

FACULTY OF **ENGINEERING**

DEGREE COURSE: **INDUSTRIAL ENGINEERING BS**

SUBJECT: FUNDAMENTALS OF ELECTRIC CIRCUITS

LECTURER: GENNARO INFANTE

E-mail: gennaro.infante@uniecampus.it

OBJECTIVES

The course is aimed at providing students with knowledge of:

- 1) electrical circuits behaviour in DC
- 2) transient
- 3) sinusoidal steady-state
- 4) three Phase Circuits
- 5) aspects of energy and power
- 6) electrical machines (transformers and asynchronous machine).

CONTENTS

1. ELECTRICAL SYSTEM in DC
2. ELECTRICAL SYSTEM in and AC
3. TREE PHASE CIRCUITS
4. DYNAMIC CIRCUITS OF I AND II ORDER
5. ELECTRICAL MACHINES (Asynchronous Machine and Transformer)

LEARNING OUTCOMES

At the end of the course students will be able to analyze electrical systems.

ASSESSMENT

Written exam: multiple choice and open questions

RECOMMENDED TEXTBOOKS

James A. Svoboda-Richard C. Dorf, Introduction to Electric Circuits 9th edition, Wiley
