LINEAR ELECTRONIC CIRCUITS

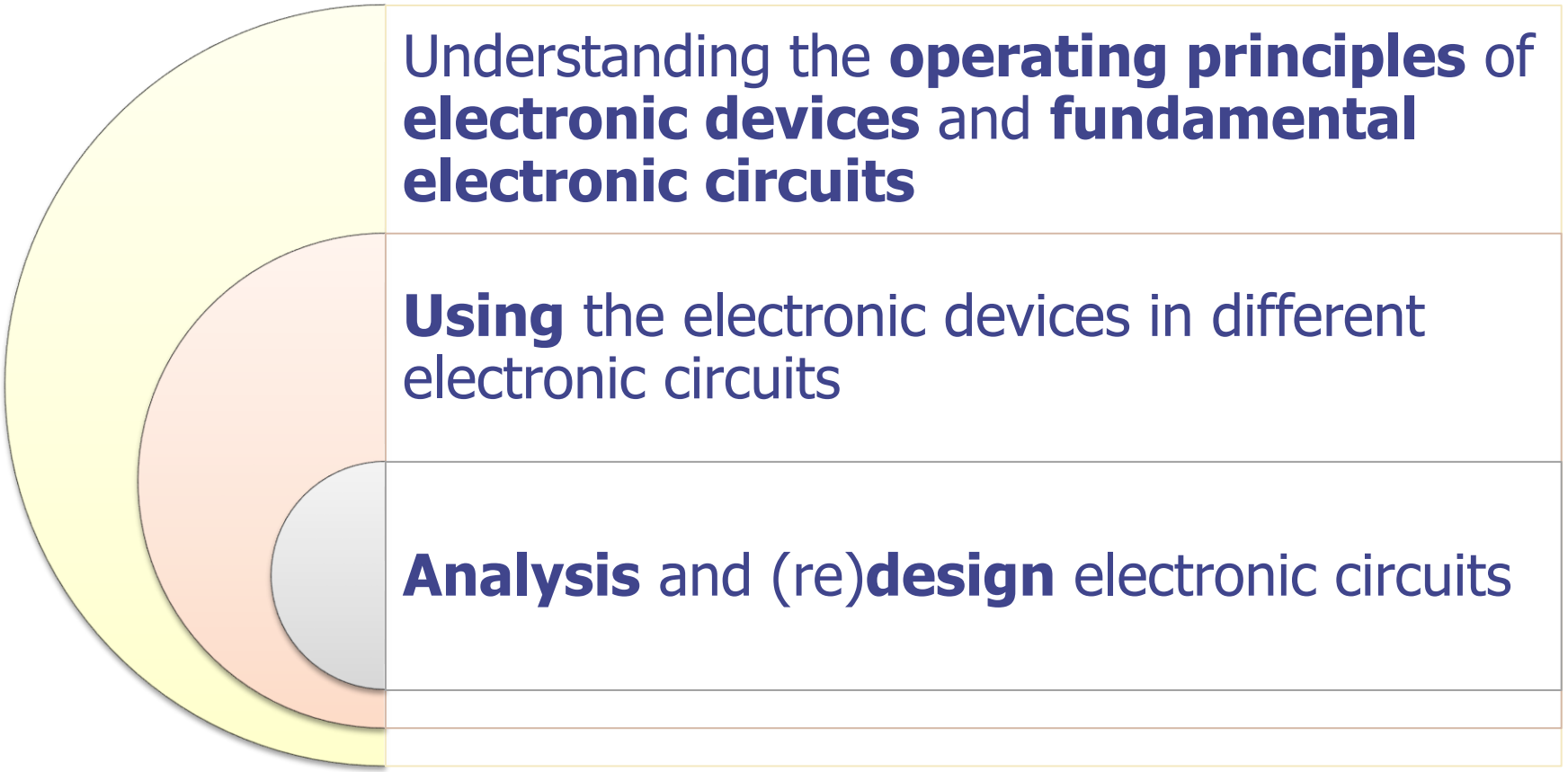
Linear Electronic Circuits

Professor Gabriel Oltean, Ph.D.

