Course Name	INTERNET OF THINGS	Course Code	COMP 556		
Credit Hours	3	Contact Hours	Lec	Lab	Total
			2	2	4
Offered as	University Requirement ☐ College Requirement ☐ Program Requirement ☒ Core ☒ Elective ☐ ITEC ☐ COMP ☒ CNET ☐				
Level	10	Prerequisite	Nil		

Course Description:

The Internet of Things (IoT) course will teach you how to program with current and leading IoT technologies for building IoT solutions for Smart Homes, Smart Campus etc., using IoT sensor and devices. Course covers the concept of IoT and will also look at the 'things' that make up the Internet of Things, including how those components are connected together, how they communicate, and how they add value to the data generated. The course will also examine cyber security and privacy issues, and highlight how IoT can optimize processes and improve efficiencies in your business. Course covers how to capture data using sensors, and the basics of analysis and visualization of the data in the cloud and its security.

Upon completion, the student will be able to:

- Understand IoT principles, design and abstraction of developing IoT systems.
- Explain in a concise manner how the general internet as well as Internet of Things works.
- Understand constraints and opportunities of wireless and mobile networks for Internet of Things.
- Use basic measurement tools to determine the real-time performance of packet based networks.
- Analyses trade-offs in interconnected wireless embedded sensor networks.
- Develop on a variety of open source devices and software services.
- Integrate a variety of IoT devices, sensors and services to build complex applications.
- Learn the basics of Raspberry Pi and compatible programming frameworks.
- Present and demonstrate the developed system

Assessment Methods							
	Exam-1 ☒	10%	Exam-2 ☒	10%	Assignments ☒	20%
	Attendance ☐	-	Lab Exam ☒	20%	Final Exam ☒	40%

Text Book:

- Peter Waher, "Learning Internet of Things", Pack Publications, ISBN: 9781783553532, 2015.

References:

- Gaston . Hillar, "Internet of Things with Python", Pack Publications, ISBN: 9781785881381, 2016.