# Dersler – AKTS Kredileri

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | |
| Kodu | | Ders Adı | AKTS | D+U+L | Z/S | Dili |
| Güz Dönemi | | | | | | |
| 521013001 | [SamplInG I](#DERS5210110001) | | 7,5 | 3+0+0 | Elective | Turkish |
| 521013002 | [PROBABILITY THEORY I](#DERS521011002) | | 7,5 | 3+0+0 | Elective | Turkish |
| 521013003 | [FUNDAMENTALS BIOSTATISTICS I](#DERS521011003) | | 7,5 | 3+0+0 | Elective | Turkish |
| 521013004 | [ıntroductıon to CALCULUS](#DERS521011004) | | 7,5 | 3+0+0 | Elective | Turkish |
| 521013005 | [LİNEAR ALGEBRA](#DERS521011005) | | 7,5 | 3+0+0 | Elective | Turkish |
| 521013006 | [GENERAL BIOLOGY I](#DERS521011006) | | 7,5 | 2+2+0 | Elective | Turkish |
| 521013007 | [INTRODUCTION TO MOLECULAR BIOLOGY](#DERS521011007) | | 7,5 | 2+2+0 | Elective | Turkish |
| 521013008 | [INTRODUCTION TO ANATOMY, ANATOMICAL TERMINOLOGY AND LOCOMOTOR SYSTEM](#DERS521011008) | | 7,5 | 2+2+0 | Elective | Turkish |
| 521013009 | [TOPOGRAPHICAL ANATOMY](#DERS521011009) | | 7,5 | 3+1+0 | Elective | Turkish |
| 521013010 | [INTRODUCTION TO HUMAN PHYSIOLOGY](#DERS521011010) | | 7,5 | 4+0+0 | Elective | Turkish |
| 521013011 | [GENERAL MICROBIOLOGY AND IMMUNOLOGY](#DERS5210110011) | | 7,5 | 2+2+0 | Elective | Turkish |
| 521013012 | HEPATIC INTRODUCTION | | 7,5 | 3+0+0 | Elective | Turkish |
| 521013013 | ETHICAL TERMINOLOGY | | 7,5 | 3+0+0 | Elective | Turkish |
| 521013014 | GENERAL HEALTH INFORMATION | | 7,5 | 3+0+0 | Elective | Turkish |
| 521013015 | [BASIC PHARMACOLOGY](#DERS521011015) | | 7,5 | 3+0+0 | Elective | Turkish |
| 521013016 | [AUTONOM NERVOUS SYSTEMS](#DERS521011016) | | 7,5 | 3+0+0 | Elective | Turkish |
| 521013017 | [GENERAL HISTOLOGY](#DERS521011017) | | 7,5 | 2+0+0 | Elective | Turkish |
| 521013018 | [BIOPHYSICS I](#DERS521011018) | | 7,5 | 3+0+0 | Elective | Turkish |
| 521013019 | [THE BASIC ISSUES OF MEDİCAL GENETICS AND LABORATORY APPLICATIONS](#DERS521011019) | | 7,5 | 1+5+0 | Elective | Turkish |
| 521013020 | [BASIC HUMAN MORPHOLOGY](#DERS521011020) | | 7,5 | 2+2+0 | Elective | Turkish |
| 521013021 | [CELL BIOLOGY](#DERS521011021) | | 7,5 | 3+2+0 | Elective | Turkish |
| 521013022 | [INTRODUCTION TO STEM CELL](#DERS521011022) | | 7,5 | 3+2+0 | Elective | Turkish |
|  | | |  |  |  |  |
| Bahar Dönemi | | | | | | |
| 521014001 | [MULTIVARIATE STATISTICAL METHODS](#DERS521012001) | | 7,5 | 3+0+0 | Elective | Turkish |
| 521014002 | [DEMOGRAPHIC TECHNIQUES](#DERS521012002) | | 7,5 | 3+0+0 | Elective | Turkish |
| 521014003 | [SamplInG II](#DERS521012003) | | 7,5 | 3+0+0 | Elective | Turkish |
| 521014004 | [ıntroductıon to ınformatıon technology](#DERS521012004) | | 7,5 | 2+2+0 | Elective | Turkish |
| 521014005 | [PROBABILITY THEORY II](#DERS521012005) | | 7,5 | 3+0+0 | Elective | Turkish |
| 521014007 | [FUNDAMENTALS BIOSTATISTICS II](#DERS521012007) | | 7,5 | 3+0+0 | Elective | Turkish |
| 521014008 | [GENERAL BIOLOGY II](#DERS521012008) | | 7,5 | 2+2+0 | Elective | Turkish |
| 521014009 | [ANATOMICAL ORGANS AND SYSTEMS](#DERS521012009) | | 7,5 | 2+2+0 | Elective | Turkish |
| 521014010 | [NEUROANATOMY](#DERS521012010) | | 7,5 | 3+1+0 | Elective | Turkish |
| 521014011 | [HUMAN PHYSIOLOGY II](#DERS521012011) | | 7,5 | 4+0+0 | Elective | Turkish |
| 521014012 | [SPECIAL MICROBIOLOGY](#DERS521012012) | | 7,5 | 4+2+0 | Elective | Turkish |
| 521014013 | MEDICINE AND HUMAN RIGHTS | | 7,5 | 3+0+0 | Elective | Turkish |
| 521014014 | REPUBLICAN TERM MEDICINE | | 7,5 | 3+0+0 | Elective | Turkish |
| 521014015 | [CENTRAL NERVOUS SYSTEM](#DERS521012015) | | 7,5 | 3+0+0 | Elective | Turkish |
| 521014016 | [CARDIOVASCULAR SYSTEM](#DERS521012016) | | 7,5 | 3+0+0 | Elective | Turkish |
| 521014017 | [GENERAL EMBRYOLOGY](#DERS521012017) | | 7,5 | 2+0+0 | Elective | Turkish |
| 521014018 | [BIOPHYSICS II](#DERS521012018) | | 7,5 | 3+0+0 | Elective | Turkish |
| 521014019 | [BASIC HUMAN CHEMISTRY AND MECHANISMS](#DERS521012019) | | 7,5 | 2+2+0 | Elective | Turkish |
| 521014020 | [BASIC CONCEPTS IN CELL CULTURE](#DERS521012020) | | 7,5 | 3+2+0 | Elective | Turkish |
| 521014021 | [BASIC LABORATORY TECHNICS IN CELL CULTURE](#DERS521012021) | | 7,5 | 3+2+0 | Elective | Turkish |
|  | | |  |  |  |  |
|  | | |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE:** **521013001** | | | **DEPARTMENT: BIOSTATISTICS** | | | |
| **COURSE NAME:** | **SamplIng - I** | | | | | |
| **INSTRUCTOR NAME**  **Assoc. Prof. Cengiz BAL** | | **COURSE LANGUAGE**  **Turkish: X**  **English: ** | | **Course Catagory** | | |
| Technical | Medical | Other(……) |
|  | |  | | X |  |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| **X** | **** | **** | **** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | **COURSE OF** | | | |
| **Theoric** | **Practice** | **Laboratory** | **Credit** | **ECTS** | **TYPE** | |
| Spring ****  Autumn **X** | 3 | 0 | 0 | 3 | 7,5 | COMPULSORY ELECTIVE  ** X** | |
|  | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | |
| **MID-TERM** | | | **ACTIVITY** | | | **Quantity** | **Percentage (%)** |
| 1st Mid-Term | | | 1 | 50 |
| 2 nd Mid- Term | | |  |  |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (………) | | |  |  |
| **FINAL** | | | Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (Written exam) | | | **1** | **50** |
| **MAKE-UP EXAM** | | | Oral | | Written | Oral and Written | Multiple Choice |
|  | | **X** |  |  |
| **PREREQUISITE(S)** | | | - | | | | |
| **COURSE CONTENT** | | | This course covers: Introduction to sampling and sampling methods, Necessities of successful sampling, Determination of Sample size, The sampling methods without probability rules, The sampling methods based on probability rules, sampling distribution etc. | | | | |
| **COURSE AIMS** | | | The purpose of this course is to teach sampling methods. | | | | |
| **COURSE OBJECTIVES** | | | This course aims to bring the students in the level at which they can use sampling methods in health area effectively. | | | | |
| **TEXTBOOK(S)** | | | 1. ÖZDAMAR, K.: (2013) IBM SPSS ile Biyoistatistik, Nisan Kitabevi, Eskişehir. 2. ÖZDAMAR, K.: (2013) Modern Bilimsel Araştırma Yöntemleri, Nisan Kitabevi, Eskişehir. | | | | |
| **REFERENCES** | | | 1. ÖZDAMAR, K.: (2013) Paket Programlar ile İstatistiksel Veri Analizi-1, Nisan Kitabevi, Eskişehir. 2. SÜMBÜLOĞLU V., SÜMBÜLOĞLU, K: (2005) Klinik ve saha araştırmalarında Örnekleme Yöntemleri ve örnekleme büyüklüğü, Alp Ofset Matbaacılık Ltd. Şti, Ankara. 3. MACHIN, D., CAMPBELL, M.J., TAN, S:B:, TAN, S.H: (2009) Sample Size Tables 3rd edition, Wiley Blackwell Publications, USA. 4. MURPHY K.R., MYORS, B.: (2004) Statistical Power Analysis, Lawrence Erlbaum Associates Publishers, London, UK. 5. SÜMBÜLOĞLU V., SÜMBÜLOĞLU, K: (1988) Sağlık Bilimlerinde Araştırma Yöntemleri, Hatiboğlu Yayınevi, Ankara. 6. ZAR, J.H.: (1974) Biostatistical Analysis, Prentice-Hall, Inc., USA. 7. SERPER, Ö.: (1986) Uygulamalı İstatistik 2, Filiz Kitabevi, İstanbul. 8. DAY, R.A.: (1996) Bilimsel Makale Nasıl Yazılır ve Yayımlanır? Tübitak, Ankara. | | | | |

|  |  |  |
| --- | --- | --- |
|  | **COURSE SYLLABUS** | |
| **WEEK** | **DATE** | **SUBJECTS/TOPICS** |
| 1 |  | Introduction to sampling and sampling methods |
| 2 |  | Necessities of successful sampling |
| 3 |  | Determination of Sample size (n) |
| 4 |  | Calculation of sample size in one sample design |
| 5 |  | Calculation of sample size in two sample design |
| 6 |  | The sampling methods without probability rules, Contengence sampling, Kota sampling |
| 7 |  | Field sampling and Monography |
| 8 |  | **Mid Term Exam** |
| 9 |  | The sampling methods based on probability rules |
| 10 |  | Simple random sampling method and applications |
| 11 |  | Systematic sampling method and applications |
| 12 |  | Stratifies sampling method and applications |
| 13 |  | Cluster sampling method and applications |
| 14 |  | Hierarchical sampling method and applications |
| 15 |  | Multi-phase sampling method and applications |
| 16 |  | Final Exam |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  |  | **X** |
| 2 | ask scientific questions and form hypothesis |  |  | **X** |
| 3 | search and interpret scientific literature |  |  | **X** |
| 4 | design and conduct experiments as well as analyze and interpret the data |  |  | **X** |
| 5 | learn how to use the experimental equipment effectively | **X** |  |  |
| 6 | function on multi-disciplinary teams |  |  | **X** |
| 7 | identify, formulate, and solve medical problems |  |  | **X** |
| 8 | use computer effectively both in conducting the experiments and analyzing the data |  |  | **X** |
| 9 | understand the impact of experimental solutions on national and international sciences |  |  | **X** |
| 10 | use effective written and oral communication/presentation skills |  |  | **X** |
| 11 | get an understanding of professional and ethical responsibility |  |  | **X** |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| 13 | other (……………………………………….) |  |  | **X** |
| 14 | other (……………………………………….) |  |  | **X** |

|  |  |
| --- | --- |
| **Assoc. Prof. Cengiz BAL** | **Date**  **23.01.2014** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE:** | 521013002 | | **DEPARTMENT: BIOSTATISTICS** | | | |
| **COURSE NAME:** | **PROBABILITY THEORY I** | | | | | |
| **INSTRUCTOR NAME** | | **COURSE LANGUAGE**  **Turkish: X**  **English:** | | **Course Catagory** | | |
| Technical | Medical | Other(……) |
| Doç. Dr. Ertuğrul ÇOLAK | |  | |  | **X** |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| **X** | **** | **** | **** |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | **COURSE OF** | | | |
| **Theoric** | **Practice** | | **Laboratory** | **Credit** | **ECTS** | **TYPE** | |
| Spring ****  Autumn **X** | 3 | 0 | | - | 3 | 7,5 | COMPULSORY ELECTIVE  ** X** | |
|  | | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | | |
| **MID-TERM** | | | | **ACTIVITY** | | | **Quantity** | **Percentage (%)** |
| 1st Mid-Term | | | **1** | **% 50** |
| 2 nd Mid- Term | | |  |  |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (………) | | |  |  |
| **FINAL** | | | | Quiz | | | **1** | **% 50** |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other(……………….) | | |  |  |
| **MAKE-UP EXAM** | | | | Oral | | Written | Oral and Written | Multiple Choice |
|  | | **1** |  |  |
| **PREREQUISITE(S)** | | | |  | | | | |
| **COURSE CONTENT** | | | | Classic Probability Model, Axiomatic Probability, Conditional Probability and Independence, The Binomial and Related Probabilities, Random Variables, Distribution Theory, Expectation, Limit Theorems, Conditional Distributions and Conditional Expectation, Random Walks, Matingale’s Probability Theory, The Exponential Distribution and The Poisson Process, Renewal Theory, Queueing Theory | | | | |
| **COURSE AIMS** | | | | To teach the fundamental probability theory. | | | | |
| **COURSE OBJECTIVES** | | | | To teach the concepts and theory of probability that form the basis of Biostatistical analysis. | | | | |
| **TEXTBOOK(S)** | | | | 1. Woodroofe M. (1975). Probability with Applications, McGraw-Hill Inc.,US.  2. Ross SM. (1989). Introduction to Probability models, Fouth Edition, Academic Press Inc., USA. | | | | |
| **REFERENCES** | | | | 1. Hogg RV, Tanis EA. (2009). Probability and Statistical Inference, Eighth Edition, Macmillian Publishing Company, New York.  2. Bain LJ, Engelhardt M. (1992) Introduction to Probability and Mathematical Statistics, Second Edition, PWS-KENT Publishing Company, Boston.  3. Freund JE. (1992). Mathematical Statistics, Fifth Edition, Prentice-Hall, Inc. USA.  4. Hogg RV, McKean J, Craig AT. (2014). Introduction to Mathematical Statistics, Pearson Education Limited, USA. | | | | |
|  | **COURSE SYLLABUS** | | | | | | | | |
| **WEEK** | **DATE** | | **SUBJECTS/TOPICS** | | | | | | |
| 1 |  | | Classic Probability Model | | | | | | |
| 2 |  | | Axiomatic Probability | | | | | | |
| 3 |  | | Conditional Probability and Independence | | | | | | |
| 4 |  | | The Binomial and Related Probabilities | | | | | | |
| 5 |  | | Random Variables | | | | | | |
| 6 |  | | Distribution Theory | | | | | | |
| 7 |  | | Expectation | | | | | | |
| 8 |  | | MIDTERM EXAM | | | | | | |
| 9 |  | | Limit Theorems | | | | | | |
| 10 |  | | Conditional Distributions and Conditional Expectation | | | | | | |
| 11 |  | | Random Walks | | | | | | |
| 12 |  | | Matingale’s Probability Theory | | | | | | |
| 13 |  | | The Exponential Distribution and The Poisson Process | | | | | | |
| 14 |  | | Renewal Theory | | | | | | |
| 15 |  | | Queueing Theory | | | | | | |
| 16 |  | | FINAL EXAM | | | | | | |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  |  | **X** |
| 2 | ask scientific questions and form hypothesis |  |  | **X** |
| 3 | search and interpret scientific literature |  |  | **X** |
| 4 | design and conduct experiments as well as analyze and interpret the data |  |  | **X** |
| 5 | learn how to use the experimental equipment effectively |  |  | **X** |
| 6 | function on multi-disciplinary teams |  |  | **X** |
| 7 | identify, formulate, and solve medical problems |  |  | **X** |
| 8 | use computer effectively both in conducting the experiments and analyzing the data |  |  | **X** |
| 9 | understand the impact of experimental solutions on national and international sciences |  |  | **X** |
| 10 | use effective written and oral communication/presentation skills |  |  | **X** |
| 11 | get an understanding of professional and ethical responsibility |  |  | **X** |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| 13 | other (……………………………………….) |  |  |  |
| 14 | other (……………………………………….) |  |  |  |

|  |  |
| --- | --- |
| **Instructor Name**  **Sign**  Doç. Dr. Ertuğrul ÇOLAK | **Date**  **22.01.2014** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE:** | **521013003** | | **DEPARTMENT: BIOSTATISTICS** | | | |
| **COURSE NAME:** | **FUNDAMENTALS BIOSTATISTICS I** | | | | | |
| **INSTRUCTOR NAME** | | **COURSE LANGUAGE**  **Turkish:**  **English: X** | | **Course Category** | | |
| Technical | Medical | Other(……) |
| Prof. Dr. K. Setenay ÖNER | |  | |  | **X** |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| **X** | **** | **** | **** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | **COURSE OF** | | | |
| **Theoric** | **Practice** | **Laboratory** | **Credit** | **ECTS** | **TYPE** | |
| Spring ****  Autumn **X** | 3 | 0 | 0 | 3 | 7,5 | COMPULSORY ELECTIVE  **X ** | |
|  | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | |
| **MID-TERM** | | | **ACTIVITY** | | | **Quantity** | **Percentage (%)** |
| 1st Mid-Term | | | **1** | **% 25** |
| 2 nd Mid-Term | | | **1** | **% 25** |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (………) | | |  |  |
| **FINAL** | | | Quiz | | | **1** | **% 50** |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other(……………….) | | |  |  |
| **MAKE-UP EXAM** | | | Oral | | Written | Oral and Written | Multiple Choice |
|  | | **1** |  |  |
| **PREREQUISITE(S)** | | |  | | | | |
| **COURSE CONTENT** | | | In this course, the definition of Biostatistics, this course covers the definition, importance and necessity of biostatistics and the usage of biostatistical analyses through computer in the health area. | | | | |
| **COURSE AIMS** | | | The objective of this course is to teach biostatistics used in data analysis in health sciences. | | | | |
| **COURSE OBJECTIVES** | | | The aim of this course is to bring the students in the level at which they can use biostatistics methods used in data analysis in health sciences with SPSS. | | | | |
| **TEXTBOOK(S)** | | | Biostatistics with SPSS, Prof. Dr. Kazım ÖZDAMAR, Nisan Kitabevi, 2013 | | | | |
| **REFERENCES** | | | 1- BELLE GV, FISHER LD, HEAGERTY PJ, LUMLEY P. Biostatistics A Methodology for the Health Sciences, A JOHN WILEY & SONS INC., 2004  2- Cleophas, T.J, Zwinderman, A.H, Cleophas, T.F., Cleophas, E.p, (2009), Statistics Aplied to Clinical Trials, 4th. Edt., Springer, Berlin. | | | | |

|  |  |  |
| --- | --- | --- |
|  | **COURSE SYLLABUS** | |
| **WEEK** | **DATE** | **SUBJECTS/TOPICS** |
| 1 |  | Statistics and Biostatistics |
| 2 |  | Introduction to SPSS |
| 3 |  | Collection of data in health sciences |
| 4 |  | Entering data SPPS, Tables, Rules of Preparing Tables |
| 5 |  | **1st Midterm** |
| 6 |  | Classification of data |
| 7 |  | Measures of Central Tendency  and Measures of Dispersion Probabilities |
| 8 |  | Graphs The Types of Graphs and Rules of Drawing Graphs |
| 9 |  | Probabilities, Distributions and Normality Tests |
| 10 |  | Sampling Methods |
| 11 |  | **2 nd Midterm** |
| 12 |  | Hypothese Tests, z Test Models, One Sample and Two Samples z Tests |
| 13 |  | t Test Models, One Sample and Two Samples t Tests |
| 14 |  | Analysis of Variance Assumptions, Oneway ANOVA |
| 15 |  | Oneway ANACOVA |
| 16 |  | **Final Exam** |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  |  | **X** |
| 2 | ask scientific questions and form hypothesis |  |  | **X** |
| 3 | search and interpret scientific literature |  |  | **X** |
| 4 | design and conduct experiments as well as analyze and interpret the data |  |  | **X** |
| 5 | learn how to use the experimental equipment effectively |  |  | **X** |
| 6 | function on multi-disciplinary teams |  |  | **X** |
| 7 | identify, formulate, and solve medical problems |  |  | **X** |
| 8 | use computer effectively both in conducting the experiments and analyzing the data |  |  | **X** |
| 9 | understand the impact of experimental solutions on national and international sciences |  |  | **X** |
| 10 | use effective written and oral communication/presentation skills |  |  | **X** |
| 11 | get an understanding of professional and ethical responsibility |  |  | **X** |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |

|  |  |
| --- | --- |
| **Instructor Name**  **Sign**  Prof. Dr. K. Setenay ÖNER | **Date** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE:** | 521013004 | | **DEPARTMENT: BIOSTATISTICS** | | | |
| **COURSE NAME:** | **ıntroductıon to CALCULUS** | | | | | |
| **INSTRUCTOR NAME** | | **COURSE LANGUAGE**  **Turkish: X**  **English:** | | **Course Catagory** | | |
| Technical | Medical | Other(……) |
| Doç. Dr. Ertuğrul ÇOLAK | |  | |  | **X** |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| **X** | **** | **** | **** |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | **COURSE OF** | | | |
| **Theoric** | **Practice** | | **Laboratory** | **Credit** | **ECTS** | **TYPE** | |
| Spring ****  Autumn **X** | 3 | 0 | | - | 3 | 7,5 | COMPULSORY ELECTIVE  ** X** | |
|  | | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | | |
| **MID-TERM** | | | | **ACTIVITY** | | | **Quantity** | **Percentage (%)** |
| 1st Mid-Term | | | **1** | **% 50** |
| 2 nd Mid- Term | | |  |  |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (………) | | |  |  |
| **FINAL** | | | | Quiz | | | **1** | **% 50** |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other(……………….) | | |  |  |
| **MAKE-UP EXAM** | | | | Oral | | Written | Oral and Written | Multiple Choice |
|  | | **1** |  |  |
| **PREREQUISITE(S)** | | | |  | | | | |
| **COURSE CONTENT** | | | | Mathematical Concepts, Functions, Graphs, and Limits, The Derivate, Applications of Differentiation, Infinite Series, The Definite Integral, The Indefinite Integral, Exponential and Logarithm Functions, Trigonometric Functions, Methods of Integration, The Differential Calculus of Functions of Several Variables, Multiple Integrals, Analytic and Vector Geometry, Linear Algebra | | | | |
| **COURSE AIMS** | | | | To teach the mathematical background and concepts | | | | |
| **COURSE OBJECTIVES** | | | | To teach the mathematical background and concepts that forms the basis of Biostatistical analysis methods. | | | | |
| **TEXTBOOK(S)** | | | | 1. Hocking, J.G., (1970), Calculus with An Introduction to Linear Algebra, Holt, Rinehart and Winston, Inc., USA  2. Edwards, L., (2010), Calculus Early Transcendental Functions, Brooks/Cole Cengage Learning, USA | | | | |
| **REFERENCES** | | | | 1. Stewart, J., (2012), Calculus, Brooks/Cole Cengage Learning, USA  2. Kelley, W.M., (2007), The Humongous Book of Calculus Problems, Alpha Books, USA | | | | |
|  | **COURSE SYLLABUS** | | | | | | | | |
| **WEEK** | **DATE** | | **SUBJECTS/TOPICS** | | | | | | |
| 1 |  | | Mathematical Concepts | | | | | | |
| 2 |  | | Functions, Graphs, and Limits | | | | | | |
| 3 |  | | The Derivate | | | | | | |
| 4 |  | | Applications of Differentiation | | | | | | |
| 5 |  | | Infinite Series | | | | | | |
| 6 |  | | The Definite Integral | | | | | | |
| 7 |  | | The Indefinite Integral | | | | | | |
| 8 |  | | MIDTERM EXAM | | | | | | |
| 9 |  | | Exponential and Logarithm Functions | | | | | | |
| 10 |  | | Trigonometric Functions | | | | | | |
| 11 |  | | Methods of Integration | | | | | | |
| 12 |  | | The Differential Calculus of Functions of Several Variables | | | | | | |
| 13 |  | | Multiple Integrals | | | | | | |
| 14 |  | | Analytic and Vector Geometry | | | | | | |
| 15 |  | | Linear Algebra | | | | | | |
| 16 |  | | FINAL EXAM | | | | | | |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  |  | **X** |
| 2 | ask scientific questions and form hypothesis |  |  | **X** |
| 3 | search and interpret scientific literature |  |  | **X** |
| 4 | design and conduct experiments as well as analyze and interpret the data |  |  | **X** |
| 5 | learn how to use the experimental equipment effectively |  |  | **X** |
| 6 | function on multi-disciplinary teams |  |  | **X** |
| 7 | identify, formulate, and solve medical problems |  |  | **X** |
| 8 | use computer effectively both in conducting the experiments and analyzing the data |  |  | **X** |
| 9 | understand the impact of experimental solutions on national and international sciences |  |  | **X** |
| 10 | use effective written and oral communication/presentation skills |  |  | **X** |
| 11 | get an understanding of professional and ethical responsibility |  |  | **X** |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| 13 | other (……………………………………….) |  |  |  |
| 14 | other (……………………………………….) |  |  |  |

