

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。

班別：視覺藝術學系一年甲班(CY110)

課程學分數：3.00(3.00小時)

授課老師：李學然(E54684)

必修：必

開課序號	2611
科目名稱	3D繪圖導論(ART2072)
科目英文名稱	Introduction to 3D Graphics
授課語言	英語/全外語授課
主要教學型態	課堂教學
教學目標	The content of this course introduces the operating principles of 3D computer graphics software, including how to control the three-dimensional modeling with vertices, edges, surfaces, and sub-surfaces, the attributes and characteristics of the models, the use of various deformation tools, the various methods of texture mapping, and the classification and attributes of lighting, the method of creating shadows, the attributes of the camera, the interface of programming grammar, the characteristics and usage modes of animation skeletons, the setting interface of 3D animation, the concept of particle effects, the setting interface of 3D graphics, the methods of 3D project management, and so on.
每週課程內容及教學方法	<p>Week 1. 3D animation production process and application areas (On Line)</p> <p>Week 2. Interface of 3D computer graphics software (On Line)</p> <p>Week 3. Animation setting curve path application, and color setting (On Line)</p> <p>Week 4. Basic particle effects and Render setting (On Line)</p> <p>Week 5. Concept of project management</p> <p>Week 6. Outliner for object management</p> <p>Week 7. Simple geometric models</p> <p>Week 8. 3D Fruit Creation</p> <p>Week 9. Freeform surface and NURBS modeling foundation</p> <p>Week 10. Techniques on Texture Mapping</p> <p>Week 11. Polygonal surface and POLYGON modeling foundation</p> <p>Week 12. Research on Skeleton Setting Techniques</p> <p>Week 13. Character controller production</p> <p>Week 14. Research on the effect of animation setting</p> <p>Week 15. Projection mapping technique</p> <p>Week 16. Lighting and Camera</p> <p>Week 17. Particle effects research (On Line)</p> <p>Week 18. Final evaluation of works (On Line)</p>

核心能力	
預期學習成果	Students are required to use a computer as a three-dimensional studio to create a virtual drama model, set up a camera and lighting, set characters, motion, and camera movements, and finally output the finished 3D drawing with computer graphics.
與預期學習成果搭配的多元評量	Participation 20% Biweekly Assignments 60% Final works 20%
主要讀本	Handouts edited by the Instructor
參考書目	Alias Systems Corp. (2017) Learning Maya 2017, Foundation, Alias Systems Corp. Guindon, M.-A. (2007). Learning Autodesk® Maya® 2008 : the special effects handbook. Autodesk, Inc. Kundert-Gibbs, J. L., & Lee, Peter. (2001). Mastering Maya 3. Sybex.
其他事項	<p>1. 本課程針對大一數位組同學開課，請大一造形組同學統一於110-2學期再選修此課程。如果大一數位組同學因額滿無法選課，請先Email通知授課老師ran@mail.nptu.edu.tw，老師確認無誤後將協助同學加選本課程。</p> <p>2. 因應新冠肺炎(COVID-19)疫情，本課程第一週開始採用同步遠距教學。請同學(上課三天前)事先註冊並登入本校「Office 365」進入「微軟Teams」點選「3D繪圖導論」課程團隊，或直接前往本課程連結 https://teams.microsoft.com/l/team/19%3a7ReiKbZ2wS-kh4LKGed0kB01Nc6P7cFH_vdpEhy3q041%40thread.tacv2/conversations?groupId=0e165bd6-eac5-4cc2-bc34-c70de91129a0&tenantId=b467d443-c70e-463e-88bd-991067d94fbb</p> <p>9/11之前未在系統選課的同學不在課程團隊裡，無法進入。想加選的同學，請事先Email通知老師(告知學號與姓名)把你加入課程團隊：ran@mail.nptu.edu.tw</p> <p>本校Office 365帳號登入說明及連結如下： http://faculty.nptu.edu.tw/~hscidf/office365/#點選”授權說明” → ”Office365學生授權及登入說明”</p> <p>※如有Office365帳號及密碼登入相關問題，請洽本校計網中心承辦人員處理 08-7663800 分機：21105 電子郵件：hscidf@mail.nptu.edu.tw</p>