



## **Antenna Theory & Design I, ECE-8675 (FALL 2020)**

### **Topics and Schedule:**

<b><u>Topics</u></b>	<b><u>No. of classes</u></b>
Introduction; Review of Maxwell's Equations	1
Antenna Fundamentals	2
Wire and Loop Antennas	2
Antenna Radiation above Ground	0.5
Antenna Arrays: Analysis & Synthesis	3
Computer modeling of Wire Antennas using Moment Method	1
Impedance Concept and Mutual Coupling	1
Broadband and Freq. Indep. Antennas	1
Impedance Matching of Antennas	1
Mobile/Wireless Communication Antennas	0.5

## **Antenna Theory & Design II, ECE-8676 (Spring 2021)**

<b><u>Topics</u></b>	<b><u>No. of Classes (tentative)</u></b>
Theory of Radiation From Apertures and Slots	1
Horn and Waveguide Antennas	1.5
Spectral-Domain Method; Dielectric Covered Apertures	1
Physical Optics and Geometrical Theory of Diffraction	1.5
Microstrip and Printed Antennas and Arrays	3
Numerical Modeling of Printed and Conformal Antennas	1
Metamaterial and EBG Surfaces for Printed Antennas	1
Reflector Antennas	2
Antenna Measurement Techniques	1
Smart Antennas	1

### **Villanova Disabilities Statement:**

It is the policy of Villanova to make reasonable academic accommodations for qualified individuals with disabilities. If you are a person with a disability (non-physical) please register with the Learning Support Office by contacting [Learning.support.services@villanova.edu](mailto:Learning.support.services@villanova.edu) or 610-519-5176 as soon as possible. Registration is needed in order to receive accommodations.

The Office of Disability Services collaborates with students, faculty, staff, and community members to create diverse learning environments that are usable, equitable, inclusive and sustainable. The ODS provides Villanova University students with physical disabilities the necessary support to successfully complete their education and participate in activities available to all students. If you have a diagnosed disability and plan to utilize academic accommodations, please contact Gregory Hannah, advisor to students with disabilities at 610-519-3209 or visit the office on the second floor of the Connelly Center.

### **Academic Integrity**

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The College of Engineering is committed to creating an environment of academic integrity and ethical decision-making that we hope is reflected in the actions of our students and graduates. As Villanova students, integrity is central to the University mission. As engineers, our code of conduct requires us to place honor and integrity at the forefront of everything we do. As engineering students, it is expected that you will begin to adopt these values and instill them into your work habits. Students violating the academic integrity policy will receive a zero on that assignment or exam and the violation will be reported to the Associate Dean for Academic Affairs.

The University's academic integrity policy can be found here:

<https://www1.villanova.edu/villanova/provost/resources/student/policies/integrity.html>.

The College of Engineering has adopted the following exam guidelines:

- Students must arrive before the start of the exam. Under exceptional circumstances a student may need to arrive late, but he/she can enter the exam no later than 5 minutes after the start of the exam.
- All cell phones must be turned off and stored away until the student exits the exam room.
- The official Villanova class attendance policy must be followed when requesting excuses for absences or lateness to an exam.
- Each student must **write and sign** the following statement, *"I have neither given nor received any unauthorized assistance in the completion of this exam."*