|  |  |
| --- | --- |
| **Instructor Name**  **Sign**  Doç. Dr. Ertuğrul ÇOLAK | **Date**  **14.03.2014** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE:** | **521013005** | | **DEPARTMENT: BIOSTATISTICS** | | | |
| **COURSE NAME:** | Linear Algebra | | | | | |
| **INSTRUCTOR NAME**  Prof. Dr. Fezan MUTLU | | **COURSE LANGUAGE**  **Turkish: X**  **English: ** | | **Course Catagory** | | |
| Technical | Medical | Other(Multidisipliner) |
|  | |  | |  | **X** | **X** |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| **X** | **** | **** | **** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | **COURSE OF** | | | |
| **Theoric** | **Practice** | **Laboratory** | **Credit** | **ECTS** | **TYPE** | |
| Spring ****  Autumn **X** | 3 | 0 | 0 | 3 | 7,5 | COMPULSORY ELECTIVE  **X ** | |
|  | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | |
| **MID-TERM** | | | **ACTIVITY** | | | **Quantity** | **Percentage (%)** |
| 1st Mid-Term | | | 1 | % 50 |
| 2 nd Mid- Term | | |  |  |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (………) | | |  |  |
| **FINAL** | | | Quiz | | | 1 | %50 |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other(……………….) | | |  |  |
| **MAKE-UP EXAM** | | | Oral | | Written | Oral and Written | Multiple Choice |
|  | | **x** |  |  |
| **PREREQUISITE(S)** | | |  | | | | |
| **COURSE CONTENT** | | | Vectors and Matrices, Solving Linear Equations, Vector Spaces and Subspaces, Orthogonality, Determinants, Eigenvalues and Eigenvectors, Linear Transformation, Applications, Numerical Linear Algebra and Complex Vectors and Complex Matrices. | | | | |
| **COURSE AIMS** | | | To teach and application to linear algebra. | | | | |
| **COURSE OBJECTIVES** | | | To bring students in a good level in which they can learn linear algebra. | | | | |
| **TEXTBOOK(S)** | | | Gilbert Strang. (1993). Introduction to linear algebra. Wellesley –Cambridge Press. USA. | | | | |
| **REFERENCES** | | | --- | | | | |

|  |  |  |
| --- | --- | --- |
|  | **COURSE SYLLABUS** | |
| **WEEK** | **DATE** | **SUBJECTS/TOPICS** |
| 1 |  | Vectors and Matrices, Vectors, Lengths and Dot Products, Planes, Matrices and Linear Equations |
| 2 |  | Solving Linear Equations, the idea of Elimination, Elimination Using Matrices |
| 3 |  | Rules for Matrix Operations, Inverse Matrices, Elimination = Factorization: A = LU, Transposes and Permutations |
| 4 |  | Vector Spaces and Subspaces, Spaces of Vectors, The Nullspace of A: Solving Ax=0, The Rank of A: Solving Ax=b |
| 5 |  | Independence Basis and Dimension, Dimentions of the Four Subspaces |
| 6 |  | Orthogonality, Orthogonality of the Four Subspaces, Projections, Least Squares Approximations,Orthogonal Bases and Gram-Schmidt |
| 7 |  | Determinants, The Properties of Dterminants , Permunants and Cofactors, Cramer’s Rule Inverses and Volumes |
| 8 |  | **Midterm Exam** |
| 9 |  | Eigenvalues and Eigenvectors, Diagonalizing a Matrix, Applications to Differential Equations |
| 10 |  | Symmetric Matrices, Positive Definite Matrices, Similar Matrices |
| 11 |  | Linear Transformation, The Idea of a Linear Transformation, The Matrix of a Linear Transformation, Choice of Basis: Similarity and Diagonalization |
| 12 |  | Applications, Graphs an Networks, Markov Matrices and Economic Models |
| 13 |  | Linear Programming, Fourier Series: Linear Algebra for Functions, Computer Graphics |
| 14 |  | Numerical Linear Algebra, Gaussian Elimination bin Practice, Norms and Condition Numbers, Iterative Methods for Linear Algebra |
| 15 |  | Complex Vectors and Complex Matrices, Complex Numbers, Hermitian and Unitary Matrices, The Fast Fourier Transform |
| 16 |  | **Final Exam** |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  |  | **X** |
| 2 | ask scientific questions and form hypothesis |  |  | **X** |
| 3 | search and interpret scientific literature |  |  | **X** |
| 4 | design and conduct experiments as well as analyze and interpret the data |  |  | **X** |
| 5 | learn how to use the experimental equipment effectively |  |  | **X** |
| 6 | function on multi-disciplinary teams |  |  | **X** |
| 7 | identify, formulate, and solve medical problems |  |  | **X** |
| 8 | use computer effectively both in conducting the experiments and analyzing the data |  |  | **X** |
| 9 | understand the impact of experimental solutions on national and international sciences |  |  | **X** |
| 10 | use effective written and oral communication/presentation skills |  |  | **X** |
| 11 | get an understanding of professional and ethical responsibility |  |  | **X** |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| 13 | other (……………………………………….) |  |  | **X** |
| 14 | other (……………………………………….) |  |  | **X** |

|  |  |
| --- | --- |
| **Instructor Name**  **Sign**  Prof. Dr. Fezan MUTLU | **Date** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE:** | 521013006 | | **DEPARTMENT:** MEDİCAL BİOLOGY | | | |
| **COURSE NAME:** | [**GENERAL BİOLOGY**](https://www.google.com.tr/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&cad=rja&ved=0CE0QFjAC&url=http%3A%2F%2Fbiology.clc.uc.edu%2Fcourses%2Fbio104%2Fintro104.htm&ei=DnsUU7KqOomPtQbZpYHICw&usg=AFQjCNEQyZB1UyFzjiGlov9boOokcBTNJg&sig2=_6bbFHGJ-hdNrdX73SLFlw&bvm=bv.61965928,d.Yms) **I** | | | | | |
| **INSTRUCTOR NAME**  Prof. Dr. Hasan Veysi GÜNEŞ | | **COURSE LANGUAGE**  **Turkish:** X  **English: ** | | **Course Catagory** | | |
| Technical | Medical | Other(……) |
|  | |  | |  | **X** |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| X | **** | **** | **** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | **COURSE OF** | | | |
| **Theoric** | **Practice** | **Laboratory** | **Credit** | **ECTS** | **TYPE** | |
| Spring ****  Autumn **X** | 2 | 2 |  | 3 | 7,5 | COMPULSORY ELECTIVE  ** X** | |
|  | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | |
| **MID-TERM** | | | **ACTIVITY** | | | **Quantity** | **Percentage (%)** |
| 1st Mid-Term | | | 1 | 40 |
| 2 nd Mid- Term | | |  |  |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (………) | | |  |  |
| **FINAL** | | | Quiz | | |  |  |
| Homework | | | 1 | 20 |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other(Final Exam) | | | 1 | 40 |
| **MAKE-UP EXAM** | | | Oral | | Written | Oral and Written | Multiple Choice |
|  | | **x** |  |  |
| **PREREQUISITE(S)** | | | -- | | | | |
| **COURSE CONTENT** | | | The cell concept, the types of cell, cell structure and functions, [classification of living organisms](https://www.google.com.tr/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&cad=rja&ved=0CFAQFjAD&url=http%3A%2F%2Fwww.tutorvista.com%2Fcontent%2Fbiology%2Fbiology-iii%2Fliving-organisms%2Fliving-organisms-summary.php&ei=jn8UU9aMKY_Tsgal3IFw&usg=AFQjCNEIrkL5f4-4C5BjMLVkl4JeDBOIkQ&sig2=x6TFzhra1tNWldAA6i_zlg&bvm=bv.61965928,d.Yms), structure and function of the microorganisms | | | | |
| **COURSE AIMS** | | | To make an introduction to general biology, to provide information about the structure and functions of cells and the gains of basic informations about [classification of living organisms](https://www.google.com.tr/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&cad=rja&ved=0CFAQFjAD&url=http%3A%2F%2Fwww.tutorvista.com%2Fcontent%2Fbiology%2Fbiology-iii%2Fliving-organisms%2Fliving-organisms-summary.php&ei=jn8UU9aMKY_Tsgal3IFw&usg=AFQjCNEIrkL5f4-4C5BjMLVkl4JeDBOIkQ&sig2=x6TFzhra1tNWldAA6i_zlg&bvm=bv.61965928,d.Yms) and the microorganisms. | | | | |
| **COURSE OBJECTIVES** | | | To gain the knowledge required for graduate education about structure and functions of cells, [classification of living organisms](https://www.google.com.tr/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&cad=rja&ved=0CFAQFjAD&url=http%3A%2F%2Fwww.tutorvista.com%2Fcontent%2Fbiology%2Fbiology-iii%2Fliving-organisms%2Fliving-organisms-summary.php&ei=jn8UU9aMKY_Tsgal3IFw&usg=AFQjCNEIrkL5f4-4C5BjMLVkl4JeDBOIkQ&sig2=x6TFzhra1tNWldAA6i_zlg&bvm=bv.61965928,d.Yms) and the microorganisms. | | | | |
| **TEXTBOOK(S)** | | | Özata A, Kutlu M, Kılıç AY, Türk A, et al., Genel Biyoloji, Anadolu Üniversitesi, 2009 | | | | |
| **REFERENCES** | | | [Reece](http://www.amazon.com/s/ref=ntt_athr_dp_sr_1?_encoding=UTF8&field-author=Jane%20B.%20Reece&search-alias=books&sort=relevancerank) JB, [Urry](http://www.amazon.com/s/ref=ntt_athr_dp_sr_2?_encoding=UTF8&field-author=Lisa%20A.%20Urry&search-alias=books&sort=relevancerank) LA, [Cain](http://www.amazon.com/s/ref=ntt_athr_dp_sr_3?_encoding=UTF8&field-author=Michael%20L.%20Cain&search-alias=books&sort=relevancerank) ML, et al., Campbell Biology, Tenth Edition,Benjamin Cummings, 2013  [Alberts](http://www.amazon.com/Bruce-Alberts/e/B00E9A80R2/ref=ntt_athr_dp_pel_1) B, [Bray](http://www.amazon.com/s/ref=ntt_athr_dp_sr_2?_encoding=UTF8&field-author=Dennis%20Bray&search-alias=books&sort=relevancerank) D, [Hopkin](http://www.amazon.com/s/ref=ntt_athr_dp_sr_3?_encoding=UTF8&field-author=Karen%20Hopkin&search-alias=books&sort=relevancerank) K, et al., Essential Cell Biology, 4th Edition, Garland Science, New York, 2013  Güneş HV, Moleküler Hücre Biyolojisi, İstanbul Tıp Kitabevi, 2012  Alberts B, Johnson A, Lewis J, Raff M, Roberts K, Walter P, Molecular Biology of The Cell, Fifth Edition, Garland Science, New York, 2008 | | | | |
|  | **COURSE SYLLABUS** | | | | | | | |
| **WEEK** | **SUBJECTS/TOPICS** | | | | | | | |
| 1 | The Cell Concept, Prokaryotic and Eukaryotic cells | | | | | | | |
| 2 | Cell Membrane and Functions | | | | | | | |
| 3 | Cytoplasm and Nucleus | | | | | | | |
| 4 | Cytoskeleton and Cell Junctions | | | | | | | |
| 5 | Cell Organelles | | | | | | | |
| 6 | Cell Division and Death | | | | | | | |
| 7 | [Classification of Living Organisms](https://www.google.com.tr/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&cad=rja&ved=0CFAQFjAD&url=http%3A%2F%2Fwww.tutorvista.com%2Fcontent%2Fbiology%2Fbiology-iii%2Fliving-organisms%2Fliving-organisms-summary.php&ei=jn8UU9aMKY_Tsgal3IFw&usg=AFQjCNEIrkL5f4-4C5BjMLVkl4JeDBOIkQ&sig2=x6TFzhra1tNWldAA6i_zlg&bvm=bv.61965928,d.Yms), Bacteria and Archaea | | | | | | | |
| 8 | WRITTEN EXAM | | | | | | | |
| 9 | Vegetable and Fungi Kingdom | | | | | | | |
| 10 | Animal Kingdom | | | | | | | |
| 11 | Structure and Functions of Prokaryotic Microorganisms | | | | | | | |
| 12 | Structure and Functions of Eukaryotic Microorganisms | | | | | | | |
| 13 | Structure and Functions of Acellular Microorganisms | | | | | | | |
| 14 | **Presentation of homework:** | | | | | | | |
| 15 | **Presentation of homework:** | | | | | | | |
| 16 | WRITTEN EXAM | | | | | | | |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  |  | **X** |
| 2 | ask scientific questions and form hypothesis |  |  | **X** |
| 3 | search and interpret scientific literature |  |  | **X** |
| 4 | design and conduct experiments as well as analyze and interpret the data | **X** |  |  |
| 5 | learn how to use the experimental equipment effectively | **X** |  |  |
| 6 | function on multi-disciplinary teams | **X** |  |  |
| 7 | identify, formulate, and solve medical problems |  |  | **X** |
| 8 | use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| 9 | understand the impact of experimental solutions on national and international sciences |  | **X** |  |
| 10 | use effective written and oral communication/presentation skills |  |  | **X** |
| 11 | get an understanding of professional and ethical responsibility |  |  | **X** |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| 13 | Ability of recognition of fundamental terms in Medical School teaching |  | **X** |  |
| 14 | Ability of handling ethic issues by considering fundamental terms |  | **X** |  |

|  |  |
| --- | --- |
| **Instructor Name**  **Sign** | **Date** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE:** | 521013007 | | **DEPARTMENT: MEDİCAL BİOLOGY** | | | |
| **COURSE NAME:** | **INTRODUCTİON TO MOLECULAR BİOLOGY** | | | | | |
| **INSTRUCTOR NAME**  Prof. Dr. İrfan DEĞİRMENCİ | | **COURSE LANGUAGE**  **Turkish:** X  **English: ** | | **Course Catagory** | | |
| Technical | Medical | Other(……) |
|  | |  | |  | **X** |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| **X** | **** | **** | **** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | **COURSE OF** | | | |
| **Theoric** | **Practice** | **Laboratory** | **Credit** | **ECTS** | **TYPE** | |
| Spring ****  Autumn **X** | 2 | 2 |  | 3 | 7,5 | COMPULSORY ELECTIVE  ** X** | |
|  | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | |
| **MID-TERM** | | | **ACTIVITY** | | | **Quantity** | **Percentage (%)** |
| 1st Mid-Term | | | 1 | 40 |
| 2 nd Mid- Term | | |  |  |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (………) | | |  |  |
| **FINAL** | | | Quiz | | |  |  |
| Homework | | | 1 | 20 |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other(Final Exam) | | | 1 | 40 |
| **MAKE-UP EXAM** | | | Oral | | Written | Oral and Written | Multiple Choice |
|  | | **x** |  |  |
| **PREREQUISITE(S)** | | | -- | | | | |
| **COURSE CONTENT** | | | The chemical bonds allowing the formation of molecules, macromolecules and complex molecules from atoms, chemically reactive groups allowing the realization of molecular organization, organic molecules that make up living systems (carbohydrates, lipids, proteins and nucleic acids) and inorganic molecules | | | | |
| **COURSE AIMS** | | | To make an introduction to the field of molecular biology and to provide the gains of basic knowledges in this field. | | | | |
| **COURSE OBJECTIVES** | | | To gain the knowledge related with the formation of macromolecules from atoms and to teach molecular structures and basic functions of inorganic molecules and organic molecules such as carbohydrates, lipids, proteins and nucleic acids. | | | | |
| **TEXTBOOK(S)** | | | Güneş HV, Moleküler Hücre Biyolojisi, İstanbul Tıp Kitabevi, 2 | | | | |
| **REFERENCES** | | | [Alberts](http://www.amazon.com/Bruce-Alberts/e/B00E9A80R2/ref=ntt_athr_dp_pel_1) B, [Bray](http://www.amazon.com/s/ref=ntt_athr_dp_sr_2?_encoding=UTF8&field-author=Dennis%20Bray&search-alias=books&sort=relevancerank) D, [Hopkin](http://www.amazon.com/s/ref=ntt_athr_dp_sr_3?_encoding=UTF8&field-author=Karen%20Hopkin&search-alias=books&sort=relevancerank) K, et al., Essential Cell Biology, 4th Edition, Garland Science, New York, 2013  [Basaran](http://www.amazon.com/Bruce-Alberts/e/B00E9A80R2/ref=ntt_athr_dp_pel_1) A, Tıbbi Biyoloji Kitabı, Pelikan Yayıncılık, 2010  Alberts B, Johnson A, Lewis J, Raff M, Roberts K, Walter P, Molecular Biology of The Cell, Fifth Edition, Garland Science, New York, 2008  Pollard TD, Earnshaw WC, Cell Biology, Saunders, New York, 2002. | | | | |

|  |  |
| --- | --- |
|  | **COURSE SYLLABUS** |
| **WEEK** | **SUBJECTS/TOPICS** |
| 1 | Introduction to the Chemical Bonds Allowing the Formation of Molecules, Macromolecules and Complex Molecules from Atoms |
| 2 | Hydrogen Bonds |
| 3 | Ionic Bonds |
| 4 | Covalent Bonds |
| 5 | Chemically Reactive Groups Allowing the Realization of Molecular Organization |
| 6 | Introduction to Organic Molecules Constituting Living Systems |
| 7 | Carbohydrates |
| 8 | WRITTEN EXAM |
| 9 | Lipids |
| 10 | Proteins |
| 11 | Nucleic Acids |
| 12 | Molecular Structures and Basic Functions of Inorganic Molecules in Living Organisms |
| 13 | Energy Transformation in Living Systems |
| 14 | **Presentation of homework:** |
| 15 | **Presentation of homework:** |
| 16 | WRITTEN EXAM |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  |  | **X** |
| 2 | ask scientific questions and form hypothesis |  |  | **X** |
| 3 | search and interpret scientific literature |  |  | **X** |
| 4 | design and conduct experiments as well as analyze and interpret the data | **X** |  |  |
| 5 | learn how to use the experimental equipment effectively | **X** |  |  |
| 6 | function on multi-disciplinary teams | **X** |  |  |
| 7 | identify, formulate, and solve medical problems |  |  | **X** |
| 8 | use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| 9 | understand the impact of experimental solutions on national and international sciences |  | **X** |  |
| 10 | use effective written and oral communication/presentation skills |  |  | **X** |
| 11 | get an understanding of professional and ethical responsibility |  |  | **X** |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| 13 | Ability of recognition of fundamental terms in Medical School teaching |  | **X** |  |
| 14 | Ability of handling ethic issues by considering fundamental terms |  | **X** |  |

|  |  |
| --- | --- |
| **Instructor Name**  **Sign** | **Date** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE:** | **521013008** | | **DEPARTMENT:** | | **ANATOMY** | | |
| **COURSE NAME:** | **Introduction to Anatomy, Anatomical Terminology and Locomotor System** | | | | | | |
| **INSTRUCTORS NAME**  Prof.Dr. Ferruh YÜCEL,  Prof.Dr. Nedim ÜNAL,  Prof.Dr. Hilmi ÖZDEN,  Prof.Dr. Emel ULUPINAR,  Prof.Dr. Yüksel AYDAR  Assist.Prof.Dr.Hakan AY | | **COURSE LANGUAGE**  **Turkish:** 🗵  **English:** □ | | **Course Catagory** | | | |
| Technical | | Medical | Other(……) |
|  | |  | | 🗴 |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.Sc.** | **Ph.D.** | **COURSE of PROVINCE** |
| 🗵 | □ | □ | □ |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | **COURSE of** | | | | | |
| **Theoric** | **Practice** | **Laboratory** | | **Credit** | **ECTS** | | **TYPE** | | |
| Spring □  Autumn 🗵 | 2 | 2 | - | | 3 | 7,5 | | COMPULSORY ELECTIVE  □🗵 | | |
|  | | | | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | | | | |
| **MID-TERM** | | **ACTIVITY** | | | | | | **Quantity** | | **Percentage (%)** |
| 1st Mid-Term | | | | | | **1** | | **50** |
| 2 nd Mid- Term | | | | | |  | |  |
| Quiz | | | | | |  | |  |
| Homework | | | | | |  | |  |
| Project | | | | | |  | |  |
| Oral Exam | | | | | |  | |  |
| Other (………) | | | | | |  | |  |
| **FINAL** | | Quiz | | | | | | **1** | | **50** |
| Homework | | | | | |  | |  |
| Project | | | | | |  | |  |
| Oral Exam | | | | | |  | |  |
| Other(……………….) | | | | | |  | |  |
| **MAKE-UP EXAM** | | Oral | | Written | | | Oral and Written | | Multiple Choice | |
|  | |  | | | 🗴 | |  | |
| **PREREQUISITE(S)** | | - | | | | | | | | |
| **COURSE CONTENT** | | Basic Latin and Greek letters, basic principles of anatomic nomenclature and anatomical description, anatomical abbreviations, osteology, arthrology and myology topics will be handled | | | | | | | | |
| **COURSE AIMS** | | In this course, detailed information about the usage and fundamentals of the Latin terminology will be given. While giving this knowledge, the relationship betweeen basic and clinical sciences has to be emphasized. | | | | | | | | |
| **COURSE OBJECTIVES** | | Students will be able to understand and use Latin anatomical terminology. And will have basic knowledge about the locomotor system. | | | | | | | | |
| **TEXTBOOK(S)** | | Adolf Faller : Wörterbuch der anatomischen Fachbegriffe. J.F.Bergmann/München Gerhard Krüger : Der anatomische Wortschatz . UTB Steinkoff/Darmstadt | | | | | | | | |
| **REFERENCES** | | -Netter F.H.:Atlas of Human Anatomy, Seventh Edition, Ciba-Geigy Corporation, 1994.-Putz R, Pabst R.: Sobotta İnsan Anatomisi (çeviri: K.Arıncı), Beta Basım Yayın Dağıtım A.Ş., İstanbul, 1993. | | | | | | | | |

