MATH 6342, TOPOLOGY, FALL 2020

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Note from Dr. Climenhaga: The items below marked as "Official university syllabus item" are taken verbatim from University of Houston syllabus language guidance regarding required and recommended syllabus language. This guidance was sent out after I put together the initial syllabus, and there is some duplication between my original syllabus items and the official university items. I believe them to be consistent with each other, but if there is any disagreement, the official university items take precedence over mine.

Syllabus Changes. (Official university syllabus item.)

Due to the changing nature of the COVID-19 pandemic, please note that the instructor may need to make modifications to the course syllabus and may do so at any time. Notice of such changes will be announced as quickly as possible through Blackboard and email.

Prerequisites: Math 4331-4332, Introduction to Real Analysis, or equivalent.

Textbook: J. Munkres, "Topology", 2nd edition, Prentice Hall, 2000. ISBN 0-13-181629-2

Course Description: This course is an introduction to point-set topology: we will study topological spaces, continuous functions, notions of convergence, connectedness, and compactness; separation axioms, Urysohn's lemma, metrizability, and Tietze's extension theorem; quotient spaces; and function spaces. Elementary notions from algebraic topology will be introduced as time permits: homotopies, fundamental group, covering spaces, deck transformations.

Grading: Your final grade will be based on the following components.

- Homework: 40% (due weekly as announced on Blackboard)
- Midterm exam: 30% (date will be announced on Blackboard)
- Final exam: 30% (date will be announced on Blackboard)

What you will need: A computer and internet connection meeting the requirements at https://uh.edu/online/tech/requirements/ as well as the following; see below for more details.

- Blackboard (for homework, discussion forum, gradebook, and important links).
 - Sign in via https://accessuh.uh.edu/login.php
- Microsoft Teams (for lectures, office hours, and any other video chat).
 - Download app; there is a possibility to join video calls in a browser, but it is strongly recommended that you download the app itself.
- A way to capture your homework assignments and exams as a pdf file.
- A microphone and webcam for online virtual proctored exams.

Lectures and office hours:

• Lectures: The lectures for this course will take place from 9:00-9:50am on Mondays, Wednesdays, and Fridays, via Microsoft Teams. A link to the "meeting room" for the lectures can be found in the "Information" section of the Blackboard page for the course. Lectures will be recorded and made available via Microsoft Stream, with links in either Blackboard or Teams.

- Office hours: I will have online office hours through Microsoft Teams; see the "Information" section of the Blackboard page for the link. It is possible that the timing of these will vary through the semester; this will be announced on Blackboard if it happens. Following the link will take you to a Teams "meeting" open to anyone in this course or in my undergraduate ODE course. If you have something to discuss privately with me, use Teams to place a video call (using the "Calls" button at the left-hand side of Teams) during my office hours. Please note that I may not respond immediately if I am currently talking with another student in the office hours meeting, but will respond as soon as I am able. I will not answer video calls outside of my office hours.
- Discussion forums: The Blackboard page for the class has discussion forums where you can ask questions about logistics of the course, details from the video lectures, or the homework assignments. Anything you post here will be visible to all students in the class. You are encouraged to use the homework forum to discuss the homework assignments with each other and to arrange virtual study sessions (through Teams).

Webcams. (Official university syllabus item.)

Access to a webcam is required for students participating remotely in this course. Webcams must be turned on during exams to ensure the academic integrity of exam administration.

Resources for Online Learning. (Official university syllabus item.)

The University of Houston is committed to student success, and provides information to optimize the online learning experience through our Power-On website. Please visit this website for a comprehensive set of resources, tools, and tips including: obtaining access to the internet, AccessUH, and Blackboard; requesting a laptop through the Laptop Loaner Program; using your smartphone as a webcam; and downloading Microsoft Office 365 at no cost. For questions or assistance contact UHOnline@uh.edu.

Synchronous Online Courses. (Official university syllabus item.)

