**KGiSL Institute of Technology**

**Department of Information Technology**

**Lesson plan (Micro level)**

Faculty Name : Mr. S. Rajasekaran Designation : Assistant Professor

Subject Name : Mobile Computing Subject Code :IT6601 (C311)

Academic Year : 2018-2019 Sem/Year : VI/III

**COURSE OUTCOMES**

Upon completion of the course, the student should be able to:

C311.1: Understand the basic concepts of mobile computing.

C311.2: Be familiar with the network protocol stack.

C311.3: Learn the basics of mobile telecommunication system.

C311.4: Be exposed to Ad-Hoc networks.

C311.5: Gain knowledge about different mobile platforms and application development.

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| **UNIT I INTRODUCTION** | | | | | | | | | |
| **Topics** | | Planned Date | Mode of Teaching | | Reference | Course Outcome | Actual  Date | Day Order /Hour | Remarks |
| 1 | Introduction to Mobile Computing | 18/12/18 | PPT | | T1,R3 | C215.1 |  |  |  |
| 2 | Mobile Computing Vs wireless Networking | 19/12/18 | PPT | | T1, R3 | C215.1 |  |  |  |
| 3 | Mobile Computing Applications | 20/12/18 | PPT | | T1, R3 | C215.1 |  |  |  |
| 4 | Characteristics of Mobile computing | 22/12/18 | PPT | | T1, R3 | C215.1 |  |  |  |
| 5 | Structure of Mobile Computing Application | 26/12/18 | PPT | | T1, R3 | C215.1 |  |  |  |
| 6 | MAC Protocols, Wireless MAC Issues | 26/12/18 | PPT | | T1, R3 | C215.1 |  |  |  |
| 7 | Fixed Assignment Schemes | 27/12/18 | PPT | | T1, R3 | C215.1 |  |  |  |
| 8 | Random Assignment Schemes | 28/12/18 | PPT | | T1, R3 | C215.1 |  |  |  |
| 9 | Reservation Based Schemes | 29/12/18 | PPT | | T1, R3 | C215.1 |  |  |  |
| Total No. of Hours prescribed per Unit by Anna University | | | | | | 9 | | | |
| Total No. of Hours Required as per Lesson Plan | | | | | | **9** | | | |
| Signature of Faculty | | | | Signature of HOD | | | | | |

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| **UNIT II MOBILE INTERNET PROTOCOL AND TRANSPORT LAYER** | | | | | | | | | |
| **Topics** | | Planned Date | Mode of Teaching | | Reference | Course Outcome | Actual  Date | Day Order /Hour | Remarks |
| 1 | Overview of Mobile IP | 03/01/19 | PPT | | T1,R3 | C215.2 |  |  |  |
| 2 | Features of Mobile IP | 04/01/19 | PPT | | T1,R3 | C215.2 |  |  |  |
| 3 | Key Mechanism in Mobile IP | 04/01/19 | PPT | | T1,R3 | C215.2 |  |  |  |
| 4 | Route Optimization | 05/01/19 | PPT | | T1,R3 | C215.2 |  |  |  |
| 5 | Overview of TCP/IP | 07/01/19 | PPT | | T1,R3 | C215.2 |  |  |  |
| 6 | Architecture of TCP/IP | 08/01/19 | PPT | | T1,R3 | C215.2 |  |  |  |
| 7 | Adaptation of tCP Window | 10/01/19 | VC | | T1,R3 | C215.2 |  |  |  |
| 8 | Improvement in TCP Performance | 11/01/19 | PPT | | T1,R3 | C215.2 |  |  |  |
| Total No. of Hours prescribed per Unit by Anna University | | | | | | 9 | | | |
| Total No. of Hours Required as per Lesson Plan | | | | | | **9** | | | |
| Signature of Faculty | | | | Signature of HOD | | | | | |

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| **UNIT III MOBILE TELECOMMUNICATION SYSTEM** | | | | | | | | | |
| **Topics** | | Planned Date | | Mode of Teaching | Reference | Course Outcome | Actual  Date | Day Order /Hour | Remarks |
| 1 | Global System for Mobile Communication (GSM) | 11/01/19 | | PPT | T1,R1 | C215.3 |  |  |  |
| 2 | GSM – Architecture | 12/01/19 | | PPT | T1,R1 | C215.3 |  |  |  |
| 3 | GSM – Security | 18/01/19 | | PPT | T1,R1 | C215.3 |  |  |  |
| 4 | General Packet Radio Service (GPRS) | 19/01/19 | | PPT | T1,R1 | C215.3 |  |  |  |
| 5 | GPRS – Architecture | 22/01/19 | | PPT | T1,R1 | C215.3 |  |  |  |
| 6 | EDGE vs GPRS | 23/01/19 | | PPT | T1,R1 | C215.3 |  |  |  |
| 7 | Universal Mobile Telecommunication System (UMTS). | 23/01/19 | | PPT | T1,R1 | C215.3 |  |  |  |
| 8 | UMTS - Architecture | 24/01/19 | | PPT | T1,R1 | C215.3 |  |  |  |
| 9 | UMTS - Handover | 04/02/19 | | PPT | T1,R1 | C215.3 |  |  |  |
| 10 | **4G Telecommunication Systems (CBS)** | 06/02/19 | | PPT | W5 | C215.3 |  |  |  |
| 11 | **Introduction to 5G (CBS)** | 07/02/19 | | PPT | W5 | C215.3 |  |  |  |
| Total No. of Hours prescribed per Unit by Anna University | | | | | | 9 | | | |
| Total No. of Hours Required as per Lesson Plan | | | | | | **11** | | | |
| Signature of Faculty | | | Signature of HOD | | | | | | |

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| **UNIT IV MOBILE AD-HOC NETWORKS** | | | | | | | | | |
| **Topics** | | Planned Date | | Mode of Teaching | Reference | Course Outcome | Actual  Date | Day Order /Hour | Remarks |
| 1 | Ad-Hoc Basic Concepts | 07/02/19 | | PPT | T1,R5 | C215.4 |  |  |  |
| 2 | Characteristics | 08/02/19 | | PPT | T1,R5 | C215.4 |  |  |  |
| 3 | Applications | 09/02/19 | | PPT | T1,R5 | C215.4 |  |  |  |
| 4 | Design Issues | 11/02/19 | | PPT | T1,R5 | C215.4 |  |  |  |
| 5 | Routing | 13/02/19 | | PPT | T1,R5 | C215.4 |  |  |  |
| 6 | Essential of Traditional Routing Protocols | 14/02/19 | | PPT | T1,R5 | C215.4 |  |  |  |
| 7 | Popular Routing Protocols | 14/02/19 | | PPT | T1,R5 | C215.4 |  |  |  |
| 8 | VANET | 15/02/19 | | PPT | T1,R5 | C215.4 |  |  |  |
| 9 | MANET Vs VANET and Security. | 16/02/19 | | PPT | T1,R5 | C215.4 |  |  |  |
| Total No. of Hours prescribed per Unit by Anna University | | | | | | 9 | | | |
| Total No. of Hours Required as per Lesson Plan | | | | | | **9** | | | |
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| **UNIT V MOBILE PLATFORMS AND APPLICATIONS** | | | | | | | | | |
| **Topics** | | Planned Date | | Mode of Teaching | Reference | Course Outcome | Actual  Date | Day Order /Hour | Remarks |
| 1 | Mobile Device Operating Systems | 18/02/19 | | PPT | T1 | C215.5 |  |  |  |
| 2 | Special Constrains & Requirements | 20/02/19 | | PPT | T1 | C215.5 |  |  |  |
| 3 | Commercial Mobile Operating Systems | 20/02/10 | | PPT | T1 | C215.5 |  |  |  |
| 4 | SDK : iOS, Android, BlackBerry, Windows Phone | 21/02/19 | | PPT | T1,W1 | C215.5 |  |  |  |
| 5 | M-Commerce Structure | 05/03/19 | | PPT | T1 | C215.5 |  |  |  |
| 6 | Pros & Cons | 06/03/19 | | PPT | T1 | C215.5 |  |  |  |
| 7 | Mobile Payment System | 08/03/19 | | PPT | T1 | C215.5 |  |  |  |
| 8 | Security Issues | 09/03/19 | | PPT | T1 | C215.5 |  |  |  |
| Total No. of Hours prescribed per Unit by Anna University | | | | | | 9 | | | |
| Total No. of Hours Required as per Lesson Plan | | | | | | **9** | | | |
| Signature of Faculty | | | Signature of HOD | | | | | | |
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| **REFERENCE BOOKS:**  R1. Jochen H. Schller, “Mobile Communications”, Second Edition, Pearson Education, New Delhi, 2007.  R2. Dharma Prakash Agarval, Qing and An Zeng, "Introduction to Wireless and Mobile systems", Thomson Asia Pvt Ltd, 2005.  R3. Uwe Hansmann, Lothar Merk, Martin S. Nicklons and Thomas Stober, “Principles of Mobile Computing”, Springer, 2003.  R4. William.C.Y.Lee,“Mobile Cellular Telecommunications-Analog and Digital Systems”, Second Edition,Tata Mc Graw Hill  Edition ,2006.  R5. C.K.Toh, “AdHoc Mobile Wireless Networks”, First Edition, Pearson Education, 2002. | | | | | | | | | |
| **WEB REFERENCES:**  W1. Android Developers : http://developer.android.com/index.html  W2. Apple Developer : https://developer.apple.com/  W3. Windows Phone Dev Center : http://developer.windowsphone.com  W4. BlackBerry Developer : http://developer.blackberry.com/  W5. https://youtube.com | | | | | | | | | |
| **MODE OF TEACHING:**  **C&B**- Chalk & Board  **PPT-**Power Point Presentation  **VC**-Video clipping | | | | | | | | | |
| **CONTENT BEYOND SYLLABUS (CBS)**  1. 4G Telecommunication Systems (CBS)  2. Introduction to 5G (CBS) | | | | | | | | | |

**Faculty HOD Principal**