

Math 592 Applied Harmonic Analysis

Fall 2009

Instructor: Dr. Mark Lammers lammersm@uncw.edu
250 Bear Hall <http://people.uncw.edu/lammersm/>

Office Hours: MTW 10-11 (Subject to change. Check webpage)

Course Objective: Be able to apply techniques from Harmonic Analysis, Linear Algebra and Statistics to signals processing.

Course Topics:

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| Spectral theory | Principal Component analysis |
| Wavelets and Time scale analysis | Frames and Time Frequency analysis |
| Compression and Sparsity | Analog to Digital conversion |

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| Grading: 2 Tests | 200 points |
| Final Exam | 100 points* |
| Collected Assignments | 100 points |
| Quizzes | 50 points |
| Total | 450 points |

* If the score of your final exam is higher than the score of any of your tests I will replace the lowest test score the score on your final.

Collected Assignments There will be four to five assignments that will be collected and graded throughout the semester. These assignments may include applications requiring Matlab.

Quizzes There will be five very short quizzes on basic concepts covered. They will be announced and you will be able to use Matlab to do them.

Grading will be done on the standard 90 – 80 – 70 – 60 scale with plus/and minus being assigned in borderline cases. The instructor reserves the right to lower these percentages but will never raise them. (i.e. may lower B to 78% never raise it to 82%).

Important dates Final exam.- 2/4 3:00-6:00 Last day to drop W 11/10

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Academic Dishonesty: Just say NO.

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