

電機工程學系碩士班

104 學年度

最低修業年限	一年
應修學分數	24 學分(不含論文研討學分)
應修（應選）課程及符合畢業資格之修課相關規定	<p>(一)於畢業前必須修滿由指導教授認可之專業課程 24 學分(不包括論文研討)。外籍生得選修電機資訊國際碩士學程規劃之英語論文研討。</p> <p>(二)專業必修:6 學分(專業必修科目:甲組 10 選 2,超大型積體電路系統設計、類比積體電路設計、計算機結構、微機電系統技術導論、演算法、功率積體電路設計、通訊系統晶片設計、影像處理、醫學工程、數位信(訊)號處理;乙組 9 選 2,演算法、計算機結構、嵌入式作業系統、計算機網路、排隊理論、機器學習、數位信(訊)號處理、雲端運算、<u>隨機過程</u>,必須皆為本系所所開授之研究所課程;外籍生經由指導教授同意,得選修非本系所所開授之研究所課程作為專業必修科目。</p> <p>(三)專業選修:18 學分,其中 9 學分必須皆為本系所所開授之研究所課程;其餘 9 學分得選修校內與台聯大非暑修研究所課程。</p> <p>(四)至外所選修本系碩博士班未開課程之規定:以研修電機資訊相關課程為限,其餘研究所課程皆須由同學提出專案申請,經指導教授及主任審定。</p> <p>(五)至外所選修本系碩博士班已開課程之規定:因特殊原因(如衝堂),經指導教授及主任之同意並提出有至外所修課之證明,本班即可予以同意。</p> <p>(六)校際選修課程僅限台大及清大非暑修課程,須經指導教授及主任同意後,方可將該課程之學分計入畢業學分。</p> <p>(七)非上述規定之修課課程(如:經營管理-創業與興業家精神或暑修班或教育部核准之學分班等),本班不計入畢業學分。</p>
備註	

Master's Degree of the Department of Electrical and Computer Engineering

Academic Year 104

Minimum Term of Study	One Year
Minimum Credits	24 Credits
Curriculum and Regulations	<ol style="list-style-type: none"> Besides Seminar course in each semester, 24 credits of major field courses are required. International students can take English Seminar course of EECS international graduate program Core courses: 6 credits must consist of core courses offered by ECE Department (as listed in attachment), but International students may register core courses of other departments with admission from advisor to transfer credit. Elective courses: 18 credits are required, 9 credits of which must consist of

	<p>courses offered by ECE Department. The other 9 credits can be acquired from courses in NCTU or University System of Taiwan (excluding courses during summer vacation).</p> <p>4. The student can take elective courses from other departments under the admission from advisor and director of the Institute when</p> <p style="padding-left: 40px;">(a) The EEC related courses but ECE Department does not offer</p> <p style="padding-left: 40px;">(b) The courses that ECE Department has offered but timetable is conflict</p> <p>5. The student select interschool course only at NTU and NTHU (excluding courses during summer vacation).</p> <p>6. Besides the course of the above requirements, the others is not included in the credits required for graduation</p>
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Required Courses List

Group	Mode	Required Courses
I	Two of Ten	VLSI System Design and Application, Analog IC Design, Introduction to Micro Electro Mechanical Systems, Computer Architecture, Algorithms, Power IC Design, Chip Design for Communication Systems, Digital Image Processing, Biomedical Engineering, Digital Signal Processing
II	Two of Nine	Algorithm, Computer Architecture, Embedded Operating Systems, Computer Network, Queuing Theory, Machine Learning, Digital Signal Processing, Cloud Computing Random Process

電機工程學系博士班

104 學年度(104.12 修訂)

最低修業年限	二年
應修學分數	21 學分(不含論文研討學分)
直升博士生 應修學分數	逕博生畢業前至少應修滿含碩士修業期間36學分(不含論文研討)，其中至少24學分必須是本系碩博士班所開之課程。

