



department of **Computer Science & Engineering** Bangladesh University of Engineering & Technology

COURSE OUTLINE

Course Code: CSE 310

Course Title: Compiler Sessional

Level/Term: 3/1

Section: A/B

Academic Session: 2016-17

Course Teachers:

Name	Initial	Room	E-mail
Khaled Mahmud Shahriar	KMS	217	k.m.shahriar@gmail.com
Md. Iftekharul Islam Sakib	MDIIS	418	miisakib@gmail.com
Shareef Ahmed	SAT	212	shareef.tamal@gmail.com

Course Outline:

Laboratory and project works based on:

- ✓ Introduction to compiling
- ✓ Basic issues regarding compiler
- ✓ Lexical analysis
- ✓ Syntax analysis
- ✓ Syntax-directed translation
- ✓ Semantic analysis: type-checking
- ✓ Run-time environments
- ✓ Intermediate code generation
- ✓ Code generation
- ✓ Code optimization
- ✓ Lexical analyzer and parser designing tools

Learning Outcomes/Objectives:

After undergoing this course, students should be able to:

- Understand the basic components of a compiler and interaction among them.
- Use tools like flex to generate scanners.
- Use tools like Bison to generate parsers with aim to perform syntax analysis, semantics analysis.
- Construct a simple compiler.
- Develop CFG to recognize a language and Regular Expression to recognize a pattern.

Assessment:

Attendance	5% - 10%
Offline and Online	60% - 75%
Quiz	20% - 30%



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Text and Reference books:


Book Name	Author	Edition
Compilers: Principles, Techniques, and Tools	Alfred V. Aho, Monica S. Lam, Ravi Sethi, Jeffrey D. Ullman	2 nd
flex & bison	John Levine	1 st
A Compact Guide to Lex & Yacc	Thomas Niemann	1 st

Tentative Weekly schedule:

Week	Topics
Week 1	✓ Class on Introduction to compiler, Basic issues, Symbol Table ✓ <i>Offline-1 declaration (Symbol Table)</i>
Week 2	✓ No Lab
Week 3	✓ Evaluation of Offline-1 and Online-1: Subsection A ₁ , B ₁ ✓ <i>Offline-2 declaration (Lexical Analysis)</i>
Week 4	✓ Evaluation of Offline-1 and Online-1: Subsection A ₂ , B ₂
Week 5	✓ Evaluation of Offline-2 and Online-2: Subsection A ₁ , B ₁
Week 6	✓ Evaluation of Offline-2 and Online-2: Subsection A ₂ , B ₂
Week 7	✓ Class on syntax analysis, semantic analysis, intermediate code generation, Bison ✓ <i>Offline-3 declaration (Syntax & Semantic Analysis)</i>
Week 8	✓ No Lab
Week 9	✓ Evaluation of Offline-3: Subsection A ₁ , B ₁ ✓ <i>Offline-4 declaration (Intermediate Code Generation, Optimization)</i>
Week 10	✓ Evaluation of Offline-3: Subsection A ₂ , B ₂
Week 11	✓ Evaluation of Offline-4: Subsection A ₁ , B ₁
Week 12	✓ Evaluation of Offline-4: Subsection A ₂ , B ₂
Week 13	✓ Quiz
Week 14	✓ No Lab

Prepared by :

Name: Md. Iftekharul Islam Sakib

Signature: 

Date: 25-02-2017

Name: Shareef Ahmed

Signature:

Date: 25-02-2017