MTH 327H-001 HONOR ANALYSIS I
FALL 2023 SYLLABUS

Instructor:	Leonid Chekhov
Lectures:	MWF 1:50PM–2:40PM in A326 WH
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Instructor's Office Hours:	M 3:00PM-3:50PM and W 12:40PM-1:30PM in D203 WH and by appointment

Recommended Textbooks. The course will be mostly based on first six chapters of *Principles of Mathematical Analysis*, 3rd ed. by Walter Rudin, McGraw-Hill Inc. ISBN 0-07-054235-X 1976, This textbook is available online, e.g.,: here
Another textbook that you may find useful (and simpler) is the standard Ross' text *Elementary Analysis, The Theory of Calculus* (2nd Edition), Kenneth Ross, Springer, ISBN: 978-1-4614-6270-5 This textbook is available in an electronic format through MSU Libraries at `http://link.springer.com.proxy1.cl.msu.edu/book/10.1007/978-1-4614-6271-2`.

Technology Components.

- **Zoom:** Lectures will be in person, as well as Friday's Laboratory works and presentations. In case of events beyond our control, we may be forced to temporarily switch to zoom lecturing, but hopefully, it will not happen.
- **D2L:** Course material (my lecture notes, still images of blackboard lectures, solutions to HW and tests, etc) will be uploaded to the D2L class page of the course,
- **Gradescope:** Submission and feedback on HW assignments will be via Gradescope.

Submission modality and recommended hardware. The preferred format of submission of your homework assignments is pdf: besides a mere convenience for grading, it provides an opportunity for a grader to insert (sticky notes or handwritten) comments right into your work. Please, arrange your work into a single pdf file (most of modern smartphones have this built-in scan option). It is supposed that the grader will provide an extensive feedback on your work.

Learning Continuity Statement. If a student will unfortunately become unable to attend classes for an extended period of time, note that there is no penalty for missing approximately 25% of the course work (one in-class test out of three and/or 2 HW assignments out of 9). This amounts approximately to missing three weeks of classes. It is however a student responsibility to learn missing material using the textbook and posted course materials. Please, notify your instructor at your

earliest opportunity about your circumstances; exceptions are possible on case-by-case scenario. Note, please, that no student should miss the final exam.

Course Continuity Statement. If your instructor will be required to be absent for an extended period of time and will be unable to perform his functions even remotely, the department will do its best to find a temporary or permanent substitution (most possible the instructor of another course section). In case of severe disruptions of the course delivery, modifications of assessment will be done. For a less severe disruptions it might be possible that 2-3 lectures during the semester will be given online (say, the class on Thanksgivings eve will be possibly online and will be recorded for your convenience).

Course Content. The above textbook (Rudin) is only a guide; actual content of the course may differ substantially from the content of the textbook. I will provide a complete lecture notes for the course material covered in lectures. Note that a substantial part of the course material is relegated to laboratory works and presentations, so the most important part of this course is student's individual and collective work. Delivering of the material will be in accordance with the following scheme: Standard 50m-long lectures on Mondays and Wednesday will be followed on Fridays either by a collective Laboratory work in which students are expected to actively participate or by student presentations.

In-class tests There will be three in-person open-book/open-notes/closed-internet midterms.

An integral part of scientific and, more specifically, mathematical way of thinking is ability to properly express your thoughts and findings for them to be accessible to your peers. Therefore, an important part of the course is learning how to properly present your thoughts. Every student in the class must therefore give a short, 10-15-minute long **presentation** to the class. These presentations will be delivered on Fridays, mostly in the second part of the course. The list of proposed topics will be available after the third week of classes, your preferences for topics will be taken into account when distributing themes among students. Besides points for presentations, students will be assigned points for participation: this includes activities in discussion sessions and discussions following students' presentations and active participation in recitations. Note also that since a part of the course material will be delegated to these presentations; attendance is important! A student who will attend all LabWorks will get 2 points for participation.