<p>應修（應選）課程及符合畢業資格之修課相關規定</p>	<p>(一)博一、博二之選課均須經由系主任及指導教授認可。博一至博三學生必須選修論文研討課程。畢業前必須選修論文研討以外由指導教授認可之專業課程至少 21 學分，其中至少 12 學分必須是本系碩博士班所開之課程。外籍生得選修電機資訊國際碩士學程規劃之英語論文研討。丙組學生可修習生醫工程研究所之課程，視同本系碩博士班所開之課程。外籍生經由指導教授同意，得選修非本系碩博士班所開之課程作為專業必修科目。</p> <p>(二)專業必修：9 學分(專業必修科目：甲組 8 選 3，超大型積體電路系統設計、類比積體電路設計、微機電系統技術導論、計算機結構、演算法、數位訊號處理、功率積體電路設計、通訊系統晶片設計；乙組 18 選 3，演算法、計算機結構、嵌入式作業系統、計算機網路、排隊理論、機器學習、數位信(訊)號處理、雲端運算、隨機過程、檢測與估計理論、適應性訊號處理、陣列訊號處理、資料壓縮、語音處理、多媒體通訊、聽語資訊處理、影像處理、小波理論與應用；丙組 9 選 3，Neural and Cardiac Electrophysiology 神經心臟電生理、Neural Prostheses 神經彌補裝置、Introduction to Ultrasound and Its Application 超音波導論與應用、Biomedical Signal Analysis and Modeling 生醫信號分析和模擬、Introduction of Biomedical Engineering Research 醫學工程導論、醫學影像學、影像處理、聽語資訊處理、Human Function Anatomy and Medical Instrument Application 人體結構與功能與臨床及醫療器材)，必須皆為本系所所開授之研究所課程。丙組學生可修習生醫工程研究所之課程，作為專業必修科目。外籍生經由指導教授同意，得選修非本系所所開授之研究所課程作為專業必修科目。</p> <p>(三)至外所選修本系碩博士班已開課程之規定：因特殊原因(如衝堂)，經指導教授及主任之同意並提出有至外所修課之證明，本班即可予以同意。</p> <p>(四)校際選修課程僅限台大及清大非暑修課程，須經指導教授及主任同意後，方可將該課程之學分計入畢業學分。</p> <p>(五)非上述規定之修課課程(如：經營管理-創業與興業家精神或暑修班或教育部核准之學分班等)，本班不計入畢業學分。</p>
<p>備註</p>	

Doctoral Degree of the Department of Electrical and Computer Engineering

Academic Year 104

<p>Minimum Term of Study</p>	<p>Two Year</p>
<p>Minimum Credits</p>	<p>21 credits(besides seminar courses)</p>
<p>Minimum Credits for Students who pursues a doctoral degree directly</p>	<p>A student who pursues a doctoral degree directly shall complete a minimum of 36 credits of which 24 credits are earned from the curriculums of this department's graduate school.</p>

Curriculum Regulations	<p>1. First and second year doctoral students must select their courses under the supervision of their advisors and the director of the institute. First year to third year doctoral students must select Seminar course and Academic Dissertation Research course for every semester. In addition to Seminars and Academic Dissertation Research, all students must complete 21 credits from courses that are approved by their advisors before graduation. Of the 21 credits, 12 credits must be from courses offered by Institute of ECE The student of Group3 can take the course of Institute of Biomedical Engineering ,regarding as the course offered by institute of ECE. International students can take English Seminar course from EECS international graduate program.</p> <p>2. Core courses: 9 credits must consist of core courses offered by Institute of ECE (as listed in attachment).The student of Group3 can take the course of Institute of Biomedical Engineering to be core courses. International student can take courses from other departments as their core courses under the agreement from the advisor.</p> <p>3. The student can take elective courses (with reasons, ex: The course that ECE Department has offered but timetable is conflict) from other departments under the agreement from advisor and director of the Institute.</p> <p>4. <i>The student select interschool courses only at NTU and NTHU (excluding courses during summer vacation) and under the agreement from advisor and director of the Institute.</i></p> <p>5. The courses that cannot followed the above requirements is not counted as the credits required for graduation.</p>
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Required Courses List

Group	Mode	Required Courses
I	Three of Eight	VLSI System Design and Application, Analog IC Design, Introduction to Micro Electro Mechanical Systems, Computer Architecture, Algorithms, Power IC Design, Chip Design for Communication Systems, Digital Signal Processing
II	Three of Eighteen	Algorithm, Computer Architecture, Embedded Operating Systems, Computer Network, Queuing Theory, Machine Learning, Digital Signal Processing, Cloud Computing, Random Process, Detection and Estimation Theory, Adaptive Signal Processing,

		<p>Array Signal Processing, Data Compression, Digital Speech Processing, Multimedia Communications, Auditory and Acoustical Information Process, Image Processing, Wavelets Theory and Applications</p>
III	Three of Nine	<p>1 、 Neural and Cardiac Electrophysiology 2 、 Neural Protheses 3 、 Introduction to Ultrasound and Its Application 4 、 Biomedical Signal Analysis and Modeling 5 、 Introduction of Biomedical Engineering Research 6 、 Medical Imaging 7 、 Image Processing 8 、 Auditory and Acoustical Information Process 9 、 Human Function Anatomy and Medical Instrument Application</p>