

University of North Texas at Dallas
Fall 2015
SYLLABUS

MATH 5621.090		Mathematical Analysis		3Hrs
Department of	Mathematics and Information Sciences	Division of	Liberal Arts & Life Sciences	
Instructor Name:	<i>Dr. Noureen Khan</i>			
Office Location:	223 DAL2			
Office Phone:	972 338 1567			
Email Address:	noureen.khan@unt.edu			
Office Hours:	Monday & Wednesday 11: 30 am - 2: 30 pm VIRTUAL HOURS: Tuesday & Thursday 12:00 pm – 2:00 pm or by appointments.			
Classroom Location:	DAL2 – 213			
Class Meeting:	Monday & Wednesday 5:30 pm – 6:50 pm			
Course Catalog Description:	This is the second part of a two semesters course in Introduction to Mathematical Analysis. Topics include: real number system; sequences and series; limit and differentiation, the Riemann integral, sequences of functions, elementary metric space theory including compactness, connectedness and completeness, complex analytic functions, Cauchy's theorem, the Taylor and Laurent series, residues, and Contour integrals.			
Prerequisites:	Admission to M.Ed. program or consent of instructor			
Required Text:	<ul style="list-style-type: none"> • Introduction to mathematical analysis by Wieslaw Krawcewicz A copy will be provided in class. 			
Reference Books	<ul style="list-style-type: none"> • Edward D. Gaughan, Introduction to analysis, Brooks/Cole Publishing Co., 1993. • Walter Rudin, Principles of mathematical analysis, McGraw-Hill, ISBN-13: 978-0070542358 			
Campus Library and Bookstore	UNT Dallas Library: phone: (972) 780-3625 UNT Dallas Bookstore: phone: (972) 780-3652			

Course Evaluation Methods:

This course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course.

Homework – Assigned and collected **weekly**

Quizzes – Weekly short quizzes

Exams – **Two** Midterm Exams

Project – Research Paper

Final Exam – Comprehensive Final Exam

Home Work – As a general rule, homework will be assigned in every class meeting, however, only “**assigned**” problems will be collected for grades on every Monday before class starts.

Reading – The reading is fundamental component for this course. You are expected to read the assigned section before coming to class.

Instrument	Value	Points	Percentages %
Homework	10 Assignments	50	10
Quizzes	Weekly Quiz	125	25
Exams	Two Midterm Exams	150	30
Class Project	Poster Presentation	50	10
Final Exam	Comprehensive Final Exam	125	25
Total:		500	100

Grade Determination:

Grade	Points	Percentage %
A	450 or more	90 or better
B	400 – 449	80 – 89
C	350 – 399	70 – 79
D	300 – 349	60 – 69
F	299 or less	less than 60

Class room Policies:

- *Come prepared!*
- Use of Cell Phones & other Electronic Gadgets (Laptops, IPADS, etc.) other than class related work is prohibited in the classroom.
- Participate in class discussions.
- No texting or talking during lectures.
- Respect and maintain learning environment.

Anyone caught cheating will receive an F for the course. Cheating includes receiving help from anyone or anything that is not allowed on homework, test or final exam.

This schedule is subject to change by instructor at any time.

Monday	TOPICS	Wednesday	TOPICS
Aug. 24	Syllabus & Pre - Test <u>Introduction to Mathematical Analysis</u>	Aug. 26	Introduction to Metric Spaces
Aug. 31	Elements of Point-Set Topology	Sep. 02 Quiz #1	Cantor's Intersection Theorem and Blair's Lemma
Sep. 07	Labor Day	Sep. 09	Limits and Continuity
Sep. 14	Limits and Continuity	Sep. 16 Quiz #2	Compact Sets and Compact Spaces
Sep 21	Compact Sets and Compact Spaces	Sep 23 Quiz #3	Compactness in Euclidean Space
Sep 28	Properties of Real Functions	Sep 30 Quiz #4	Elementary Functions
Oct 05	Review Exam #1	Oct 07	Exam #1
Oct 12	Differentiable Functions	Oct 14 Quiz #5	Higher Derivative
Oct 19	Riemann Integral and Conditions for Integration	Oct 21 Quiz #6	Properties of Definite Integrals
Oct 26	Fundamental Theorem of Integration	Oct 28 Quiz #7	Improper Integrals
Nov 02	Sequences and Series of Functions	Nov 04 Quiz #8	Pointwise Convergence
Nov 09	Uniform Convergence	Nov 11 Quiz #9	Properties of Uniform Convergence
Nov 16	Series of Functions	Nov 18 Quiz #10	Series of Functions
Nov 23	Criteria for Uniform Convergence	Nov 25	Exam #2
Nov 30	Project Presentations	Dec 02	Review Final Exam
12/08/14	NO CLASS	Dec 09	FINAL EXAM (5:00 pm – 7:00 pm)

University Policies and Procedures:

Students with Disabilities (ADA Compliance):

The University of North Texas Dallas faculty is committed to complying with the Americans with Disabilities Act (ADA). Students' with documented disabilities are responsible for informing faculty of their needs for reasonable accommodations and providing written authorized documentation. For more information, you may visit the Office of Disability Accommodation/Student Development Office, DAL 2 Suite 115 or call at 972-338-1779.

Student Evaluation of Teaching Effectiveness Policy:

The Student Evaluation of Teaching Effectiveness (SETE) is a requirement for all organized classes at UNT. This short survey will be made available to you at the end of the semester, providing you a chance to comment on how this class is taught. I am very interested in the feedback I get from students, as I work to continually improve my teaching. I consider the SETE to be an important part of your participation in this class.

Academic Integrity:

Academic integrity is a hallmark of higher education. You are expected to abide by the University's code of conduct and Academic Dishonesty policy. Any person suspected of academic dishonesty (i.e., cheating or plagiarism) will be handled in accordance with the University's policies and procedures. Refer to the Student Code of Conduct at http://www.unt.edu/csrr/student_conduct/index.html for complete provisions of this code.

Bad Weather Policy:

On those days that present severe weather and driving conditions, a decision may be made to close the campus. In case of inclement weather, call UNT Dallas Campuses main voicemail number (972) 780-3600 or search postings on the campus website www.unt.edu/dallas. Students are encouraged to update their Eagle Alert contact information, so they will receive this information automatically.

Attendance and Participation Policy:

*The University attendance policy is in effect for this course. Class attendance and participation is expected because the class is designed as a shared learning experience and because essential information not in the textbook will be discussed in class. The dynamic and intensive nature of this course makes it impossible for students to make-up or to receive credit for missed classes. Attendance and participation in all class meetings is essential to the integration of course material and your ability to demonstrate proficiency. Students are responsible to notify the instructor if they are missing class and for what reason. Students are also responsible to make up any work covered in class. It is recommended that each student coordinate with a student colleague to obtain a copy of the class notes, if they are absent. **Excessive absences (more than 3 classes, with or without excuse) may result in being dropped from the class or receiving an F for the course.***

Diversity/Tolerance Policy:

Students are encouraged to contribute their perspectives and insights to class discussions. However, offensive & inappropriate language (swearing) and remarks offensive to others of particular nationalities, ethnic groups, sexual preferences, religious groups, genders, or other ascribed statuses will not be tolerated. Disruptions which violate the Code of Student Conduct will be referred to the Center for Student Rights and Responsibilities as the instructor deems appropriate.