else your classmates may wonder as well, please ask me in class.

- I will always do my best to ensure the communication relevant to the course is clear and transparent, it is your responsibility as well to keep yourself updated by regularly checking your university listed email.

- Course Canvas Page: Students are expected to log in and check the course

home page and canvas regularly for posted announcements, assignments and handouts. Zoom meetings will be held through the canvas page.

## I. NETIQUETTE - EXPECTATIONS FOR ONLINE LEARNING ENVIRONMENT

Here are some norms of communications for online settings.

- **Classroom equivalency:** Respectful participation in all aspects of the course will make our time together productive and engaging. Zoom lectures, discussion threads, emails and canvas are all considered equivalent to classrooms and student behavior within those environments shall conform to the student code. Specifically:

- Posting photos or comments that would be off-topic in a classroom are still off-topic in an online posting.
- Disrespectful language and photos are never appropriate.
- Using angry or abusive language is not acceptable, and will be dealt with according to the Student Code. The instructor may remove online postings that are inappropriate.
- Do not use ALL CAPS, except for titles, or overuse certain punctuation marks such as exclamation points and question marks.
- Course e-mails, e-journals, and other online course communications are part of the classroom and as such, are University property and subject to the Student Code. Privacy regarding these communications between correspondents must not be assumed and should be mutually agreed upon in advance, in writing.
  
- Other expectations for online communication (on Discussion Board, Emails, Zoom chat etc.):
  
- **Emails:** When emailing your Instructor and Teaching Team keep a professional tone (e.g. Use a descriptive subject line, avoid "Hey" and always use your professors proper title: Dr. or Prof., Sign your message with your name and return e-mail address. Please consult this page for tips on how to write appropriate professional emails: <https://academicpositions.com/career-advice/how-to-email-a-professor>
- Treat your instructor, teaching team and classmates with respect in email or any other communication.
- Remember that all college level communication should have correct spelling and grammar (this includes discussion boards).
- Avoid slang terms such as "wassup?" and texting abbreviations such as "U" instead of "you"
- Be cautious when using humor or sarcasm as tone is sometimes lost in an email or discussion post and your message might be taken seriously or be offensive to others.
- Be careful with personal information (both yours and others).
  
- **Electronic or equipment failure:** It is your responsibility to maintain your computer and related equipment in order to participate in the online portion of the course. Equipment failures will not be an acceptable excuse for late or absent assignments.
  
- Canvas allows students to change the name that is displayed AND allows them to add their pronouns to their Canvas name. Additionally, students can indicate their pronouns in Zoom.

## J. ASSIGNMENTS, ASSESSMENT & GRADING



Here are some details about course grading.

- The total score is the weighted sum of the midterm, the homework, and the final. Grades will be assigned by the scale above. Note that the estimate of grades computed by Canvas is at best an approximation of your grade.

- The midterms and final will consist of in-class exams.

There will be one midterm exams on Wednesday Oct. 4. This exam is to be completed during the class period. Its total weighting in the final score is 25%.

- Students seeking academic accommodations should contact me and make necessary arrangements before the first exam. Students will have to arrange an alternative with me beforehand if they are unable to take the exam at the scheduled time. Otherwise, except in extraordinary circumstances, no makeup exams will be given.

Homework will be assigned daily. The homework problems will be listed on the class webpage. Students may discuss homework with each other, but are expected to write up assignments on their own. Copying from another student or from the internet is cheating and will be treated as academic misconduct. If you use any reference other than the textbook, you are expected to quote the reference in full and provide a complete citation. Refer to the American Mathematical Society style guide

<https://www.ams.org/publications/authors/AMS-StyleGuide-online.pdf>

or the APA, MLA or Chicago styles recommended by University of Utah Writing Program

<https://writingcenter.utah.edu/writing-resources/index.php>

- The final exam will be held in the normal classroom. It will be given during the final exam period according to the University final exam schedule.

- Students should check their grades and notify me if they notice any mistake. For instance, it is the student's responsibility to ensure the accuracy of all recorded homework, quizzes, online assignments, and exam grades. Also you should keep a record all your graded assignments. If you see any error in your grades on Canvas, reach out to the instructor as soon as possible, or at the latest within two weeks from when the assignment was returned.

