

Course Content

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| Course Title (English) | Computational Electromagnetics |
| Course Title (Chinese) | 數值電磁學 |
| Credit | 3 |
| Instructor | Prof. Chen Shih-Yuan 陳士元 教授 |
| Outline | <ol style="list-style-type: none">1. Overview of Computational Electromagnetics (CEM)2. One-Dimensional Finite Difference Time Domain (FDTD) Method3. Two- and Three-Dimensional FDTD Methods4. One-Dimensional Method of Moments (MoM)5. Method of Moments for Surface Modeling6. Finite Element Method (FEM) <p>本課程將深入淺出介紹目前在數值電磁領域中，最普遍被使用的三大方法，包含時域有限差分法 (FDTD)、動差法 (MoM)與有限元素法 (FEM)。除了基本理論外，本課程亦穿插介紹目前常見的套裝電磁模擬軟體，如 CST、XFDTD、NEC、IE3D、HFSS 等之使用及其異同，並與理論相互印證。</p> <p>https://ceiba.ntu.edu.tw/1022CEM</p> |
| Goal | <p>The goal of this course is to familiarize students with the theoretic basics, limitations, pros and cons, and applications of the big three in CEM, namely the FDTD, MoM, and FEM.</p> <p>透過修習本課程，同學們將瞭解數值電磁方法的極限及其應用，並能正確使用套裝電磁模擬軟體、判斷分析其結果之準確度。</p> |
| English Teaching | <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO |

Teaching
Material



English



Chinese