|  |  |
| --- | --- |
|  | **COURSE SYLLABUS** |
| **WEEK** | **SUBJECTS/TOPICS** |
| 1 | Letters and symbols of the Latin and Greek alphabet |
| 2 | Latin anatomical terminology and its usage |
| 3 | Fundamentals of anatomical terminology |
| 4 | Latin anatomical abbreviations and descriptions |
| 5 | Introduction to the locomotor system, bones of, head, vertebral column and thorax |
| 6 | Articulations of the head, vertebral column and thorax |
| 7 | Muscles and nerves of the head and neck |
| 8 | MID-TERM EXAM |
| 9 | Muscles and nerves of the back and chest |
| 10 | Muscles and nerves of the abdomen and the diaphragma |
| 11 | Muscles and nerves of the pelvis and perineum |
| 12 | Bones and articulations of the upper extremity |
| 13 | Muscles and nerves of the upper extremity |
| 14 | Bones and articulations of the lower extremity |
| 15 | Muscles and nerves of the lower extremity |
| 16 | FINAL EXAM |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  |  | 🗴 |
| 2 | ask scientific questions and form hypothesis |  |  | 🗴 |
| 3 | search and interpret scientific literature |  |  | 🗴 |
| 4 | design and conduct experiments as well as analyze and interpret the data | 🗴 |  |  |
| 5 | learn how to use the experimental equipment effectively | 🗴 |  |  |
| 6 | function on multi-disciplinary teams |  | 🗴 |  |
| 7 | identify, formulate, and solve medical problems |  | 🗴 |  |
| 8 | use computer effectively both in conducting the experiments and analyzing the data | 🗴 |  |  |
| 9 | understand the impact of experimental solutions on national and international sciences | 🗴 |  |  |
| 10 | use effective written and oral communication/presentation skills |  | 🗴 |  |
| 11 | get an understanding of professional and ethical responsibility |  | 🗴 |  |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  |  | 🗴 |
| 13 | other (……………………………………….) |  |  |  |
| 14 | other (……………………………………….) |  |  |  |

|  |  |
| --- | --- |
| **Instructor Name:**  Prof.Dr. Ferruh YÜCEL,  Prof.Dr. Nedim ÜNAL,  Prof.Dr. Hilmi ÖZDEN,  Prof.Dr. Emel ULUPINAR,  Prof.Dr. Yüksel AYDAR  Assist.Prof.Dr.Hakan AY | **Sign:**  **Date** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE:** | **521013009** | | **DEPARTMENT:** | | **ANATOMY** | | |
| **COURSE NAME:** | **Topographical Anatomy** | | | | | | |
| **INSTRUCTOR NAME**  Prof.Dr. Ferruh YÜCEL,  Prof.Dr. Nedim ÜNAL,  Prof.Dr. Hilmi ÖZDEN,  Prof.Dr. Emel ULUPINAR,  Prof.Dr. Yüksel AYDAR  Assist.Prof.Dr.Hakan AY | | **COURSE LANGUAGE**  **Turkish:** 🗵  **English:** □ | | **Course Catagory** | | | |
| Technical | | Medical | Other(……) |
|  | |  | | 🗴 |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.Sc.** | **Ph.D.** | **COURSE of PROVINCE** |
| 🗵 | □ | □ | □ |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | **COURSE of** | | | | | |
| **Theoric** | **Practice** | **Laboratory** | | **Credit** | **ECTS** | | **TYPE** | | |
| Spring □  Autumn 🗵 | 3 | 1 | - | | 3,5 | 7,5 | | COMPULSORY ELECTIVE  □🗵 | | |
|  | | | | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | | | | |
| **MID-TERM** | | **ACTIVITY** | | | | | | **Quantity** | | **Percentage (%)** |
| 1st Mid-Term | | | | | | **1** | | **50** |
| 2 nd Mid- Term | | | | | |  | |  |
| Quiz | | | | | |  | |  |
| Homework | | | | | |  | |  |
| Project | | | | | |  | |  |
| Oral Exam | | | | | |  | |  |
| Other (………) | | | | | |  | |  |
| **FINAL** | | Quiz | | | | | | **1** | | **50** |
| Homework | | | | | |  | |  |
| Project | | | | | |  | |  |
| Oral Exam | | | | | |  | |  |
| Other(……………….) | | | | | |  | |  |
| **MAKE-UP EXAM** | | Oral | | Written | | | Oral and Written | | Multiple Choice | |
|  | |  | | | 🗴 | |  | |
| **PREREQUISITE(S)** | | - | | | | | | | | |
| **COURSE CONTENT** | | In this course, it is given basic anatomic knowledge about the topographic relation of anatomic structures. Extremities, head and neck, thorax, abdomen and pelvis are examined. | | | | | | | | |
| **COURSE AIMS** | | Give the topographic information about the systems and make clear the functional importance | | | | | | | | |
| **COURSE OBJECTIVES** | | Determination of anatomic points of the systems and its place on human body system, understanding of the functional importance, the ability to provide the topographic integration (relations) of the structures. | | | | | | | | |
| **TEXTBOOK(S)** | | -Arıncı, K, Elhan, A: Anatomi, Cilt 1-2, 2. Baskı, Güneş Kitabevi, Ankara, 1997.-Langman Jan: Medizinische Embryologie, Band: 1-3, Georg Thieme Verlag, Stuttgart-New York.-Moore, KL: Clinically Oriented Anatomy. 3th Edition, Williams and Wilkins, Baltimore, 1992.-Williams P.L.: Gray’s Anatomy, 38.edition, ELBS with Churchill Livingstone, Great Britain, 1995. | | | | | | | | |
| **REFERENCES** | | -Netter F.H.:Atlas of Human Anatomy, Seventh Edition, Ciba-Geigy Corporation, 1994.-Putz R, Pabst R.: Sobotta İnsan Anatomisi (çeviri: K.Arıncı), Beta Basım Yayın Dağıtım A.Ş., İstanbul, 1993. | | | | | | | | |

|  |  |
| --- | --- |
|  | **COURSE SYLLABUS** |
| **WEEK** | **SUBJECTS/TOPICS** |
| 1 | Topographic Anatomy of the skull, face and special sense organs |
| 2 | Topographic Anatomy of the neck |
| 3 | Topographic Anatomy of the vertebral column and spinal cord |
| 4 | Topographic Anatomy of the thorax (pleura, lungs and mediastinum) |
| 5 | Topographic Anatomy of the shoulder and axillary region |
| 6 | Topographic Anatomy of the arm, wrist and forearm regions |
| 7 | Topographic Anatomy of the elbow region and hand |
| 8 | MIDTERM EXAM |
| 9 | Topographic Anatomy of the abdomen |
| 10 | Topographic Anatomy of the inguinal region |
| 11 | Topographic Anatomy of the perineum |
| 12 | Topographic Anatomy of the pelvic region |
| 13 | Topographic Anatomy of the hip joint and thigh region |
| 14 | Topographic Anatomy of the knee, leg and foot region |
| 15 | Topographic Surface Anatomy |
| 16 | FINAL EXAM |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  |  | 🗴 |
| 2 | ask scientific questions and form hypothesis |  |  | 🗴 |
| 3 | search and interpret scientific literature |  |  | 🗴 |
| 4 | design and conduct experiments as well as analyze and interpret the data |  | 🗴 |  |
| 5 | learn how to use the experimental equipment effectively |  | 🗴 |  |
| 6 | function on multi-disciplinary teams |  |  | 🗴 |
| 7 | identify, formulate, and solve medical problems |  |  | 🗴 |
| 8 | use computer effectively both in conducting the experiments and analyzing the data | 🗴 |  |  |
| 9 | understand the impact of experimental solutions on national and international sciences |  | 🗴 |  |
| 10 | use effective written and oral communication/presentation skills |  | 🗴 |  |
| 11 | get an understanding of professional and ethical responsibility |  | 🗴 |  |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  |  | 🗴 |
| 13 | other (……………………………………….) |  |  |  |
| 14 | other (……………………………………….) |  |  |  |

|  |  |
| --- | --- |
| **Instructor Name:**  Prof.Dr. Ferruh YÜCEL,  Prof.Dr. Nedim ÜNAL,  Prof.Dr. Hilmi ÖZDEN,  Prof.Dr. Emel ULUPINAR,  Prof.Dr. Yüksel AYDAR  Assist.Prof.Dr.Hakan AY | **Sign:**  **Date** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE:** | **521013010** | | **DEPARTMENT: PHYSIOLOGY** | | | |
| **COURSE NAME:** | **INTRODUCTİON TO HUMAN PHYSİOLOGY** | | | | | |
| **INSTRUCTOR NAME:**  **All of Faculty of Physiology Department** | | **COURSE LANGUAGE**  **Turkish: X**  **English:** | | **Course Catagory** | | |
| Technical | Medical | Other(……) |
|  | |  | |  | **X** |  |
|  |  |  |  |  |  |  |

**COURSE LEVEL**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **PROPAEDEUTIC** | | | **M.SC.** | | | **Ph.D.** | | | **COURSE OF PROVINCE** | |
| **X** | | |  | | |  | | |  | |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | **COURSE OF** | | | | | |
| **Theoric** | **Practice** | | **Laboratory** | **Credit** | | **ECTS** | **TYPE** | | |
| Spring  Autumn **X** | 4 |  | |  | 4 | | 7,5 | COMPULSORY ELECTIVE  **X** | | |
|  | | | | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | | | | |
| **MID-TERM** | | | | **ACTIVITY** | | | | **Quantity** | | **Percentage (%)** |
| 1st Mid-Term | | | | 1 | | 30 |
| 2 nd Mid- Term | | | |  | |  |
| Quiz | | | |  | |  |
| Homework | | | |  | |  |
| Project | | | |  | |  |
| Oral Exam | | | |  | |  |
| Other (literatüre search and presentation) | | | | 1 | | 20 |
| **FINAL** | | | | Quiz | | | |  | |  |
| Homework | | | |  | |  |
| Project | | | |  | |  |
| Oral Exam | | | |  | |  |
| Other(Final Exam) | | | | **1** | | **50** |
| **MAKE-UP EXAM** | | | | Oral | | | Written | Oral and Written | | Multiple Choice |
|  | | | **X** |  | |  |
| **PREREQUISITE(S)** | | | | None | | | | | | |
| **COURSE CONTENT** | | | | Introduction to Human Physiology is designed to develop an understanding of how the different organ systems of the human body function. The course emphasizes the relationship between physiology and health given mechanisms to the body's physiological responses to changing environment conditions to continue homeostasis. | | | | | | |
| **COURSE AIMS** | | | | An understanding of the acute and chronic physiological changes that occur in the body systems. | | | | | | |
| **COURSE OBJECTIVES** | | | | By the end of this module students will be able to:  List the functions of physiological systems and explain how they contribute to homeostasis. | | | | | | |
| **TEXTBOOK(S)** | | | | **1. Guyton AC.** and Hall JE. Textbook of Medical Physiology.  **2. Ganong WF.** Review of Medical Physiology.  **3. Tortora G and Grabowski S.** Principles of Anatomy and Physiology. 4. Berne, R.M. and Levy, M.N. Principles of Physiology | | | | | | |
| **REFERENCES** | | | | A series of visual and written documents will be provided a (1) concise, (2) updated and (3) rigorous overview of major concepts of the physiology of systems discussed in the first part of the class | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |  |
| --- | --- | --- |
|  | **COURSE SYLLABUS** | |
| **WEEK** | **DATE** | **SUBJECTS/TOPICS** |
| 1 |  | Introduction of the course and basic cell functions |
| 2 |  | Electrical properties of cells |
| 3 |  | Muscle physiology |
| 4 |  | Central nervous system |
| 5 |  | Periferal nervous system |
| 6 |  | Hormonal regulation |
| 7 |  | Midterm exam |
| 8 |  | Haematology |
| 9 |  | The heart |
| 10 |  | Circulation |
| 11 |  | Respiratory system |
| 12 |  | Kidney functions |
| 13 |  | Digestive system |
| 14 |  | Final exam |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  |  | **X** |
| 2 | ask scientific questions and form hypothesis |  |  |  |
| 3 | search and interpret scientific literature |  | **X** |  |
| 4 | design and conduct experiments as well as analyze and interpret the data | **X** |  |  |
| 5 | learn how to use the experimental equipment effectively | **X** |  |  |
| 6 | function on multi-disciplinary teams |  |  |  |
| 7 | identify, formulate, and solve medical problems | **X** |  |  |
| 8 | use computer effectively both in conducting the experiments and analyzing the data | **X** |  |  |
| 9 | understand the impact of experimental solutions on national and international sciences |  |  |  |
| 10 | use effective written and oral communication/presentation skills | **X** |  |  |
| 11 | get an understanding of professional and ethical responsibility |  | **X** |  |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  | **X** |  |
| 13 | other (……………………………………….) |  |  |  |
| 14 | other (……………………………………….) |  |  |  |

|  |  |
| --- | --- |
| **Name of Head of Physiology Department**  **Prof. Dr. Ruhi UYAR**  **Sign** | **Date**  November 19, 2012 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE CODE:** | **521013011** | **DEPARTMENT: MEDICAL MICROBIOLOGY** | | | |
| **COURSE NAME:** | **GENERAL MICROBIOLOGY AND IMMUNOLOGY** |  | | | |
| **INSTRUCTOR NAME:**  **Prof. Dr. Gül Durmaz**  **Prof. Dr. Yurdanur Akgün**  **Prof. Dr. Tercan Us**  **Doç. Dr. Nihal Doğan**  **Doç. Dr. Abdurrahman Kiremitçi**  **Doç. Dr. Nilgün Kaşifoğlu**  **Doç. Dr. Yasemin Öz** | | **COURSE LANGUAGE**  **Turkish: X**  **English:** | **Course Catagory** | | |
| Technical | Medical | Other(……) |
|  | |  |  | **X** |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| **X** |  |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | **COURSE OF** | | | |
| **Theoric** | **Practice** | **Laboratory** | **Credit** | **ECTS** | **TYPE** | |
| Spring  Autumn **X** | 2 | 2 | 0 | 3 | 7,5 | COMPULSORY ELECTIVE  **X** | |
|  | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | |
| **MID-TERM** | | | **ACTIVITY** | | | **Quantity** | **Percentage (%)** |
| 1st Mid-Term | | | 1 | 40 |
| 2 nd Mid- Term | | |  |  |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (………) | | |  |  |
| **FINAL** | | | Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other(……………….) | | | **1** | **60** |
| **MAKE-UP EXAM** | | | Oral | | Written | Oral and Written | Multiple Choice |
|  | |  | **X** |  |
| **PREREQUISITE(S)** | | | Be a graduate of the Faculty of Pharmacy, Faculty of Medicine, Faculty of Dentistry or Faculty of Veterinary Medicine | | | | |
| **COURSE CONTENT** | | | Content of the lesson is as follows: Introduction to and short history of microbiology and, taxonomy of microorganisms, structure and physiology of bacteria, staining methods, sampling and general isolation methods, normal microbial flora, disinfection and sterilization methods, introduction to immunology, antigen and immunoglobulin, structure of immune system, immune response, active and passive immunization. | | | | |
| **COURSE AIMS** | | | In this lesson, basic subjects about Medical Microbiology and Immunology are taught. | | | | |
| **COURSE OBJECTIVES** | | | 1.  Understand the basic characteristics and importance of microorganisms.  2.   Learn nomenclature, classification and identification of microorganisms of medical importance.  3.  Know the anatomy of a prokaryotic cell, the functions of the parts, and how it differs    from a eukaryotic cell.  4.  Know basic bacterial shapes and arrangements and differences between Gram negative and positive cell walls.  5.  Know physiology of bacteria (growth requirements and terms: temperature, pH, and atmosphere).  6.  Know microbial genetics and terminology (mutation, transformation, transduction, conjugation).  7.  Know details of Gram stain, acid fast stain and Giemsa and their purpose.  8. Learn the artificial growth media of microorganisms.  9.  Know normal flora within the human host and its clinical relevance  10.  Know sterilization & disinfection methods and effect of physical and chemical agents on microbe and terms as disinfection, sterilization and antisepsis.  11. Know basic concepts about immunology including antigen and antibody.  12. Learn lymphoid organs and cells.  13. Learn immune response process.  14. Learn immuno-prophylaxis methods to prevent infectious diseases. | | | | |
| **TEXTBOOK(S)** | | | Murray PR, Rosenthal KS, Pfaller MA**( Eds) Medical Microbiology Sixth Edition Mosby Elsevier 2009** | | | | |
| **REFERENCES** | | | Brooks, G.,. Burtel T.S. (2001). **Medikal Mikrobiyoloji. 22. baskı. SA Morse Lange Medikal Kitaplar** | | | | |

|  |  |  |
| --- | --- | --- |
|  | **COURSE SYLLABUS** | |
| **WEEK** | **DATE** | **SUBJECTS/TOPICS** |
| 1 |  | Introduction to Microbiology and the History of Microbiology  The tools, equipment and devices used in Microbiology Laboratories |
| 2 |  | The Structure and The Physiology of The Bacteria |
| 3 |  | Bacterial Genetics and Antimicrobials |
| 4 |  | Growth Media of Microorganisms |
| 5 |  | Stains and Staining Methods |
| 6 |  | Environmental Microbiology and sampling methods  Sterilization and Disinfection |
| 7 |  | Innate immunity |
| 8 |  | Introduction to the Immunity and Antigen |
| 9 |  | The structure of the immune system |
| 10 |  | MID-TERM EXAM |
| 11 |  | Immunoglobulin (antibodies) |
| 12 |  | Immune response and Hypersensitivity reactions |
| 13 |  | Vaccines and Immune Serum (Immunoprophylaxis) |
| 14 |  | The generation of infection |
| 15 |  | Microbiological diagnostic methods |
| 16 |  | FINAL EXAM |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  |  | **X** |
| 2 | ask scientific questions and form hypothesis |  |  | **X** |
| 3 | search and interpret scientific literature |  |  | **X** |
| 4 | design and conduct experiments as well as analyze and interpret the data |  |  | **X** |
| 5 | learn how to use the experimental equipment effectively |  |  | **X** |
| 6 | function on multi-disciplinary teams |  |  | **X** |
| 7 | identify, formulate, and solve medical problems |  |  | **X** |
| 8 | use computer effectively both in conducting the experiments and analyzing the data |  |  | **X** |
| 9 | understand the impact of experimental solutions on national and international sciences |  |  | **X** |
| 10 | use effective written and oral communication/presentation skills |  |  | **X** |
| 11 | get an understanding of professional and ethical responsibility |  | **X** |  |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| 13 | other (……………………………………….) |  |  | **X** |
| 14 | other (……………………………………….) |  | **X** |  |

|  |  |
| --- | --- |
| **Instructor Name: Sign**  **Prof. Dr. Gül Durmaz**  **Prof. Dr. Yurdanur Akgün**  **Prof. Dr. Tercan Us**  **Doç. Dr. Nihal Doğan**  **Doç. Dr. Abdurrahman Kiremitçi**  **Doç. Dr. Nilgün Kaşifoğlu**  **Doç. Dr. Yasemin Öz** | **Date: 27.02.20124** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE:** | **521013015** | | **DEPARTMENT: MEDİCAL PHARMACOLOGY** | | | |
| **COURSE NAME:** | **BASİC PHARMACOLOGY** | |  | | | |
| **INSTRUCTOR NAME**  **Prof. Dr. Fatma Sultan KILIÇ** | | **COURSE LANGUAGE**  **Turkish: X**  **English: ** | | **Course Catagory** | | |
| Technical | Medical | Other(……) |
|  | |  | |  | **X** |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| **X** | **** | **** | **** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | **COURSE OF** | | | |
| **Theoric** | **Practice** | **Laboratory** | **Credit** | **ECTS** | **TYPE** | |
| Spring ****  Autumn **x** | 3 | 0 |  | 3 | 7,5 | COMPULSORY ELECTIVE  **X ** | |
|  | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | |
| **MID-TERM** | | | **ACTIVITY** | | | **Quantity** | **Percentage (%)** |
| 1st Mid-Term | | | 1 | 50 |
| 2 nd Mid- Term | | |  |  |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (………) | | |  |  |
| **FINAL** | | | Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other(……written………….) | | | **1** | **50** |
| **MAKE-UP EXAM** | | | Oral | | Written | Oral and Written | Multiple Choice |
|  | |  |  |  |
| **PREREQUISITE(S)** | | |  | | | | |
| **COURSE CONTENT** | | | The fundamental objective to achieve in the lesson is to learn the basic pharmacological knowledge, as well as the sources, the application ways, the pharmacokinetics, the pharmacodynamics, and the factors altering the effects of drugs | | | | |
| **COURSE AIMS** | | | The fundamental objective to achieve in the lesson is to learn the basic pharmacological knowledge, as well as the sources, the application ways, the pharmacokinetics, the pharmacodynamics, and the factors altering the effects of drugs | | | | |
| **COURSE OBJECTIVES** | | | To learn the basic pharmacological knowledge. To provide suffient knowledge about the effects and advers effects and interactions of drugs which are used in both experimental and in clinical practice. | | | | |
| **TEXTBOOK(S)** | | | 1. KAYAALP, S O. (2012); Akılcı Tedavi Yönünden Tıbbi Farmakoloji. | | | | |
| **REFERENCES** | | | 1. CİNGİ, I; EROL, K. (1996); Anadolu Üniversitesi Açık Öğretim Fakültesi Sağlık Personeli Önlisans Eğitimi, Farmakoloji.  2. DÖKMECİ, I. (2007); M.Y. Okulları için Farmakoloji Dersleri. Nobel Tıp Kitapevleri.  3. SÜZER, O. (2005); Farmakolojinin Temelleri.. Nobel Tıp Kitapevleri.  4. GOODMAN AND GİLLMAN‘S (2011). The Pharmacological basis of Therapeutics. 12th edition  5. Basic and Clinical Pharmacology: Bertram G. Katzung,  6. Pharmacology: H.P.Rang, M.M Dale, J.M.Ritter,  7. Lippincott’sPharmacology: Richard Harvey, Pamela Champe,  8.Human Pharmacology, Molecular to Clinical: Brody, Larner, Mınneman. | | | | |

|  |  |  |
| --- | --- | --- |
|  | **COURSE SYLLABUS** | |
| **WEEK** | **DATE** | **SUBJECTS/TOPICS** |
| 1 |  | Introduction to Pharmacology |
| 2 |  | The transition of drugs through biological membranes and absorption |
| 3 |  | The application ways and absorption of drugs from application areas |
| 4 |  | The distribution of drugs |
| 5 |  | The biotransformation of drugs |
| 6 |  | The excretion and elimination kinetics of drugs |
| 7 |  | Midterm exam |
| 8 |  | The Association between dose, concentration and effect |
| 9 |  | Mechanisms of action of drugs |
| 10 |  | Receptors and the Association between drugs and receptors |
| 11 |  | The factors changing the effects of drugs |
| 12 |  | Drug interactions |
| 13 |  | Toxic effects of drugs |
| 14 |  | The methods in drug development |
| 15 |  | Semester exam |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  |  | **X** |
| 2 | ask scientific questions and form hypothesis |  |  | **X** |
| 3 | search and interpret scientific literature |  | **X** |  |
| 4 | design and conduct experiments as well as analyze and interpret the data |  | **X** |  |
| 5 | learn how to use the experimental equipment effectively |  | **X** |  |
| 6 | function on multi-disciplinary teams |  |  | **X** |
| 7 | identify, formulate, and solve medical problems |  |  | **X** |
| 8 | use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| 9 | understand the impact of experimental solutions on national and international sciences |  |  | **X** |
| 10 | use effective written and oral communication/presentation skills |  | **X** |  |
| 11 | get an understanding of professional and ethical responsibility |  |  | **X** |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |

|  |  |
| --- | --- |
| **Instructor Name**  **Prof. Dr. Fatma Sultan KILIÇ**  **Sign** | **Date**  15.11.2012 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE:** | **521013016** | | **DEPARTMENT: MEDİCAL PHARMACOLOGY** | | | |
| **COURSE NAME:** | **AUTONOM NERVOUS SYSTEMS** | |  | | | |
| **INSTRUCTOR NAME**  Prof. Dr. Kevser EROL | | **COURSE LANGUAGE**  **Turkish: X**  **English: ** | | **Course Catagory** | | |
| Technical | Medical | Other(……) |
|  | |  | |  | **X** |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| **X** | **** | **** | **** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | **COURSE OF** | | | |
| **Theoric** | **Practice** | **Laboratory** | **Credit** | **ECTS** | **TYPE** | |
| Spring****  Autumn**X** | 3 | 0 |  | 3 | 7,5 | COMPULSORY ELECTIVE  **X ** | |
|  | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | |
| **MID-TERM** | | | **ACTIVITY** | | | **Quantity** | **Percentage (%)** |
| 1st Mid-Term | | | 1 | 50 |
| 2 nd Mid- Term | | |  |  |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (………) | | |  |  |
| **FINAL** | | | Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other(……written………….) | | | **1** | **50** |
| **MAKE-UP EXAM** | | | Oral | | Written | Oral and Written | Multiple Choice |
|  | |  |  |  |
| **PREREQUISITE(S)** | | |  | | | | |
| **COURSE CONTENT** | | | General information about the autonomous nerve system and providing information about autonomic ganglions | | | | |
| **COURSE AIMS** | | | Overseeing the information about autonomus nerve systems | | | | |
| **COURSE OBJECTIVES** | | | Informing the students about endications, counterendications and effects of the medicines of this system: | | | | |
| **TEXTBOOK(S)** | | | 1. KAYAALP, S O. (2012); Akılcıl Tedavi Yönünden Tıbbi Farmakoloji. | | | | |
| **REFERENCES** | | | 1. CİNGİ, I; EROL, K. (1996); Anadolu Üniversitesi Açık Öğretim Fakültesi Sağlık Personeli Önlisans Eğitimi, Farmakoloji.  2. DÖKMECİ, I. (2007); M.Y. Okulları için Farmakoloji Dersleri. Nobel Tıp Kitapevleri.  3. SÜZER, O. (2005); Farmakolojinin Temelleri.. Nobel Tıp Kitapevleri.  4. GOODMAN AND GİLLMAN‘S (2011). The Pharmacological basis of Therapeutics. 12th edition  5. Basic and Clinical Pharmacology: Bertram G. Katzung,  6. Pharmacology: H.P.Rang, M.M Dale, J.M.Ritter,  7. Lippincott’sPharmacology: Richard Harvey, Pamela Champe,  8.Human Pharmacology, Molecular toClinical: Brody,Larner,Mınneman. | | | | |

