Course Name	Compiler design principles
Prerequisite course	Data structures and algorithms
Corequisite course	-
References	1. A. V.Aho, R. Sethi, J. D. Ullman, Compilers: Principles, Techniques and tools, 2rd Edition, Addison-wesley, 2007. 2. D. Grune, H Bal, C. Jacobs, K. langendoen, Modern Compilers Design, JohnWiley & Sons, 2000 3. Terence Parr. "Language Implementation Patterns." (2010).
Course instructor	Dr. Mohammadhadi Alaeiyan
Syllabus	1. Introduction of compilers and advantages and disadvantages and features and components of the compiler 2. Types of Machines 3. Nondeterministic finite automata Machines 4. How to create a lexical analyzer and correct word errors 5. Optimization of automated machines 6. Language and grammar of the language 7. Definitions of terms, decomposition tree 8. Top-down and bottom-up parsing descriptions 9. Ambiguous grammars 10. Explain the grammars of LL (1) and the necessary calculations for 11. Priority of operators 12. Bottom-up analysis and description of LR (1) analysis including SLR (1), LALR (1) and CLR (1) 13. Semantic analysis 14. Manage the Symbol table 15. Intermediate code generation 16. Memory allocattion methods at runtime 17. Generate code 18. Code optimization 19. Familiarize and teach the process of using automated tools for automated compilers