

國立屏東大學 110學年度第1學期 教學課程綱要

※為保護智慧財產權，請勿非法影印教科書。

課程學分數：3.00(3.00小時)

授課老師：呂欣澤(300582)

必選修：選

開課序號	0189
科目名稱	高等人工智慧 (FAB1203)
科目英文名稱	Advanced Artificial Intelligence
授課語言	英語/全外語授課
主要教學型態	課堂教學&遠距輔助教學
教學目標	Advanced Artificial Intelligence aims: 1. To learn background knowledge of AI. 2. To construct research skills for AI solution development. 3. To practice how to solve the industrial problem by taking AI approach.
課程綱要	Week 1 Opening, Introduction to the Artificial Intelligence Week 2 Introduction to the Artificial Intelligence Week 3 Data preprocessing (PCA) Week 4 Data preprocessing (T-SNE) Week 5 Domain Adaptation (domain adversarial neural network) Week 6 Domain Adaptation (contrastive adaptation network) Week 7 Transformer (bidirectional transformers for language understanding) Week 8 Transformer (generative pre-trained transformer) Week 9 Midterm exam Week 10 Industry Lecturer: a real project from industrial #1 (Tentative: InnoCare Optoelectronics Corp.) Week 11 Industry Lecturer: a real project from industrial #2 (Tentative: InnoCare Optoelectronics Corp.) Week 12 Industry Lecturer: a real project from industrial #3 (Tentative: InnoCare Optoelectronics Corp.) Week 13 Industry Lecturer: a real project from industrial #4 (Tentative: InnoCare Optoelectronics Corp.) Week 14 Industry Lecturer: a real project from industrial #5 (Tentative: InnoCare Optoelectronics Corp.) Week 15 Industry Lecturer: a real project from industrial #6 (Tentative: InnoCare Optoelectronics Corp.) Week 16 Demo day Week 17 Demo day Week 18 Demo day
核心能力	1. 培養理論與實務並重之資訊專業知識 60% 2. 整合系統開發、系統設計及實務應用能力 15% 3. 優質團隊合作、全球化思考及國際視野之能力 10%

	<p>4. 團隊領導與管理能力 0%</p> <p>5. 獨立思考與研究能力 10%</p> <p>6. 科技鑑賞與創新能力 5%</p>
授課方式	
評量方式	<p>1. Homework</p> <p>2. Midterm exam</p> <p>3. One AI solution or agent</p> <p>4. Course engagement</p>
主要讀本	Tailor-made material
參考書目	<p>Russell, Stuart, and Peter Norvig. "Artificial intelligence: a modern approach." (2002).</p> <p>Manaswi, Navin Kumar, Navin Kumar Manaswi, and Suresh John. "Deep Learning with Applications Using Python." (2018).</p>
其他事項	<p>1. IM Group for course notifications: <a href="http://line.me/ti/g/whLAP4GkQK">http://line.me/ti/g/whLAP4GkQK</a></p> <p>2. Once the pandemic of COVID-19, the course will follow the CDC and school instructions to switch the learning activities from offline to online. The preference remote tool is Google Meet, please prepare your G-suit account for emergency use.</p>