



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

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|--|---|--|---------------------|---|---|---------------------------------|---|------------|---|
| Course Title | | Basic Organic Chemistry I | | | | | | | |
| Course Code | | KMY183 | | Couse Level | | First Cycle (Bachelor's Degree) | | | |
| ECTS Credit | 3 | Workload | 76 (<i>Hours</i>) | Theory | 2 | Practice | 0 | Laboratory | 0 |
| Objectives of the Course | | to create a scientific basis for understanding the functions of life processes of the basic building block of the carbon compounds of living systems and learning the chemical behavior by examining the this basis the acquisition of functional groups, the methods and reaction mechanisms, to do structural analysis evaluating the spectral data. | | | | | | | |
| Course Content | | IUPAC Nomenclature and functional groups, isomers: classification and nomenclature, acids, bases, electrophiles and nucleophiles, the resonance theory and intermediate particles, alkenes: Radical yerdeğiştir reaction mechanism, alkyl halides: SN1, SN2, E1 and E2 mechanisms, alkenes: participation mechanism and various additions, | | | | | | | |
| Work Placement | | N/A | | | | | | | |
| Planned Learning Activities and Teaching Methods | | | | Explanation (Presentation), Discussion, Problem Solving | | | | | |
| Name of Lecturer(s) | | Assoc. Prof. Erkan FIRINCI, Assoc. Prof. Fatih EYDURAN | | | | | | | |

Assessment Methods and Criteria

| Method | Quantity | Percentage (%) |
|---------------------|----------|----------------|
| Midterm Examination | 1 | 28 |
| Final Examination | 1 | 70 |
| Assignment | 14 | 12 |

Recommended or Required Reading

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|---|--------------------------|
| 1 | Organik Kimya: Solomon |
| 2 | Organik Kimya: Fessenden |

| Week | Weekly Detailed Course Contents | |
|------|---------------------------------|--|
| 1 | Theoretical | IUPAC Nomenclature: alkenes alkenes, alkynes, alkyl halides, alcohols, ethers |
| 2 | Theoretical | IUPAC Nomenclature: Aromatic compounds, aldehydes and ketones, amines, carboxylic acids and their derivatives |
| 3 | Theoretical | Isomers: classification and nomenclature |
| 4 | Theoretical | Alkanes: Synthesis and reactions include: aliphatic radical substitution reaction mechanism |
| 5 | Theoretical | Spectroscopic methods: NMR, IR spectra |
| 6 | Theoretical | Alkyl halides: alkalinity power, Synthesis E1 and E2 reaction mechanisms, spectroscopic data |
| 7 | Theoretical | Alkyl halides: Core affinity power, reactions, SN1 and SN2 mechanisms, spectroscopic data |
| 8 | Theoretical | Alkanes: Synthesis and Reactions: Catalytic and radical addition reactions, mechanisms, spectroscopic data |
| 9 | Theoretical | Midterm |
| 10 | Theoretical | Alkenes: Reactions ionic addition reactions, mechanisms, spectroscopic data |
| 11 | Theoretical | E1, E2 and SN1, SN2 reactions on the core affinity-base, solvent, concentration, leaving group and structure of effect |
| 12 | Theoretical | Alcohols: Synthesis, SN1 and SN2 reaction mechanisms, spectroscopic data |
| 13 | Theoretical | Alcohols: The reaction of E1, E2, SN1 and SN2 reactions, mechanisms and spectroscopic data |
| 14 | Theoretical | Ethers: Synthesis, |
| 15 | Theoretical | Ethers: reactions, SN1 and SN2 reactions, mechanisms, spectroscopic data |
| 16 | Theoretical | Final exam |

Workload Calculation

| Activity | Quantity | Preparation | Duration | Total Workload |
|---------------------|----------|-------------|----------|----------------|
| Lecture - Theory | 14 | 0 | 2 | 28 |
| Midterm Examination | 1 | 22 | 2 | 24 |



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|---|---|----|---|----|
| Final Examination | 1 | 22 | 2 | 24 |
| Total Workload (Hours) | | | | 76 |
| [Total Workload (Hours) / 25*] = ECTS | | | | 3 |
| *25 hour workload is accepted as 1 ECTS | | | | |

