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

Electrical and Computer Engineering Department

VLSI Physical Design Automation Track

All master's students must complete a tentative degree plan, which is 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 Graduate School. Use the columns on the right to indicate approved (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, and 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 516 IC Technologies					
ECE 528 VLSI-Computer-Aided Design					
ECE 529 CAD for ULSI an Emerging Technologies					
ECE 583 Low Power IC Design					
ECE 515 Fundamentals of Semiconductor Devices					
ECE 525 Digital Integrated Circuit Design I					
ECE 526 Digital Integrated Circuit Design II					
ECE 527 High Performance Digital Systems					
ECE 540 System on a Chip Design with FPGAs					
ECE 544 Embedded System Design with FPGAs					
ECE 571 Intro to System Verilog for Design and Verification					
ECE 572 Advanced Logic Synthesis					
ECE 581 ASIC Modeling and Synthesis					
ECE 582 Formal Verification of Hardware/Software Systems					
ECE 584 Foundations of Cyber-Physical Systems					
ECE 586 Computer Architecture					
ECE 587 Advanced Computer Architecture I					
ECE 590 Digital Design Using Hardware Desc. Languages					
ECE 593 Fundamentals of Pre-Silicon Validation					
ECE 597 Post-Silicon Electrical Validation					
EE 516 Mathematical Foundations of Machine Learning					
EE 519 Deep Learning Theory and Practice					
Thesis – Complete 9 credits					
ECE 503 Thesis					
ECE 503 Thesis					
ECE 503 Thesis					
Electives – Complete 14 credits					
		TOTAL CREDITS:			

Notes: _____

Email: _____ ID#: _____

Student Name: _____ Signature: _____

(Last) (First)

Adviser: _____ Signature: _____

(Last) (First)

ECE Graduate Director Signature: _____ Date: _____