**,**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **COURSE CODE:** | **521013017** | **DEPARTMENT: HISTOLOGY AND EMBRYOLOGY** | | |
| **COURSE NAME:** | **GENERAL HİSTOLOGY** |  | | |
| **INSTRUCTOR NAME**  Yrd.Doç.Dr.Dilek BURUKOĞLU DÖNMEZ | **COURSE LANGUAGE**  **Turkish: X**  **English: ** | **Course Catagory** | | |
| Technical | Medical | Other(……) |
|  |  |  | **X** |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| **X** | **** | **** | **** |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | **COURSE OF** | | | |
| **Theoric** | | **Practice** | | **Laboratory** | **Credit** | **ECTS** | **TYPE** | |
| Spring ****  Autumn **X** | 2 | | - | | - | 2 | 7,5 | COMPULSORY ELECTIVE  **X ** | |
|  | | | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | | | |
| **MID-TERM** | | | | | **ACTIVITY** | | | **Quantity** | **Percentage (%)** |
| 1st Mid-Term | | | 1 | 25 |
| 2 nd Mid- Term | | | 1 | 25 |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (………) | | |  |  |
| **FINAL** | | | | | Quiz | | | **1** | **50** |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other(……………….) | | |  |  |
| **MAKE-UP EXAM** | | | | | Oral | | Written | Oral and Written | Multiple Choice |
|  | | **X** |  |  |
| **PREREQUISITE(S)** | | | | |  | | | | |
| **COURSE CONTENT** | | | | | Histology is the microscopic study of the structure of biological tissues using special staining techniques combined with light and electron microscopy. Despite its complexity, the human body is composed of only 4 basic types of tissue; epithelial, connective, muscular, and nervous. | | | | |
| **COURSE AIMS** | | | | | Name the instruments and techniques used to prepare and study histological specimens.  Differentiate between different tissues and organs in histological slide seen under the microscope  To teach the basic characteristics of the four main tissue | | | | |
| **COURSE OBJECTIVES** | | | | | The objective of a histology course is to lead the student to understand the histology of cells, tissues, and organs and to correlate structure with function. | | | | |
| **TEXTBOOK(S)** | | | | | L.C.Junqueira, J.Carnerio, çeviri editörleri; S.Solakoğlu, Y.Aytekin. Temel Histoloji, Nobel tıp kitabevleri, 2009. | | | | |
| **REFERENCES** | | | | | Michael H. Ross, Wojciech Pawlina. Histology, A Text and Atlas, sixth edition, 2011 | | | | |
|  | | **COURSE SYLLABUS** | | | | | | | | |
| **WEEK** | | **DATE** | | **SUBJECTS/TOPICS** | | | | | | |
| 1 | |  | | Introduction to the histology | | | | | | |
| 2 | |  | | Histological techniques | | | | | | |
| 3 | |  | | Cell structure | | | | | | |
| 4 | |  | | Cell organelles, inclusions and nucleus structure | | | | | | |
| 5 | |  | | 1st Mid-Term | | | | | | |
| 6 | |  | | Epithelial tissue | | | | | | |
| 7 | |  | | Epithelial tissue-glandular epithelium | | | | | | |
| 8 | |  | | Connective tissue | | | | | | |
| 9 | |  | | Adipose tissue | | | | | | |
| 10 | |  | | 2 st Mid-Term | | | | | | |
| 11 | |  | | Cartilage tissue | | | | | | |
| 12 | |  | | Bone tissue | | | | | | |
| 13 | |  | | Muscle tissue | | | | | | |
| 14 | |  | | General nervous tissue | | | | | | |
| 15 | |  | | Blood tissue and bone marrow | | | | | | |
| 16 | |  | | Final | | | | | | |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  | **X** |  |
| 2 | ask scientific questions and form hypothesis |  | **X** |  |
| 3 | search and interpret scientific literature |  | **X** |  |
| 4 | design and conduct experiments as well as analyze and interpret the data |  |  | **X** |
| 5 | learn how to use the experimental equipment effectively |  |  | **X** |
| 6 | function on multi-disciplinary teams |  |  | **X** |
| 7 | identify, formulate, and solve medical problems |  | **X** |  |
| 8 | use computer effectively both in conducting the experiments and analyzing the data |  |  | **X** |
| 9 | understand the impact of experimental solutions on national and international sciences |  | **X** |  |
| 10 | use effective written and oral communication/presentation skills |  |  | **X** |
| 11 | get an understanding of professional and ethical responsibility |  | **X** |  |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  | **X** |  |
| 13 | other (……………………………………….) |  |  |  |
| 14 | other (……………………………………….) |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Instructor Name**  **Sign**  Yrd.Doç.Dr. Dilek BURUKOĞLU DÖNMEZ | | **Date**  06.03.2014 | | | | |
| **COURSE CODE:** **521013018** |  | | **DEPARTMENT: BIOPHYSICS** | | |
| **COURSE NAME: BIOPHYSICS I** |  | |  | | |
| **INSTRUCTOR NAME**  **Prof.Dr. Ferhan ESEN** | **COURSE LANGUAGE**  **Turkish: X**  **English: ** | | **Course Catagory** | | |
| Technical | Medical | Other (……) |
|  |  | |  | **X** |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| **X** | **** |  | **** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | **COURSE OF** | | | |
| **Theoric** | **Practice** | **Laboratory** | **Credit** | **ECTS** | **TYPE** | |
| Spring  Autumn **X** | 3 | - | - | 3 | 7,5 | COMPULSORY ELECTIVE  **X ** | |
|  | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | |
| **MID-TERM** | | | **ACTIVITY** | | | **Quantity** | **Percentage (%)** |
| 1st Mid-Term | | | **1** | **40** |
| 2 nd Mid- Term | | |  |  |
| Quiz | | |  |  |
| Homework | | | **1** | **20** |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (………) | | |  |  |
| **FINAL** | | | Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Written | | | **1** | **40** |
| Other(……………….) | | |  |  |
| **MAKE-UP EXAM** | | | Oral | | Written | Oral and Written | Multiple Choice |
|  | |  | **X** |  |
| **PREREQUISITE(S)** | | |  | | | | |
| **COURSE CONTENT** | | | Physics and Biology. Force and muscle force, Torque and equilibrium, Dynamics. Energy, Lokomotion. Liquids, Gases and Solids. Thermodynamics | | | | |
| **COURSE AIMS** | | | To give students the biophysics background they need for their professional work. | | | | |
| **COURSE OBJECTIVES** | | | Understands the relation between physics and the life sciences.  Apply knowledge of mathematics and physics to the life sciences. | | | | |
| **TEXTBOOK(S)** | | | **Güner Z.:** Tıp ve Biyoloji öğrencileri için fizik. A.Ü.T.F, Ankara, 1981. Cromer A.H..: Physics for the life sciences. McGraw-Hill New York 1974.. | | | | |
| **REFERENCES** | | | **Çelebi G:** Biyomedikal Fizik, (2.Baskı), Barış Yayınları, Fakülteler Kitabevi, İzmir, (1995). | | | | |

|  |  |  |
| --- | --- | --- |
|  | **COURSE SYLLABUS** | |
| **WEEK** | **DATE** | **SUBJECTS/TOPICS** |
| 1 |  | Physic and Biology |
| 2 |  | Force, compression and tension, friction. |
| 3 |  | Contact force. Muscle force. |
| 4 |  | Torque. Equilibrium |
| 5 |  | Bending moment, shear stress. |
| 6 |  | Functional adaptation. |
| 7 |  | Dynamics. |
| 8 |  | Locomotion |
| 9 |  | Work and energy. |
| 10 |  | Metabolic rate. |
| 11 |  | Liquids. |
| 12 |  | The effect of gravity on fluids. |
| 13 |  | Surface tensio, capillary action, osmosis and negative pressure. |
| 14 |  | Gas laws. |
| 15 |  | Mechanical properties of solids. |
| 16 |  | Thermodynamics. |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  | **X** |  |
| 2 | ask scientific questions and form hypothesis |  |  | **X** |
| 3 | search and interpret scientific literature |  | **X** |  |
| 4 | design and conduct experiments as well as analyze and interpret the data |  |  | **X** |
| 5 | learn how to use the experimental equipment effectively |  |  | **X** |
| 6 | function on multi-disciplinary teams |  | **X** |  |
| 7 | identify, formulate, and solve medical problems |  |  | **X** |
| 8 | use computer effectively both in conducting the experiments and analyzing the data |  |  | **X** |
| 9 | understand the impact of experimental solutions on national and international sciences |  |  | **X** |
| 10 | use effective written and oral communication/presentation skills |  |  | **X** |
| 11 | get an understanding of professional and ethical responsibility |  |  | **X** |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| 13 | other (……………………………………….) |  |  |  |
| 14 | other (……………………………………….) |  |  |  |

|  |  |
| --- | --- |
| **Instructor Name**  **Prof.Dr. Ferhan ESEN**  **Sign** | **Date** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE:** | **521013019** | | **DEPARTMENT: MEDICAL GENETICS** | | | |
| **COURSE NAME:** | **THE BASİS ISSUES OF MEDİCAL GENETİCS AND LABORATORY APPLİCATİONS** | | | | | |
| **INSTRUCTOR NAME**  **Prof.Dr.Sevilhan ARTAN** | | **COURSE LANGUAGE**  **Turkish: X**  **English:** | | **Course Catagory** | | |
| Technical | Medical | Other(……) |
|  | |  | |  | **X** |  |
|  |  |  |  |  |  |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| **X** |  |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | **COURSE OF** | | | |
| **Theoric** | **Practice** | **Laboratory** | **Credit** | **ECTS** | **TYPE** | |
| Spring  Autumn **X** | 1 | 5 |  | 3,5 | 7,5 | COMPULSORY ELECTIVE  **X** | |
|  | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | |
| **MID-TERM** | | | **ACTIVITY** | | | **Quantity** | **Percentage (%)** |
| 1st Mid-Term | | | 1 | 30 |
| 2 nd Mid- Term | | |  |  |
| Quiz | | |  |  |
| Homework | | | 1 | 10 |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (………) | | |  |  |
| **FINAL** | | | Quiz | | | **1** | **60** |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other(……………….) | | |  |  |
| **MAKE-UP EXAM** | | | Oral | | Written | Oral and Written | Multiple Choice |
|  | | **X** |  |  |
| **PREREQUISITE(S)** | | |  | | | | |
| **COURSE CONTENT** | | | Able to know genome organisation, gene expression, mutations, DNA analysis methods, patterns of inheritance, chromosome structure | | | | |
| **COURSE AIMS** | | | To learn basic issues in medical genetics and diagnostic methods | | | | |
| **COURSE OBJECTIVES** | | | Understanding the basic genetic issues and laboratory applications | | | | |
| **TEXTBOOK(S)** | | | Thompson&Thompson Tıbbi Genetik 2009 | | | | |
| **REFERENCES** | | |  | | | | |

|  |  |  |
| --- | --- | --- |
|  | **COURSE SYLLABUS** | |
| **WEEK** | **DATE** | **SUBJECTS/TOPICS** |
| 1 |  | Genetic material - Genome |
| 2 |  | Gene structure - Expression - Control |
| 3 |  | DNA polymorphism |
| 4 |  | Mutations and Types |
| 5 |  | Recombinant DNA technologies |
| 6 |  | Direct mutation analysis methods |
| 7 |  | Indirect mutation analysis methods |
| 8 |  | Patterns of inheritance |
| 9 |  | Non-Mendelian inheritance |
| 10 |  | Multifactorial inheritance |
| 11 |  | Chromosome organization and chromatin structure |
| 12 |  | Numerical chromosome aberrations |
| 13 |  | Structural chromosome aberrations |
| 14 |  | Karyotype nomenculature |
| 15 |  | Cytogenetic diagnostic methods |
| 16 |  | Molecular cytogenetic diagnostic methods |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  | **X** |  |
| 2 | ask scientific questions and form hypothesis |  | **X** |  |
| 3 | search and interpret scientific literature |  |  | **X** |
| 4 | design and conduct experiments as well as analyze and interpret the data |  |  |  |
| 5 | learn how to use the experimental equipment effectively |  |  |  |
| 6 | function on multi-disciplinary teams |  | **X** |  |
| 7 | identify, formulate, and solve medical problems |  |  | **X** |
| 8 | use computer effectively both in conducting the experiments and analyzing the data |  |  |  |
| 9 | understand the impact of experimental solutions on national and international sciences |  | **X** |  |
| 10 | use effective written and oral communication/presentation skills |  |  | **X** |
| 11 | get an understanding of professional and ethical responsibility |  |  | **X** |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  |  |  |
| 13 | other (……………………………………….) |  |  | **X** |
| 14 | other (……………………………………….) |  |  | **X** |

|  |  |
| --- | --- |
| **Instructor Name**  **Sign**    Prof.Dr.Sevilhan ARTAN | **Date** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE:** | **521013020** | | **DEPARTMENT: INTERDISCIPLINARY NEUROSCIENCE** | | | |
| **COURSE NAME:** | **BASIC HUMAN MORPHOLOGY** | | | | | |
| **INSTRUCTOR NAME**  **Prof.Dr.Sevilhan ARTAN, Prof.Dr.Varol ŞAHİNTÜRK, Prof.Dr.Emel ULUPINAR, Doç.Dr.Hülyam KURT** | | **COURSE LANGUAGE**  **Turkish: X**  **English: ** | | **Course Catagory** | | |
| Technical | Medical | Other(……) |
|  | |  | |  | **X** |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| **X** | **** | **** | **** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | **COURSE OF** | | | |
| **Theoric** | **Practice** | **Laboratory** | **Credit** | **ECTS** | **TYPE** | |
| Spring ****  Autumn **X** | 2 | 2 |  | 3 | 7,5 | COMPULSORY ELECTIVE  ** x** | |
|  | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | |
| **MID-TERM** | | | **ACTIVITY** | | | **Quantity** | **Percentage (%)** |
| 1st Mid-Term | | | 1 | 50 |
| 2 nd Mid- Term | | |  |  |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (………) | | |  |  |
| **FINAL** | | | Quiz | | | **1** | **50** |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other(……………….) | | |  |  |
| **MAKE-UP EXAM** | | | Oral | | Written | Oral and Written | Multiple Choice |
| **x** | |  |  |  |
| **PREREQUISITE(S)** | | |  | | | | |
| **COURSE CONTENT** | | | Morphological investigation of basic organ systems in humans | | | | |
| **COURSE AIMS** | | | To give basic information about human morphology to students applying to neuroscience master program. | | | | |
| **COURSE OBJECTIVES** | | | To learn basic information about human morphology | | | | |
| **TEXTBOOK(S)** | | | Gray’s anatomy for students, Histology a text and atlas, Practical guide to neurogenetics, Molecular Biology of the Cell | | | | |
| **REFERENCES** | | |  | | | | |

|  |  |  |
| --- | --- | --- |
|  | **COURSE SYLLABUS** | |
| **WEEK** | **DATE** | **SUBJECTS/TOPICS** |
| 1 | Medical biology | Cell types and organelles |
| 2 | Medical biology | Transport events in the cell |
| 3 | Medical biology | Cell signaling systems |
| 4 | Medical biology | DNA, RNA and proteins |
| 5 | Medical genetics | Introduction to genes, functions and gene regulation mechanisms |
| 6 | Medical genetics | Chromosoms and DNA analysis |
| 7 | Medical genetics | Molecular sitogenetic methods |
| 8 |  | MID TERM EXAM |
| 9 | Anatomy | Muscular and skeleton system anatomy |
| 10 | Anatomy | Cardiovascular and respiratory system anatomy |
| 11 | Anatomy | Digestive and genitourinary system anatomy |
| 12 | Anatomy | Nervous and endocrine system anatomy |
| 13 | Anatomy | Sense organs anatomy |
| 14 | Histology | Epithelia, glands and connective tissue |
| 15 | Histology | Cartilage, bone, muscle, blood and adipose tissues |
| 16 | Histology | Nervous tissue |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  |  | **X** |
| 2 | ask scientific questions and form hypothesis |  | **X** |  |
| 3 | search and interpret scientific literature | **X** |  |  |
| 4 | design and conduct experiments as well as analyze and interpret the data | **X** |  |  |
| 5 | learn how to use the experimental equipment effectively |  |  | **X** |
| 6 | function on multi-disciplinary teams |  |  | **X** |
| 7 | identify, formulate, and solve medical problems |  |  | **X** |
| 8 | use computer effectively both in conducting the experiments and analyzing the data | **X** |  |  |
| 9 | understand the impact of experimental solutions on national and international sciences |  |  | **X** |
| 10 | use effective written and oral communication/presentation skills |  | **X** |  |
| 11 | get an understanding of professional and ethical responsibility |  |  | **X** |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| 13 | other (……………………………………….) |  |  | **X** |
| 14 | other (……………………………………….) | **X** |  |  |

|  |  |
| --- | --- |
| **Instructor Name**  **Sign**  **Prof.Dr.Emel ULUPINAR** | **Date**  **12.04.2013** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE CODE** | **521013021** | **DEPARTMENT** | **STEM CELL** | | |
| **COURSE NAME** | | **CELL BIOLOGY** | | | |
| **INSTRUCTOR NAME** | | **COURSE LANGUAGE** | **COURSE CATAGORY** | | |
| Yrd. Doç. Dr. Onur UYSAL | | Turkish | **Technical** | **Medical** | **Other (…)** |
|  | **X** |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| **X** |  |  |  |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | **COURSE OF** | | | | |
| **TEORIC** | **PRACTICE** | **LABORATORY** | | **CREDIT** | | **ECTS** | | **TYPE** |
| Autumm **X** | 3 | 2 |  | | 4 | | 7,5 | | Compulsory |
|  | | | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | | | |
| **MID-TERM EXAM** | | | **Activity** | | | **Quantity** | | **Percentage (%)** | |
| 1st Mid-Term | | | 1 | | 40 | |
| 2nd Mid-Term | | |  | |  | |
| Quiz | | |  | |  | |
| Homework | | |  | |  | |
| Project | | |  | |  | |
| Oral Exam | | |  | |  | |
| Other (………) | | |  | |  | |
| **FINAL EXAM** | | | Quiz | | |  | |  | |
| Homework | | |  | |  | |
| Project | | |  | |  | |
| Oral Exam | | |  | |  | |
| Other (Written Exam) | | | 1 | | 60 | |
| **MAKE-UP EXAM** | | | **Oral** | **Written** | | **Oral and Written** | | **Multiple Choice** | |
|  | **X** | |  | |  | |
| **PREREQUISITE(S)** | | |  | | | | | | |
| **COURSE CONTENT** | | | Cell, structure of cell, organelles and communication | | | | | | |
| **COURSE AIMS** | | | Teaching the cell, cell structure, organelles and communication to students who have graduated from different fields | | | | | | |
| **COURSE OBJECTIVES** | | | At the end of this course, cell, structure of cell, organelles and communication will be learned. | | | | | | |
| **TEXTBOOK(S)** | | | Molecular Biology of the Cell, by Bruce Alberts, Alexander Johnson Julian Lewis, Martin Raff, Keith Roberts, Peter Walter. ISBN-13: 978-0815341109 | | | | | | |
| **REFERENCES** | | | Electronic databases and scientific books about the subject | | | | | | |

|  |  |  |
| --- | --- | --- |
| **COURSE SYLLABUS** | | |
| **WEEK** | **DATE** | **SUBJECTS/TOPICS** |
| **1** |  | Definition of the cell |
| **2** |  | Prokaryotic and eukaryotic cells |
| **3** |  | General characteristics of the cell |
| **4** |  | Cell membrane |
| **5** |  | Membrane traffic |
| **6** |  | Nucleus |
| **7** |  | Nucleolus |
| **8** |  | MID-TERM EXAM |
| **9** |  | Protein producing organelles |
| **10** |  | Organelles involved in energy production |
| **11** |  | Customized organelles |
| **12** |  | Cell skeleton |
| **13** |  | Complexes mobile for connection |
| **14** |  | Cell division |
| **15** |  | Cell signaling |
| **16** |  | FINAL EXAM |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | | **1** | **2** | **3** |
| **1** | gather as well as apply knowledge of health sciences |  |  | **X** |
| **2** | ask scientific questions and form hypothesis |  |  | **X** |
| **3** | search and interpret scientific literature |  |  | **X** |
| **4** | design and conduct experiments as well as analyze and interpret the data |  |  | **X** |
| **5** | learn how to use the experimental equipment effectively |  |  | **X** |
| **6** | function on multi-disciplinary teams |  |  | **X** |
| **7** | identify, formulate, and solve medical problems |  |  | **X** |
| **8** | use computer effectively both in conducting the experiments and analyzing the data |  |  | **X** |
| **9** | understand the impact of experimental solutions on national and international sciences |  |  | **X** |
| **10** | use effective written and oral communication/presentation skills |  |  | **X** |
| **11** | get an understanding of professional and ethical responsibility |  |  | **X** |
| **12** | get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| **13** | other (get an understanding of basic concepts of medical education) |  |  | **X** |
| **14** | other (get an understanding of approaching to ethical problems with taking basic concepts to center) |  |  | **X** |