Learning Outcomes

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|---|---|
| 1 | To be able to name the organic compound (according to IUPAC nomenclature) |
| 2 | to determine the structure of the compound alkalinity, acidity, the nucleophilic and electrophilic properties and able to decide which one is dominant. |
| 3 | To know the basic chemical behavior of functional groups. |
| 4 | To take into account the concept of isomerism |
| 5 | To use the spectroscopic data. |
| 6 | To understand the reaction mechanisms |

Programme Outcomes (Nutrition and Dietetics)

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|----|--|
| 1 | Assess, apply and evaluate the accuracy, reliability and validity of basic knowledge and evidence based current scientific developments on nutrition and dietetics. |
| 2 | Assess scientifically the energy and nutrients need of individuals and develop nutrition plans and programs for the clients according to the principles of adequate and balanced nutrition and assessment of energy and nutrient requirements |
| 3 | Develop food and nutrition plans and policies for the prevention and promotion of healthy lifestyle applying the methods of nutritional assessment for the population. |
| 4 | Assess the nutritional status of the patients, evaluate the clinical symptoms, plan and apply individualized medical nutrition therapy for the patients. |
| 5 | Evaluate the factors affecting the quality of food consumed by the individuals and populations from production to consumption and implement the legal standards and legislations on food safety and food security. |
| 6 | Consider, interpret and apply the basic scientific knowledge on nutrition and dietetics especially have skills on critical thinking, problem solving and decision making and use effectively the appropriate current technologies and computer, demonstrate skills in preparing research manuscripts, project proposals, collecting and verifying data and writing report. |
| 7 | Assess, evaluate and interpret the nutritional status of the individuals and population groups using current knowledge, develop preventive measures, apply medical nutrition therapy, demonstrate active participation, teamwork and contributions with national and international stakeholders in health and social areas, in terms of ethical principles. |
| 8 | Plan menus in the institutional food service systems depending on the energy and nutrient requirements of target groups in the scope of nutrition and dietetic principles, take care of food safety in all settings from purchase of food to service, apply appropriate service using technological developments. |
| 9 | Develop and use effective strategies for the education, counseling and encouragement of individuals and population groups to facilitate behavior change and choose healthy and safety foods, prepare and update the related educational materials. |
| 10 | Apply laboratory work on product development, food analysis and related factors effecting food quality and interpret the results and evaluate them according to the legal arrangements. |
| 11 | Plan, manage, evaluate, monitor and report researches and programs to educate and increase and improve the knowledge and awareness of individuals and population groups on healthy nutrition during all lifecycle period, and lead such activities, support and take role in the preparation and implementation of national and international food and nutrition plans and policies. |
| 12 | Work and perform duties in the scope of occupational responsibilities and ethical principles, understand the importance of lifelong learning, follow the latest developments (innovations) in science, technology and health, demonstrate professional attributes for the enhancement of nutrition and dietetics profession. |
| 13 | Use, apply, discuss and share scientific and evidence based knowledge in nutrition and dietetics practice with team and team members, develop and demonstrate effective skills using oral, print, visual methods in communicating and expressing thoughts and ideas, communicate with all stakeholders within ethical principles. Develop and demonstrate effective communications skills using oral, print, visual, electronic and mass media methods |
| 14 | Plan, apply, monitor and evaluate individualized medical nutrition therapy within interdisciplinary approaches, considering the sociocultural, economical status of patients in various age groups and also contribute to clinical researches. |

Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High

| | L1 | L2 | L3 | L4 | L5 | L6 |
|----|----|----|----|----|----|----|
| P1 | 1 | 2 | 1 | 1 | 1 | 1 |
| P2 | 1 | 2 | 1 | 1 | 1 | 1 |
| P3 | 1 | 1 | 1 | 1 | 1 | 1 |
| P4 | 2 | 1 | 2 | 2 | 1 | 1 |
| P5 | 2 | 1 | 2 | 2 | 2 | 1 |
| P6 | 1 | 1 | 1 | 1 | 2 | |
| P7 | 1 | 1 | 1 | 1 | 2 | 2 |
| P8 | 1 | 2 | 1 | 1 | 1 | 2 |



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|-----|---|---|---|---|---|---|
| P9 | 1 | 2 | 1 | 1 | 1 | 1 |
| P10 | 1 | 1 | 1 | 2 | 1 | 1 |
| P11 | 1 | 1 | 2 | 2 | 1 | 1 |
| P12 | 2 | 1 | 1 | 1 | 1 | 1 |
| P13 | 1 | 1 | 1 | 1 | 2 | 1 |
| P14 | 2 | 2 | 1 | 1 | 1 | |

