**Detailed Syllabus**

**Lecture-wise Breakup**

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| **Subject Code** |  | **Semester**  **ODD 2017** | **Semester \_VII \_\_ Session 2017-18** |
| **Subject Name** | **Mobile Ad hoc networks** | | |
| **Credits** | **3** | **Contact Hours** | **3+1=4** |

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| **Faculty (Names)** | **Coordinator(s)** | **Dr. Charu Gandhi** |
| **Teacher(s) (Alphabetically)** |  |

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| **Module No.** | **Subtitle of the Module** | **Topics in the module** | **No. of Lectures for the module** |
| **1.** | Introduction to Ad hoc Wireless Networks | Introduction, applications, Issues , Ad hoc wireless internet | 3 |
| **2.** | Mac Protocols for Ad Hoc Networks | Issues, Classifications: contention based, CB with reservation, CB with scheduling mechanisms,  Multimedia and power control MAC protocols | 8 |
| **3.** | Routing protocols for Ad hoc Networks | Issues, Classifications, Table driven, On Demand, Hybrid, Hierarchical, Power aware routing protocols, Protocols with efficient flooding mechanisms, Multicast routing mechanisms | 12 |
| **4.** | Transport Layer | Issues and solutions to transport layer design, Various solutions to The ransport protocols | 4 |
| **5.** | Quality of Service in Ad hoc networks | Issues and challenges, Classificaions of QoS solutions, MAC layer solutions, Network layer solutions, QoS frameworks | 8 |
| **6.** | Security Issues | Security requirements, Issues and challenges in providing security, Security attacks, Secure routing | 5 |
|  |  | **Total number of Lectures** | **40** |

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| **Recommended Reading material:** | |
| **1.** | Ad Noc Wireless Networks- Architectures and Protocols, C. Siva Ram Murthy and B.S Manoj, Pearson |
| **2.** | **Mobile AD HOC Networking,** by [Marco Conti, Silvia Giordano, Ivan Stojmenovic Stefano Basagni](http://www.amazon.in/s/ref=dp_byline_sr_book_1?ie=UTF8&field-author=Marco+Conti%2C+Silvia+Giordano%2C+Ivan+Stojmenovic+Stefano+Basagni&search-alias=stripbooks), Wiley |
| **3.** | Adhoc Mobile Wireless Protocol: Protocols and Systems by Toh, PEarson |