

Syrian Arab Republic	 الجامعة الافتراضية السورية SYRIAN VIRTUAL UNIVERSITY	الجمهورية العربية السورية
Ministry of Higher Education		وزارة التعليم العالي
Syrian Virtual University		الجامعة الافتراضية السورية

## Course Definition:

### 1- Basic Information:

Course Name	Compiler project
Course ID	CMPP
Contact Hours (Registered Sessions)	
Contact Hours (Synchronized Sessions)	12 sessions
Mid Term Exam	-
Exam	
Registered Sessions Work Load	
Synchronized Session Work Load	64
Credit Hours	6

### 2- Pre-Requisites:

Course	ID
Compiler	CMP

### 3- Course General Objectives:

- 1- Build Lexical Analysis
- 2- Build Syntactical Analysis
- 3- Build symbol table and semantic tree
- 4- Build Semantic Analysis
- 5- Code Generation
- 6- Optional: Code Optimization
- 7- Evaluation the build compiler on machine code

Syrian Arab Republic	 الجامعة الافتراضية السورية SYRIAN VIRTUAL UNIVERSITY	الجمهورية العربية السورية
Ministry of Higher Education		وزارة التعليم العالي
Syrian Virtual University		الجامعة الافتراضية السورية

#### 4- Intended Learning Outcomes (ILO):

Code	Intended Learning Outcomes
ILO1	Build Lexical Analysis
ILO2	Build Syntactical Analysis
ILO3	Build symbol table and semantic tree
ILO4	Build Semantic Analysis
ILO5	Code Generation
ILO6	Optional: Code Optimization
ILO7	Evaluation the build compiler on machine code

#### 5- Course Syllabus (18 hours of total synchronized sessions)

- **RS:** Recorded Sessions; **SS:** Synchronized Sessions;

ILO	Course Syllabus	RS	SS	Type	Additional Notes
ILO1	Build Lexical Analysis and Manage Lexical errors	0	3	Projects	-
ILO2	Build Syntactical Analysis and manage ambiguity problem and manage Syntactical errors	0	9	Projects	-
ILO3	Build symbol table and semantic tree	0	9	Projects	-
ILO4	Build Semantic Analysis and manage	0	15	Projects	-

Syrian Arab Republic	 الجامعة الافتراضية السورية SYRIAN VIRTUAL UNIVERSITY	الجمهورية العربية السورية
Ministry of Higher Education		وزارة التعليم العالي
Syrian Virtual University		الجامعة الافتراضية السورية

	Semantic errors				
<b>ILO5</b>	Code Generation	4	15	Projects	Exercises
<b>ILO6</b>	Optional: Code Optimization	4	9	Projects	Exercises
<b>ILO7</b>	Evaluation the build compiler on machine code	0	3	Projects	Exercises

## 6- Assessment Criteria (Related to ILOs)

ISC	Interactive Synchronized Collaboration	Ex	Exams	Rpt	Reports
PF2F	Presentations and Face-to-Face Assessments	PW	Practice Work		

ILO Code	ILO	Intended Results	Assessment Type				
			ISC	PW	Ex	PF2F	Rpt
<b>ILO1</b>	Build Lexical Analysis and Manage Lexical errors		✓	✓		✓	✓
<b>ILO2</b>	Build Syntactical Analysis and manage ambiguity problem and manage Syntactical errors		✓	✓		✓	✓
<b>ILO3</b>	Build symbol table and semantic tree		✓	✓		✓	✓
<b>ILO4</b>	Build Semantic Analysis and manage Semantic errors		✓	✓		✓	✓
<b>ILO5</b>	Code Generation		✓	✓		✓	✓

Syrian Arab Republic	 الجامعة الافتراضية السورية SYRIAN VIRTUAL UNIVERSITY	الجمهورية العربية السورية
Ministry of Higher Education		وزارة التعليم العالي
Syrian Virtual University		الجامعة الافتراضية السورية

<b>ILO6</b>	Optional: Code Optimization		✓	✓		✓	✓
<b>ILO7</b>	Evaluation the build compiler on machine code					✓	

### 7- Practice Tools:

Tool Name	Description
Flex	Tool to Build Lexical Analysis
Bison	Tool to Build Syntactical Analysis
DotNet/Other	Programming Tool for object oriented

### 8- Main References

Principles of Compiler Design – Alfred V. Aho, Jeffrey D. Ullman – 1980