This course is being offered in the Synchronous Online format. Synchronous online class meetings will take place according to the class schedule. There is no face-to-face component to this course. In between synchronous class meetings, there may also be asynchronous activities to complete (e.g., discussion forums and assignments). This course will have a final exam per the University schedule. The exam will be delivered in the synchronous online format, and the specified date and time will be announced during the course. Prior to the exam, descriptive information, such as the number and types of exam questions, resources and collaborations that are allowed and disallowed in the process of completing the exam, and procedures to follow if connectivity or other resource obstacles are encountered during the exam period, may be provided.

Recording of Class. (Official university syllabus item.)

Students may not record all or part of class, livestream all or part of class, or make/distribute screen captures, without advanced written consent of the instructor. If you have or think you may have a disability such that you need to record class-related activities, please contact the Center for Students with DisABILITIES. If you have an accommodation to record class-related activities, those recordings may not be shared with any other student, whether in this course or not, or with any other person or on any other platform. Classes may be recorded by the instructor. Students may use instructor's recordings for their own studying and notetaking. Instructor's recordings are not authorized to be shared with anyone without the prior written approval of the instructor. Failure to comply with requirements regarding recordings will result in a disciplinary referral to the Dean of Students Office and may result in disciplinary action.

Drop/withdraw deadlines: The current version of the university's academic calendar lists the following deadlines: see the calendar itself for official information.

- Wednesday, September 9: Last day to drop a course or withdraw without receiving a grade
- Tuesday, November 3: Last day to drop a course or withdraw with a "W".

Participation and homework: You are expected to regularly attend the live online lectures at the scheduled time and to participate by asking questions about anything I say that is not clear to you. If questions arise after the lecture concludes, you are strongly encouraged to ask them via the discussion forum in Blackboard or during online office hours. I may cover some material in lectures that does not appear in the textbook, and the tests and exams will draw on all material covered in lectures and homework. Homework assignments will be due as announced on Blackboard; you will submit your assignment by uploading a file to Blackboard, which must be in pdf format.

- Other file formats will not be accepted.
- Late homeworks will not be accepted.*

Tests and exams: For online tests you will need to use a "virtual proctoring system" such as Respondus Lockdown Browser or CASA Monitor; details will be announced on Blackboard. (At this time I am still waiting for further guidance from the department before finalizing the details.) All tests must be completed by the announced deadline.*

*Exceptions to these deadline policies may be made per the Student Academic Adjustments/Auxiliary Aids Policy for students with approved CSD accommodations, as well as for students with an official excused absence as recognized by University of Houston in accordance with federal and state law and described at https://uh.edu/provost/policies-resources/student/excused-absence-policy/- to seek such an exception you must contact me promptly, notify me of the situation, and provide me with documentation. This must be done before the due date or test/exam date unless the exception is for an unforeseeable emergency. Even if we discuss the matter verbally, I will also ask you to send me information and documentation by email, in order to keep a written record.

Excused Absence Policy. (Official university syllabus item.)

Regular class attendance, participation, and engagement in coursework are important contributors to student success. Absences may be excused as provided in the University of Houston Undergraduate Excused Absence Policy and Graduate Excused Absence Policy for reasons including: medical illness of student or close relative, death of a close family member, legal or government proceeding that a student is obligated to attend, recognized professional and educational activities where the student is presenting, and University-sponsored activity or athletic competition. Additional policies address absences related to military service, religious holy days, pregnancy and related conditions, and disability.

Religious Holy Days. (Official university syllabus item.)

Students whose religious beliefs prohibit class attendance or the completion of specific assignments on designated dates may obtain an excused absence. To do so, please make a written request for an excused absence and submit it to your instructor as soon as possible, to allow the instructor to make arrangements. For more information, see the Student Handbook. http://catalog.uh.edu/index.php

Announcements and email communications: All course announcements will be made on the Blackboard site, which you are expected to check regularly. Some announcements may also be posted on Teams or sent via email (using the email address recorded in the official class list, which is typically a "@uh.edu" address), but the "Information" page of the Blackboard site will be the official location for all announcements, and you are responsible for being aware of anything that is posted here. Please also note that you are responsible for the content in emails sent to your UH account, regardless if your external (non-UH) email provider filters or blocks them. Emails lost to external

providers shall not be used as a justification to claim faculty are unresponsive, to appeal grades, etc. See http://www.uh.edu/infotech/services/accounts/email/student-email/index.php for further information about your UH email account.

If you need to contact me with a question or concern, you are always welcome to speak to me during my online office hours, or to email me using the address listed at the top of the syllabus to arrange a private discussion. If you email me and do not receive a response within one working day, please resend the email. If you again do not hear from me within one more working day, it is likely that your email is not coming through and you should alert me to the problem in the online office hour or by sending me a message in Blackboard/Teams. It is your responsibility to ensure that I am aware of issues you may have with the course; failure to effectively initiate timely communication is not a valid basis for a grade grievance and cannot be used as such.

UH Email. (Official university syllabus item.)

Email communications related to this course will be sent to your Exchange email account which each University of Houston student receives. The Exchange mail server can be accessed via Outlook, which provides a single location for organizing and managing day-to-day information, from email and calendars to contacts and task lists. Exchange email accounts can be accessed by logging into Office 365 with your Cougarnet credentials or through Access UH. They can also be configured on IOS and Android mobile devices. Additional assistance can be found at the Get Help page.

Other policies: All coursework (assignments, exams, etc.) will be graded within 10 days of when it is submitted; you will receive your grades and any feedback via Blackboard. Any requests for reconsideration of grades on individual pieces of coursework must be made within 15 days of when grades are posted on Blackboard.

If you do not turn in homeworks or take exams, do not drop the class, and your name appears on the final class roll but I have not received any communication from you concerning your inability to participate in the class, you will receive a grade of F at the end of the semester. Thus if for any reason you are unable to participate fully in this online course, it is vital that you contact me as soon as you experience difficulties.

Academic honesty and dishonesty: You are expected to follow the Academic Honesty Policy in the Student Handbook; see https://uh.edu/provost/policies-resources/honesty/. In particular, the following are expected in this course.

- You are permitted and encouraged to work collaboratively with your classmates on homework assignments to discover and understand solutions working together and teaching each other is one of the best ways to fully learn the material. However, the final write-up of the solutions must be in your own words.
- Academic dishonesty on exams includes but is not limited to copying work and using prohibited materials such as notes, calculators, or cell phones. Cheating on tests or exams may result in disciplinary action both in this course and at the department and college levels.
- Exams will be given online using a virtual proctoring service; you will also be asked to sign an academic honesty statement.

Honor Code Statement. (Official university syllabus item)

Students may be asked to sign an honor code statement as part of their submission of any graded work including but not limited to projects, quizzes, and exams: "I understand and agree to abide by the provisions in the University of Houston Graduate Academic Honesty Policy. I understand that academic honesty is taken very seriously and, in the cases of violations, penalties may include suspension or expulsion from the University of Houston."

Special needs: Whenever possible, and in accordance with 504/ADA guidelines, the University of Houston will attempt to provide reasonable academic accommodations to students who request and require them. Please call the Center for Students with DisAbilities (CSD) at 713-743-5400 for more assistance. Do not hesitate to contact me to discuss such concerns/needs.

Counseling and Psychological Services (CAPS). (Official university syllabus item)

CAPS can help students who are having difficulties managing stress, adjusting to college, or feeling sad and hopeless. You can reach CAPS (www.uh.edu/caps) by calling 713-743-5454 during and after business hours for routine appointments or if you or someone you know is in crisis. Also, there is no appointment necessary for the "Let's Talk" program, which is a drop-in consultation service at convenient locations and hours around campus.

(Note: CAPS also has a dedicated website for COVID-19 resources at https://uh.edu/caps/resources/covid-19/)

Helpful Information. (Official university syllabus item)

- COVID-19 Updates: https://uh.edu/covid-19/
- Coogs Care: https://www.uh.edu/dsaes/coogscare/
- Laptop Checkout Requests:
 - https://www.uh.edu/infotech/about/planning/off-campus/index.php#do-you-need-a-laptop
- Health FAQs: https://uh.edu/covid-19/faq/health-wellness-prevention-faqs/
- Student Health Center:
 - $\verb|https://uh.edu/class/english/lcc/current-students/student-health-center/index.| php|$