5 ECTS: 125 h

2 C: 28 h
1 L: 14 h
1 S: 14 h
69 h individual study

Objectives


Understanding the **operating principles** of **electronic devices** and **fundamental electronic circuits**
Using the electronic devices in different electronic circuits
Analysis and (re)**design** electronic circuits

Course

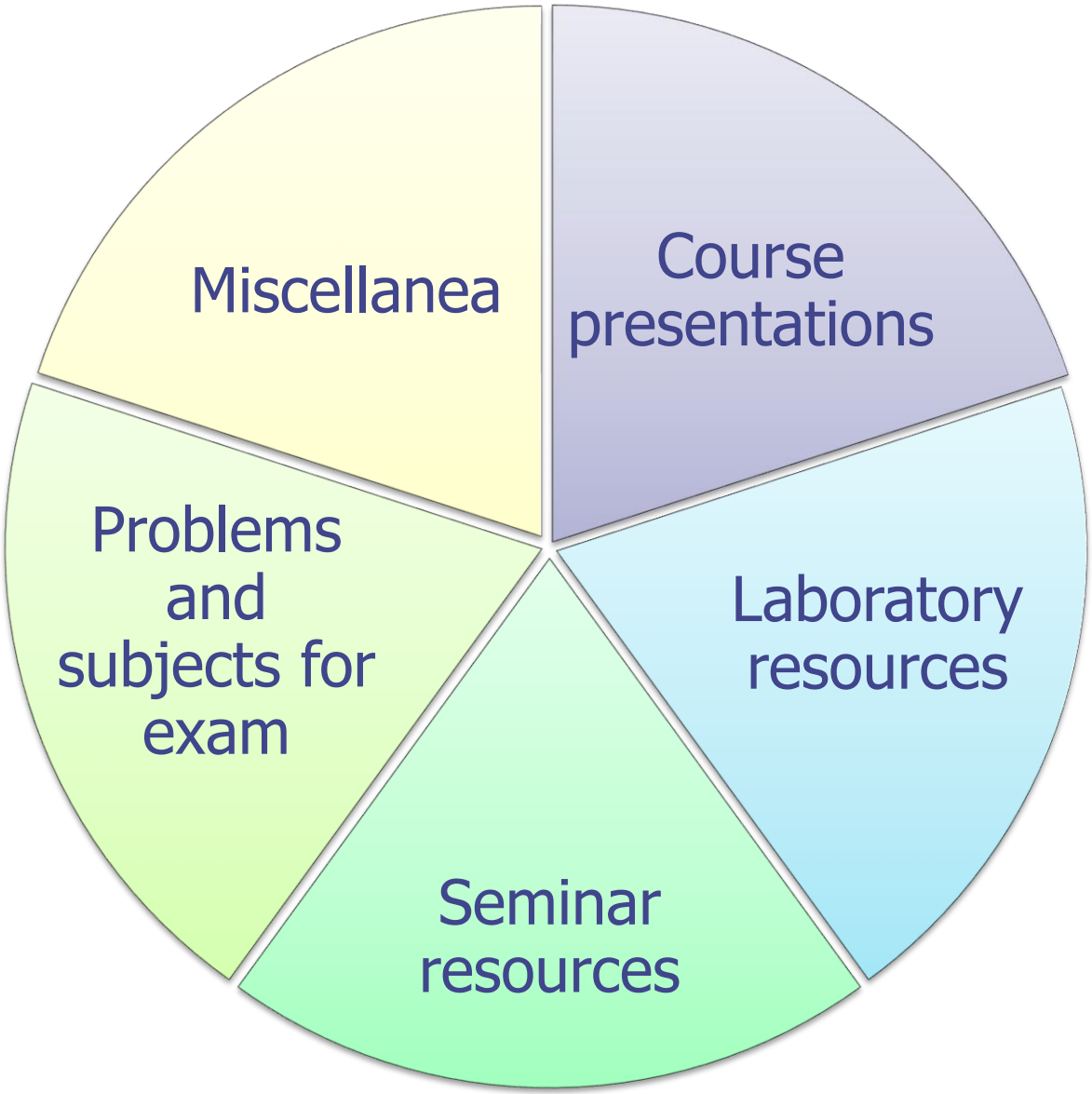
High level of involvement of the students

It is recommended to read (study) in advance the topics of the course

Presentations, questions, discussions, problem solving...

