

REAL ANALYSIS

Spring 2006

MATH 311 Syllabus

sec: R@

Instructor: Dr. Hamed Al-Sulami

Office: Math.Dep. 405&458

Office Hrs: S.M.W 11:30-1:30

.S.T. 10-12

Phone:

E-Mail: hhaalsalmi @ kaau.edu.sa

Time and places: 10:00-10:50 S.M.W B40R 201

Prerequisite: MAT 151 or equivalent (a grade of “C” or higher).

Textbook: Introduction to Real Analysis, 3rd Ed. By R. Bartle and D. Sherbert

Grading: The semester grade will be computed from the final exam (40%); one semester tests (20%), and Homework (40%)

Policies: Students are responsible for material covered in class whether or not it is in the text.
Homework will be collected every Saturday.

No late homework will be accepted.

Attendance:

Attendance is mandatory. Anyone who does not miss any lecture throughout the semester will receive 10 extra points.

Math is a not like watching TV. You need to take notes and work out each problem to learn it.

Positive class participation is expected in the form of group and individual work, board work, and cooperative learning. If you are ever absent you are responsible for all material presented in class.

Moreover, it is your responsibility to obtain a copy and understanding of notes and work.

Homework: the class will be divided into groups of five members. Each group will hand in one answer sheet with the names of the group. The homework will be given every Saturday and the group should hand it in the next Saturday. During that week each member of the group has the right to meet with me and discuss one question. After handing in the homework the group will be asked to come to my office to discuss the homework and answer some questions about the materials in that section.

Section	Day
<u>1.2: Mathematical Induction</u>	W:16/1/1427
<u>2.1: The Algebraic and Order Properties of R</u>	S: 19/1/1427
<u>2.2: Absolute Value and Real Line</u>	M:21/1/1427
<u>2.3: The Completeness Property</u>	W: 23/1/1427
<u>2.4: Applications of 2.3</u>	S&M:26,28/1/1427
<u>3.1: Sequences and their limits</u>	W&S: 1,4/2/1427
<u>3.2: Limit Theorems</u>	M:6/2/1427
<u>3.3: Monotone Sequences</u>	W:8/2/1427
<u>3.4: Subsequences and B.W. Theorem</u>	S&M:11,13/2/1427
<u>3.5: The Cauchy Criterion</u>	W&S:15,18/2/1427
<u>3.6: Divergent Sequences</u>	M:20/2/1427
<u>3.7: Series</u>	W&S:22&25/2/1427
<u>11.1: Topology of R</u>	M:27/2/1427
<u>11.2: Compact Sets</u>	W:29 /2/1427
<u>4.1: Limits of Functions</u>	S:3/3/1427
<u>4.2: Limit Theorems</u>	M&W:5,7/3/1427
<u>4.3: Right and left hand limit</u>	S&M:10,12/3/1427
<u>5.1: Continuous Functions</u>	W:14/3/1427
<u>5.2: Combinations of Con. Functions</u>	S:17/3/1427
<u>5.3: Continuous Fun. On Intervals</u>	M&W:19&21/3/1427
<u>5.4: Uniform Continuity</u>	S:24/3/1427
<u>6.1: The Derivative</u>	M&W:26,28/3/1427
<u>6.2: The Mean Value Theorem</u>	S:1/4/1427
<u>7.1: The Riemann Integral</u>	M&W: 3,5/4/1427
<u>7.2: Riemann Integrable Functions</u>	S&M: 8,10/4/1427
<u>7.3: The Fundamental Theorem</u>	W&S: 12,15/4/1427

No late homework will be accepted