Late Assignments/Missed Assignments/Regrading Policies:

- Homework will be due on the third class meeting after the assignment. Incompletes: According to university policy, to be considered for an incomplete, a student must have 20% or less of the course work remaining and be passing the course with a C or better. You must request an incomplete grade and I will consider giving that grade only under exceptional circumstances.

#### K. ACADEMIC CODE OF CONDUCT

Students are encouraged to review the Student Code for the University of Utah: <https://regulations.utah.edu/academics/6-400.php>. In order to ensure that the highest standards of academic conduct are promoted and supported at the University, students must adhere to generally accepted standards of academic honesty, including but not limited to refraining

from cheating, plagiarizing, research misconduct, misrepresenting one's work, and/or inappropriately collaborating. A student who engages in academic misconduct as defined in Part I.B. may be subject to academic sanctions including but not limited to a grade reduction, failing grade, probation, suspension or dismissal from the program or the University, or revocation of the student's degree or certificate. Sanctions may also include community service, a written reprimand, and/or a written statement of misconduct that can be put into an appropriate record maintained for purposes of the profession or discipline for which the student is preparing. Incidents of academic misconduct (e.g. cheating, plagiarizing, misrepresenting one's work, and/or inappropriately collaborating on exams) will be subject to penalty per Section V of Policy 6-400, the Student Code. Incidents of academic dishonesty on homework assignments will result in a minimum penalty of a full letter-grade reduction and up to a failing grade (E) or the course. Incidents of academic dishonesty on exams will result in a minimum penalty of a failing grade (E) for the course, and the incident(s) will be referred to the dean of your major-department college for possible further sanction.). I endorse the Chemistry Department's Code of Conduct at [this link](#)

<https://csme.utah.edu/chemistry-code-of-conduct/>

#### L. ADDITIONAL POLICIES AND RESOURCES

**The Americans with Disabilities Act:** The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability & Access, 162 Olpin Union Building, 801-581-5020. CDA will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in alternative format with prior notification to the Center for Disability & Access.

**Inclusivity Statement:** It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that student's 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. It is my intent to present materials and activities that are respectful of diversity: age, color, disability, gender, gender identity, gender expression, national origin, political affiliation, race, religion, sexual orientation, and veteran status, and other unique identities. gender, sexuality, disability, age, socioeconomic status, ethnicity, race, culture, and other unique identities. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups. In addition, if any of our class meetings conflict with your religious events, please let me know so that we can make arrangements for you.

<https://csme.utah.edu/sample-inclusivity-statements/>

**Discrimination and Harassment:** If you or someone you know has been harassed or assaulted, you are encouraged to report it to the Title IX Coordinator in the Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or Office of the Dean of Students, 270 Union Building, 801-581-7066. To report to the police, contact the Department of Public Safety, 801-585-2677(COPS). Please see Student Bill of Rights, section E

<http://regulations.utah.edu/academics/6-400.php>.

I will listen and believe you if someone is threatening you.

Names/Pronouns. Canvas allows students to change the name that is displayed AND allows them to add their pronouns to their Canvas name. Class rosters are provided to the instructor with the student's legal name as well as "Preferred first name" (if previously entered by you in the Student Profile section of your CIS account, which can be managed at any time). While CIS refers to this as merely a preference, I will honor you by referring to you with the name and pronoun that feels best for you in class or on assignments. Please advise me of any name or pronoun changes so I can help create a learning environment in which you, your name, and your pronoun are respected. If you need any assistance or support, please reach out to the LGBT Resource Center.

[https://lgbt.utah.edu/campus/faculty\\_resources.php](https://lgbt.utah.edu/campus/faculty_resources.php)

English Language Learners. If you are an English language learner, please be aware of several resources on campus that will support you with your language and writing development. These resources include: the Writing Center

<http://writingcenter.utah.edu/>

and the Writing Program

<http://writing-program.utah.edu/>

and the English Language Institute

<http://continue.utah.edu/eli/>

Please let me know if there is any additional support you would like to discuss for this class.

Undocumented Student Support. Immigration is a complex phenomenon with broad impact on those who are directly affected by it, as well as those who are indirectly affected by their relationships with family members, friends, and loved ones. If your immigration status presents obstacles to engaging in specific activities or fulfilling specific course criteria, confidential arrangements may be requested from the Dream Center. Arrangements with the Dream Center will not jeopardize your student status, your financial aid, or any other part of your residence. The Dream Center offers a wide range of resources to support undocumented students (with and without DACA) as well as students from mixed-status families. To learn more, please contact the Dream Center at 801.213.3697 or visit

[dream.utah.edu](http://dream.utah.edu).

