



**Universidad Nacional de Colombia (UNAL) Sede
Manizales
Undergraduate Program in
Information Systems
SILABO**

CS351. Topics in Computer Graphics (Elective)

2022-II

1. General information

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

2. Professors

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
<ul style="list-style-type: none"> • CS355. Advanced Computer Graphics • CS356. Computer animation • CS313. Geometric Algorithms • CS357. visualization • CS358. Virtual reality • CS359. Genetic algorithms 	<ul style="list-style-type: none"> • Advanced Topics on Computer Graphics
Readings: Soars022S, Soars022W, Soars022T, Cambridge06, MacGrew99	

8. Methodology
<p>El profesor del curso presentará clases teóricas de los temas señalados en el programa propiciando la intervención de los alumnos.</p> <p>El profesor del curso presentará demostraciones para fundamentar clases teóricas.</p> <p>El profesor y los alumnos realizarán prácticas</p> <p>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.</p>

9. Assessment
<p>Continuous Assessment 1 : 20 %</p> <p>Partial Exam : 30 %</p> <p>Continuous Assessment 2 : 20 %</p> <p>Final exam : 30 %</p>

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.