

**INDIAN INSTITUTE OF TECHNOLOGY TIRUPATI
PROFORMA FOR NEW COURSE**

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| 1. | Title of the Course | Software Engineering |
| 2. | Course Number | CS3105 |
| 3. | Status of the Course | Core |
| 4. | Structure of Credits | 3-0-0-3 |
| 5. | Offered To | UG |
| 6. | New Course/Modification to | New |
| 7. | To be Offered by | Department of Computer Science and Engineering |
| 8. | To take effect from | July 2018 |
| 9. | Prerequisite | Nil |
| 10. | Whether approved by the Department | Yes |
| 11. | Course Objective: To understand and apply core principles and practices of software engineering for systematic development of non-trivial software systems. | |
| 12. | Course Content: Software engineering as a discipline; software process and product engineering; software development lifecycle models; agile software development; requirements engineering; software architecture; software design; Unified Modeling Language (UML); design patterns; software construction; testing; verification and validation; software metrics; software project management; advanced software engineering topics such as reuse, reengineering and evolution. | |
| 13. | Text book(s): 1. Ghezzi C, Jazayeri M and Mandrioli D, <i>Fundamentals of Software Engineering</i> , Pearson India Education (2015). 2. Sommerville I, <i>Software Engineering</i> , Pearson Education (2017). | |
| 14. | Reference(s): 1. Brooks Jr. F P, <i>The Mythical Man-Month: Essays on Software Engineering</i> , Addison Wesley (1995). 2. Fowler M, <i>UML Distilled: A Brief Guide to the Standard Object Modeling Language</i> , Addison-Wesley Professional (2007). 3. Pressman R S, <i>Software Engineering: A Practitioner's Approach</i> , Tata McGrawHill (2017). | |