Course Content	
Course Title (English)	Nonlinear Optics
Course Title (Chinese)	非線性光學
Credit	3
Instructor	Prof. Chi-Kuang Sun 孫啟光 教授
Outline	1. Maxwell's equations and the description of nonlinear processes. 2. Nonlinear polarization, coupled wave equations, phase matching, and propagation. 3. EO effect and nonlinear frequency generation. 4. Third order optical nonlinearities. 5. The quantum mechanical description of nonlinear phenomena. 6. The two level atom, density matrix theory, perturbation theory, and double-Feynman diagram. 7. Applications of nonlinear optical techniques for experimental measurement including Raman spectroscopy, photon echoes, and time-resolved spectroscopy.
Goal	提供非線性光學現象與應用的基本理論基礎
English Teaching	☐ YES ■ NO
Teaching Material	■ English ☐ Chinese