|  |  |
| --- | --- |
| **INSTRUCTOR NAME** | **DATE** |
| Yrd. Doç. Dr. Onur UYSAL |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE CODE** | **521013022** | **DEPARTMENT** | **STEM CELL** | | |
| **COURSE NAME** | | **INTRODUCTION TO STEM CELL** | | | |
| **INSTRUCTOR NAME** | | **COURSE LANGUAGE** | **COURSE CATAGORY** | | |
| Yrd. Doç. Dr. Ayla EKER SARIBOYACI | | Turkish | **Technical** | **Medical** | **Other (…)** |
|  | **X** |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| **X** |  |  |  |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | **COURSE OF** | | | | |
| **TEORIC** | **PRACTICE** | **LABORATORY** | | **CREDIT** | | **ECTS** | | **TYPE** |
| Autumm **X** | 3 | 2 |  | | 4 | | 7,5 | | Compulsory |
|  | | | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | | | |
| **MID-TERM EXAM** | | | **Activity** | | | **Quantity** | | **Percentage (%)** | |
| 1st Mid-Term | | | 1 | | 40 | |
| 2nd Mid-Term | | |  | |  | |
| Quiz | | |  | |  | |
| Homework | | |  | |  | |
| Project | | |  | |  | |
| Oral Exam | | |  | |  | |
| Other (………) | | |  | |  | |
| **FINAL EXAM** | | | Quiz | | |  | |  | |
| Homework | | |  | |  | |
| Project | | |  | |  | |
| Oral Exam | | |  | |  | |
| Other (Written Exam) | | | 1 | | 60 | |
| **MAKE-UP EXAM** | | | **Oral** | **Written** | | **Oral and Written** | | **Multiple Choice** | |
|  | **X** | |  | |  | |
| **PREREQUISITE(S)** | | |  | | | | | | |
| **COURSE CONTENT** | | | Stem cell concept, types and applications of stem cells. | | | | | | |
| **COURSE AIMS** | | | Teaching the structure of stem cell, root cell, types and application areas to the students who have graduated from different fields | | | | | | |
| **COURSE OBJECTIVES** | | | At the end of this course, stem cell, root cell structure, varieties and application areas will be taught to the students graduated from different fields. | | | | | | |
| **TEXTBOOK(S)** | | | Stem Cells in Clinic and Research, Edited by Ali Gholamrezanezhad, ISBN 978-953-307-797-0, 816 | | | | | | |
| **REFERENCES** | | | Electronic databases and scientific books about the subject | | | | | | |

|  |  |  |
| --- | --- | --- |
| **COURSE SYLLABUS** | | |
| **WEEK** | **DATE** | **SUBJECTS/TOPICS** |
| **1** |  | Stem cell concept |
| **2** |  | Characteristics of stem cells |
| **3** |  | Differentiation of stem cells |
| **4** |  | Types of stem cells |
| **5** |  | Hematopoietic stem cells |
| **6** |  | Embryonic stem cells |
| **7** |  | Mesenchymal stem cells |
| **8** |  | MID-TERM EXAM |
| **9** |  | Induced pluripotent stem cells |
| **10** |  | Cancer stem cells |
| **11** |  | Usage areas of the stem cell |
| **12** |  | Advantages and disadvantages of use of tissue-specific stem cells |
| **13** |  | Stem cell technology |
| **14** |  | Stem cells in drug development |
| **15** |  | innovations in stem cell technologies |
| **16** |  | FINAL EXAM |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | | **1** | **2** | **3** |
| **1** | gather as well as apply knowledge of health sciences |  |  | **X** |
| **2** | ask scientific questions and form hypothesis |  |  | **X** |
| **3** | search and interpret scientific literature |  |  | **X** |
| **4** | design and conduct experiments as well as analyze and interpret the data |  |  | **X** |
| **5** | learn how to use the experimental equipment effectively |  |  | **X** |
| **6** | function on multi-disciplinary teams |  |  | **X** |
| **7** | identify, formulate, and solve medical problems |  |  | **X** |
| **8** | use computer effectively both in conducting the experiments and analyzing the data |  |  | **X** |
| **9** | understand the impact of experimental solutions on national and international sciences |  |  | **X** |
| **10** | use effective written and oral communication/presentation skills |  |  | **X** |
| **11** | get an understanding of professional and ethical responsibility |  |  | **X** |
| **12** | get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| **13** | other (get an understanding of basic concepts of medical education) |  |  | **X** |
| **14** | other (get an understanding of approaching to ethical problems with taking basic concepts to center) |  |  | **X** |

|  |  |
| --- | --- |
| **INSTRUCTOR NAME** | **DATE** |
| Yrd. Doç. Dr. Ayla EKER SARIBOYACI |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE:** | **521014001** | | **DEPARTMENT: BIOSTATISTICS** | | | |
| **COURSE NAME:** | **MULTIVARIATE STATISTICAL METHODS** | | | | | |
| **INSTRUCTOR NAME**  Prof. Dr. Kazım ÖZDAMAR | | **COURSE LANGUAGE**  **Turkish: X**  **English: ** | | **Course Catagory** | | |
| Technical | Medical | Other(Multidisipliner) |
|  | |  | |  | **X** | **X** |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| **X** | **** |  | **** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | **COURSE OF** | | | |
| **Theoric** | **Practice** | **Laboratory** | **Credit** | **ECTS** | **TYPE** | |
| Spring **X**  Autumn **** | 3 | 0 | 0 | 3 | 7,5 | COMPULSORY ELECTIVE  **X ** | |
|  | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | |
| **MID-TERM** | | | **ACTIVITY** | | | **Quantity** | **Percentage (%)** |
| 1st Mid-Term | | | 1 | % 50 |
| 2 nd Mid- Term | | |  |  |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (………) | | |  |  |
| **FINAL** | | | Quiz | | | **1** | **%50** |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other(……………….) | | |  |  |
| **MAKE-UP EXAM** | | | Oral | | Written | Oral and Written | Multiple Choice |
|  | | **x** |  |  |
| **PREREQUISITE(S)** | | |  | | | | |
| **COURSE CONTENT** | | | This course covers introduction of multivariate analysis. Evaluating and perform of vector and matris applications to multivariate data sets, Computation of distance/proximity, covariance and correlation matrices. application the Hotelling T2, MANOVA, Multiple and multivariate regression, multiple logistic regression, Principle Component, Factor and Clustering Analyses to suitable data sets | | | | |
| **COURSE AIMS** | | | Evaluting the multiple data sets for biostatistical and statistical analyses. The calculation of mean vector, correlation and covariance matrices. Calculations of Distances/Proximity, Similarity/Dissimilarity matrices specific to data types. Application to Multiple and multivariate regression, multiple logistic regression, Principle Component, Factor and Clustering Analyses to suitable data sets. | | | | |
| **COURSE OBJECTIVES** | | | This course aims to bring the students in the level at which they can use Univariate and Multivariate statistical Methods in health area effectively. | | | | |
| **TEXTBOOK(S)** | | | ÖZDAMAR, K. (2013). Paket Programlar ile İstatistiksel Veri Analizi II, 9. Baskı. Eskişehir:Nisans Kitabevi.Richard A. Johnson,R.A., Wichern, D.W. (2002). Applied Multivariate statistical Analysis, 6th edt. USA: Amazon Corp.ALPAR, R. (2011). Çok değişkenli İstatistiksel Yöntemler. Ankara: Detay Yayıncılık. | | | | |
| **REFERENCES** | | | 1. Rencher, A.C. (2002). Methods of Multivariate Analysis, 3rd. Edt. USA: John Wiley & Sons, Inc. 2. Sharma, S. (1996). Applied Multivariate Techniques,2nd. Edt. USA: John Wiley & Sons, Inc. | | | | |

|  |  |  |
| --- | --- | --- |
|  | **COURSE SYLLABUS** | |
| **WEEK** | **DATE** | **SUBJECTS/TOPICS** |
| 1 |  | The characteristics of multivariate data sets, Description of distribution and generate multivariate data sets, calcuklation of Distance/Proximity, Similarity/Dissimilarity, Covariance, Correlation matrices from suitable data sets. |
| 2 |  | Procedures of vector and matrix processes, Application of statistical and biostatistical processes from data sets. |
| 3 |  | Hotelling T2 and MANOVA analyses in Independent groups multivariate data matrices |
| 4 |  | Hotelling T2 and MANOVA analyses in related groups multivariate data matrices |
| 5 |  | Application Multiple and multivariate regression analyses to suitable data matrices |
| 6 |  | Application Multiple logistic regression analysis to suitable data matrices |
| 7 |  | **Midterm Exam** |
| 8 |  | Application of Principle Component Analysis |
| 9 |  | Application of Exploratory Factor Analysis, Factor Extraction, Factor rotation and calculation of factor scores |
| 10 |  | Uses of Factor Analisis in different science area. |
| 11 |  | Types of Cluster analysis. Hierachical Cluster Analysis and Application to suitable problems in Health and Other Science Fields. |
| 12 |  | K-Means Cluster Analysis and Application to suitable problems in Health and Other Science Fields. |
| 13 |  | Medoid Cluster Analysis and Application to suitable problems in Health and Other Science Fields. |
| 14 |  | Fuzzy Cluster Analysis and Application to suitable problems in Health and Other Science Fields. |
| 15 |  | Application with Statistical Packages |
| 16 |  | Final Exam |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  |  | **X** |
| 2 | ask scientific questions and form hypothesis |  |  | **X** |
| 3 | search and interpret scientific literature |  |  | **X** |
| 4 | design and conduct experiments as well as analyze and interpret the data |  |  | **X** |
| 5 | learn how to use the experimental equipment effectively |  |  | **X** |
| 6 | function on multi-disciplinary teams |  |  | **X** |
| 7 | identify, formulate, and solve medical problems |  |  | **X** |
| 8 | use computer effectively both in conducting the experiments and analyzing the data |  |  | **X** |
| 9 | understand the impact of experimental solutions on national and international sciences |  |  | **X** |
| 10 | use effective written and oral communication/presentation skills |  |  | **X** |
| 11 | get an understanding of professional and ethical responsibility |  |  | **X** |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| 13 | other (……………………………………….) |  |  | **X** |
| 14 | other (……………………………………….) |  |  | **X** |

|  |  |
| --- | --- |
| **Instructor Name**  **Sign**  Prof.Dr. Kazım ÖZDAMAR | **Date** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE:** | 521014002 | | **DEPARTMENT:** BIOSTATISTICS | | | |
| **COURSE NAME:** | **DEMOGRAPHIC TECHNIQUES** | | | | | |
| **INSTRUCTOR NAME** | | **COURSE LANGUAGE**  **Turkish: X**  **English:** | | **Course Catagory** | | |
| Technical | Medical | Other(……) |
| Prof. Dr. Fezan MUTLU | |  | |  | **X** |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| **X** | **** | **** | **** |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | **COURSE OF** | | | |
| **Theoric** | **Practice** | | **Laboratory** | **Credit** | **ECTS** | **TYPE** | |
| Spring **X**  Autumn **** | 3 | 0 | | - | 3 | 7,5 | COMPULSORY ELECTIVE  ** X** | |
|  | | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | | |
| **MID-TERM** | | | | **ACTIVITY** | | | **Quantity** | **Percentage (%)** |
| 1st Mid-Term | | | **1** | **% 50** |
| 2 nd Mid- Term | | |  |  |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (………) | | |  |  |
| **FINAL** | | | | Quiz | | | **1** | **% 50** |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other(……………….) | | |  |  |
| **MAKE-UP EXAM** | | | | Oral | | Written | Oral and Written | Multiple Choice |
|  | | **1** |  |  |
| **PREREQUISITE(S)** | | | |  | | | | |
| **COURSE CONTENT** | | | | Sources of Demographic Data, Ratio, Rate, and Probability, Population Composition, Lexis Diagram, Mortality and Its Measurement, Standardization, Life Table, Measures of Marriage and Divorce, Fertility and Its Measurements, Measurements of Migration, Population Change and Projection, Future population prospects. | | | | |
| **COURSE AIMS** | | | | After completion of this course, the student will be able to identify appropriate sources of data, perform basic demographic analyses using various techniques and ensure their comparability across populations. The student will also be able to produce population projections and interpret the information gathered by the different demographic methods. | | | | |
| **COURSE OBJECTIVES** | | | | To bring students in a good level in which they can apply Demographic Techniques | | | | |
| **TEXTBOOK(S)** | | | | 1. Graziella Caselli, Jacques Vallin, and Guillaume Wunsch. *Demography: Analysis and Synthesis.* Academic Press is an imprint of Elsevier. 2006.  2. Shyrock S, Siegel JS, Stockwell EG. *The Methods and Materials of Demography*. Academic Press. 1976. | | | | |
| **REFERENCES** | | | | 1. Peter R. Cox. *Demograpy*. Cambridge University Press. 1976.  2. Steve H. Murdock, David A. Swanson. *Applied Demography in the 21st Century*. Springer Science+Business Media, B.V. 2008. | | | | |
|  | **COURSE SYLLABUS** | | | | | | | | |
| **WEEK** | **DATE** | | **SUBJECTS/TOPICS** | | | | | | |
| 1 |  | | Sources of Demographic Data | | | | | | |
| 2 |  | | Ratio, Rate, and Probability | | | | | | |
| 3 |  | | Population Composition | | | | | | |
| 4 |  | | Lexis Diagram | | | | | | |
| 5 |  | | Mortality and Its Measurement | | | | | | |
| 6 |  | | Standardization | | | | | | |
| 7 |  | | Exercises | | | | | | |
| 8 |  | | MİDTERM EXAM | | | | | | |
| 9 |  | | Life Table | | | | | | |
| 10 |  | | Measures of Marriage and Divorce | | | | | | |
| 11 |  | | Fertility and Its Measurements | | | | | | |
| 12 |  | | Measurements of Migration | | | | | | |
| 13 |  | | Population Change and Projection | | | | | | |
| 14 |  | | Future population prospects | | | | | | |
| 15 |  | | Exercises | | | | | | |
| 16 |  | | FINAL EXAM | | | | | | |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  |  | **X** |
| 2 | ask scientific questions and form hypothesis |  |  | **X** |
| 3 | search and interpret scientific literature |  |  | **X** |
| 4 | design and conduct experiments as well as analyze and interpret the data |  |  | **X** |
| 5 | learn how to use the experimental equipment effectively |  |  | **X** |
| 6 | function on multi-disciplinary teams |  |  | **X** |
| 7 | identify, formulate, and solve medical problems |  |  | **X** |
| 8 | use computer effectively both in conducting the experiments and analyzing the data |  |  | **X** |
| 9 | understand the impact of experimental solutions on national and international sciences |  |  | **X** |
| 10 | use effective written and oral communication/presentation skills |  |  | **X** |
| 11 | get an understanding of professional and ethical responsibility |  |  | **X** |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| 13 | other (……………………………………….) |  |  |  |
| 14 | other (……………………………………….) |  |  |  |

|  |  |
| --- | --- |
| **Instructor Name**  **Sign**  Prof. Dr. Fezan MUTLU | **Date**  **23.01.2014** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE:** **521014003** | | | **DEPARTMENT: BIOSTATISTICS** | | | |
| **COURSE NAME:** | **SamplIng II** | | | | | |
| **INSTRUCTOR NAME**  **Assoc. Prof. Cengiz BAL** | | **COURSE LANGUAGE**  **Turkish: X**  **English: ** | | **Course Catagory** | | |
| Technical | Medical | Other(……) |
|  | |  | | **X** |  |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| **X** | **** | **** | **** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | **COURSE OF** | | | |
| **Theoric** | **Practice** | **Laboratory** | **Credit** | **ECTS** | **TYPE** | |
| Spring **X**  Autumn **** | 3 | 0 | 0 | 3 | 7,5 | COMPULSORY ELECTIVE  ** X** | |
|  | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | |
| **MID-TERM** | | | **ACTIVITY** | | | **Quantity** | **Percentage (%)** |
| 1st Mid-Term | | | 1 | 50 |
| 2 nd Mid- Term | | |  |  |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (………) | | |  |  |
| **FINAL** | | | Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (Written exam) | | | **1** | **50** |
| **MAKE-UP EXAM** | | | Oral | | Written | Oral and Written | Multiple Choice |
|  | | **X** |  |  |
| **PREREQUISITE(S)** | | | - | | | | |
| **COURSE CONTENT** | | | This course covers: requirements of successful sampling, Sampling methods, Determination of Sample size, hypotesis tests, power analysis etc. | | | | |
| **COURSE AIMS** | | | The purpose of this course are to teach sampling methods, hypotesis tests and power analysis. | | | | |
| **COURSE OBJECTIVES** | | | This course aims to bring the students in the level at which they can use sampling methods and power analysis in health area effectively. | | | | |
| **TEXTBOOK(S)** | | | 1. ÖZDAMAR, K.: (2013) IBM SPSS ile Biyoistatistik, Nisan Kitabevi, Eskişehir. 2. ÖZDAMAR, K.: (2013) Modern Bilimsel Araştırma Yöntemleri, Nisan Kitabevi, Eskişehir. | | | | |
| **REFERENCES** | | | 1. ÖZDAMAR, K.: (2013) Paket Programlar ile İstatistiksel Veri Analizi-1, Nisan Kitabevi, Eskişehir. 2. SÜMBÜLOĞLU V., SÜMBÜLOĞLU, K: (2005) Klinik ve saha araştırmalarında Örnekleme Yöntemleri ve örnekleme büyüklüğü, Alp Ofset Matbaacılık Ltd. Şti, Ankara. 3. MACHIN, D., CAMPBELL, M.J., TAN, S:B:, TAN, S.H: (2009) Sample Size Tables 3rd edition, Wiley Blackwell Publications, USA. 4. MURPHY K.R., MYORS, B.: (2004) Statistical Power Analysis, Lawrence Erlbaum Associates Publishers, London, UK. 5. SÜMBÜLOĞLU V., SÜMBÜLOĞLU, K: (1988) Sağlık Bilimlerinde Araştırma Yöntemleri, Hatiboğlu Yayınevi, Ankara. 6. ZAR, J.H.: (1974) Biostatistical Analysis, Prentice-Hall, Inc., USA. 7. SERPER, Ö.: (1986) Uygulamalı İstatistik 2, Filiz Kitabevi, İstanbul. 8. DAY, R.A.: (1996) Bilimsel Makale Nasıl Yazılır ve Yayımlanır? Tübitak, Ankara. | | | | |

|  |  |  |
| --- | --- | --- |
|  | **COURSE SYLLABUS** | |
| **WEEK** | **DATE** | **SUBJECTS/TOPICS** |
| 1 |  | Overview to sampling and sampling methods |
| 2 |  | General definitions, terms and reviewing the information necessary |
| 3 |  | Controlled sampling method and applications |
| 4 |  | Proportional sampling method and applications |
| 5 |  | Combine sampling method and applications |
| 6 |  | Sampling distributions of statistics |
| 7 |  | Determination of sample units |
| 8 |  | **Mid Term Exam** |
| 9 |  | Overview of Establishment of hypotesis, Hypotesis tests, , level of error, power of test, sample size etc. |
| 10 |  | Power anaysis and sampling methods |
| 11 |  | Calculation of sample size in one and two sample design and applications |
| 12 |  | Calculation of sample size in K sample design and applications |
| 13 |  | Calculation of power in resulted research |
| 14 |  | Calculation of power in crosstabulated data sets. |
| 15 |  | Calculation of power in regression and correlation analysis |
| 16 |  | Final Exam |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  |  | **X** |
| 2 | ask scientific questions and form hypothesis |  |  | **X** |
| 3 | search and interpret scientific literature |  |  | **X** |
| 4 | design and conduct experiments as well as analyze and interpret the data |  |  | **X** |
| 5 | learn how to use the experimental equipment effectively | **X** |  |  |
| 6 | function on multi-disciplinary teams |  |  | **X** |
| 7 | identify, formulate, and solve medical problems |  |  | **X** |
| 8 | use computer effectively both in conducting the experiments and analyzing the data |  |  | **X** |
| 9 | understand the impact of experimental solutions on national and international sciences |  |  | **X** |
| 10 | use effective written and oral communication/presentation skills |  |  | **X** |
| 11 | get an understanding of professional and ethical responsibility |  |  | **X** |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| 13 | other (……………………………………….) |  |  | **X** |
| 14 | other (……………………………………….) |  |  | **X** |

|  |  |
| --- | --- |
| **Assoc. Prof. Cengiz BAL** | **Date**  **23.01.2014** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE:** **521014004** | | | **DEPARTMENT: BIOSTATISTICS** | | | |
| **COURSE NAME:** | **ıntroductıon to ınformatıon technology** | | | | | |
| **INSTRUCTOR NAME**  **Assoc. Prof. Cengiz BAL** | | **COURSE LANGUAGE**  **Turkish: X**  **English: ** | | **Course Catagory** | | |
| Technical | Medical | Other(……) |
|  | |  | | **X** |  |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| **X** | **** | **** | **** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | **COURSE OF** | | | |
| **Theoric** | **Practice** | **Laboratory** | **Credit** | **ECTS** | **TYPE** | |
| Spring **X**  Autumn **** | 3 | 0 | 0 | 3 | 7,5 | COMPULSORY ELECTIVE  ** X** | |
|  | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | |
| **MID-TERM** | | | **ACTIVITY** | | | **Quantity** | **Percentage (%)** |
| 1st Mid-Term | | | 1 | 50 |
| 2 nd Mid- Term | | |  |  |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (………) | | |  |  |
| **FINAL** | | | Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (Written exam) | | | **1** | **50** |
| **MAKE-UP EXAM** | | | Oral | | Written | Oral and Written | Multiple Choice |
|  | | **X** |  |  |
| **PREREQUISITE(S)** | | | - | | | | |
| **COURSE CONTENT** | | | Concept of Basic Computer Technology, Hardware and Software Concepts, Operating Systems and Types, Understand and Use Word Processing, Spreadsheets and Slide Presentations Preparation Programs, Data Base and Facilities, Internet Infrastructure and Internet Usage, Web Page Design | | | | |
| **COURSE AIMS** | | | This course aims to bring the students in the level at which they can use informatin technology in health area effectively. | | | | |
| **COURSE OBJECTIVES** | | | The objective of the course is to provide students to use computer technologies actively. | | | | |
| **TEXTBOOK(S)** | | | Karabey, B., Çağıltay K, Karakuş, T., Kurşun E., Baykal N., Tekin, N., Şen, E.T.: Temel Bilgi Teknolojileri, Anadolu Üniversitesi Yayınları, Eskişehir, 2013. | | | | |
| **REFERENCES** | | | 1. Bağcı, Ö.Yeni Başlayanlara Bilgisayarın B’si, Seçkin Yayıncılık, Ankara, 2010. 2. Dinçel, T. Bilgisayar Öğreniyorum, Kodlab Yayın Dağıtım, İstanbul, 2010. | | | | |

