San Pablo Catholic University (UCSP)
Undergraduate Program in
Computer Science
SILABO

CS351. Topics in Computer Graphics (Elective)

2023-II

1. General information

1.1 School	:	Ciencia de la Computación
1.2 Course	:	CS351. Topics in Computer Graphics
1.3 Semester	:	9^{no} Semestre.
1.4 Prerrequisites	:	CS251. Computer graphics . (7th Sem)
1.5 Type of course	:	Elective
1.6 Learning modality	:	Face to face
1.7 Horas	:	2 HT; 4 HP;
1.8 Credits	:	4
1.9 Plan	:	Plan Curricular 2016

2. Professors

Lecturer

- Erick Gomez Nieto <emgomez@ucsp.edu.pe>
  - PhD in Ciencia de la Computación y Matemática Computacional, Universidad de Sao Paulo - USP, Brasil, 2017.
  - MSc in Ciencia de la Computación, Universidad de Sao Paulo - USP, Brasil, 2012.

3. Course foundation

In this course you can delve into any of the topics Mentioned in the area of Graphics Computing (Graphics and Visual Computing - GV).

This course is designed to perform some advanced course suggested by the ACM / IEEE curriculum. Hughes et al. (2013); Hearn and Baker (1990)

4. Summary

1. Advanced Topics on Computer Graphics

5. Generales Goals

- That the student uses computer techniques Graphs that involve complex data structures and algorithms.

- That the student apply the concepts learned to create an application about a real problem.

- That the student investigate the possibility of creating a new algorithm and / or new technique to solve a real problem

6. Contribution to Outcomes

This discipline contributes to the achievement of the following outcomes:

1) Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions. (**Usage**)

6) Apply computer science theory and software development fundamentals to produce computing-based solutions. (**Usage**)

7. Content

UNIT 1: Advanced Topics on Computer Graphics (0)	
Competences:	
Content	**Generales Goals**
• CS355. Advanced Computer Graphics • CS356. Computer animation • CS313. Geometric Algorithms • CS357. visualization • CS358. Virtual reality • CS359. Genetic algorithms	• Advanced Topics on Computer Graphics
Readings: Soars022S, **Soars022W**, **Soars022T**, **Cambridge06**, **MacGrew99**	

8. Methodology

1. El profesor del curso presentará clases teóricas de los temas señalados en el programa propiciando la intervención de los alumnos.

2. El profesor del curso presentará demostraciones para fundamentar clases teóricas.

3. El profesor y los alumnos realizarán prácticas

4. Los alumnos deberán asistir a clase habiendo leído lo que el profesor va a presentar. De esta manera se facilitará la comprensión y los estudiantes estarán en mejores condiciones de hacer consultas en clase.

9. Assessment Theory Sessions:
The theory sessions are held in master classes with activities including active learning and roleplay to allow students to internalize the concepts.

Practical Sessions:
The practical sessions are held in class where a series of exercises and/or practical concepts are developed through problem solving, problem solving, specific exercises and/or in application contexts.

Evaluation System:
The final grade is obtained through of:

CONTINUOUS ASSESMENT	EVALUATIONS
Continuous assessment 1 : 15 %	**Midterm Exam** : 30 %
Continuous assessment 2 : 15%	**Final Exam** : 40 %
30%	70%

Where:

Continuous Assessment: It includes group work, active participation in class, exercise test.

- Continuos assessment 1 (weeks 1 - 9)
- Continuos assesment 2 (weeks 10 - 17)

To pass the course you must obtain 11.5 or more in the final grade .

References

Hearn, Donald and Pauline Baker (1990). *Computer Graphics in C.* Prentice Hall.
Hughes, John F. et al. (2013). *Computer Graphics - Principles and Practice 3rd Edition.* Addison-Wesley.