**Course Approval Form**

(Saved)

<table>
<thead>
<tr>
<th>Coll./Schl./Div.:</th>
<th>College of Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dept./Comm./Prog.:</td>
<td>Electrical Engineering</td>
</tr>
<tr>
<td>Action:</td>
<td>NEW</td>
</tr>
<tr>
<td>Course Level:</td>
<td>Undergraduate Course</td>
</tr>
<tr>
<td>Course Type:</td>
<td>Standard Course</td>
</tr>
<tr>
<td>Effective:</td>
<td>Fall 2013</td>
</tr>
<tr>
<td>Offered once only:</td>
<td>No</td>
</tr>
<tr>
<td>Offered summer sessions only:</td>
<td>No</td>
</tr>
<tr>
<td>Quarter(s) Offered:</td>
<td>Fall, Winter</td>
</tr>
<tr>
<td>Last Approved Form</td>
<td>(Submitted: )</td>
</tr>
<tr>
<td>Effective:</td>
<td></td>
</tr>
<tr>
<td>Notes:</td>
<td></td>
</tr>
</tbody>
</table>

### Proposed

<table>
<thead>
<tr>
<th>Course Number:</th>
<th>EE 003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renumbered From:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Title:</th>
<th>Smartphones, Tablets, and Wireless Networks: Understanding Electronics and Information Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-Z Segment Title:</td>
<td></td>
</tr>
<tr>
<td>Units:</td>
<td>4</td>
</tr>
<tr>
<td>Activity(ies):</td>
<td>Lecture, 3 hours per week (group activity)</td>
</tr>
<tr>
<td></td>
<td>Discussion, 1 hour per week (group activity)</td>
</tr>
</tbody>
</table>

| Prerequisite(s):      |                                                                                               |

<table>
<thead>
<tr>
<th>Description:</th>
<th>Introduces basic concepts and system level understanding of electronic products and systems, wireless communications and networking, industrial control and robotics that are necessary for citizens and leaders in the information age. Uses smartphones, tablets, computers, WiFi and cellular networks, robotics and autonomous vehicles as examples. Technical background not required.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grading</td>
<td></td>
</tr>
</tbody>
</table>
Type: Letter Grade or Satisfactory/No Credit (S/NC); no petition required
In Progress: No
Statement: 
Repeatable: No
Maximum Units:
Statement: 
Cross-listed With: 
Credit Statement: 

If repeatable, may be taken more than once per quarter: No

Breadth Statement:

Instructor(s): Associate Professor Ping Liang

Justification:
Nowadays, people's work and daily life depend on a wide range of electronic products. To function effectively in the information world, non-engineering students need to gain a high level understanding of electronic products and systems, networking and information technology. This is especially true for future leaders.

Correspondence:

Overlaps/Duplicates Other Courses: No
Affects Programs: No
Affects Prerequisites/Descriptions: No

Syllabus:
EE 003: Smartphones, Tablets, and Wireless Networks: Understanding Electronics and Information Technology
Fall and Winter 2013

Credits and Contact Hours
4.0 Units

Textbook and Related Materials
Specific Course Information

A. Course Description (Catalog description)
Introduces basic concepts and system level understanding of electronic products and systems, wireless communications and networking, industrial control and robotics that are necessary for citizens and leaders in the information age. Uses smartphones, tablets, computers, Wifi and cellular networks, robotics and autonomous vehicles as examples. Technical background not required.

B. Prerequisite(s)
None

C. List of Topics
Week 1: Why you should understand electronics and electronic concepts
Week 2: The Systems versus Components View of Electronics
Week 3: Electronic Circuits - Linear/Analog
Week 4: Electronic Circuits - Digital
Week 5: How Tablets and Computers Work
Week 6: Radio waves and wireless communication systems
Week 7: Cellular networks and smartphones
Week 8: Networking: personal area network, LAN, WLAN/Wifi, wide area network, Internet
Week 9: Audio and Video Technology: from MP3 to HDTV
Week 10: Industrial Control, robotics and autonomous vehicles

Approvals:
Department/Committee/Program Faculty:
Submitted by
Department/Committee/Program Chair:
Reviewed by Courses Specialist:
Reviewed by Dean of
College/School/Division:

Executive Committee
College of Engineering:
College of Humanities, Arts, and Social Sciences:
College of Natural and Agricultural Sciences:
Division of Biomedical Sciences:
Graduate School of Education:
Graduate School of Management:
University Honors Program:

Dean of the Graduate Division:
Graduate Council:

Committee on Courses: