TCET/FRM/IP-02/09 Revision: A

Semester Plan
(Theory)

Semester: VII **Course:** BE-IT

Subject code /Name : ITC 7056 / Ubiquitous Computing (Elective) **Class:** BE-IT-A & B

S.No.	Prerequisite/ Bridge course:	Duration (Week /Hrs)	Modes of Learning	Recommended Sources
1	Virtual reality, Operating Systems, Computer Networks	2 hours	Self Learning/ Revision	**Textbooks:** 1.Learning Virtual Reality: Developing Immersive Experiences and Applications for Desktop, Web, and Mobile 2.Modern Operating Systems by Andrew S. Tanenbaum **3.** Computer Networks by Andrew S. Tanenbaum

Sr. No.	Module No.	Lesson No.	Detailed ContentTopics Planned (Technology to be used)	Teaching Aids Required	Planned /Completion Date	Resource Book Reference	Remarks
Subject Orientation Program							
1	1 to 6	L.1.1	Theory (Syllabus and its mapping with CO,PO and PEOS)	Power point presentation	10/7/2017	___	
2	1 to 6	L.1.2	Practical (List of Experiments and its mapping with CO,PO and PEOS)	Power point presentation, Chalk & Board	13/7/17	___	
3	1 to 6	L.1.3	Outcome Based Education	Power point presentation, Chalk & Board	11/7/2017	___	
Foundation Program (Theory Sessions, Project Based Learning, Core Assigment)							
4	Module 1	L.2.1	Introduction to Ubiquitous Computing	Power point presentation, Chalk & Board	17/7/17	1.8	
5	Module 1	L.2.2	Properties of Ubiquitous Computing,	Power point presentation, Chalk & Board	19/7/17	1.8.2	
6	Module 1	L.2.3	Ubiquitous System Environment Interaction.	Power point presentation, Chalk & Board	20/7/17	1.8.3	
7	Module 1	L.2.4	Architectural Design for UbiCom Systems: Smart DEI Model.	Power point presentation, Chalk & Board	21/7/17	1.8.4	
Theory Sessions							
8	Module 2	L.3.1	Introduction to Smart Devices: Users, Mobiles, Cards	Power point presentation, Chalk & Board	25/7/17	2.8 , 2.8.4	
9	Module 2	L.3.2	Device Networks.	Power point presentation, Chalk & Board	26/7/17	2.8.5	
10	Module 2	L.3.3	Service Architecture Models.	Power point presentation, Chalk & Board	28/7/17	2.8.6	
11	Module 2	L.3.4	Service Provision Life-Cycle.	Power point presentation, Chalk & Board	28/7/17	2.8.7	
12	Module 2	L.4.1	Virtual Machines	Power point presentation, Chalk & Board	01/08/17	2.8.8	
13	Module 2	L.4.2	Operating Systems	Power point presentation, Chalk & Board	02/08/17	2.8.9	
14	Module 2	L.4.3	Mobile Computers	Power point presentation, Chalk & Board	04/08/17	2.8.10	
15	Module 2	L.4.4	Communicator Devices.	Power point presentation, Chalk & Board	04/08/17	2.8.11	
16	Module 3	L.4.5	Tagging the Physical World.	Power point presentation, Chalk & Board	05/08/17	3.9	
17	Module 3	L.6.1	Sensors and Sensor Networks.	Power point presentation, Chalk & Board	08/08/17	3.9.4	
18	Module 3	L.6.2	Micro Actuation and Sensing: Micro- Electro-Mechanical Systems.	Power point presentation, Chalk & Board	09/08/17	3.9.5	
19	Module 3	L.6.3	MEMS	Power point presentation, Chalk & Board	11/08/17	3.9.5.1	

20	Module 3	L.6.4	Embedded Systems and Real-Time Systems.	Power point presentation, Chalk & Board	11/08/17	3.9.6	
21	Module 3	L.7.1	Control Systems for Physical World Tasks.	Power point presentation, Chalk & Board	16/8/17	3.9.7	
22	Module 3	L.7.2	Robots	Power point presentation, Chalk & Board	18/8/17	3.9.8	
23	Module 3	L.7.3	Revision -- 3rd Module	Power point presentation, Chalk & Board	18/8/17	Module 3	
24	Module 4	L.7.4	Introduction to Context-Aware Computing,	Power point presentation, Chalk & Board	19/8/17	4.8	
25	Module 4	L.7.5	Context- Aware Systems,	Power point presentation, Chalk & Board	19/8/17	4.9	
26	Module 4	L.8.1	Context-Aware Applications,	Power point presentation, Chalk & Board	30/8/17	4.9.1	
27	Module 4	L.8.2	Designing Context-Aware Applications,	Power point presentation, Chalk & Board	1/9/2017	4.9.2	
28	Module 4	L.8.3	Implementing Context-Aware Applications,	Power point presentation, Chalk & Board	1/9/2017	4.10	
29	Module 4	L.9.1	Issues for building Context-Aware Applications.	Power point presentation, Chalk & Board	5/9/2017	4.11	
30	Module 4	L.9.2	Issues for building Context-Aware Applications.	Power point presentation, Chalk & Board	6/9/2017	4.11	
31	Module 4	L.9.3	Revision -- 4th Module	Power point presentation, Chalk & Board	8/9/2017	Module 4	
32	Module 5	L.9.4	Human-Computer Interaction	Power point presentation, Chalk & Board	8/9/2017	5.8	
33	Module 5	L.10.1	User Interfaces and Interaction for Four Widely Used Devices.	Power point presentation, Chalk & Board	12/9/2017	5.9	
34	Module 5	L.10.2	Hidden UI Via Basic Smart Devices.	Power point presentation, Chalk & Board	13/9/17	5.10	
35	Module 5	L.10.3	Hidden UI Via Wearable and Implanted Devices.	Power point presentation, Chalk & Board	15/9/17	5.11	
36	Module 5	L.10.4	Human- Centered Design (HCD).	Power point presentation, Chalk & Board	15/9/17	5.12	
37	Module 5	L.11.1	Human- Centered Design Cycle.	Power point presentation, Chalk & Board	19/9/17	5.12.1	
38	Module 5	L.11.2	User Models: Acquisition and Representation.	Power point presentation, Chalk & Board	20/9/17	5.13	
39	Module 5	L.11.3	iHCI Desi	Power point presentation, Chalk & Board	22/9/17	5.14	
40	Module 5	L.11.4	Revision -- 5th Module	Power point presentation, Chalk & Board	22/9/17	Module 5	
41	Module 6	L.12.1	Data Networks ,	Power point presentation, Chalk & Board	26/9/17	6.8	
42	Module 6	L.13.1	Audio Networks.	Power point presentation, Chalk & Board	3/10/2017	6.9	
43	Module 6	L.13.2	Wireless Data Networks.	Power point presentation, Chalk & Board	4/10/2017	6.10	
44	Module 6	L.13.3	Universal and Transparent Audio, Video and Alphanumeric Data.	Power point presentation, Chalk & Board	6/10/2017	6.11, 6.11.1	
45	Module 6	L.13.4	Ubiquitous Networks.	Power point presentation, Chalk & Board	6/10/2017	6.12	
46	Module 6	L.13.5	Network Design Issues.	Power point presentation, Chalk & Board	7/10/2017	6.13	
47	Module 6	L.13.6	Human Intelligence Versus Machine Intelligence.	Power point presentation, Chalk & Board	7/10/2017	6.14	
48	Module 6	L.14.1	Challenges in Ubiquitous System,	Power point presentation, Chalk & Board	13/10/17	6.13.1	
49	Module 6	L.14.2	Social Issues: Promise Versus Peril.	Power point presentation, Chalk & Board	13/10/17	6.14	
Remark: **Course:**		**Syllabus Coverage:**		**Practice Session:**		**Beyond Syllabus:** Challenges for smart interaction and future technologies	
No. of (lectures planned)/(lecture taken): 49							

Advanced course: Human centered robotics	12 Weeks / 2 Hrs	Online NPTEL course with Hands on	**Web sources:** 1.https://www.coursera.org/specializations/robotics **Textbook reference:** 1.Adam Greenfield. Everyware the Drawing age of Ubiquitous Computing, Published in Association with AIGA.

Text Books:

1.1. Stefan Poslad. Ubiquitous Computing: Smart Devices, Environments and Interactions, Wiley Publication.

1.2. John Krumm. Ubiquitous Computing Fundamentals. CRC Press.

Reference Books:

2.1. Yin-Leng Theng and Henry B. L. Duh. Ubiquitous Computing: Design, Implementation, and Usability. IGI Global.

2.2 Adam Greenfield. Everyware the Drawing age of Ubiquitous Computing, Published in Association with AIGA.

Digital Reference:

3.1.https://www.techopedia.com/definition/22702/ubiquitous-computing

3.2. http://nptel.ac.in/courses/108102045/37

SD/-	**SD/-**	**SD/-**
Name & Signature of Faculty	**Signature of HOD**	**Signature of Principal /Dean (Academics)**
Date:	**Date:**	**Date:**

Note:

1. Plan date and completion date should be in compliance
2. Courses are required to be taught with emphasis on resource book, course file, text books, reference books, digital references etc.
3. Planning is to be done for 15 weeks where 1st week will be SOP, 2nd -13th for effective teaching and 14th -15th week for effective university examination oriented teaching, mock practice session and semester consolidation.
4. According to university syllabus where lecture of 4 hrs/per week is mentioned minimum 48 hrs and in case of 3 lectures per week minimum 42 lectures are to be engaged are required to be engaged during the semester and therefore accordingly semester planning for delivery of theory lectures shall be planned.
5. In order to improve score in NBA, faculty members are also required to focus course teaching beyond university prescribed syllabus and measuring the outcomes w.r.t learning course and programme objectives.
6. Text books and reference books are available in syllabus. Here only additional references w.r.t. non –digital/ digital sources can be written (if applicable)
7. Technology to be used in class room during lecture shall be written below the topic planned within the bracket.