## Course: CSCI3260  
**Course ID:** 002596  
**Eff Date:** 2022-07-01  
**Crse Status:** Active  
**Apprv. Status:** Approved

### Course Details:

**Principles of Computer Graphics**  
計算機圖形學之原理

This course introduces fundamental computer graphics techniques and algorithms. Topics to be covered include: graphics hardware and interaction devices, transformation of coordination systems, scan conversion algorithms, hidden surface algorithms, illumination models and shading, rendering, texture mapping, computer animation and visualization.

本科介紹電腦圖形學技術之基本原理及演算法，包括坐標系統之變換、掃描變換演算法、隱藏面演算法、光照模型及基本描影、渲染、紋理影射、動畫及視覺化技術。

### Grade Descriptor:

**A**  
EXCELLENT – exceptionally good performance and far exceeding expectation in all or most of the course learning outcomes; demonstration of superior understanding of the subject matter, the ability to analyze problems and apply extensive knowledge, and skillful use of concepts and materials to derive proper solutions.

有關等級說明的資料，請參閱英文版本。

**B**  
GOOD – good performance in all course learning outcomes and exceeding expectation in some of them; demonstration of good understanding of the subject matter and the ability to use proper concepts and materials to solve most of the problems encountered.

有關等級說明的資料，請參閱英文版本。

**C**  
FAIR – adequate performance and meeting expectation in all course learning outcomes; demonstration of adequate understanding of the subject matter and the ability to solve simple problems.

有關等級說明的資料，請參閱英文版本。

**D**  
MARGINAL – performance barely meets the expectation in the essential course learning outcomes; demonstration of partial understanding of the subject matter and the ability to solve simple problems.
有关等級说明的資料，請參閱英文版本。

F

FAILURE - performance does not meet the expectation in the essential course learning outcomes; demonstration of serious deficiencies and the need to retake the course.

有关等級说明的資料，請參閱英文版本。

Equivalent Offering:
Units: 3 (Min) / 3 (Max) / 3 (Acad Progress)
Grading Basis: Graded
Repeat for Credit: N
Multiple Enroll: N
Course Attributes:

Topics:

COURSE OUTCOMES

Learning Outcomes:
1. Be able to understand fundamental graphics concepts and techniques;
2. Be able to transform, represent and display 2D/3D information on computer display;
3. Be able to perform interactive graphics programming in OpenGL;
4. Be able to produce a short animation sequence;

Course Syllabus:
This course introduces fundamental computer graphics techniques and algorithms. Topics to be covered include: graphics hardware and interaction devices, transformation of coordination systems, scan conversion algorithms, hidden surface algorithms, illumination models and shading, rendering, texture mapping, computer animation and visualization.

Assessment Type:
Essay test or exam : 25%
Others : 35%
Short answer test or exam : 40%
Feedback for Evaluation:

1. Mid-term course evaluation
2. Term-end course evaluation
3. Quality of project outcome
4. Students' performance in the midterm exam and final exam

Required Readings:


Recommended Readings:


OFFERINGS

1. CSCI3260  
   Acad Organization=CSD; Acad Career=UG

COMPONENTS

- LEC : Size=30; Final Exam=Y; Contact=3
- TUT : Size=30; Final Exam=N; Contact=1

ENROLMENT REQUIREMENTS

1. CSCI3260  
   Enrollment Requirement Group:
   Prerequisite: CSCI2100 or 2520 or ESTR2102.

   New Enrollment Requirement(s):
   Pre-requisite = no change

CAF

- eLearning hrs for blended cls 0
- No. of micro-modules 0
- Research components (UG) 0%