Course Name	SOFT COMPUTING	Course Code	COMP – 556		
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	NONE		

Course Description:

This course covers the concepts of Soft Computing. It includes soft and hard computing, characteristics of Soft computing, neural network architectures, fuzzy logic, fuzzy sets, operation on fuzzy sets, genetic algorithm, hybrid systems, and applications of soft computing. Students will use their critical thinking to solve problems.

Upon completion, the student will be able to:

- Discuss the soft computing techniques and their application
- Explain the differences between soft computing and hard computing.
- Analyze various neural network architectures.
- Recognize the definition of fuzzy systems and their uses.
- Understand the genetic algorithm concepts and their applications.
- Select a suitable technique of soft computing to solve problems.

Grading	☒ Exam 1	15%	☒ Exam 2	15%	☒ Assignment(s)	30%
	☒ Final	40%	☐ Lab		☐ Mini Project	

Text Book:

- S.N. SIVANANDAM, S.N. DEEPA, "Principles of Soft Computing", Wiley India, 2nd Edition, ISBN 13: 9788126527410, 2011

References:

- N. K. Sinha and M. M. Gupta, "Soft Computing and Intelligent Systems", ELSEVIER, 1st Edition, ISBN 13: 978-0126464900, 1999
- Timothy J. Ross, "Fuzzy Logic with Engineering Applications" Wiley, 3rd Edition, ISBN 13: 978-0470743768, 2010