

ST.ANN'S COLLEGE OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
LESSON PLAN

Subject: COMPILER DESIGN
Name of Faculty: M. Lakshmi Bai

Year/ Sem: III-I Semester C
Academic Year: 2018-2019

| S.No. | UNIT | TOPICS | No.of Classes Required |
|----------------------|------|--|------------------------|
| 1 | I | Introduction Language Processing, Structure of a compiler the evaluation of Programming language, The Science of building a Compiler application of Compiler Technology, Programming Language Basics. Lexical Analysis-: The role of lexical analysis buffering, specification of tokens. Recognitions of tokens the lexical analyzer generator | 11 |
| 2 | II | Syntax Analysis -: The Role of a parser, Context free Grammars Writing A grammar, top down parsing, bottom up parsing Introduction to Lr Parser. | 10 |
| 3 | III | More Powerful LR parser (LR1, LALR) Using Armigers Grammars Equal Recovery in Lr parser Syntax Directed Transactions Definition, Evolution order of SDTS Application of SDTS. Syntax Directed Translation Schemes. | 10 |
| 4 | IV | Intermediated Code: Generation Variants of Syntax trees 3 Address code, Types and Declaration, Translation of Expressions, Type Checking. Canted Flow Back patching | 10 |
| 5 | V | Runtime Environments, Stack allocation of space, access to Non Local data on the stack Heap Management code generation – Issues in design of code generation the target Language Address in the target code Basic blocks and Flow graphs. A Simple Code generation. | 10 |
| 6 | VI | Machine Independent Optimization. The principle sources of Optimization peep hole Optimization, Introduction to Data flow Analysis. | 09 |
| TOTAL CLASSES | | | 60 |

TEXT BOOKS:

1. Compilers, Principles Techniques and Tools. Alfred V Aho, Monical S. Lam, Ravi Sethi Jeffery D. Ullman, 2nd edition, pearson, 2007
2. Compiler Design K.Muneeswaran, OXFORD
3. Principles of compiler design, 2nd edition, Nandhini Prasad, Elsebier.

REFERENCE BOOKS:

1. Compiler Construction, Principles and practice, Kenneth C Louden, CENGAGE
2. Implementations of Compiler, A New approach to Compilers including the algebraic methods, Yunlinsu , SPRINGER

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