



**National University of the Altiplano (UNA)**  
School of Computer Science  
Syllabus 2024-II

**1. COURSE**

CS351. Topics in Computer Graphics (Elective)

**2. GENERAL INFORMATION**

- 2.1 Course** : CS351. Topics in Computer Graphics
- 2.2 Semester** : 9<sup>th</sup> Semester.
- 2.3 Credits** : 4
- 2.4 Horas** : 2 HT; 4 HP;
  
- 2.5 Duration of the period** : 16 weeks
- 2.6 Type of course** : Elective
- 2.7 Learning modality** : Face to face
- 2.8 Prerequisites** : 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. [**Foley13; Hearn90**]

**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**

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

**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