Veterans Center. If you are a student veteran, the U of Utah has a Veterans Support Center located in Room 161 in the Olpin Union Building. Hours: M-F 8-5pm. Please visit their website for more information about what support they offer, a list of ongoing events and links to outside resources:

<http://veteranscenter.utah.edu/>

Please also let me know if you need any additional support in this class for any reason.

Student Mental Health Resources. Rates of burnout, anxiety, depression, isolation, and loneliness have noticeably increased during the pandemic. If you need help, reach out for campus mental health resources, including counseling,

trainings and other support. Consider participating in a Mental Health First Aid or other wellness-themed training provided by our Center for Student Wellness and sharing these opportunities with your peers, teaching assistants and department colleagues.

Wellness Statement. Personal concerns such as stress, anxiety, relationship difficulties, depression, cross-cultural differences, etc., can interfere with a student's ability to succeed and thrive at the University of Utah. For helpful resources contact the Center for Student Wellness at 801-581-7776 or

[www.wellness.utah.edu](http://www.wellness.utah.edu)

Student Success Advocates: The mission of Student Success Advocates is to support students in making the most of their University of Utah experience ([ssa.utah.edu](http://ssa.utah.edu)). They can assist with mentoring, resources, etc. Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact a Student Success Advocate for support

<https://asuu.utah.edu/displaced-students>

Faculty seeking an accommodation to teach remotely should contact Human Resources. For courses classified in the schedule as "in-person," faculty must host live classes at the scheduled time in the assigned classroom. They have discretion to determine whether to offer additional modalities: (e.g., live-streaming a class meeting or creating a recording for students to access at home). However, this is not required.

Faculty must accommodate the instructional needs of students who are quarantined or self-isolated due to COVID-19, or who have ADA accommodations. In many if not most cases, a faculty member's regular, pre-COVID-19 approach to accommodating students who miss class or assignments because of an illness will be sufficient. If a student is self-isolated for a longer period of time due from 2020-2021 to accommodate the student. If necessary, faculty may want to consult with the Center for Disability Access (CDA). Each course and each student's circumstance will be different. Please be as open-minded and flexible as is possible and reasonable when students need COVID-19 related accommodations and as you plan your courses and assignments.

Addressing Sexual Misconduct: Title IX makes it clear that violence and harassment based on sex and gender (which includes sexual orientation and gender identity/expression) is a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veteran's status or genetic information. If you or someone you know has been harassed or assaulted on the basis of your sex, including sexual orientation or gender identity/expression, you are encouraged to report it to the University's Title IX Coordinator; Director, Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or to the Office of the Dean of Students, 270 Union Building, 801-581-7066. For support and confidential consultation, contact the Center for Student Wellness, 426 SSB, 801-581-7776. To report to police, contact the Department of Public Safety, 801-585-2677(COPS).

Campus Safety: The University of Utah values the safety of all campus community members. To report suspicious activity or to request a courtesy escort, call campus police at 801-585-COPS (801-585-2677). You will receive important emergency alerts and safety messages regarding campus safety via text message. For more information regarding safety and to view available

training resources, including helpful videos, visit

[safeu.utah.edu](http://safeu.utah.edu)

**University Counseling Center:** The University Counseling Center (UCC) provides developmental, preventive, and therapeutic services and programs that promote the intellectual, emotional, cultural, and social development of University of Utah students. They advocate a philosophy of acceptance, compassion, and support for those they serve, as well as for each other. They aspire to respect cultural, individual and role differences as they continually work toward creating a safe and affirming climate for individuals of all ages, cultures, ethnicities, genders, gender identities, languages, mental and physical abilities, national origins, races, religions, sexual orientations, sizes and socioeconomic statuses.

**Office of the Dean of Students:** The Office of the Dean of Students is dedicated to being a resource to students through support, advocacy, involvement, and accountability. It serves as a support for students facing challenges to their success as students, and assists with the interpretation of University policy and regulations. Please consider reaching out to the Office of Dean of Students for any questions, issues and concerns. 200 South Central Campus Dr., Suite 270. Monday-Friday 8 am-5 pm.