|  |  |  |
| --- | --- | --- |
|  | **COURSE SYLLABUS** | |
| **WEEK** | **DATE** | **SUBJECTS/TOPICS** |
| 1 |  | Information Technology and Computer Organization |
| 2 |  | Basic Hardware in Computer |
| 3 |  | Additional Hardware in Computer |
| 4 |  | Concept of Software and Types |
| 5 |  | Operating System, Commonly Used Operating Systems |
| 6 |  | Word Processors Facilities, Basic Concepts, Creating and Editing a Document, Creating a Table |
| 7 |  | **Mid Term Exam** |
| 8 |  | Properties of Spreadsheet Programs, Basic Concepts, Data Entry and Formatting, Calculation |
| 9 |  | Creating Graphics in Spreadsheet Programs |
| 10 |  | Slide Presentation Program Facilities, Basic Concepts, Preparation of Slides and Presentations |
| 11 |  | Database Features, Tables, Records, Fields, Query, Reporting |
| 12 |  | Internet Infrastructure, Network Protocols, IP Numbers and Computer Names, Internet Servers |
| 13 |  | Internet Usage, Basic Concepts, www- World Wide Web, ftp- File Transfer Protocol, Search Engines, E-Mail |
| 14 |  | Web Page Design, Basic Concepts and HTML |
| 15 |  | Web Page Design in Package Programs |
| 16 |  | Final Exam |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | Contribute to the level of professional knowledge |  |  | **X** |
| 2 | Develop professional communication skills |  |  | **X** |
| 3 | Create to current information on the ability of the program to reach |  |  | **X** |
| 4 | Gain the ability to communicate and exchange information with counterparts in the field of professional practice. |  |  | **X** |
| 5 | Gain awareness of the application of the rules of professional deontology |  | **X** |  |
| 6 | Have a basic level of knowledge related to the field of health |  | **X** |  |
| 7 | Be able to use technological products related to the field |  |  | **X** |
| 8 | Gain required hand skills related to the field |  |  | **X** |
| 9 | Gain the habit of ability to practice sterilization, disinfection, and antisepsi | **X** |  |  |
| 10 | Gain the ability to solve problems that may arise during the professional practice in a healthy way |  |  | **X** |
| 11 | Gain the authority to make decisions quickly and accurately related to the field |  |  | **X** |
| 12 | Have information about the health care legislation |  | **X** |  |
| 13 | Gain awareness of professional responsibility |  |  | **X** |
| 14 | Gain the required knowledge and experience in occupational safety |  |  | **X** |
| 15 | Contribute to the intellectual level |  |  | **X** |

|  |  |
| --- | --- |
| **Assoc. Prof. Cengiz BAL** | **Date**  **13.03.2014** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE:** | 521014005 | | **DEPARTMENT: BIOSTATISTICS** | | | |
| **COURSE NAME:** | **PROBABILITY THEORY II** | | | | | |
| **INSTRUCTOR NAME** | | **COURSE LANGUAGE**  **Turkish: X**  **English:** | | **Course Catagory** | | |
| Technical | Medical | Other(……) |
| Doç. Dr. Ertuğrul ÇOLAK | |  | |  | **X** |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| **X** | **** | **** | **** |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | **COURSE OF** | | | |
| **Theoric** | **Practice** | | **Laboratory** | **Credit** | **ECTS** | **TYPE** | |
| Spring **X**  Autumn **** | 3 | 0 | | - | 3 | 7,5 | COMPULSORY ELECTIVE  ** X** | |
|  | | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | | |
| **MID-TERM** | | | | **ACTIVITY** | | | **Quantity** | **Percentage (%)** |
| 1st Mid-Term | | | **1** | **% 50** |
| 2 nd Mid- Term | | |  |  |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (………) | | |  |  |
| **FINAL** | | | | Quiz | | | **1** | **% 50** |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other(……………….) | | |  |  |
| **MAKE-UP EXAM** | | | | Oral | | Written | Oral and Written | Multiple Choice |
|  | | **1** |  |  |
| **PREREQUISITE(S)** | | | |  | | | | |
| **COURSE CONTENT** | | | | Probability Distributions and Probability Densities, Mathematical Expectation, Discrete Probability Distributions, Continuous Probability Distributions, Functions of Random Variables, Limiting Distributions,  Sampling Distributions, Estimation: Theory, Estimation: Applications, Hypothesis Testing: Theory, Hypothesis Testing: Applications, Regression and Linear Models, Reliability and Survival Distributions, Nonparametric Tests | | | | |
| **COURSE AIMS** | | | | To teach the concepts and theory of probability that form the basis of advanced Biostatistical analysis. | | | | |
| **COURSE OBJECTIVES** | | | | To educate students about the theory of probability and mathematical statistics that is necessary for the effective implementation of Biostatistical analysis. | | | | |
| **TEXTBOOK(S)** | | | | 1. Freund JE. (1992). Mathematical Statistics, Fifth Edition, Prentice-Hall, Inc. USA.  2. Hogg RV, McKean J, Craig AT. (2014). Introduction to Mathematical Statistics, Pearson Education Limited, USA. | | | | |
| **REFERENCES** | | | | 1. Hogg RV, Tanis EA. (2009). Probability and Statistical Inference, Eighth Edition, Macmillian Publishing Company, New York.  2. Ross SM. (1989). Introduction to Probability models, Fouth Edition, Academic Press Inc., USA.  3. Woodroofe M. (1975). Probability with Applications, McGraw-Hill Inc.,US.  4. Bain LJ, Engelhardt M. (1992) Introduction to Probability and Mathematical Statistics, Second Edition, PWS-KENT Publishing Company, Boston. | | | | |
|  | **COURSE SYLLABUS** | | | | | | | | |
| **WEEK** | **DATE** | | **SUBJECTS/TOPICS** | | | | | | |
| 1 |  | | Probability Distributions and Probability Densities | | | | | | |
| 2 |  | | Mathematical Expectation | | | | | | |
| 3 |  | | Discrete Probability Distributions | | | | | | |
| 4 |  | | Continuous Probability Distributions | | | | | | |
| 5 |  | | Functions of Random Variables | | | | | | |
| 6 |  | | Limiting Distributions | | | | | | |
| 7 |  | | Sampling Distributions | | | | | | |
| 8 |  | | MIDTERM EXAM | | | | | | |
| 9 |  | | Estimation: Theory | | | | | | |
| 10 |  | | Estimation: Applications | | | | | | |
| 11 |  | | Hypothesis Testing: Theory | | | | | | |
| 12 |  | | Hypothesis Testing: Applications | | | | | | |
| 13 |  | | Regression and Linear Models | | | | | | |
| 14 |  | | Reliability and Survival Distributions | | | | | | |
| 15 |  | | Nonparametric Tests | | | | | | |
| 16 |  | | FINAL EXAM | | | | | | |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  |  | **X** |
| 2 | ask scientific questions and form hypothesis |  |  | **X** |
| 3 | search and interpret scientific literature |  |  | **X** |
| 4 | design and conduct experiments as well as analyze and interpret the data |  |  | **X** |
| 5 | learn how to use the experimental equipment effectively |  |  | **X** |
| 6 | function on multi-disciplinary teams |  |  | **X** |
| 7 | identify, formulate, and solve medical problems |  |  | **X** |
| 8 | use computer effectively both in conducting the experiments and analyzing the data |  |  | **X** |
| 9 | understand the impact of experimental solutions on national and international sciences |  |  | **X** |
| 10 | use effective written and oral communication/presentation skills |  |  | **X** |
| 11 | get an understanding of professional and ethical responsibility |  |  | **X** |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| 13 | other (……………………………………….) |  |  |  |
| 14 | other (……………………………………….) |  |  |  |

|  |  |
| --- | --- |
| **Instructor Name**  **Sign**  Doç. Dr. Ertuğrul ÇOLAK | **Date**  **22.01.2014** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE:** | **521014007** | | **DEPARTMENT: BIOSTATISTICS** | | | |
| **COURSE NAME:** | **FUNDAMENTALS BIOSTATISTICS II** | | | | | |
| **INSTRUCTOR NAME** | | **COURSE LANGUAGE**  **Turkish:**  **English: X** | | **Course Category** | | |
| Technical | Medical | Other(……) |
| Prof. Dr. K. Setenay ÖNER | |  | |  | **X** |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| **X** | **** | **** | **** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | **COURSE OF** | | | |
| **Theoric** | **Practice** | **Laboratory** | **Credit** | **ECTS** | **TYPE** | |
| Spring **X**  Autumn **** | 3 | 0 | 0 | 3 | 7,5 | COMPULSORY ELECTIVE  **X ** | |
|  | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | |
| **MID-TERM** | | | **ACTIVITY** | | | **Quantity** | **Percentage (%)** |
| 1st Mid-Term | | | **1** | **% 25** |
| 2 nd Mid- Term | | | **1** | **% 25** |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (………) | | |  |  |
| **FINAL** | | | Quiz | | | **1** | **% 50** |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other(……………….) | | |  |  |
| **MAKE-UP EXAM** | | | Oral | | Written | Oral and Written | Multiple Choice |
|  | | **1** |  |  |
| **PREREQUISITE(S)** | | |  | | | | |
| **COURSE CONTENT** | | | This course covers the definition, importance and necessity of biostatistics and the usage of biostatistical analyses through computer in the health area. | | | | |
| **COURSE AIMS** | | | The objective of this course is to teach the theoretical and practical applications of biostatistical analyses in the health area. | | | | |
| **COURSE OBJECTIVES** | | | The aim of this course is to bring the students in the level at which they can use biostatistics methods used in data analysis in health sciences with SPSS. | | | | |
| **TEXTBOOK(S)** | | | Biostatistics with SPSS, Prof. Dr. Kazım ÖZDAMAR, Nisan Kitabevi, 2013 | | | | |
| **REFERENCES** | | | 1- BELLE GV, FISHER LD, HEAGERTY PJ, LUMLEY P. Biostatistics A Methodology for the Health Sciences, A JOHN WILEY & SONS INC., 2004  2- Cleophas, T.J, Zwinderman, A.H, Cleophas, T.F., Cleophas, E.p, (2009), Statistics Aplied to Clinical Trials, 4th. Edt., Springer, Berlin. | | | | |

|  |  |  |
| --- | --- | --- |
|  | **COURSE SYLLABUS** | |
| **WEEK** | **DATE** | **SUBJECTS/TOPICS** |
| 1 |  | Two way ANOVA |
| 2 |  | Two way ANACOVA |
| 3 |  | Nonparametric Tests |
| 4 |  | Chisquare Tests, Kolmogorov Smirnov (KS) Test |
| 5 |  | **1st Midterm** |
| 6 |  | Mann-Whitney U Test, Wilcoxon T Test |
| 7 |  | Kruskal-Wallis H Test |
| 8 |  | Friedman Twoway Anavo |
| 9 |  | Linear Regression Analysis |
| 10 |  | Multiple Regression Analysis |
| 11 |  | **2 nd Midterm** |
| 12 |  | Corelation Analysis |
| 13 |  | Regression Analysis Applications |
| 14 |  | Specific statistical methods in health |
| 15 |  | ROC Analysis, Survival Analysis |
| 16 |  | **Final Exam** |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  |  | **X** |
| 2 | ask scientific questions and form hypothesis |  |  | **X** |
| 3 | search and interpret scientific literature |  |  | **X** |
| 4 | design and conduct experiments as well as analyze and interpret the data |  |  | **X** |
| 5 | learn how to use the experimental equipment effectively |  |  | **X** |
| 6 | function on multi-disciplinary teams |  |  | **X** |
| 7 | identify, formulate, and solve medical problems |  |  | **X** |
| 8 | use computer effectively both in conducting the experiments and analyzing the data |  |  | **X** |
| 9 | understand the impact of experimental solutions on national and international sciences |  |  | **X** |
| 10 | use effective written and oral communication/presentation skills |  |  | **X** |
| 11 | get an understanding of professional and ethical responsibility |  |  | **X** |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |

|  |  |
| --- | --- |
| **Instructor Name**  **Sign**  Doç. Dr. K. Setenay ÖNER | **Date** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE:** | 521014008 | | **DEPARTMENT: MEDİCAL BİOLOGY** | | | |
| **COURSE NAME:** | [**GENERAL BİOLOGY**](https://www.google.com.tr/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&cad=rja&ved=0CE0QFjAC&url=http%3A%2F%2Fbiology.clc.uc.edu%2Fcourses%2Fbio104%2Fintro104.htm&ei=DnsUU7KqOomPtQbZpYHICw&usg=AFQjCNEQyZB1UyFzjiGlov9boOokcBTNJg&sig2=_6bbFHGJ-hdNrdX73SLFlw&bvm=bv.61965928,d.Yms) **II** | | | | | |
| **INSTRUCTOR NAME**  Prof. Dr. Hasan Veysi GÜNEŞ | | **COURSE LANGUAGE**  **Turkish: X**  **English: ** | | **Course Catagory** | | |
| Technical | Medical | Other(……) |
|  | |  | |  | **X** |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| X | **** | **** | **** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | **COURSE OF** | | | |
| **Theoric** | **Practice** | **Laboratory** | **Credit** | **ECTS** | **TYPE** | |
| Spring **X**  Autumn**** | 2 | 2 |  | 3 | 7,5 | COMPULSORY ELECTIVE  ** X** | |
|  | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | |
| **MID-TERM** | | | **ACTIVITY** | | | **Quantity** | **Percentage (%)** |
| 1st Mid-Term | | | 1 | 40 |
| 2 nd Mid- Term | | |  |  |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (………) | | |  |  |
| **FINAL** | | | Quiz | | |  |  |
| Homework | | | 1 | 20 |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other(Final Exam) | | | 1 | 40 |
| **MAKE-UP EXAM** | | | Oral | | Written | Oral and Written | Multiple Choice |
|  | | **x** |  |  |
| **PREREQUISITE(S)** | | | -- | | | | |
| **COURSE CONTENT** | | | Systems in the human organism, [animal reproduction and development](https://www.google.com.tr/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&ved=0CDwQFjAA&url=https%3A%2F%2Fwww.boundless.com%2Fbiology%2Fintroduction-to-animal-diversity%2Ffeatures-of-the-animal-kingdom%2Fanimal-reproduction-and-development%2F&ei=oY8UU4e6CJDPsgadvYE4&usg=AFQjCNFt39VXDXC_hkPEcfmByMN7o6PpvQ&sig2=0dCxfDLNzZM3R5CitazQ7w&bvm=bv.61965928,d.Yms), mendelian and human genetics | | | | |
| **COURSE AIMS** | | | To provide teaching of basic informations about systems in the human organism, [animal reproduction and](https://www.google.com.tr/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&ved=0CDwQFjAA&url=https%3A%2F%2Fwww.boundless.com%2Fbiology%2Fintroduction-to-animal-diversity%2Ffeatures-of-the-animal-kingdom%2Fanimal-reproduction-and-development%2F&ei=oY8UU4e6CJDPsgadvYE4&usg=AFQjCNFt39VXDXC_hkPEcfmByMN7o6PpvQ&sig2=0dCxfDLNzZM3R5CitazQ7w&bvm=bv.61965928,d.Yms) mendelian genetics, to develop the research skills about the latest developments in the field of human genetics, to gain the ability to find out relavant literatures and present these knowledges. | | | | |
| **COURSE OBJECTIVES** | | | To teach the topics in this course and to gain the ability to find out current informations, arrange in the form of report and present to a certain community. | | | | |
| **TEXTBOOK(S)** | | | Özata A, Kutlu M, Kılıç AY, Türk A, et al., Genel Biyoloji, Anadolu Üniversitesi, 2009 | | | | |
| **REFERENCES** | | | [Reece](http://www.amazon.com/s/ref=ntt_athr_dp_sr_1?_encoding=UTF8&field-author=Jane%20B.%20Reece&search-alias=books&sort=relevancerank) JB, [Urry](http://www.amazon.com/s/ref=ntt_athr_dp_sr_2?_encoding=UTF8&field-author=Lisa%20A.%20Urry&search-alias=books&sort=relevancerank) LA, [Cain](http://www.amazon.com/s/ref=ntt_athr_dp_sr_3?_encoding=UTF8&field-author=Michael%20L.%20Cain&search-alias=books&sort=relevancerank) ML, et al., Campbell Biology, Tenth Edition,Benjamin Cummings, 2013  [Basaran](http://www.amazon.com/Bruce-Alberts/e/B00E9A80R2/ref=ntt_athr_dp_pel_1) A, Tıbbi Biyoloji Kitabı, Pelikan Yayıncılık, 2010  Güneş HV, Moleküler Hücre Biyolojisi, İstanbul Tıp Kitabevi, 2012  Alberts B, Johnson A, Lewis J, Raff M, Roberts K, Walter P, Molecular Biology of The Cell, Fifth Edition, Garland Science, New York, 2008 | | | | |

|  |  |
| --- | --- |
|  | **COURSE SYLLABUS** |
| **WEEK** | **SUBJECTS/TOPICS** |
| 1 | Systems in the Human Organism and Nervous System |
| 2 | Circulatory System |
| 3 | Immune System |
| 4 | Endocrine System |
| 5 | Digestive and Urinary System |
| 6 | Skeletal and Muscular System |
| 7 | Respiratory System and Sensory Organs |
| 8 | WRITTEN EXAM |
| 9 | [Animal Reproduction and Development](https://www.google.com.tr/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&ved=0CDwQFjAA&url=https%3A%2F%2Fwww.boundless.com%2Fbiology%2Fintroduction-to-animal-diversity%2Ffeatures-of-the-animal-kingdom%2Fanimal-reproduction-and-development%2F&ei=oY8UU4e6CJDPsgadvYE4&usg=AFQjCNFt39VXDXC_hkPEcfmByMN7o6PpvQ&sig2=0dCxfDLNzZM3R5CitazQ7w&bvm=bv.61965928,d.Yms) |
| 10 | Mendelian Genetics and Genetic Concepts |
| 11 | Heredity in the Human Organism |
| 12 | Population Genetics |
| 13 | Mutations |
| 14 | Presentation of homework: |
| 15 | Presentation of homework: |
| 16 | WRITTEN EXAM |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  |  | **X** |
| 2 | ask scientific questions and form hypothesis |  |  | **X** |
| 3 | search and interpret scientific literature |  |  | **X** |
| 4 | design and conduct experiments as well as analyze and interpret the data | **X** |  |  |
| 5 | learn how to use the experimental equipment effectively | **X** |  |  |
| 6 | function on multi-disciplinary teams | **X** |  |  |
| 7 | identify, formulate, and solve medical problems |  |  | **X** |
| 8 | use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| 9 | understand the impact of experimental solutions on national and international sciences |  | **X** |  |
| 10 | use effective written and oral communication/presentation skills |  |  | **X** |
| 11 | get an understanding of professional and ethical responsibility |  |  | **X** |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| 13 | Ability of recognition of fundamental terms in Medical School teaching |  | **X** |  |
| 14 | Ability of handling ethic issues by considering fundamental terms |  | **X** |  |

|  |  |
| --- | --- |
| **Instructor Name**  **Sign** | **Date** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE:** | **521014009** | | **DEPARTMENT:** | | **ANATOMY** | | |
| **COURSE NAME:** |  | | **ANATOMICAL ORGANS AND SYSTEMS** | | | | |
| **INSTRUCTOR NAME**  Prof.Dr. Ferruh YÜCEL,  Prof.Dr. Nedim ÜNAL,  Prof.Dr. Hilmi ÖZDEN,  Prof.Dr. Emel ULUPINAR,  Prof.Dr. Yüksel AYDAR  Assist.Prof.Dr.Hakan AY | | **COURSE LANGUAGE**  **Turkish:** 🗵  **English:** □ | | **Course Catagory** | | | |
| Technical | | Medical | Other(……) |
|  | |  | | 🗴 |  |
|  |  |  |  |  |  |  |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.Sc.** | **Ph.D.** | **COURSE of PROVINCE** |
| 🗵 | □ | □ | □ |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | **COURSE of** | | | | | |
| **Theoric** | **Practice** | **Laboratory** | | **Credit** | **ECTS** | | **TYPE** | | |
| Spring 🗵  Autumn □ | 2 | 2- | - | | 3 | 7,5 | | COMPULSORY ELECTIVE  □🗵 | | |
|  | | | | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | | | | |
| **MID-TERM** | | **ACTIVITY** | | | | | | **Quantity** | | **Percentage (%)** |
| 1st Mid-Term | | | | | | **1** | | **50** |
| 2 nd Mid- Term | | | | | |  | |  |
| Quiz | | | | | |  | |  |
| Homework | | | | | |  | |  |
| Project | | | | | |  | |  |
| Oral Exam | | | | | |  | |  |
| Other (………) | | | | | |  | |  |
| **FINAL** | | Quiz | | | | | | **1** | | **50** |
| Homework | | | | | |  | |  |
| Project | | | | | |  | |  |
| Oral Exam | | | | | |  | |  |
| Other(……………….) | | | | | |  | |  |
| **MAKE-UP EXAM** | | Oral | | Written | | | Oral and Written | | Multiple Choice | |
|  | |  | | | 🗴 | |  | |
| **PREREQUISITE(S)** | | - | | | | | | | | |
| **COURSE CONTENT** | | In this course, it is given briefly the basic anatomic knowledge about the systems and related organs. | | | | | | | | |
| **COURSE AIMS** | | Give the anatomical information about the antomical systems and make clear the functional importance. | | | | | | | | |
| **COURSE OBJECTIVES** | | Determination of anatomic points of organ systems on the human body, understanding of the functional importance, the ability to provide the clinical integration (relations) of the systems. | | | | | | | | |
| **TEXTBOOK(S)** | | -Arıncı, K, Elhan, A: Anatomi, Cilt 1-2, 2. Baskı, Güneş Kitabevi, Ankara, 1997.-Langman Jan: Medizinische Embryologie, Band: 1-3, Georg Thieme Verlag, Stuttgart-New York.-Moore, KL: Clinically Oriented Anatomy. 3th Edition, Williams and Wilkins, Baltimore, 1992.-Williams P.L.: Gray’s Anatomy, 38.edition, ELBS with Churchill Livingstone, Great Britain, 1995. | | | | | | | | |
| **REFERENCES** | | -Netter F.H.:Atlas of Human Anatomy, Seventh Edition, Ciba-Geigy Corporation, 1994.-Putz R, Pabst R.: Sobotta İnsan Anatomisi (çeviri: K.Arıncı), Beta Basım Yayın Dağıtım A.Ş., İstanbul, 1993. | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
|  | **COURSE SYLLABUS** |
| **WEEK** | **SUBJECTS/TOPICS** |
| 1 | Respiratory system-Nose and larynx |
| 2 | Respiratory system-trachea and lungs |
| 3 | Cardiovascular system-the heart |
| 4 | Cardiovascular system-the vascular system |
| 5 | Urogenital system-the urinary system |
| 6 | Urogenital system-male genital organs |
| 7 | Urogenital system-female genital organs |
| 8 | MIDTERM EXAM |
| 9 | Nervous system-spinal chord, bulbus, pons |
| 10 | Nervous system-mesencephalon and diencephalon |
| 11 | Nervous system-cerebellum |
| 12 | Nervous system-telencephalon |
| 13 | Nervous system-brain ventricles and membranes |
| 14 | Nervous system-special sense organs |
| 15 | Endocrine system |
| 16 | FINAL EXAM |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  |  | **🗴** |
| 2 | ask scientific questions and form hypothesis |  |  | **🗴** |
| 3 | search and interpret scientific literature |  |  | **🗴** |
| 4 | design and conduct experiments as well as analyze and interpret the data |  | **🗴** |  |
| 5 | learn how to use the experimental equipment effectively | **🗴** |  |  |
| 6 | function on multi-disciplinary teams |  |  | **🗴** |
| 7 | identify, formulate, and solve medical problems |  | **🗴** |  |
| 8 | use computer effectively both in conducting the experiments and analyzing the data | **🗴** |  |  |
| 9 | understand the impact of experimental solutions on national and international sciences |  |  | **🗴** |
| 10 | use effective written and oral communication/presentation skills |  | **🗴** |  |
| 11 | get an understanding of professional and ethical responsibility |  | **🗴** |  |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **🗴** |
| 13 | other (……………………………………….) |  |  |  |
| 14 | other (……………………………………….) |  |  |  |

