

# 人工智慧技術與應用碩士學位學程

109 學年度(109.05 修訂)

(溯及既往，適用 108 學年度入學學生)

最低修業年限	1 年
應修學分數	24 學分：含本學程專業課程至少 15 學分(其中專業必修至少 6 學分)； <b>修業期間應修習 2 學期論文研討(書報討論)。論文研討(書報討論)不計入應修學分數。</b>
應修(應選)課程及符合畢業資格之修課相關規定	<p>專業必修：</p> <ol style="list-style-type: none"> <li>1.機器學習(3 學分)</li> <li>2.深度學習/深度學習與實務(最多採計 3 學分)</li> <li>3.人工智慧(3 學分)</li> <li>4.最佳化理論與應用(3 學分)</li> </ol> <p>專業選修：</p> <ol style="list-style-type: none"> <li>1.檢測與估計/檢測與估計理論(最多採計 3 學分)</li> <li>2.隨機過程/隨機程序(最多採計 3 學分)</li> <li>3.消息理論(3 學分)</li> <li>4.影像處理(3 學分)</li> <li>5.嵌入式作業系統 (3 學分)</li> <li>6.感測與智慧系統(3 學分)</li> <li>7.機器人學(3 學分)</li> <li>8.自主駕駛車技術(3 學分)</li> <li>9.自走式機器人(3 學分)</li> <li>10.機器人視覺(3 學分)</li> <li>11.雲端運算與巨量資料處理(3 學分)</li> <li>12.電腦視覺/應用電腦視覺(最多採計 3 學分)</li> <li>13.計算機結構(3 學分)</li> <li><b>14.自然語言處理(3 學分)</b></li> <li>15.資料探勘(3 學分)</li> <li>16.圖形識別(3 學分)</li> <li>17.深度學習系統與實現(3 學分)</li> </ol>
備註	<ol style="list-style-type: none"> <li>1.依據本校「國立交通大學學術倫理教育課程實施辦法，入學第一學期結束前需至「臺灣學術倫理教育資源中心」平台修習學術倫理課程，並通過課程總測驗達及格標準。未通過總測驗之學生不得申請學位考試。</li> <li>2.專業必修科目必須於本校電機學院或資訊學院修習。</li> <li>3.其他未盡事宜，依據本學程「修業規章」辦理。</li> </ol>

## Graduate Degree Program of Artificial Intelligence

Academic Year 2020

(The amendment in Academic Year 2020 is also applied to students who enrolled in Academic Year 2019.)

Minimum Term of Study	1 year
Minimum Credits	24 credits: Including 15 professional course credits (required courses: at least 6 credits). <b>Thesis discussion (seminar): 2 semesters are required, 0 credit for each semester.</b>
Curriculum and Regulations	<p>Required Courses:</p> <ol style="list-style-type: none"> <li>1. Machine Learning (3 credits)</li> <li>2. Deep Learning/ Deep Learning and Practice (at most 3 credits)</li> <li>3. Artificial Intelligence (3 credits)</li> <li>4. Optimization Theory and Application (3 credits)</li> </ol>

	<p>Elective Courses:</p> <ol style="list-style-type: none"> <li>1. Detection and Estimation/ Detection and Estimation Theory (at most 3 credits)</li> <li>2. Stochastic Processes (3 credits)</li> <li>3. Information Theory (3 credits)</li> <li>4. Image Processing (3 credits)</li> <li>5. Embedded Operating Systems (3 credits)</li> <li>6. Sensing and Intelligent Systems (3 credits)</li> <li>7. Robotics (3 credits)</li> <li>8. Self-Driving Cars (3 credits)</li> <li>9. Mobile Robots (3 credits)</li> <li>10. Robotic Vision (3 credits)</li> <li>11. Cloud Computing and Big Data Analytics (3 credits)</li> <li>12. Computer Vision/Applied Computer Vision (at most 3 credits)</li> <li>13. Computer Architecture (3 credits)</li> <li>14. Natural Language Processing (3 credits)</li> <li>15. Data Mining (3 credits)</li> <li>16. Pattern Recognition (3 credits)</li> <li>17. DL Systems and Inference Realization (3 credits)</li> </ol>
Note	<ol style="list-style-type: none"> <li>1. According to “National Chiao Tung University Academic Ethics Education Program Implementation Rules”: “Students should take courses on the “Center for Taiwan Academic Research Ethics Education” platform and pass the required approval standard for the final test before the end of the first semester after enrollment.”</li> <li>2. Required courses must be taken from classes from the College of Electrical and Computer Engineering or the College of Computer Science, NCTU.</li> <li>3. Matters not covered by this contract shall be settled will be executed in accordance with the “Regulations on Academic Studies for Master Program Students” for the Graduate Degree Program of Artificial Intelligence.</li> </ol>