ELE 539 **Analog Integrated Circuit Design** **Fall 2009**

Class: MW 8:00-9:15 Kelley 203

Instructor: Godi Fischer, Professor, K214, e-mail: fischer@ele.uri.edu

Office Hours: M 2:00-4:00, W 2:00-4:00

Texts: David A. Johns, Ken Martin: Analog Integrated Circuits.
John Wiley, 1997. ISBN 0-471-14448-7

P.R. Gray, P.J. Hurst, S.H. Lewis, R.G. Meyer: Analysis and Design of Analog Integrated Circuits. John Wiley, 2009, ISBN 978-0-470-24599-6

Syllabus:
1. IC Devices and Device Modeling (Chapter 1, Johns/Martin)
2. IC Processing (Chapter 2)
3. Basic Current Mirrors and Gain Stages (Chapter 3)
4. Noise Analysis (Chapter 4)
5. Operational Amplifiers (Chapters 5 & 6)
6. Comparators (Chapter 7)
7. Voltage References (Chapter 8)
8. Continuous-Time Filters (Chapter 11)
9. Discrete-Time Filter (Chapters 9 & 10)
10. Nyquist-Rate Converters (Chapter 12 & 13)
11. Oversampled Converters (Chapter 14)

Exams:
1. **W 10-14-09**, 75 min, 2-page summary
2. **W 11-16-09**, 75 min, 3-page summary
3. **Final**: **F 12-21-09**, 8-11am, 4-page summary

Project:
In addition to the three exams, each student has to complete a design project in the area of analog integrated circuits. Completion of the project requires a written report and an oral presentation.

Grading:
The final grade will be computed as a weighted average of the 2 intermediate exams (17.5% each), homework (5%), 2 mini projects (5% each) the final exam (30%) and a design project (report 12%, oral presentation 8%).