University of Montenegro

Faculty of Maritime Studies Kotor

Study program: Marine Electrical Engineering

Type and level of studies: Undergraduate studies

Course unit: Fundamentals of marine electrical engineering and electronics II

Teacher in charge: Tatjana Dlabac, Associate Professor

Language of instruction: English

ECTS: 5

Course load: 2L+1E+1P

Semester: Summer Course unit objective

To familiarize students with basic laws and principles in electrical engineering and electronics necessary for more further study levels, considering STCW'10 convention (Table A-III/6) and IMO model course 7.08 (paragraphs 1.1.3.3, 1.1.3.4, 1.1.3.7, 1.1.4.1, 1.1.9.6, 2.1.6.6.1 and Ap. 6: 1.10)

Learning outcomes of Course unit

Upon successful completion of this subject the student will be able to:

- Define and apply all laws on alternating (mono-phase and three-phase) electrical and electric circuits,
- Define and apply the principles of operations of transistors (BJT, FET, MOSFET, IGBT) as well as their relevant circuits
- Analyse and calculate complex circuits of alternating current, as well as electronic diodes circuits, transistors and amplifiers,
- Plan and perform measurements on alternating current circuits and electronic diodes circuits, transistors and amplifiers,
- Demonstrate familiarity with relevant precautions for working with alternating current.

Teaching methods: Lectures, exercises, laboratory exercises, homework assignments, tests, office hours, and individual work.

Examination methods (maximum 100 points)

METHODS OF KNOWLEDGE ASSESSMENT AND MARKING:

Test I, up to 15 points;

Test II, up to 20 points;

Laboratory exercises up to 22 points;

Homework and tests, up to 8 points;

Final exam, up to 35 points;

Positive mark requires not less than 50 points cumulatively.

Grading system Grade No. of points Description Α 90-100 Excellent Exceptionally good В 80-89 Very good C 70-79 Good D 60-69 Ε 50-59 Passing **Failing** F less than 50