|  |  |
| --- | --- |
| **Instructor Name:**  Prof.Dr. Ferruh YÜCEL,  Prof.Dr. Nedim ÜNAL,  Prof.Dr. Hilmi ÖZDEN,  Prof.Dr. Emel ULUPINAR,  Prof.Dr. Yüksel AYDAR  Assist.Prof.Dr.Hakan AY | **Sign:**  **Date** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE:** | **521014010** | | **DEPARTMENT:** | | **ANATOMY** | | |
| **COURSE NAME:** | **NEUROANATOMY** | | | | | | |
| **INSTRUCTOR NAME**  Prof.Dr. Ferruh YÜCEL,  Prof.Dr. Nedim ÜNAL,  Prof.Dr. Hilmi ÖZDEN,  Prof.Dr. Emel ULUPINAR,  Prof.Dr. Yüksel AYDAR  Assist.Prof.Dr.Hakan AY | | **COURSE LANGUAGE**  **Turkish:** 🗵  **English:** □ | | **Course Catagory** | | | |
| Technical | | Medical | Other(……) |
|  | |  | | 🗴 |  |
|  |  |  |  |  |  |  |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.Sc.** | **Ph.D.** | **COURSE of PROVINCE** |
| 🗵 | □ | □ | □ |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | **COURSE of** | | | | | |
| **Theoric** | **Practice** | **Laboratory** | | **Credit** | **ECTS** | | **TYPE** | | |
| Spring 🗵  Autumn □ | 3 | 1 | - | | 3,5 | 7,5 | | COMPULSORY ELECTIVE  □🗵 | | |
|  | | | | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | | | | |
| **MID-TERM** | | **ACTIVITY** | | | | | | **Quantity** | | **Percentage (%)** |
| 1st Mid-Term | | | | | | **1** | | **50** |
| 2 nd Mid- Term | | | | | |  | |  |
| Quiz | | | | | |  | |  |
| Homework | | | | | |  | |  |
| Project | | | | | |  | |  |
| Oral Exam | | | | | |  | |  |
| Other (………) | | | | | |  | |  |
| **FINAL** | | Quiz | | | | | | **1** | | **50** |
| Homework | | | | | |  | |  |
| Project | | | | | |  | |  |
| Oral Exam | | | | | |  | |  |
| Other(……………….) | | | | | |  | |  |
| **MAKE-UP EXAM** | | Oral | | Written | | | Oral and Written | | Multiple Choice | |
|  | |  | | | 🗴 | |  | |
| **PREREQUISITE(S)** | | In this course, it is given basic anatomic knowledge about the nervous system | | | | | | | | |
| **COURSE CONTENT** | | Give the anatomical information about the nervous system and make clear the functional importance. | | | | | | | | |
| **COURSE AIMS** | | Determination of anatomic points of the nervous system, understanding of the functional importance, the ability to provide the clinical integration (relations) of the systems. | | | | | | | | |
| **COURSE OBJECTIVES** | | Determination of anatomic points of the related system and its place on human body system, understanding of the functional importance, the ability to provide the clinical integration (relations) of the system. | | | | | | | | |
| **TEXTBOOK(S)** | | -Arıncı, K, Elhan, A: Anatomi, Cilt 1-2, 2. Baskı, Güneş Kitabevi, Ankara, 1997.-Langman Jan: Medizinische Embryologie, Band: 1-3, Georg Thieme Verlag, Stuttgart-New York.-Moore, KL: Clinically Oriented Anatomy. 3th Edition, Williams and Wilkins, Baltimore, 1992.-Williams P.L.: Gray’s Anatomy, 38.edition, ELBS with Churchill Livingstone, Great Britain, 1995. | | | | | | | | |
| **REFERENCES** | | -Netter F.H.:Atlas of Human Anatomy, Seventh Edition, Ciba-Geigy Corporation, 1994.-Putz R, Pabst R.: Sobotta İnsan Anatomisi (çeviri: K.Arıncı), Beta Basım Yayın Dağıtım A.Ş., İstanbul, 1993. | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
|  | **COURSE SYLLABUS** |
| **WEEK** | **SUBJECTS/TOPICS** |
| 1 | Development of central nervous system |
| 2 | Neurons and their types |
| 3 | Organization of senses |
| 4 | Features of sensory receptors, classification of receptors |
| 5 | Spinal cord and spinal nerves |
| 6 | Bulbus |
| 7 | Pons |
| 8 | MID-TERM EXAM |
| 9 | Cerebellum |
| 10 | Mesencephalon, Diencephalon |
| 11 | Telencephalon, the main cortical areas |
| 12 | Rhinencephalon, limbic lobe and olfactory pathways |
| 13 | Basal nuclei and extrapyramidal system |
| 14 | Ventricular system, meninges of the brain, cranial vessels |
| 15 | Autonomic Nervous System |
| 16 | FINAL EXAM |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  |  | **🗴** |
| 2 | ask scientific questions and form hypothesis |  |  | **🗴** |
| 3 | search and interpret scientific literature |  |  | **🗴** |
| 4 | design and conduct experiments as well as analyze and interpret the data |  | **🗴** |  |
| 5 | learn how to use the experimental equipment effectively |  | **🗴** |  |
| 6 | function on multi-disciplinary teams |  |  | **🗴** |
| 7 | identify, formulate, and solve medical problems |  |  | **🗴** |
| 8 | use computer effectively both in conducting the experiments and analyzing the data | **🗴** |  |  |
| 9 | understand the impact of experimental solutions on national and international sciences |  | **🗴** |  |
| 10 | use effective written and oral communication/presentation skills |  | **🗴** |  |
| 11 | get an understanding of professional and ethical responsibility |  | **🗴** |  |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **🗴** |
| 13 | other (……………………………………….) |  |  |  |
| 14 | other (……………………………………….) |  |  |  |

|  |  |
| --- | --- |
| **Instructor Name:**  Prof.Dr. Ferruh YÜCEL,  Prof.Dr. Nedim ÜNAL,  Prof.Dr. Hilmi ÖZDEN,  Prof.Dr. Emel ULUPINAR,  Prof.Dr. Yüksel AYDAR  Assist.Prof.Dr.Hakan AY | **Sign:**  **Date** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE:** | **521014011** | | **DEPARTMENT: PHYSIOLOGY** | | | |
| **COURSE NAME:** | **HUMAN PHYSİOLOGY II** | | | | | |
| **INSTRUCTOR NAME:**  **Prof. Dr. Kubilay UZUNER** | | **COURSE LANGUAGE**  **Turkish: X**  **English: ** | | **Course Catagory** | | |
| Technical | Medical | Other(……) |
|  | |  | |  | **X** |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| **X** | **** | **** | **** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | **COURSE OF** | | | |
| **Theoric** | **Practice** | **Laboratory** | **Credit** | **ECTS** | **TYPE** | |
| Spring **X**  Autumn **** | 4 |  |  | 4 | 7,5 | COMPULSORY ELECTIVE  ** X** | |
|  | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | |
| **MID-TERM** | | | **ACTIVITY** | | | **Quantity** | **Percentage (%)** |
| 1st Mid-Term | | | 1 | 30 |
| 2 nd Mid- Term | | |  |  |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (literatüre search and presentation) | | | 1 | 20 |
| **FINAL** | | | Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other(Final Exam) | | | **1** | **50** |
| **MAKE-UP EXAM** | | | Oral | | Written | Oral and Written | Multiple Choice |
|  | | **X** |  |  |
| **PREREQUISITE(S)** | | | None | | | | |
| **COURSE CONTENT** | | | The Human Physiology II is the second part of two consecutive physiology courses which are designed to develop an understanding of how the different organ systems of the human body function The course emphasizes the relationship between physiology and health given mechanisms to the body's physiological adaptation responses to changing environment for homeostasis. | | | | |
| **COURSE AIMS** | | | An understanding of endocrine,respiratory, renal and digestive functions and their roles to mintain homeostasis in the body. | | | | |
| **COURSE OBJECTIVES** | | | By the end of this module students will be able to:  List the functions of the given physiological systems and explain how they contribute to homeostasis. | | | | |
| **TEXTBOOK(S)** | | | **1. Guyton AC.** and Hall JE. Textbook of Medical Physiology.  **2. Ganong WF.** Review of Medical Physiology.  **3. Tortora G and Grabowski S.** Principles of Anatomy and Physiology. 4. Berne, R.M. and Levy, M.N. Principles of Physiology | | | | |
| **REFERENCES** | | | A series of visual and written documents will be provided a (1) concise, (2) updated and (3) rigorous overview of major concepts of the physiology of systems discussed in the first part of the class | | | | |

|  |  |  |
| --- | --- | --- |
|  | **COURSE SYLLABUS** | |
| **WEEK** | **DATE** | **SUBJECTS/TOPICS** |
| 1 |  | Overview of the course |
| 2 |  | Essentials of Endocrine system |
| 3 |  | Hormones and hormonal regulation |
| 4 |  | Reproductive physiology |
| 5 |  | Urinary system |
| 6 |  | Acid-base balance |
| 7 |  | Midterm exam |
| 8 |  | Respiratory physiology I |
| 9 |  | Respiratory physiology II |
| 10 |  | Digestive system and metabolism I |
| 11 |  | Digestive system and metabolism II |
| 12 |  | Integration of body functions I |
| 13 |  | Integration of body functions II |
| 14 |  | Final exam |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  |  | **X** |
| 2 | ask scientific questions and form hypothesis |  |  |  |
| 3 | search and interpret scientific literature |  | **X** |  |
| 4 | design and conduct experiments as well as analyze and interpret the data | **X** |  |  |
| 5 | learn how to use the experimental equipment effectively | **X** |  |  |
| 6 | function on multi-disciplinary teams |  |  |  |
| 7 | identify, formulate, and solve medical problems | **X** |  |  |
| 8 | use computer effectively both in conducting the experiments and analyzing the data | **X** |  |  |
| 9 | understand the impact of experimental solutions on national and international sciences |  |  |  |
| 10 | use effective written and oral communication/presentation skills | **X** |  |  |
| 11 | get an understanding of professional and ethical responsibility |  | **X** |  |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  | **X** |  |
| 13 | other (……………………………………….) |  |  |  |
| 14 | other (……………………………………….) |  |  |  |

|  |  |
| --- | --- |
| **Instructor Name**  **Prof. Dr. Kubilay UZUNER**  **Sign** | **Date**  November 19, 2012 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE:** | **521014012** | | **DEPARTMENT: MEDICAL MICROBIOLOGY** | | | |
| **COURSE NAME:** | **SPECIAL MICROBIOLOGY** | |  | | | |
| **INSTRUCTOR NAME:**  **Prof. Dr. Gül Durmaz**  **Prof. Dr. Yurdanur Akgün**  **Prof. Dr. Tercan Us**  **Doç. Dr. Nihal Doğan**  **Doç. Dr. Abdurrahman Kiremitçi**  **Doç. Dr. Nilgün Kaşifoğlu**  **Doç. Dr. Yasemin Öz** | | **COURSE LANGUAGE**  **Turkish: X**  **English:** | | **Course Catagory** | | |
| Technical | Medical | Other(……) |
|  | |  | |  | **X** |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| **X** |  |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | **COURSE OF** | | | |
| **Theoric** | **Practice** | **Laboratory** | **Credit** | **ECTS** | **TYPE** | |
| Spring X  Autumn | 4 | 2 | 0 | 5 | 7,5 | COMPULSORY ELECTIVE  **X** | |
|  | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | |
| **MID-TERM** | | | **ACTIVITY** | | | **Quantity** | **Percentage (%)** |
| 1st Mid-Term | | | 1 | 40 |
| 2 nd Mid- Term | | |  |  |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (………) | | |  |  |
| **FINAL** | | | Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other(……………….) | | | **1** | **60** |
| **MAKE-UP EXAM** | | | Oral | | Written | Oral and Written | Multiple Choice |
|  | |  | **X** |  |
| **PREREQUISITE(S)** | | | Be a graduate of the Faculty of Pharmacy, Faculty of Medicine, Faculty of Dentistry or Faculty of Veterinary Medicine | | | | |
| **COURSE CONTENT** | | | Introduction to bacteriology, gram positive coccus, gram negative coccus, gram positive bacilli, gram negative bacilli, Mycobacteria, spirokets, Mycoplasma, Chlamydia, Introduction to Medical Virology, DNA viruses, RNA viruses, Introduction to Medical Mycology, yeast and molds, Introduction to Medical Parasitology, intestinal and urogenital protozoa, blood and tissue protozoa, helminths | | | | |
| **COURSE AIMS** | | | To teach the general features, classification, virulence mechanisms, disease spectrums, epidemiology, clinical findings, laboratory diagnosis and protective methods of bacteria, yeast and molds, parasites, viruses. | | | | |
| **COURSE OBJECTIVES** | | | 1. Understand the definition, structure and classification of bacteria, viruses, fungi and parasites.  2. Understand basic laboratory techniques related to the identification of bacteria, viruses, fungi and parasites.  3. For laboratory diagnosis of individual infectious agent, describe basic classification, important differentiating laboratory tests, important unique microscopy or growth characteristics.  4. Learn the basic principles of prevention and control of individual infectious diseases which may include alteration of the reservoir of infection, interruption of transmission of infection. | | | | |
| **TEXTBOOK(S)** | | | Murray PR, Rosenthal KS, Pfaller MA**( Eds) Medical Microbiology Sixth Edition Mosby Elsevier 2009** | | | | |
| **REFERENCES** | | | Brooks, G.,. Burtel T.S. (2001). **Medikal Mikrobiyoloji. 22. baskı. SA Morse Lange Medikal Kitaplar** | | | | |

|  |  |  |
| --- | --- | --- |
|  | **COURSE SYLLABUS** | |
| **WEEK** | **DATE** | **SUBJECTS/TOPICS** |
| 1 |  | Introduction to special microbiology |
| 2 |  | Introduction to bacteriology |
| 3 |  | Gr (+) coccus |
| 4 |  | Gr (-) coccus |
| 5 |  | Gr (+) bacilli |
| 6 |  | Gr (-) bacilli associated with gastrointestinal system-1 |
| 7 |  | Gr (-) bacilli associated with gastrointestinal system-2 |
| 8 |  | Gr (-) bacilli associated with respiratory system |
| 9 |  | Zoonotic Gr (-) bacilli |
| 10 |  | MID-TERM EXAM |
| 11 |  | Mycobacteriaceae/Actinomyces |
| 12 |  | Mycoplasma/Spirokets |
| 13 |  | General Virology |
| 14 |  | Mycology |
| 15 |  | Medical parasitology |
| 16 |  | FİNAL EXAM |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  |  | **X** |
| 2 | ask scientific questions and form hypothesis |  |  | **X** |
| 3 | search and interpret scientific literature |  |  | **X** |
| 4 | design and conduct experiments as well as analyze and interpret the data |  |  | **X** |
| 5 | learn how to use the experimental equipment effectively |  |  | **X** |
| 6 | function on multi-disciplinary teams |  |  | **X** |
| 7 | identify, formulate, and solve medical problems |  |  | **X** |
| 8 | use computer effectively both in conducting the experiments and analyzing the data |  |  | **X** |
| 9 | understand the impact of experimental solutions on national and international sciences |  |  | **X** |
| 10 | use effective written and oral communication/presentation skills |  |  | **X** |
| 11 | get an understanding of professional and ethical responsibility |  | **X** |  |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| 13 | other (……………………………………….) |  |  |  |
| 14 | other (……………………………………….) |  |  |  |

|  |  |
| --- | --- |
| **Instructor Name: Sign**  **Prof. Dr. Gül Durmaz**  **Prof. Dr. Yurdanur Akgün**  **Prof. Dr. Tercan Us**  **Doç. Dr. Nihal Doğan**  **Doç. Dr. Abdurrahman Kiremitçi**  **Doç. Dr. Nilgün Kaşifoğlu**  **Doç. Dr. Yasemin Öz** | **Date: 27.02.2014** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **COURSE CODE:** | **521014015** | **DEPARTMENT: MEDİCAL PHARMACOLOGY** | | |
| **COURSE NAME:** | **CENTRAL NERVOUS SYSTEM** |  | | |
| **INSTRUCTOR NAME**  Prof. Dr. Fatma Sultan KILIÇ | **COURSE LANGUAGE**  **Turkish: x**  **English: ** | **Course Catagory** | | |
| Technical | Medical | Other(……) |
|  |  |  | **X** |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| **X** | **** | **** | **** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | **COURSE OF** | | | |
| **Theoric** | **Practice** | **Laboratory** | **Credit** | **ECTS** | **TYPE** | |
| Spring **X**  Autumn **** | 3 | 0 |  | 3 | 7,5 | COMPULSORY ELECTIVE  **X ** | |
|  | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | |
| **MID-TERM** | | | **ACTIVITY** | | | **Quantity** | **Percentage (%)** |
| 1st Mid-Term | | | 1 | 50 |
| 2 nd Mid- Term | | |  |  |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (………) | | |  |  |
| **FINAL** | | | Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other(……written………….) | | | **1** | **50** |
| **MAKE-UP EXAM** | | | Oral | | Written | Oral and Written | Multiple Choice |
|  | |  |  |  |
| **PREREQUISITE(S)** | | |  | | | | |
| **COURSE CONTENT** | | | Neurotransmitter systems in central nervous system, amine neurotransmittres, amino acide neurotransmitters, peptide neurotransmitters, adenosinergic system, nitrergic system, neurosteroid system | | | | |
| **COURSE AIMS** | | | To teach the neurotransmitter systems in central nervous system | | | | |
| **COURSE OBJECTIVES** | | | To be able to realize the basic neurotransmitters | | | | |
| **TEXTBOOK(S)** | | | 1. KAYAALP, S O. (2012); Akılcıl Tedavi Yönünden Tıbbi Farmakoloji. | | | | |
| **REFERENCES** | | | 1. CİNGİ, I; EROL, K. (1996); Anadolu Üniversitesi Açık Öğretim Fakültesi Sağlık Personeli Önlisans Eğitimi, Farmakoloji.  2. DÖKMECİ, I. (2007); M.Y. Okulları için Farmakoloji Dersleri. Nobel Tıp Kitapevleri.  3. SÜZER, O. (2005); Farmakolojinin Temelleri.. Nobel Tıp Kitapevleri.  4. GOODMAN AND GİLLMAN‘S (2011). The Pharmacological basis of Therapeutics. 12th edition  5. Basic and Clinical Pharmacology: Bertram G. Katzung,  6. Pharmacology: H.P.Rang, M.M Dale, J.M.Ritter,  7. Lippincott’sPharmacology: Richard Harvey, Pamela Champe,  8.Human Pharmacology, Molecular toClinical: Brody,Larner,Mınneman. | | | | |

|  |  |  |
| --- | --- | --- |
|  | **COURSE SYLLABUS** | |
| **WEEK** | **DATE** | **SUBJECTS/TOPICS** |
| 1 |  | History and introduction |
| 2 |  | Neuromediators, synaps amd interactions |
| 3 |  | Dopaminergic system |
| 4 |  | Epinephrine and norepinephrine |
| 5 |  | Serotonine |
| 6 |  | Acetylcholine |
| 7 |  | Histamine |
| 8 |  | **Mid term exam** |
| 9 |  | GABA and glycine |
| 10 |  | Aspartate and glutamate |
| 11 |  | Opioide peptides |
| 12 |  | Substance P, other kinines and neuropeptides |
| 13 |  | Nitrergic system |
| 14 |  | Adenosinergic system |
| 15 |  | Neurosteroides |
| 16 |  | **Final exam** |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  |  | **X** |
| 2 | ask scientific questions and form hypothesis |  |  | **X** |
| 3 | search and interpret scientific literature |  |  | **X** |
| 4 | design and conduct experiments as well as analyze and interpret the data |  |  | **X** |
| 5 | learn how to use the experimental equipment effectively |  | **X** |  |
| 6 | function on multi-disciplinary teams |  |  | **X** |
| 7 | identify, formulate, and solve medical problems |  | **X** |  |
| 8 | use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| 9 | understand the impact of experimental solutions on national and international sciences |  |  | **X** |
| 10 | use effective written and oral communication/presentation skills |  | **X** |  |
| 11 | get an understanding of professional and ethical responsibility |  |  | **X** |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |

|  |  |
| --- | --- |
| **Instructor Name**  Prof. Dr. Fatma Sultan KILIÇ  **Sign** | **Date**  15.11.2012 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE:** | **521014016** | | **DEPARTMENT: Medical Pharmacology** | | | |
| **COURSE NAME:** | **Cardiovascular System** | |  | | | |
| **INSTRUCTOR NAME**  Prof.Dr. Basar SIRMAGUL | | **COURSE LANGUAGE**  **Turkish: X**  **English: ** | | **Course Catagory** | | |
| Technical | Medical | Other(……) |
|  | |  | |  | **X** |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| **X** | **** | **** | **** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | **COURSE OF** | | | |
| **Theoric** | **Practice** | **Laboratory** | **Credit** | **ECTS** | **TYPE** | |
| Spring **X**  Autumn | 3 | 0 |  | 3 | 7,5 | COMPULSORY ELECTIVE  **X ** | |
|  | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | |
| **MID-TERM** | | | **ACTIVITY** | | | **Quantity** | **Percentage (%)** |
| 1st Mid-Term | | | 1 | 50 |
| 2 nd Mid- Term | | |  |  |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (………) | | |  |  |
| **FINAL** | | | Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other(……written………….) | | | **1** | **50** |
| **MAKE-UP EXAM** | | | Oral | | Written | Oral and Written | Multiple Choice |
|  | |  |  |  |
| **PREREQUISITE(S)** | | |  | | | | |
| **COURSE CONTENT** | | | Cardiovascular physiology and disorders, pharmacological theraphies, major drug class and their protective and treatment properties. Additionaly this course include that principles of CVS therapy and briefly cardiovascular medicine framework will given. | | | | |
| **COURSE AIMS** | | | The objectives of this course are to gain familiarity with the different classes of CVS drugs. To provide students with an understanding of the pharmacology of the essential elements of the cardiovascular system like that **i] blood volume-blood pressure, ii] vascular tone, iii] heart rate and iv] force of contraction**. These principles are then applied to a number of clinical conditions, **i] myocardial ischaemia (angina pectoris), ii] heart failure and iii] hypertension.** Inaddition, the students discuss the practical application of this knowledge in the clinical management of hypertension and other CVS disorders | | | | |
| **COURSE OBJECTIVES** | | | To provide instruction concerning the actions and mechanisms of action ofdrugs that influence the activity of the heart and blood vessels. Such drugs are relevant to many types of disease. In order to understand how the pharmacology of drugs leads to real or potential therapeutic benefit it is necessary to consider normal cardiovascular homeostasis and how this is affected by disease. Therefore we focus on homeostasis and disease in the course, with a view to providing some context for the pharmacology | | | | |
| **TEXTBOOK(S)** | | | 1. KAYAALP, S O. (2012); Akılcıl Tedavi Yönünden Tıbbi Farmakoloji. | | | | |
| **REFERENCES** | | | 1. CİNGİ, I; EROL, K. (1996); Anadolu Üniversitesi Açık Öğretim Fakültesi Sağlık Personeli Önlisans Eğitimi, Farmakoloji.  2. DÖKMECİ, I. (2007); M.Y. Okulları için Farmakoloji Dersleri. Nobel Tıp Kitapevleri.  3. SÜZER, O. (2005); Farmakolojinin Temelleri.. Nobel Tıp Kitapevleri.  4. GOODMAN AND GİLLMAN‘S (2011). The Pharmacological basis of Therapeutics. 12th edition  5. Basic and Clinical Pharmacology: Bertram G. Katzung,  6. Pharmacology: H.P.Rang, M.M Dale, J.M.Ritter,  7. Lippincott’sPharmacology: Richard Harvey, Pamela Champe,  8.Human Pharmacology, Molecular toClinical: Brody,Larner,Mınneman.  9. Hardman JG, Limbird LE, Gilman AG, The Pharmacological Basis of Therapeutics,McGraw-Hill, New York, (10th ed.)2001.  10. . Lüllmann H, Mohr K, Ziegler A.Atlas de Poche de Pharmacologie ,Medecine-Sciences Flammarion, Paris (2. baskı),1996 | | | | |

