

## Content

| Course Code | Course Name      | Semester | Theory | Practice | Lab | Credit | ECTS |
|-------------|------------------|----------|--------|----------|-----|--------|------|
| GEM104      | Marine Chemistry | 1        | 2      | 0        | 0   | 2      | 3    |

|                        |  |
|------------------------|--|
| Prerequisites          |  |
| Admission Requirements |  |

|                         |                  |
|-------------------------|------------------|
| Language of Instruction |                  |
| Course Type             |                  |
| Course Level            | Associate Degree |
| Objective               |                  |
| Content                 |                  |
| References              |                  |

## Theory Topics

| Week | Weekly Contents  |
|------|--|
| 1    | Basic concepts and basic laws.   |
| 2    | Stoichiometric calculations. Gases, liquids and solids                   |
| 3    | Structure of atom and periodic table. Chemical bonds. Nuclear reactions. |
| 4    | Solutions. Heat energy in chemical reactions.                            |
| 5    | Rate of reactions. Equilibrium. Acids and bases.                         |
| 6    | Physical and chemical properties of seawater.                            |
| 7    | Corrosion and corrosion control.   |
| 8    | Sea paints.  |
| 9    | Fuel and oil chemistry.  |
| 10   | Fuel and oil chemistry.  |
| 11   | Fuel and oil types and properties.                                       |
| 12   | Fuel and oil types and properties.                                       |
| 13   | Hazardous substances. Sea pollution.                                     |
| 14   | Hazardous substances. Sea pollution.                                     |