

## 1. COURSE

CS351. Topics in Computer Graphics (Elective)

## 2. GENERAL INFORMATION

<b>2.1 Course</b>	:	CS351. Topics in Computer Graphics
<b>2.2 Semester</b>	:	9 <sup>no</sup> Semestre.
<b>2.3 Credits</b>	:	4
<b>2.4 Horas</b>	:	2 HT; 4 HP;
<b>2.5 Duration of the period</b>	:	16 weeks
<b>2.6 Type of course</b>	:	Elective
<b>2.7 Learning modality</b>	:	Blended
<b>2.8 Prerequisites</b>	:	CS251. Computer graphics . (7 <sup>th</sup> Sem) CS251. Computer graphics . (7 <sup>th</sup> Sem)

## 3. PROFESSORS

Meetings after coordination with the professor

## 4. INTRODUCTION TO THE COURSE

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. [Hug+13; HB90]

## 5. 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. COMPETENCES

- 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. TOPICS

Unit 1: Advanced Topics on Computer Graphics (0)	
Competences Expected:	
Topics	Learning Outcomes
<ul style="list-style-type: none"> <li>• CS355. Advanced Computer Graphics</li> <li>• CS356. Computer animation</li> <li>• CS313. Geometric Algorithms</li> <li>• CS357. visualization</li> <li>• CS358. Virtual reality</li> <li>• CS359. Genetic algorithms</li> </ul>	<ul style="list-style-type: none"> <li>• Advanced Topics on Computer Graphics</li> </ul>
<b>Readings :</b> [Soars022S], [Soars022W], [Soars022T], [Cambridge06], [MacGrew99]	

## 8. WORKPLAN

### 8.1 Methodology

Individual and team participation is encouraged to present their ideas, motivating them with additional points in the different stages of the course evaluation.

### 8.2 Theory Sessions

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

### 8.3 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.

## 9. EVALUATION SYSTEM

\*\*\*\*\* EVALUATION MISSING \*\*\*\*\*

## 10. BASIC BIBLIOGRAPHY

[HB90] Donald Hearn and Pauline Baker. *Computer Graphics in C*. Prentice Hall, 1990.

[Hug+13] John F. Hughes et al. *Computer Graphics - Principles and Practice 3rd Edition*. Addison-Wesley, 2013.