# 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: | 4060100 |
| 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.
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| Text Books &ReferenceBooks | **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
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| E-Resources | 1. <https://nptel.ac.in/courses>
2. <https://freevideolectures.com/university/iitm>
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