COURSE SYLLABUS
EE221 RF Integrated Circuit Design

Spring 2010
Dept. of Electrical Engineering
University of California, Riverside

Instructor: Prof. Albert Wang
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Office Hours: Wednesday 3:00pm-5:00pm
Web: http://www.ee.ucr.edu/~aw

Course Objective: Essentials of contemporary RF CMOS integrated circuit analysis and design.

Lecture
M, 3:10pm-6:00pm, 121 Engineering II

Group Discussion
M, 6:10-7pm, 415 EBUII

Prerequisites: EE100A/B, Senior & Graduate standing and Instructor Permit


Other References:
• Other reference materials to be provided.

Exam: Exam: 5/17, M
Project: Course Design Project in Teams of Two + in-class presentation
Grades: Exam: 60% + HW: 5% + Project: 35%

Topical Outlines & Schedule
(Subject to modification upon progresses)

<table>
<thead>
<tr>
<th>Weeks</th>
<th>Date</th>
<th>Lecture Contents</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>3/29</td>
<td>Passive/active IC devices, Passive RLC network, Distributed systems, Smith chart, Bandwidth estimation, RF amplifier design, Voltage reference &amp; biasing, Noise, LNA design, Mixers, RF power amplifiers, Feedback systems, Phase-locked loop, Oscillator, Synthesizer, etc.</td>
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<tr>
<td>2</td>
<td>4/5</td>
<td>All student are required to attend the 2nd ISRS-UCR on Friday, 4/2, at 10:30am-1pm.</td>
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<td>3</td>
<td>4/12</td>
<td>Required: IEEE Seminar &amp; ISRF-UCR on 4/2</td>
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<td>4</td>
<td>4/19</td>
<td>Project Assignment</td>
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<td>5</td>
<td>4/26</td>
<td>Exam</td>
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<td>6</td>
<td>5/3</td>
<td>Project presentation, 5/27, TH</td>
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<td>7</td>
<td>5/10</td>
<td>Memorial Day</td>
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<tr>
<td>8</td>
<td>5/17</td>
<td>Final week</td>
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