### Guidelines for Course Selection for M.S. Students in the Electrical & Computer Engineering Department

<table>
<thead>
<tr>
<th>Depth Area</th>
<th>Undergraduate Preparation</th>
<th>Core Course Plan A (Thesis)</th>
<th>Core Course(s) Plan B (Project)</th>
<th>Depth Courses</th>
</tr>
</thead>
</table>
EE 641: RF Wireless Systems  
EE 650: Modern Comm Thy  
EE 652: Prin & Apps of Info Thy  
EE 653: Coding Theory |
| Electromagnetic Systems         | EE 440: Electromagnetic Waves | EE 602: Stochastic Systems | EE 540: Microwave Design  
EE 602: Stochastic Systems     | EE 534: Solid State Devices  
EE 540: Microwave Design  
EE 631: RF Electronic Ckts  
EE 634: RF Circuit Design  
EE 641: RF Wireless Systems  
EE 645: Antennas & Propagation  
EE 674: Sig. and Power Integrity |
| Computer Networks                | EE 410: Signals and Systems | EE 602: Stochastic Systems | EE 602: Stochastic Systems  
CompE 560: Computer & Data Networks  
CompE 565: Multimedia Comm  
EE 660: High Speed Nets  
EE 662: Wireless Sensor Nets  
EE 665: Multimedia Networks |
EE 602: Stochastic Systems     | CompE 565: Multimedia Comm  
EE 556: Digital Signal Proc  
EE 654: Adaptive Algorithms  
EE 657: Digital Image Proc  
EE 658: Advanced DSP |
CompE 572: VLSI Ckt Design  
EE 530: Analog Integ. Ckt Design  
EE 600: VLSI Testing  
EE 634: RF Circuit Design  
EE 670: ASIC Design  
EE 672: VLSI System Design  
EE 674: Sig. and Power Integrity |
| Embedded Systems                 | EE 410: Signals and Systems  
CompE 571: Embedded Operating Sys.  
EE 522: Digital Control Systems  
EE 556: Digital Signal Proc  
EE 662: Wireless Sensor Nets  
EE 672: VLSI System Design |
| Energy Systems and Control      | EE 480: Power Systems  
EE 581: Power Systems Dynamics  
EE 584: Power Electronics  
EE 596: Renewable Energy Systems  
EE 600: Advanced Power Electronics |
Instructions

These guidelines provide a roadmap for students in either Plan A or Plan B. Before meeting with the ECE Department Graduate Advisor, a classified student should prepare a Program of Study using these guidelines in selecting the courses to be declared for the degree program. The Program of Study should follow the guidelines given below:

General Comments

- Core courses must be taken in the first semester of the program.
- No more than four (4) 500 level courses are accepted for the graduate program.
- Plan A students must take 6 units of EE799 and EE799A under the supervision of a professor as the thesis advisor. The thesis will be taken according to the rules of the Graduate and Research Affairs.
- Plan B students must take EE798 (Project) under the supervision of a professor as the project advisor. The project will be evaluated and approved by two professors including the project advisor in a 30 minute presentation session.
- Students are allowed to take two courses from outside the ECE Department, with the approval of their thesis or project advisor and the Graduate Advisor. If students change thesis or project advisor, these non-ECE courses may not be used as part of their Program of Study.
- Plan B students are encouraged to enroll in the project (EE798) after completing 21 units (as early as the third semester) but they must take it after completing 27 units.
- Plan B students must submit their POS when they take EE798 (Project).
- EE797 and EE799A&B cannot be used in Plan B. If students switch from Plan A to Plan B, they need to remove EE797 and EE799A&B from their POS and take 6 units of regular courses and 3 units of EE798, with the approval of the project advisor and the Graduate Advisor.
- International students can go for CPT after completing 18 units. They need to maintain a GPA of 3.0 or better to qualify for the CPT. They cannot work more than 20 hours per week in a semester in which they have classes and the location of their work must be within the driving distance of SDSU.
Plan A Students: Total of 30 units

- Declare a depth area.
- Take four (4) courses in the depth area including the core course. (12 units).
- Take two breadth courses: (6 units).
- Take one course either from the depth area or as a breadth course. (3 units).
- Register for six units of EE797 (research) and three units of EE799A (thesis): (9 units).
- Credit is not given for EE798 for Plan A students.
- Submit the POS to the department signed by the Thesis Advisor.

