Course Name	VIRTUAL REALITY	Course Code	COMP - 563		
Credit Hours	2	Contact Hours	Theory	Lab	Total
			2	-	2
Offered as	☐ University Requirement ☐ College Requirement ☒ Program Requirement ☐ Core ☒ Elective ☐ ITEC ☒ COMP ☐ CNET				
Level	10	Prerequisite	COMP 461		

Course Description:

This course provides basic concepts of system framework and development tools in Virtual Reality. The list of topics covers the basics of Hardware and Software of Virtual Reality, Geometry of Virtual Worlds, Light and Optics, Physiology of Human Vision, Visual Perception of Depth Motion and Color, Visual Rendering and Physics in Real and Virtual World.

Course objectives:

- Understand the basic concept and framework of virtual reality.
- Explain the principles and multidisciplinary features of virtual reality.
- Apply the technology for multimodal user interaction and perception in VR, in particular the visual, audial and haptic interface and behavior.
- Apply the technology for managing large scale VR environment in real time.
- Understand the VR system framework and development tools.

Grading	☒ Exam 1	10%	☒ Exam 2	10%	☒ Assignment(s)	10%
	☒ Final	40%	☒ Lab	20%	☒ Mini Project	10%

Text Book:

- Steven M. LaValle, Virtual Reality: Virtual Reality, Cambridge University Press, 2019.

References:

- George Mather, Foundations of Sensation and Perception: Psychology Press; 2 edition, 2009. ISBN-13: 978-1841696997