
SYLLABUS

Date/ Revision	April 2017
Faculty	Engineering
Approval	Head of Program Study

SUBJECT : LOGIC

1. Identification of Subject:

Name of Subject	: LOGIC
Code of Subject	:
SKS / ECTS	:
Semester	: 1
Study Program	: CSE
Lecturer	: TBA

2. Competency

After having the course, students are expected to:

- To demonstrate proficiency in translating English sentences into symbolized logical notation.
- To demonstrate the ability to translate symbolized logical notation into English sentences.
- To demonstrate proficiency in constructing and evaluating formal derivations according to rules of traditional formal logic

3. Description of Subject:

This course covers traditional formal logic, discursive logic, fallacies, and argument construction. Two logical systems are examined, which are Sentential Logic and Predicate Logic. There will be practices related to translating English sentences into symbolic notation, and constructing formal derivations

4. Learning Approach

Approach	: Problem based learning,
Method	: Discussion, question answer, group work
Student Task	: Practice
Media	: Spreadsheet, Mathematical simulation tool

5. Evaluation

a) Absence maximum	: 25%
b) Participation in discussion	: 5 points
c) Homework, Classwork	: 10 points
d) Presentation, Simulation	: 10 points
e) Daily Quiz	: 15 points
f) Final Examination	: 60 points
Total	: 100 points

6. Contents/ Topics of Lecturing:

Week	Topics	Content	Remark
1	Chapter 1	<ul style="list-style-type: none"> • Introduction • What is Logic for? • What kind of sentences? • Premise and conclusion markers • Sentences and Propositions 	
2	Chapter 1	<ul style="list-style-type: none"> • The Canonical Form of arguments • Possibilities • Inductive and Deductive Logic 	
3	Chapter 1	<ul style="list-style-type: none"> • Validity and Soundness 	
4	Chapter 2	<ul style="list-style-type: none"> • Logical Connectives • Well Formed Formulas and Propositional Logic 	
5	Chapter 4	<ul style="list-style-type: none"> • Translating English into Propositional Language 	
6	Chapter 3	<ul style="list-style-type: none"> • Truth tables for formulas • Tautological Contradictory, Contingent and Necessary Propositions 	
7	Mid Term Break		
8	Chapter 3	<ul style="list-style-type: none"> • Truth tables for arguments • Using Truth tables to test for Validity 	
9	Chapter 5	<ul style="list-style-type: none"> • Derivation in Propositional Logic: Hypothetical Rules . Non Hypothetical rules, Non basic rules • Equivalent 	
10	Chapter 6	<ul style="list-style-type: none"> • Translating English into Predicate Logic 	
11	Chapter 7	<ul style="list-style-type: none"> • Translating English into Predicate Logic 	
12	Chapter 8	<ul style="list-style-type: none"> • Derivation in Predicate Logic 	
13	Chapter 8	<ul style="list-style-type: none"> • Derivation in Predicate Logic 	
14	All chapter	<ul style="list-style-type: none"> • Review of Propositional Logic and predicate logic 	
15	Final Examination		

7. Book Reference:

Symbolic Logic: A First Course , by Gary Hardegree, Third Edition, New York: McGraw - Hill, 1999.
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