# 20CS32P2 - COMPILER DESIGN LABORATORY

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| Course Category: | Professional Core | Credits: | 1.5 |
| Course Type: | Practical | Lecture-Tutorial-Practical: | 0-0-3 |
| Prerequisite: | Knowledge of automata theory, context free languages, data structures. | Sessional Evaluation:  Univ. Exam Evaluation:  Total Marks: | 40  60  100 |
| Objectives: | * Develop ability to design and analyze a compiler. * Deepen the understanding of compiler design. * Develop problem solving ability using programming. | | |

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| Course Outcomes | Upon successful completion of the course, the students will be able to: | |
| CO1 | Build a code generator using different intermediate codes and optimize the target code. |
| Course Content | 1. Implementation of Lexical Analyzer. 2. Elimination of Left Recursion from a given grammar. 3. Left factoring of a given grammar. 4. A Lex Program for a simple calculator. 5. Computation of First and Follow Sets for a given grammar. 6. Construction of Predictive Parsing Table. 7. Implementation of SR Parsing. 8. Computation of LR (0) items. 9. Generation of Intermediate Code. | |
| Text Books &  Reference  Books | **TEXT BOOKS:**   1. Compilers, Principles Techniques and Tools.Alfred V Aho, Monical S. Lam, Ravi Sethi Jeffery D. Ullman,2nd edition, pearson,2007.   **REFERENCE BOOKS:**   1. Alfred V.Aho, Jeffrey D.Ullman, Principles of Compiler Design,Publications. 2. Compiler Design K.Muneeswaran, OXFORD 3. Principles of compiler design,2nd edition,Nandhini Prasad,Elsevier | |
| E-Resources | 1. <https://nptel.ac.in/courses> 2. <https://freevideolectures.com/university/iitm> | |