Dongseo University

Division of Computer Engineering

Computer Graphics

Instructor(s): Byung Gook Lee   **Classroom:**
Office: UIT Bldg**.**   **Class Time:**
Phone: 051-320- 1727   **Office Hours:**
Email: lbg@dongseo.ac.kr

Course Description:
This course introduces students to the basic knowledge of computer graphics with OpenGL. OpenGL is the premier environment for developing portable, interactive 2D and 3D graphics applications. Since its introduction in 1992, OpenGL has become the industry's most widely used and supported 2D and 3D graphics application programming interface (API), bringing thousands of applications to a wide variety of computer platforms. OpenGL fosters innovation and speeds application development by incorporating a broad set of rendering, texture mapping, special effects, and other powerful visualization functions. Developers can leverage the power of OpenGL across all popular desktop and workstation platforms, ensuring wide application deployment.

Course Goals & Objectives:
At the conclusion of this course, the successful (passing) student will be able to
1. Use the OpenGL open source API to develop 2D and 3D applications
2. Have a view on Computer Graphics related theories and platforms
3. Write simple algorithms to solve problems based on computer graphic theories

Course Outline:
- Week 1 Introduction to OpenGL
- Week 2 Shader Fundamentals
- Week 3 Basic Color Theory
- Week 4 Viewing Transformations
- Week 5 Textures
- Week 6 Light and Shadow
- Week 7 Geometry Shaders
- Week 8 Mid-Term Week
- Week 9 Introduction to OpenCV
- Week 10 Use of OpenCV library
- Week 11 Basic Image Processing(1)
- Week 12 Basic Image Processing(2)
- Week 13 Computer Vision(1)
- Week 14 Computer Vision(2)
- Week 15 Final Week

Textbook(s)
- Required:
- Recommended:

Class Website: e-Class

Course Assignments & Grading:

- *Exams: 50% (Mid-term Exam 25%, Final Exam 25%)*

- *Quizzes*: 0~10%

- *Course Projects*: 0~20%

- *Assignments*: 0~20%

- *Bonus Credit*: Attendance Points 20%

- *Grading*: A~A+ : 30%, B~B+ : 35%, under C+ : 35%

Grading Policies:
- Late Work: All assignments must be submitted on the due date. Late assignments will not be accepted.
- Make-Ups: There will be make-ups given for any of the assignments of this course.
- Contesting: Grades can be contested during a two-week period from the time that they are announced. After such period has elapsed, grades may not be contested

Course Policies:
- Attendance:
- Academic Misconduct Policy: Any form of cheating will be penalized and may result in failing the course or expulsion from the university.

■ 자유선택(19학점) : 추가의견

학년 학기	이수 구분	교과목 번호	교 과 목 명	강-실- 학	담당교수(예상)
3-1	자유선택		센서및인터페이스 (Sensor and Interface)	2-2-3	알라사렐라
			네트워크보안 (Network Security)	2-2-3	이훈재/이상곤
			리눅스시스템 (Linux System)	2-2-3	강대기
3-2	자유선택		모바일융합 (Mobile Convergence)	2-2-3	이석호
			소프트웨어분석및설계 (Software Analysis and Design)	2-2-3	문미경/엘레나
4-1	자유선택		근거리무선통신프로토콜설계 (Near-Field Communication Protocol Design)	2-2-3	조형국
4-2	자유선택		셀프브랜드설계 2 (Self-Brand Design 2)	1-0-1	엘레나