



Teacher

Dr Neil Course

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Book

The best book for this course is:

- Raymond A. Barnett, Michael R. Ziegler and Karl E. Byleen, *College Mathematics for Business, Economics, Life Sciences, and Social Sciences*, Pearson.

Note: This is *not* a required purchase. Unfortunately it is not currently available in the university library. The second best book is:

- George B. Thomas Jr., Maurice D. Weir and Joel Hass, *Thomas' Calculus*, Pearson.

This book *is* in the library [visit kutuphane.okan.edu.tr and search for “thomas calculus” to find it.]:

Website

You will find course information, handouts, lecture notes, homework questions, exam dates, etc. on my website:

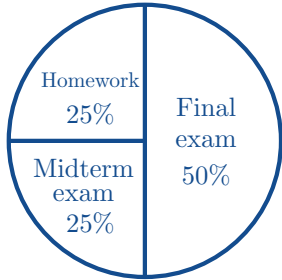
- www.neilcourse.co.uk/math117.html

Differences between studying at school and at university

Unlike at high school, you are now expected to self-direct your studies. At university, in addition to the formal teaching that you receive, you are also expected to study independently. To succeed, you will be expected to complete your own reading and research around topics, to fill in the detail and develop your thinking further. Your lecturers will *not* check that you are studying the correct amount. *You* must decide how much you need to study, how often you should go to the library, how many problems you need to solve, etc. As a general guide, you should expect that for every hour of lectures you receive, you should be spending an additional 1-2 hours studying outside of class.

“The only way to learn mathematics is to do mathematics.” – Paul Halmos (1916–2006)

Contents



This course will be examined with 1 final exam, 1 midterm exam and 8 pieces of homework.

The midterm exam will be held in week 8 or week 9. If you miss the midterm exam due to illness, bereavement, or another valid reason, then you may write to your department to request a makeup (mazaret) midterm exam. The head of the Architecture Department will decide who is allowed to enter a makeup exam. The makeup midterm exam (if there is one) will likely be held in week 13 or 14. Students who entered the midterm exam are not allowed to also enter the makeup midterm exam.

The final exam will be held after the end of term. And then finally there will be a retake (bütünleme) final exam for those students who wish to improve their grades. You should talk with your advisor if you wish to enter the retake final exam.

About the Homework

During the course, there will be homework problems for you to study. Please remember that your answers to the homework problems must be your own work. Plagiarism is not acceptable in higher education: **If you copy another student's homework, or if you allow someone to copy your homework, then you will both receive a mark of zero.**

The purpose of the homework problems is to help you understand the course material. Obviously I can't help you in the exams, but I am always very happy to give hints to you if you are struggling with a particular homework problem. If the weighted average of your exam scores is less than 20% then your homework hasn't helped you and your homework scores will be set to zero.

Office Hour

If you have any questions, you can find me in my office (C333) each

- Thursday, from 12:00 to 12:30.

Alternatively, you can email your questions to me at neil.course@okan.edu.tr . If you do send an email to me, please remember to write either “MATH117” or “Maths for Architecture” somewhere in your email so that I know which course you are asking about.



Week	Topics Covered	Independent Study Expected
Introduction		
1	Symbolic Logic Numbers	
2	Cartesian Coordinates Functions	Read your lecture notes and read the textbook. Solve the problems in the lecture notes.
The Geometry of Space		
3	Polar Coordinates Conic Sections	Read your lecture notes and read the textbook. Solve the problems in the lecture notes. Complete homework 1.
4	Three Dimensional Cartesian Coordinates Vectors	Read your lecture notes and read the textbook. Solve the problems in the lecture notes. Complete homework 2.
5	The Dot Product The Cross Product	Read your lecture notes and read the textbook. Solve the problems in the lecture notes.
6	Lines Planes Projections	Read your lecture notes and read the textbook. Solve the problems in the lecture notes. Complete homework 3.
Graph Theory and Probability		
7	Graph Theory	Read your lecture notes and read the textbook. Solve the problems in the lecture notes. Complete homework 4.
8	Midterm Exam (maybe week 8, maybe week 9.)	
9	Combinatorics	Read your lecture notes and read the textbook. Solve the problems in the lecture notes.
10	Probability	Read your lecture notes and read the textbook. Solve the problems in the lecture notes. Complete homework 5.
Calculus		
11	Limits Continuity Differentiation	Read your lecture notes and read the textbook. Solve the problems in the lecture notes. Complete homework 6.
12	Differentiation Rules Derivatives of Trigonometric Functions The Chain Rule	Read your lecture notes and read the textbook. Solve the problems in the lecture notes.
13	Antiderivatives Integration The Definite Integral	Read your lecture notes and read the textbook. Solve the problems in the lecture notes. Complete homework 7.
14	The Fundamental Theorem of Calculus The Substitution Method Area Between Curves	Read your lecture notes and read the textbook. Solve the problems in the lecture notes. Complete homework 8.