

# MATH 4253/5253 Real Analysis, Spring 2018

**Section:** 01      **Hours Credit:** 3 hours

**Room and Hours:** Anthropology Building 7, MWF: 8:50 am – 9:40 am

**Prerequisite:** math 3243 with C or better

**Instructor:** Dr. Kwang Shin

**Office Hours:** MWF (9:50 am -10:50 am and 12:00 pm – 1:20 pm) or by appointment.

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**E-mail:** [kshin@westga.edu](mailto:kshin@westga.edu) through your campus e-mail (myUWG).

**Course Description:** This is an introduction to Lebesgue integral. First, we will review the Riemann integral. Then we will discuss Lebesgue measure, measurable sets, measurable functions, Lebesgue integral and properties of Lebesgue integral.

**Text:** Gail Susan Nelson, *A User-friendly Introduction to Lebesgue Measure and Integration*, American Mathematical Society.

**Learning Outcomes:** Upon successful completion of the course, the student will

1. Be able to understand concepts and properties of Riemann integrals,
2. Be able to understand Lebesgue measure,
3. Be able to understand Lebesgue measurable sets and functions,
4. Be able to understand concepts and properties of Lebesgue integrals, and
5. Be able to understand convergence theorems of Lebesgue integrals.

**Hour Exams:** Exam 1 (Wed, Feb 7), Exam 2 (Fri, Mar 16), Exam 3 (Wed, Apr 25).

**Final Exam:** Monday, May 7, 8:00 am -- 10:00 am. The final exam will be cumulative.

**Homework:** Homework will be assigned almost every week. Homework will be collected for grade. Partial credit will be considered for incomplete work. However, **late submission will receive zero point**. The total homework score will be converted to a 200 point scale at the end of semester.

<b>Grade Scale:</b>	3 hour exams	300 points (100 points each)
	Homework	200 points
	Final	200 points
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	Total	700 points

A: 630 - 700, B: 560 - 629, C: 490 - 559, D: 385 - 489, F: 0 - 384

**February 28** is the last day to withdraw from a class with a grade of W.

**Attendance and Pop-up Quizzes:** Attendance is required and expected. Students are responsible for all material covered in class and all announcements made. An undetermined number of pop-up quizzes may be given for extra points. Such a quiz will consist of one problem, discussed during the same class. *It will*

*count as absent if you are not present when the attendance is checked. Attendance can be used for bonus points at the end.* If you have no absence, you will get 10 bonus points and for each additional absence, you will get 3 points less. For example, if you miss 4 classes in total, you will get 10 minus 12, resulting -2 points and if you miss 5 classes, you will get -5 points. These absences exclude absences due to official university activities if approved by the instructor in advance or well-documented illness.

**Make-up:** In general, make-up exams will *not* be given *after* the scheduled exam date. There will be no make-up final except when a conflict with other finals occurs. If a conflict occurs to you, please inform the instructor at least two weeks in advance. Make-up hour exams will be granted for official university activities if the student notifies the instructor at least a week in advance and for well-documented illness.

**Classroom Behavior:** You are expected not to disturb your classmate's learning. No phone or computer use during class without instructor's permission.

Also, please carefully review the following information at <https://www.westga.edu/UWGSyllabusPolicies/> or <https://www.westga.edu/administration/vpaa/common-language-course-syllabi.php>. It contains important material pertaining to your rights and responsibilities in this class. Because these statements are updated as federal, state, university, and accreditation standards change, you should review the information each semester.