课程教学进度计划表

Teaching Schedule

一、基本信息Basic Information

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| 课程名称  Course Title | 计算机图形技术（双语） Computer Graphics Technology(Bilingual) | | | | |
| 课程代码  Course Code | 2140021 | 课程序号  Course No. | 2783 | 课程学分/学时  Course Credits / Teaching Hour | 2/32 |
| 授课教师 Tutor | 余莉 Li Yu | 教师工号  Teacher ID | 08041 | 专/兼职  Full/Part time | 专职  Full Time |
| 上课班级  Class | 数媒B23-2 Bachelor in Digital Media Technology  B23-2 | 班级人数  class size | 40 | 上课教室 Venue | 计算中心326 Computing Center326 |
| 答疑安排  Q&A Time | 时间：周三1-2，周五3-4 地点: 7-222 电话：68130890 | | | | |
| 课程号/课程网站 | 7558610 / https://my.gench.edu.cn/FAP5.Portal/pc.html?rnd=597943790 | | | | |
| 选用教材  Teaching Materials | 视觉计算基础：计算机视觉、图形学和图像处理的核心概念，阿娣提·玛珠德，机械工业出版社，2019.4  Majumder A , Gopi M . Techniques: Core Concepts in Computer Vision, Graphics, and Image Processing [M]. 2018. | | | | |
| 参考教材与资料  Bibliography | 1、Fundamentals Of Computer Graphics，Steve Marschner，Apple Academic Press，2020.1  2、计算机图形学基础教程(第2版)，孙家广等，清华大学出版社，2009.8  Basic course of computer graphics (2nd Edition), sun Jiaguang et al., Tsinghua University Press, August 2009 | | | | |

二、课程教学进度安排Teaching Schedule

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| --- | --- | --- | --- | --- |
| 课次Time | 课时 Class Hour | 教学内容 Topics | 教学方式 Teaching Methods | 作业 Assignment |
| 1 | 2 | 第1章　数据 Chapter 1 Data | 讲课、边讲边练 Lecture & exercise | OpenCV 图像处理截图 image processing screenshot |
| 2 | 2 | 第2章　技术 Chapter 2 Technologies | 讲课、边讲边练 Lecture & exercise | 第一章测试（数据） Chapter I test (data) |
| 3 | 2 | 第3章 卷积 Chapter 3 Convolution | 讲课、实验 Lecture & exercise | 卷积的截图 Screenshot of convolution |
| 4 | 2 | 第5章 特征检测 Chapter 5 Feature Detection | 讲课、实验 Lecture & exercise | 边缘检测的截图 Screenshot of edge detection |
| 5 | 2 | 第5章 特征检测（2） Chapter 5 Feature Detection (2) | 讲课、实验 Lecture & exercise | 卷积和滤波的测试 Test (convolution, filtering) |
| 6 | 2 | 第4章　谱分析 Chapter 4 Spectral Analysis | 讲课、实验 Lecture & exercise | 谱分析的测试 Test of spectral analysis |
| 7 | 2 | 第6章　几何变换 Chapter 6 Geometric Transformations | 讲课、实验 Lecture & exercise | 线性变换的截图 Screenshot of linear transform |
| 8 | 2 | 实验1 计算机视觉入门 Experiment 1 Introduction to Computer Vision | 实验 Exercise | 实验报告 Lab report |
| 9 | 2 | 第6章 几何变换（2） Chapter 6 Geometric Transformations2 第7章 针孔相机 Chapter 7 The Pinhole Camera | 讲课、实验 Lecture & exercise | 投影变换 Projection transformation |
| 10 | 2 | 第12章　多样化域，计算机图形学概述 Chapter 12 The Diverse Domain, overview of computer graphics | 讲课 Lecture |  |
| 11 | 2 | 第13章　交互性图形流程 Chapter 13 Interactive Graphics Pipeline | 讲课、实验 Lecture & exercise | Tutor/Transform截图 Screenshot of Tutor/Transform |
| 12 | 2 | 第13章　交互性图形流程（2）裁剪、反走样Chapter 13 Interactive Graphics Pipeline (2), Clipping and Anti-aliasing | 讲课、实验 Lecture & exercise | Tutor/projection 截图 Screenshot of Tutor/projection |
| 13 | 2 | 第14章　真实感与性能 光照明模型 Chapter 14 Realism and Performance, Lighting Model | 讲课 Lecture | Tutor/light 截图 Screenshot of Tutor/light |
| 14 | 2 | 第14章　真实感与性能（2）纹理 Chapter 14 Realism and Performance (2), Texture | 讲课、实验 Lecture & exercise | 计算机图形学的测试 Test of computer graphics |
| 15 | 2 | 小组汇报 Team Report | 小组汇报 Team Report | 小组汇报 Team Report |
| 16 | 2 | 第9章 光照 Chapter 9 Lighting 第11章 光度处理 Chapter 11 Photometric Processing | 讲课、实验 Lecture & exercise | 辐射度学、直方图处理 Radiometry, histogram processing |

三、考核方式Course Assessment

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| 总评构成 Grading Computation | 占比  Weightage | 考核方式  Assessment Index |
| X1 | 50% | 个人项目报告 Final Personal Report（2000 words） |
| X2 | 20% | 过程考核：个人作业 Personal Work（800 words） |
| X3 | 20% | 过程考核：小组团队作业 Team Work（1200 words） |
| X4 | 10% | 过程考核：课堂表现、出勤等 Class Performance |

任课教师Signed by Instructor：余莉

系主任审核Signed by Teaching Supervisor：矫桂娥

日期Date：2025年2月