

Course Content

Course Title (English)	Electromagnetic Compatibility
Course Title (Chinese)	電磁相容
Credit	3
Instructor	Prof. Tzong-Ling Wu 吳宗霖 教授
Outline	<p>In recent years, the industries and academics have promoted significant progress in miniaturization of digital circuits and expansion of the operation frequencies. At the same time, wireless communication technologies grow rapidly and have been introduced to various applications. Therefore, electromagnetic compatibility or EMC issue due to the radiation or near-field interferences of various electronic devices has become a serious problem in circuit and system design. In this course, we will introduce the theory as well as the techniques for EMC design and measurement. The objectives of this course include,</p> <ol style="list-style-type: none">1. Introduction for EMC2. Transmission Lines and Signal Integrity3. Antennas for EMC4. Signal Spectral and Radiated Emission5. Radiated Susceptibility and Conducted Emission6. Cross talk and Differential Signals7. Shielding8. ESD9. EMC Design for Power Delivery Network
Goal	<ol style="list-style-type: none">1. The lectures will introduce the fundamentals of EMC.

	<p>2. The lectures will deliver basic concepts to students about the antenna and circuit design with good immunity to interferences.</p> <p>3. Through the assignments, students will be urged to implement and validate some simulation and measurement techniques.</p> <p>4. A final presentation for assigned EMC issues will be conducted to train students the ability of independent thinking and systematic expression.</p>
English Teaching	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Teaching Material	<input checked="" type="checkbox"/> English <input type="checkbox"/> Chinese