

Electrical Engineering Graduate Program

Microwave, Antenna and Photonic Systems (MAPS)

Concentration Degree Plan

5-20-2019

Name: _____ Student number: _____

An ECE graduate student interested in a Master's Degree with a concentration in Microwave, Antenna and Photonic Systems (MAPS) must submit this concentration degree program plan to the ECE office, according to the deadlines listed on the information page on the back of this form. Your academic advisor must approve and sign this form prior to submission. See the information page on the back for a discussion on establishing your academic advisor. Any changes to your degree plan can be made by submitting an updated form with the approval of your academic advisor. Please list in the section provide below the Area (including Track), Breadth and Independent Study & Thesis courses in the order in which you plan to take them, making note of prerequisites. See the course lists on the back of this form.

ECE office phone: 610-519-4970.

Semester	Year	Course	Name	Prerequisite	C	MA	A	B	IT
1. F S M	_____	_____	_____.	_____	☐	☐	☐	☐	☐
2. F S M	_____	_____	_____.	_____	☐	☐	☐	☐	☐
3. F S M	_____	_____	_____.	_____	☐	☐	☐	☐	☐
4. F S M	_____	_____	_____.	_____	☐	☐	☐	☐	☐
5. F S M	_____	_____	_____.	_____	☐	☐	☐	☐	☐
6. F S M	_____	_____	_____.	_____	☐	☐	☐	☐	☐
7. F S M	_____	_____	_____.	_____	☐	☐	☐	☐	☐
8. F S M	_____	_____	_____.	_____	☐	☐	☐	☐	☐
9. F S M	_____	_____	_____.	_____	☐	☐	☐	☐	☐
10. F S M	_____	_____	_____.	_____	☐	☐	☐	☐	☐

Total number of courses: _____

☐ Thesis option must be at least	4	1	2	0	3
☐ Nonthesis option without independent study	4	1	2	3	0
☐ Nonthesis option with independent study	4	1	2	2	1

Academic Adviser signature: _____ Date: _____

Abbreviations:

F Fall semester	MA Math course requirement
S Spring semester	A Area course electives
M Summer semester	B Breadth course electives
C Core course requirements	IT Independent study and Theses

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Information Page:

Core Courses: Introduction to Photonics (ECE8562), Microwave Theory and Techniques I (ECE8670), Microwave Theory and Techniques II (ECE8671), and Antenna Theory I (ECE8675)

Area Courses: RFIC Design (ECE8566), Optoelectronic Devices and Circuits (ECE8568), Antenna Theory II (ECE8676), Optical Communications (ECE8760), and Engineering Math* (ECE8001)

Breadth Courses: should be selected to complement MAPS core and area courses such that your degree supports your professional interests

* Math Course: Engineering Math (ECE8001); Math course is required for students entering the program in Fall 2019 or later. For students who entered the program before Fall 2019, an area or a breadth course may substitute for the math requirement upon approval of one of the academic advisors listed below.

Academic Advisor: Each student who selects the MAPS concentration must work with his/her academic advisor (for a research assistants his/her research advisor) to prepare and submit an approved degree plan. The academic advisor must be a full time faculty member who teaches courses in the MAPS area. Dr. Robert Caverly is the default Academic Advisor for the MAPS concentration. Any student interested in the MAPS concentration is encouraged to meet with him until he/she has established a permanent academic advisor.

Full time ECE faculty who regularly serve as academic advisors for the MAPS concentration are:

<u>Name</u>	<u>Telephone</u>	<u>E-mail</u>	<u>Office</u>
Robert Caverly	5660	robert.caverly@villanova.edu	T433
Ahmad Hoorfar	7223	ahmad.hoorfar@villanova.edu	T434
Rosalind Wynne	6294	rosalind.wynne@villanova.edu	T429

Concentration Requirements: The degree plan must meet general departmental requirements for graduation, and the specific MAPS concentration requirements detailed above and on the MAPS concentration Web page, which is accessed as follows: go to

<http://www1.villanova.edu/villanova/engineering/departments/ece/graduate/masters-ee.html>

and select the "Microwave, Antenna and Photonic Systems" link.

Additional courses should be selected to complement those above and to support your professional interests. [Please refer to the following hyperlinks.](#)

Complete list of courses by semester

<https://www1.villanova.edu/villanova/engineering/departments/ece/graduate/masters-ee/courseschedule.html>

Course offering history

http://www1.villanova.edu/villanova/engineering/resources/catalog/courses/grad_ece.html

The following are **deadlines** for the MAPS concentration degree plan submission:

- ✓ full time students -before registering for their first semester;
- ✓ part time students –before registering for their first semester;
- ✓ 5 year BS/MS students -before registering for fall semester senior year.