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. | 2772 | 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B23-1Bachelor in Digital Media TechnologyB23-1 | 班级人数class size | 40 | 上课教室Venue | 计算中心326Computing 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 | 1638102 / 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，2019.4Majumder 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，2020.12、计算机图形学基础教程(第2版)，孙家广等，清华大学出版社，2009.8Basic 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