Plan B Students: Total of 30 units

- Declare a depth area.
- Take six (6) courses in the depth area including the core course(s). (18 units).
- Take three breadth courses: (9 units).
- Take EE798 (Project) advised by the project advisor. (3 units).
- Submit the POS to the department signed by the Project Advisor.

All courses and depth areas listed are subject to the State of California and university funding and therefore may not always be available. Please contact the ECE Department for more information.

List of the Professors in Each Area of Specialization

Communication Systems: Dr. Madhu Gupta, Dr. Santosh Nagaraj, Dr. Duy Nguyen
Electromagnetic Systems: Dr. Madhu Gupta, Dr. Ege Engin, Dr. Satish Sharma
Computer Networks: Dr. Sunil Kumar, Dr. Yusuf Ozturk, Dr. Christopher Paolini, Dr. Mahasweta Sarkar
Signal Processing: Dr. Ashkan Ashrafi, Dr. Sunil Kumar
VLSI Systems: Dr. Amir Alimohammad, Dr. Ege Engin, Dr. Ke Huang, Dr. Ying-Khai Teh
Embedded Systems: Dr. Baris Aksanli, Dr. Yusuf Ozturk, Dr. Hakan Toreyin
Energy Systems and Control: Dr. Chris Mi, Dr. Reza Sabzehgar, Dr. Saeed Manshadi, Dr. Sridhar Seshagiri, Dr. Lal Tummala
Graduate Courses Tentatively Offered in Fall and Spring Semesters

**IMPORTANT NOTE:** This is just a tentative schedule and is intended to help students plan their Program of Study ahead of time. The courses and the semesters are subject to change without prior notice. **Offering of the courses is also contingent upon the availability of the instructors.**

<table>
<thead>
<tr>
<th>Fall Semesters</th>
<th>Spring Semesters</th>
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<tbody>
<tr>
<td>EE502 Electronic Devices Rehab</td>
<td>EE534 Solid State Devices</td>
</tr>
<tr>
<td>EE503 Biomedical Instrumentation</td>
<td>EE530 Analog Integrated Circuit Design</td>
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<tr>
<td>EE522 Digital Control Systems</td>
<td>EE540 Microwave Devices and Systems</td>
</tr>
<tr>
<td>EE540 Microwave Devices and Systems</td>
<td>EE556 Digital Signal Processing</td>
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<tr>
<td>EE556 Digital Signal Processing</td>
<td>EE581 Power System Dynamics</td>
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<tr>
<td>EE558 Digital Communications</td>
<td>EE600 Advanced Power Electronics</td>
</tr>
<tr>
<td>EE584 Power Electronics</td>
<td>EE600 Digital ASIC Design</td>
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<tr>
<td>EE596 Renewable Energy Smart Grid</td>
<td>EE600 VLSI Testing</td>
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<tr>
<td>EE601 Linear Sys Theory &amp; Design</td>
<td>EE602 Stochastic Signals &amp; Systems</td>
</tr>
<tr>
<td>EE602 Stochastic Signals &amp; Systems</td>
<td>EE634 RF Circuit Design</td>
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<tr>
<td>EE631 RF Electronics Circuits</td>
<td>EE641 RF Wireless Systems</td>
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<tr>
<td>EE645 Antennas and Propagation</td>
<td>EE650 Modern Communication Theory I</td>
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<tr>
<td>EE654 Adaptive Algorithms</td>
<td>EE652 Principles &amp; App of Information Theory</td>
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<tr>
<td>EE657 Digital Image Processing</td>
<td>EE653 Coding Theory</td>
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<tr>
<td>EE662 Wireless Sensor Networks</td>
<td>EE658 Advanced Digital Signal Process</td>
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<tr>
<td>EE672 VLSI System Design</td>
<td>EE660 High Speed Net Design</td>
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<tr>
<td>EE674 Signal and Power Integrity</td>
<td>EE665 Multimedia Wireless Networks</td>
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<tr>
<td>COMPE560 Computer and Data Networks</td>
<td>EE685 MEMS Design and Applications</td>
</tr>
<tr>
<td>COMPE565 Multimedia Communication Systems</td>
<td>COMPE560 Computer and Data Networks</td>
</tr>
<tr>
<td>COMPE572 VLSI Circuit Design</td>
<td>COMPE561 Database and Web Programming</td>
</tr>
<tr>
<td>COMPE571 Embedded Operating System</td>
<td>COMPE565 Multimedia Communication Systems</td>
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