A homework will be assigned via Gradescope on a roughly weekly basis; your work will be collected weekly (presumably on Saturday) also via Gradescope. All problems in homework assignments will be original and customized; two lowest scores (including missing assignments) will be dropped from the final score; students who will submit ALL assignments will get 2 points for participation. Points for participation are capped at four, but I hope that students who get all four points will continue with their active participation in the course!

Students are expected to attend lectures and laboratory works and are responsible for all material covered in class and in the homework.

Grade calculation. The components of the course will contribute the following amounts of the final grade:

Homework	21% (seven best; 3% each + bonus problems)
In class exams	45% (15 % each)
Final exam	20%
Presentation	10%
Participation	4%

The grade scale will be no harsher than the following:

4.0	$90 \leq x$
3.5	$85 \leq x < 90$
3.0	$80 \leq x < 85$
2.5	$75 \leq x < 80$
2.0	$70 \leq x < 75$
1.5	$65 \leq x < 70$
1.0	$60 \leq x < 65$
0	$x < 60$

Homework.

- There will be 9-10 assignments collected electronically via Gradescope, due on Saturdays at 5PM, containing exercises on topics covered in the corresponding week.
- You are encouraged to collaborate on homework. However, your submitted solutions should be written independently in your own words.
- Your lowest two (out of a total of 9-10) homework scores will be dropped when determining your final grade. These are to allow for missed assignments and other external factors which may affect your ability to complete homework.
- No late homework will be accepted, instead we will drop homeworks with the lowest scores.
- You may earn up to two bonus points for the problems marked by a star (*). They are difficult problems, often requiring a lot of effort to be solved, and they are optional.

Exams.

- There will be three one-hour long midterm exams and the 2-hour long final exam.
- midterm exams are in-class open-book/open-notes/closed-internet exams;
- The final exam is an open-book exam administered on Wednesday, December 13. No student should miss the final exam.
- Your lowest in-class exam score will be replaced by your final exam score, if this will raise your course grade.
- No make up exams will be given unless for a valid reason which is agreed in advance. Instead, a missing in-class exam will be treated as the lowest score exam and its grade will be replaced by your final exam grade. You should not miss more than one in-class exam.

Important dates.

First class	Monday 8/28
Labor day	– no classes Monday 9/4
First collection of homework	??Saturday 9/10
In-class exam 1	Monday 9/18
In class exam 2	Friday 10/13 (TBC)
Break days	Monday 10/23 - Tuesday 10/24
In class exam 3	Friday 11/17 (TBC)
Holiday – no classes	Thursday 11/23 - Friday 11/24
Final exam	12/13

Accommodations for Students with Disabilities. Michigan State University is committed to providing equal opportunity for participation in all programs, services, and activities. Requests for accommodations by persons with disabilities may be made by contacting the Resource Center for Persons with Disabilities at 517-884-RCPD or on the web at rcpd.msu.edu. Once your eligibility for an accommodation has been determined, you will be issued a Verified Individual Services Accommodation ("VISA") form. Please present this form to your instructor at the start of the term and/or two weeks prior to the accommodation date (quiz, exam, etc.). Requests for accommodations with less than two weeks notice may not be granted. Requests for accommodations with less than two days notice typically cannot be granted.

Grief Absence. The Mathematics faculty and staff work hard to be sensitive and to accommodate the bereavement process of a student who has lost a family member or who is experiencing emotional distress from a similar tragedy so that the student is not academically disadvantaged in their class. The Mathematics Department relies on the University's Grief Absence Policy to alert us of when it is appropriate to grant additional accommodations. According to the University's Grief Absence Policy, it is the responsibility of the student to:

- notify the Associate Dean or designee of their college of the need for a grief absence in a timely manner, but no later than one week from the student's initial knowledge of the situation,
- provide appropriate verification of the grief absence as specified by the Associate Dean, and
- complete all missed work as determined in consultation with the instructor.

It is the responsibility of the Associate Dean or designee to:

- determine with the student the expected period of absence – it is expected that some bereavement processes may be more extensive than others depending on individual circumstances,
- notify the faculty that the student will be absent, and
- receive verification of the authenticity of a grief absence request upon the student's return.