# Master of Science (M.S.) – Thesis Program

## Electrical and Computer Engineering Department

### Digital IC Design Track

All master's students must complete a tentative degree plan approved by the adviser no later than the second quarter of residence at PSU. **NOTE:** all changes must be initialed and dated by both the student and the adviser. All Pre-admission and Transfer credits MUST be approved by both the ECE Department and the Office of Graduate Studies via DARS exceptions. Use the columns on the right to indicate (P) Pre-admission (taken at PSU before formal admission) and (T) Transfer credits (taken at another institution). Master's students may apply no more than three credits of ECE 507 Graduate Seminar toward degree elective requirements. Courses with a grade of C+ or lower can be used toward elective requirements only with advisor approval.

| | TERM | GRADE | Credits | P | T |
|---|---|---|---|---|---|
| **Grad School Essentials – Complete 2 credits** | | | | | |
| ECE 563 Grad School Essentials I | | | | | |
| ECE 564 Grad School Essentials II | | | | | |
| **Core – Complete 20 credits** | | | | | |
| ECE 525 Digital Integrated Circuit Design I | | | | | |
| ECE 526 Digital Integrated Circuit Design II | | | | | |
| ECE 530 Physical Design of Digital Integrated Circuits | | | | | |
| ECE 581 ASIC Modeling and Synthesis | | | | | |
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| ECE 527 High-Performance Digital Systems | | | | | |
| ECE 540 System on a Chip Design with FPGAs | | | | | |
| ECE 544 Embedded System Design with FPGAs | | | | | |
| ECE 560 Assertion Based Verification | | | | | |
| ECE 571 Introduction to System Verilog for Design and Verification | | | | | |
| ECE 582 Formal Verification of HW/SW Systems | | | | | |
| ECE 585 Microprocessors System Design | | | | | |
| ECE 586 Computer Architecture | | | | | |
| ECE 587 Advanced Computer Architecture I | | | | | |
| ECE 588 Advanced Computer Architecture II | | | | | |
| ECE 510 16nm FinFET IoT SoC Design and Fabrication | | | | | |
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| **Thesis – Complete 9 credits** | | | | | |
| ECE 503 Thesis | | | | | |
| ECE 503 Thesis | | | | | |
| ECE 503 Thesis | | | | | |
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| **Electives – Complete 14 credits** | | | | | |
| Write in course number and name | | | | | |
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| | | **TOTAL CREDITS:** | | | |

Notes: _____

Email: _____ ID#: _____

Student Name: _____ Signature: _____
(Last) ( First)

Adviser: _____ Signature: _____
(Last) ( First)

Date:

**ECE Graduate Director Signature:** _____ _____