

大學部教育目標：

1. **專業知識** - 傳授基礎及專業知識，並培養分析、設計、規劃、應用、與解決問題及進一步研究深造的能力

Teach students both fundamental and professional knowledge and develop their competence for analysis, for design, for planning, for implementation, for problem-solving and for further research.

2. **團隊合作** - 訓練團隊合作精神，加強協調溝通能力

Train students to develop their team spirit and to enhance their coordination and communication skills.

3. **專業倫理** - 啟發專業倫理，教導社會責任

Inspire students to follow professional ethics and instruct them in bearing social responsibilities.

4. **國際視野** - 培育國際觀與前瞻性

Foster international perspectives and the forward-looking vision.

5. **終身學習** - 培養終身自我學習與創新能力

Cultivate lifelong self-learning habits and the capabilities of innovation.

大學部核心能力：

1. **解決電機工程問題** - 運用數學、科學及工程知識解決電機工程問題的能力

Be able to apply knowledge of math, science and engineering to solving electrical engineering related problems.

2. **解析電機工程數據** - 設計與執行電機工程相關實驗，以及分析與解釋數據的能力

Be able to design and to perform experiments as well as to analyze and to interpret the data.

3. **具備電機實務技巧** - 執行電機工程實務所需技術、技巧及使用工具之能力，能依系統所需規格及目標，應用模擬分析軟體，檢驗、測試與評估系統性能，尋求較佳的可行方案

Be able to exercise professional skills into practice, to find better solutions based on the required specifications and goals, and to use the simulation and analysis software to examine, to test, and to evaluate the system performance.

4. **元件系統設計能力** - 設計電機工程相關系統、元件或製程之能力

Be able to design electrical engineering related systems, elements, and processes.

5. 團隊合作溝通管理 - 計畫管理、有效溝通與團隊合作並能獨立完成書寫報告及口頭報告的能力

Be able to manage systematically and to communicate efficiently in a team, and be able to accomplish both written and oral reports independently.

6. 發掘解析電機問題 - 發掘、分析及處理電機工程相關問題的能力

Be able to recognize, to analyze and to resolve electrical engineering related problems.

7. 培養永續學習能力 - 認識時事議題，瞭解電機工程技術對環境、社會及全球的影響，並培養持續學習的習慣與能力

Be able to realize how the engineering technologies make an influence on the society as well as on the world, and to cultivate the lifelong learning habits and capabilities.

8. 認識電機專業倫理 - 理解專業倫理、社會責任及重視智慧財產權

Be able to understand the ethical and social responsibilities, and to respect intellectual property rights.

9. 基礎英語溝通能力 - 具有基本英文溝通能力

Be able to communicate in fundamental English skills.

研究所教育目標

1. 強化專業領域之技能知識、拓展電機視野

Strengthen the professional skills and knowledge, and expand the horizons.

2. 開發協調與獨立思考潛能、厚植領導能力

Develop the potentials of coordination and independent thinking, and cultivate the leadership.

3. 勇於創新與尊重智慧財產、落實科技應用

Be undaunted for innovation, respect intellectual properties, and implement the application of technology in practice.

4. 具備人道熱忱並關懷社會、胸懷國際宏圖

Possess the humanity, enthusiasm, and society care as well as the international perspectives.

研究所核心能力

1. 電機專業之養成 - 電機領域之專業知識。

Be able to possess professional knowledge in the field of electrical engineering.

2. 資料蒐集與整合 - 資料蒐集、研讀、整理、策劃、設計、系統整合及執行專題研究之能力

3. 數據分析與組織 - 研究結果分析、詮釋、組織及撰寫專業論文之能力

Be able to analyze and to interpret the results and to write professional papers.

Be able to collect and to analyze data, to design and to integrate systems and to perform the research in particular projects.

4. 獨立與創新思考 - 創新思考及獨立解決問題之能力

Be able to innovate and to solve problems independently.

5. 團隊合作與協調 - 與不同領域人員協調整合團隊合作之能力

Be able to coordinate and to integrate professionals with different expertise into a team.

6. 具備良好國際觀

Be able to have excellent international perspectives.

7. 領導管理規劃力 - 領導、管理及規劃之能力。

Be able to lead, to manage, and to plan.

8. 終身學習與成長 - 終身自我學習成長及應用電機專業技能知識之能力

Be able to develop lifelong self-learning habits, and to apply professional skills into practice.