Dedicated web page

www.bel.utcluj.ro/dce/didactic/lec/



Content

- Fundamentals
- Diodes
- Logic circuits (CMOS)
- Op-amp comparator
- Op-amp amplifiers

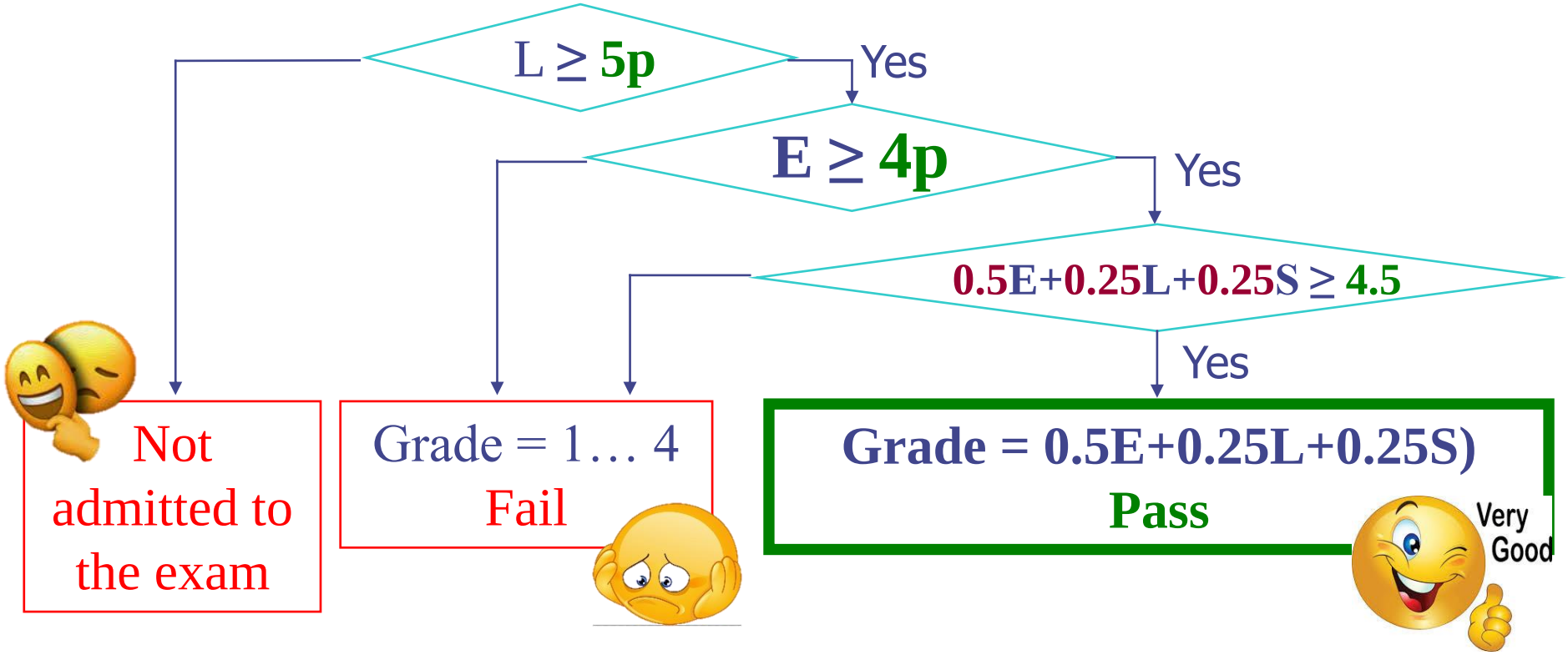
- Voltage regulators
- Integrated voltage regulators
- Sinusoidal oscillators
- Nonsinusoidal signals generators

- Oltean, G., Electronic Devices, Editura U.T. Pres, Cluj-Napoca, ISBN 973-662-220-7, 2006; 317 pp.

- Oltean, G., Circuite Electronice, UT Pres, Cluj-Napoca, 2007, ISBN 978-973-662-300-4, 203 pag

Student Assessment (formative and summative)

- Exam (E) + Lab (L) + Seminar (S)
- E: problem solving: 0…10 pts
- L: full attendance + activity: 0…10 pts
- S: attendance + activity: 0…10 pts



Illustration

Ex 1

E = 8; L = 10; S = 9

0.5·8+0.25·10+0.25·9 = 8.75; Grade (rounded): **9**

Ex 2

E = 4; L = 8.5; S = 2

0.5·4+0.25·8.5+0.25·2 = 4.625; Grade (rounded): **5**

Ex 3

E = 4; L = 6; S = 3

0.5·4+0.25·6+0.25·3 = 4.25; Grade (rounded): **4**

Ex 4

E = 3.9; L = 7; S = 8

Grade: **4**

Experience and Learning