|  |  |  |
| --- | --- | --- |
|  | **COURSE SYLLABUS** | |
| **WEEK** | **DATE** | **SUBJECTS/TOPICS** |
| 1 |  | The pathophysiological signs of the cardiovascular system |
| 2 |  | Introduction to the pharmacological therapies of the CVS |
| 3 |  | Diuretics |
| 4 |  | Drugs affecting renin and angiotensin systems |
| 5 |  | Drugs used for the treatment of myocardial ischemia |
| 6 |  | CVS simulations( spesific drugs effects on the hemodynamic parameters) |
| 7 |  | CVS’s drugs interactions and adverse effects |
| 8 |  | **Mid-term exam** |
| 9 |  | Antihypertensive agents |
| 10 |  | Pharmacological treatment of heart failure |
| 11 |  | Antiaggregan , anticoagülants, antiarrhythmic drugs |
| 12 |  | Drugs used in the treatment of hyperlipoproteinemias |
| 13 |  | Calcium channel antagonists and vasodilators |
| 14 |  | Beta adrenergic receptor antagonists |
| 15 |  | Centrally acting CVS agents |
| 16 |  | **Final exam** |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  | **X** |  |
| 2 | ask scientific questions and form hypothesis |  | **X** |  |
| 3 | search and interpret scientific literature |  | **X** |  |
| 4 | design and conduct experiments as well as analyze and interpret the data |  | **X** |  |
| 5 | learn how to use the experimental equipment effectively |  | **X** |  |
| 6 | function on multi-disciplinary teams |  | **X** |  |
| 7 | identify, formulate, and solve medical problems |  |  | **X** |
| 8 | use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| 9 | understand the impact of experimental solutions on national and international sciences |  | **X** |  |
| 10 | use effective written and oral communication/presentation skills |  | **X** |  |
| 11 | get an understanding of professional and ethical responsibility |  | **X** |  |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  | **X** |  |

|  |  |
| --- | --- |
| **Instructor Name**  Prof.Dr. Basar SIRMAGUL | **Date**  15.11.2012 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **COURSE CODE:** | **521014017** | **DEPARTMENT: HISTOLOGY AND EMBRYOLOGY** | | |
| **COURSE NAME:** | **GENERAL EMBRYOLOGY** |  | | |
| **INSTRUCTOR NAME**  Yrd.Doç.Dr.Dilek  BURUKOĞLU DÖNMEZ | **COURSE LANGUAGE**  **Turkish: X**  **English: ** | **Course Catagory** | | |
| Technical | Medical | Other(……) |
|  |  |  | X |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| **X** | **** | **** | **** |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | **COURSE OF** | | | |
| **Theoric** | **Practice** | | **Laboratory** | **Credit** | **ECTS** | **TYPE** | |
| Spring **X**  Autumn **** | 2 | - | | - | 2 | 7,5 | COMPULSORY ELECTIVE  **X ** | |
|  | | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | | |
| **MID-TERM** | | | | **ACTIVITY** | | | **Quantity** | **Percentage (%)** |
| 1st Mid-Term | | | 1 | 25 |
| 2 nd Mid- Term | | | 1 | 25 |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (………) | | |  |  |
| **FINAL** | | | | Quiz | | | **1** | **50** |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other(……………….) | | |  |  |
| **MAKE-UP EXAM** | | | | Oral | | Written | Oral and Written | Multiple Choice |
|  | | **X** |  |  |
| **PREREQUISITE(S)** | | | |  | | | | |
| **COURSE CONTENT** | | | | Embryology is the study of the sequential developmental events that occur during prenatal development as the various tissues, organs, and systems develop from conception to birth. Human embryology is the study of the human embryo and fetus. | | | | |
| **COURSE AIMS** | | | | Students will learn the importance of human development. Importance of Human Embryology: Embryology is inherently important in understanding how a single cell develops into an adult being. The science is also important because it contributes to an understanding of human anatomy (gross, microscopic, and neural), and it helps in the interpretation of congenital abnormalities, or *anomalies*. | | | | |
| **COURSE OBJECTIVES** | | | | From the beginning stages of human development taught in detail in the light of this information will be provided a better understanding of the basis of embryology | | | | |
| **TEXTBOOK(S)** | | | | Moore KL, Persaud T.V.N. The developing human, Clinically oriented embryology 6th edition | | | | |
| **REFERENCES** | | | | Moore KL, Persaud T.V.N: Essentials of embryology and birth defects, Before we are born, 7.edition. | | | | |
|  | **COURSE SYLLABUS** | | | | | | | | |
| **WEEK** | **DATE** | | **SUBJECTS/TOPICS** | | | | | | |
| 1 |  | | Introduction to the embryology | | | | | | |
| 2 |  | | Mitosis and meiosis | | | | | | |
| 3 |  | | Development of the female genital system | | | | | | |
| 4 |  | | Development of the male genital system | | | | | | |
| 5 |  | | 1st Mid-Term | | | | | | |
| 6 |  | | The beginning of human development: the first week | | | | | | |
| 7 |  | | Fertilization and cleavage of the zygote | | | | | | |
| 8 |  | | The beginning of human development: the second week | | | | | | |
| 9 |  | | The beginning of human development: the third week | | | | | | |
| 10 |  | | 2 st Mid-Term | | | | | | |
| 11 |  | | Organogenesis period: the fourth to eighth weeks | | | | | | |
| 12 |  | | The fetal period: Ninth week to birth | | | | | | |
| 13 |  | | Placenta and fetal membranes | | | | | | |
| 14 |  | | Development of the pharyngeal apparatus | | | | | | |
| 15 |  | | Congenital anomalies | | | | | | |
| 16 |  | | Final | | | | | | |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  | **X** |  |
| 2 | ask scientific questions and form hypothesis |  | **X** |  |
| 3 | search and interpret scientific literature |  | **X** |  |
| 4 | design and conduct experiments as well as analyze and interpret the data |  |  | **X** |
| 5 | learn how to use the experimental equipment effectively |  |  | **X** |
| 6 | function on multi-disciplinary teams |  |  | **X** |
| 7 | identify, formulate, and solve medical problems |  | **X** |  |
| 8 | use computer effectively both in conducting the experiments and analyzing the data |  |  | **X** |
| 9 | understand the impact of experimental solutions on national and international sciences |  | **X** |  |
| 10 | use effective written and oral communication/presentation skills |  |  | **X** |
| 11 | get an understanding of professional and ethical responsibility |  | **X** |  |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  | **X** |  |
| 13 | other (……………………………………….) |  |  |  |
| 14 | other (……………………………………….) |  |  |  |

|  |  |
| --- | --- |
| **Instructor Name**  **Sign**  Yrd.Doç.Dr. Dilek BURUKOĞLU DÖNMEZ | **Date**  06.03.2014 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **COURSE CODE:** **521014018** |  | **DEPARTMENT: BIOPHYSICS** | | |
| **COURSE NAME: BIOPHYSICS II** |  |  | | |
| **INSTRUCTOR NAME**  **Prof.Dr. Ferhan ESEN** | **COURSE LANGUAGE**  **Turkish: X**  **English: ** | **Course Catagory** | | |
| Technical | Medical | Other (……) |
|  |  |  | **X** |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| **X** | **** |  | **** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | **COURSE OF** | | | |
| **Theoric** | **Practice** | **Laboratory** | **Credit** | **ECTS** | **TYPE** | |
| Spring **X**  Autumn | 3 | - | - | 3 | 7,5 | COMPULSORY ELECTIVE  **X ** | |
|  | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | |
| **MID-TERM** | | | **ACTIVITY** | | | **Quantity** | **Percentage (%)** |
| 1st Mid-Term | | | **1** | **40** |
| 2 nd Mid- Term | | |  |  |
| Quiz | | |  |  |
| Homework | | | **1** | **20** |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (………) | | |  |  |
| **FINAL** | | | Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Written | | | **1** | **40** |
| Other(……………….) | | |  |  |
| **MAKE-UP EXAM** | | | Oral | | Written | Oral and Written | Multiple Choice |
|  | |  | **X** |  |
| **PREREQUISITE(S)** | | |  | | | | |
| **COURSE CONTENT** | | | Physics and Biology. Electricity and magnetism, Wave phenomena. Sound and ultrasound. Light and optics. Electromagnetic radiation. | | | | |
| **COURSE AIMS** | | | To give students the biophysics background they need for their professional work. | | | | |
| **COURSE OBJECTIVES** | | | Understands the relation between physics and the life sciences.  Apply knowledge of mathematics and physics to the life sciences. | | | | |
| **TEXTBOOK(S)** | | | **Güner Z.:** Tıp ve Biyoloji öğrencileri için fizik. A.Ü.T.F, Ankara, 1981. Cromer A.H..: Physics for the life sciences. McGraw-Hill New York 1974.. | | | | |
| **REFERENCES** | | | **Çelebi G:** Biyomedikal Fizik, (2.Baskı), Barış Yayınları, Fakülteler Kitabevi, İzmir, (1995). | | | | |

|  |  |  |
| --- | --- | --- |
|  | **COURSE SYLLABUS** | |
| **WEEK** | **DATE** | **SUBJECTS/TOPICS** |
| 1 |  | Physic and biology |
| 2 |  | Electric dipole |
| 3 |  | Electric potential of a dipole and ECG |
| 4 |  | Electric current in fluids |
| 5 |  | Electrophoresis |
| 6 |  | Biological effects of constant currents |
| 7 |  | Magnetic fields |
| 8 |  | Magnetic fields of the human body |
| 9 |  | Electromagnetism |
| 10 |  | Instruments |
| 11 |  | Wave phonomenon |
| 12 |  | Sound and ultrasound |
| 13 |  | Light |
| 14 |  | Optics |
| 15 |  | Spectroscopy |
| 16 |  | Electromagnetic radiation |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  | **X** |  |
| 2 | ask scientific questions and form hypothesis |  |  | **X** |
| 3 | search and interpret scientific literature |  | **X** |  |
| 4 | design and conduct experiments as well as analyze and interpret the data |  |  | **X** |
| 5 | learn how to use the experimental equipment effectively |  |  | **X** |
| 6 | function on multi-disciplinary teams |  | **X** |  |
| 7 | identify, formulate, and solve medical problems |  |  | **X** |
| 8 | use computer effectively both in conducting the experiments and analyzing the data |  |  | **X** |
| 9 | understand the impact of experimental solutions on national and international sciences |  |  | **X** |
| 10 | use effective written and oral communication/presentation skills |  |  | **X** |
| 11 | get an understanding of professional and ethical responsibility |  |  | **X** |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| 13 | other (……………………………………….) |  |  |  |
| 14 | other (……………………………………….) |  |  |  |

|  |  |
| --- | --- |
| **Instructor Name**  **Prof.Dr.Ferhan ESEN**  **Sign** | **Date** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COURSE CODE:** | **521014019** | | **DEPARTMENT: INTERDISCIPLINARY NEUROSCIENCE** | | | |
| **COURSE NAME:** | **BASIC HUMAN CHEMISTRY AND MECHANISM** | |  | | | |
| **INSTRUCTOR NAME**  **Prof.Dr.Ziya Kaygısız, Prof.Dr. Ferhan Esen, Prof.Dr.Güngör KANBAK, Prof.Dr.Fatma Sultan KILIÇ** | | **COURSE LANGUAGE**  **Turkish: X**  **English: ** | | **Course Catagory** | | |
| Technical | Medical | Other(……) |
|  | |  | |  | **X** |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| **X** | **** | **** | **** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | **COURSE OF** | | | |
| **Theoric** | **Practice** | **Laboratory** | **Credit** | **ECTS** | **TYPE** | |
| Spring **X**  Autumn **** | 2 | 2 |  | 3 | 7,5 | COMPULSORY ELECTIVE  ** X** | |
|  | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | |
| **MID-TERM** | | | **ACTIVITY** | | | **Quantity** | **Percentage (%)** |
| 1st Mid-Term | | | 1 | 50 |
| 2 nd Mid- Term | | |  |  |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other (………) | | |  |  |
| **FINAL** | | | Quiz | | | **1** | **50** |
| Homework | | |  |  |
| Project | | |  |  |
| Oral Exam | | |  |  |
| Other(……………….) | | |  |  |
| **MAKE-UP EXAM** | | | Oral | | Written | Oral and Written | Multiple Choice |
| **x** | |  |  |  |
| **PREREQUISITE(S)** | | |  | | | | |
| **COURSE CONTENT** | | | Morphological investigation of basic organ systems in humans | | | | |
| **COURSE AIMS** | | | To give basic information about human morphology to students applying to neuroscience master program. | | | | |
| **COURSE OBJECTIVES** | | | To learn basic information about human morphology | | | | |
| **TEXTBOOK(S)** | | | Gray’s anatomy for students, Histology a text and atlas, Practical guide to neurogenetics, Molecular Biology of the Cell | | | | |
| **REFERENCES** | | |  | | | | |

|  |  |  |
| --- | --- | --- |
|  | **COURSE SYLLABUS** | |
| **WEEK** | **DATE** | **SUBJECTS/TOPICS** |
| 1 | Medical biochemistry | Basic concepts and mechanisms in biochemistry |
| 2 | Medical biochemistry | Carbohydrate and lipid metabolism |
| 3 | Medical biochemistry | Protein metabolism and Nucleic acids |
| 4 | Medical biochemistry | Enzymes and hormones |
| 5 | Medical biophysics | Basic biophysical mechanisms at the cell membrane |
| 6 | Medical biophysics | Signaling between nerve cells |
| 7 | Medical biophysics | Synaptic integration: excitatory and inhibitory |
| 8 |  | MID TERM EXAM |
| 9 | Physiology | Functions of the nervous and special senses |
| 10 | Physiology | Functions of the muscular system |
| 11 | Physiology | Functions of the cardiovascular and respiratory system |
| 12 | Physiology | Functions of the digestive and genitourinary system anatomy |
| 13 | Medical Pharmacology | Introduction to drugs, pharmacokinetics of drugs |
| 14 | Medical Pharmacology | Mechanisms of actions, dose and concentration relation |
| 15 | Medical Pharmacology | Receptors and receptor theories |
| 16 | Medical Pharmacology | Factors altering the effects of drugs |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** |  | **1** | **2** | **3** |
| 1 | gather as well as apply knowledge of health sciences |  |  | **X** |
| 2 | ask scientific questions and form hypothesis |  | **X** |  |
| 3 | search and interpret scientific literature | **X** |  |  |
| 4 | design and conduct experiments as well as analyze and interpret the data | **X** |  |  |
| 5 | learn how to use the experimental equipment effectively |  |  | **X** |
| 6 | function on multi-disciplinary teams |  |  | **X** |
| 7 | identify, formulate, and solve medical problems |  |  | **X** |
| 8 | use computer effectively both in conducting the experiments and analyzing the data | **X** |  |  |
| 9 | understand the impact of experimental solutions on national and international sciences |  |  | **X** |
| 10 | use effective written and oral communication/presentation skills |  | **X** |  |
| 11 | get an understanding of professional and ethical responsibility |  |  | **X** |
| 12 | get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| 13 | other (……………………………………….) |  |  | **X** |
| 14 | other (……………………………………….) | **X** |  |  |

|  |  |
| --- | --- |
| **Instructor Name**  **Sign**  **Prof.Dr.Emel ULUPINAR** | **Date**  **12.04.2013** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE CODE** | **521014020** | **DEPARTMENT** | **STEM CELL** | | |
| **COURSE NAME** | | **BASIC CONCEPTS IN CELL CULTURE** | | | |
| **INSTRUCTOR NAME** | | **COURSE LANGUAGE** | **COURSE CATAGORY** | | |
| Yrd. Doç. Dr. Onur UYSAL | | Turkish | **Technical** | **Medical** | **Other (…)** |
|  | **X** |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| **X** |  |  |  |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | **COURSE OF** | | | | |
| **TEORIC** | **PRACTICE** | **LABORATORY** | | **CREDIT** | | **ECTS** | | **TYPE** |
| Spring **X** | 3 | 2 |  | | 4 | | 7,5 | | Compulsory |
|  | | | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | | | |
| **MID-TERM EXAM** | | | **Activity** | | | **Quantity** | | **Percentage (%)** | |
| 1st Mid-Term | | | 1 | | 40 | |
| 2nd Mid-Term | | |  | |  | |
| Quiz | | |  | |  | |
| Homework | | |  | |  | |
| Project | | |  | |  | |
| Oral Exam | | |  | |  | |
| Other (………) | | |  | |  | |
| **FINAL EXAM** | | | Quiz | | |  | |  | |
| Homework | | |  | |  | |
| Project | | |  | |  | |
| Oral Exam | | |  | |  | |
| Other (Written Exam) | | | 1 | | 60 | |
| **MAKE-UP EXAM** | | | **Oral** | **Written** | | **Oral and Written** | | **Multiple Choice** | |
|  | **X** | |  | |  | |
| **PREREQUISITE(S)** | | |  | | | | | | |
| **COURSE CONTENT** | | | Basic concepts and considerations in cell culture. | | | | | | |
| **COURSE AIMS** | | | Teaching cell cultures to students who have graduated from different fields. | | | | | | |
| **COURSE OBJECTIVES** | | | At the end of this course, the basic concepts of cell culture and the necessary considerations will be taught to the students who have graduated from different fields | | | | | | |
| **TEXTBOOK(S)** | | | Basic Cell Culture Protocols, Editors: Helgason, Cheryl D, ISBN 978-1-62703-128-8. | | | | | | |
| **REFERENCES** | | | Electronic databases and scientific books about the subject | | | | | | |

|  |  |  |
| --- | --- | --- |
| **COURSE SYLLABUS** | | |
| **WEEK** | **DATE** | **SUBJECTS/TOPICS** |
| **1** |  | Safety in the laboratory |
| **2** |  | Cell culture |
| **3** |  | The aims of cell culture |
| **4** |  | Conditions to observe in cell culture |
| **5** |  | Application areas of cell culture |
| **6** |  | Culture conditions |
| **7** |  | Sources of contamination and contamination |
| **8** |  | MID-TERM EXAM |
| **9** |  | Sterilization techniques |
| **10** |  | Nutrient media |
| **11** |  | Growth regulators |
| **12** |  | Developmental control in vitro culture |
| **13** |  | Primer cell culture |
| **14** |  | Culture of special cell lines, 2 and 3-dimensional animal tissue culture |
| **15** |  | Cytotoxicity and genotoxicity studies in cell cultures |
| **16** |  | FINAL EXAM |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | | **1** | **2** | **3** |
| **1** | gather as well as apply knowledge of health sciences |  |  | **X** |
| **2** | ask scientific questions and form hypothesis |  |  | **X** |
| **3** | search and interpret scientific literature |  |  | **X** |
| **4** | design and conduct experiments as well as analyze and interpret the data |  |  | **X** |
| **5** | learn how to use the experimental equipment effectively |  |  | **X** |
| **6** | function on multi-disciplinary teams |  |  | **X** |
| **7** | identify, formulate, and solve medical problems |  |  | **X** |
| **8** | use computer effectively both in conducting the experiments and analyzing the data |  |  | **X** |
| **9** | understand the impact of experimental solutions on national and international sciences |  |  | **X** |
| **10** | use effective written and oral communication/presentation skills |  |  | **X** |
| **11** | get an understanding of professional and ethical responsibility |  |  | **X** |
| **12** | get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| **13** | other (get an understanding of basic concepts of medical education) |  |  | **X** |
| **14** | other (get an understanding of approaching to ethical problems with taking basic concepts to center) |  |  | **X** |

|  |  |
| --- | --- |
| **INSTRUCTOR NAME** | **DATE** |
| Yrd. Doç. Dr. Onur UYSAL |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE CODE** | **521014021** | **DEPARTMENT** | **STEM CELL** | | |
| **COURSE NAME** | | **BASIC LABORATORY TECHNICS IN CELL CULTURE** | | | |
| **INSTRUCTOR NAME** | | **COURSE LANGUAGE** | **COURSE CATAGORY** | | |
| Doç. Dr. Ayla EKER SARIBOYACI | | Turkish | **Technical** | **Medical** | **Other (…)** |
|  | **X** |  |

**COURSE LEVEL**

|  |  |  |  |
| --- | --- | --- | --- |
| **PROPAEDEUTIC** | **M.SC.** | **Ph.D.** | **COURSE OF PROVINCE** |
| **X** |  |  |  |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | **COURSE OF** | | | | |
| **TEORIC** | **PRACTICE** | **LABORATORY** | | **CREDIT** | | **ECTS** | | **TYPE** |
| Spring **X** | 3 | 2 |  | | 4 | | 7,5 | | Compulsory |
|  | | | | | | | | | |
| **ASSESMENT CRITERIA** | | | | | | | | | |
| **MID-TERM EXAM** | | | **Activity** | | | **Quantity** | | **Percentage (%)** | |
| 1st Mid-Term | | | 1 | | 40 | |
| 2nd Mid-Term | | |  | |  | |
| Quiz | | |  | |  | |
| Homework | | |  | |  | |
| Project | | |  | |  | |
| Oral Exam | | |  | |  | |
| Other (………) | | |  | |  | |
| **FINAL EXAM** | | | Quiz | | |  | |  | |
| Homework | | |  | |  | |
| Project | | |  | |  | |
| Oral Exam | | |  | |  | |
| Other (Written Exam) | | | 1 | | 60 | |
| **MAKE-UP EXAM** | | | **Oral** | **Written** | | **Oral and Written** | | **Multiple Choice** | |
|  | **X** | |  | |  | |
| **PREREQUISITE(S)** | | |  | | | | | | |
| **COURSE CONTENT** | | | Basic techniques applied in cell culture laboratory | | | | | | |
| **COURSE AIMS** | | | Teaching basic techniques applied in cell culture laboratory to students graduated from different fields. | | | | | | |
| **COURSE OBJECTIVES** | | | At the end of this course, basic techniques applied in cell culture laboratory will be taught to the students who graduated from different fields. | | | | | | |
| **TEXTBOOK(S)** | | | Basic Cell Culture Protocols, Editors: Helgason, Cheryl D, ISBN 978-1-62703-128-8. | | | | | | |
| **REFERENCES** | | | Electronic databases and scientific books about the subject | | | | | | |

|  |  |  |
| --- | --- | --- |
| **COURSE SYLLABUS** | | |
| **WEEK** | **DATE** | **SUBJECTS/TOPICS** |
| **1** |  | Sub-culture, cell counting methods |
| **2** |  | Freeze-thawing |
| **3** |  | Passing and trypsinization |
| **4** |  | Cell proliferation index and viability tests (MTT, XTT, WST1) |
| **5** |  | Characterization methods in cell culture |
| **6** |  | Immunohistochemical methods |
| **7** |  | Immunofluorescence methods |
| **8** |  | MID-TERM EXAM |
| **9** |  | Flow cytometride cell cycle |
| **10** |  | ELIZA applications |
| **11** |  | Gel electrophoresis, imaging systems and analysis |
| **12** |  | Real-time pcr |
| **13** |  | Co-culture techniques |
| **14** |  | Western blotting |
| **15** |  | In-vitro differentiation methods |
| **16** |  | FINAL EXAM |

**PROGRAM QUTCOMES**

Place choose never(1), few(2) or many(3) regarding your course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | | **1** | **2** | **3** |
| **1** | gather as well as apply knowledge of health sciences |  |  | **X** |
| **2** | ask scientific questions and form hypothesis |  |  | **X** |
| **3** | search and interpret scientific literature |  |  | **X** |
| **4** | design and conduct experiments as well as analyze and interpret the data |  |  | **X** |
| **5** | learn how to use the experimental equipment effectively |  |  | **X** |
| **6** | function on multi-disciplinary teams |  |  | **X** |
| **7** | identify, formulate, and solve medical problems |  |  | **X** |
| **8** | use computer effectively both in conducting the experiments and analyzing the data |  |  | **X** |
| **9** | understand the impact of experimental solutions on national and international sciences |  |  | **X** |
| **10** | use effective written and oral communication/presentation skills |  |  | **X** |
| **11** | get an understanding of professional and ethical responsibility |  |  | **X** |
| **12** | get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| **13** | other (get an understanding of basic concepts of medical education) |  |  | **X** |
| **14** | other (get an understanding of approaching to ethical problems with taking basic concepts to center) |  |  | **X** |

|  |  |
| --- | --- |
| **INSTRUCTOR NAME** | **DATE** |
| Doç. Dr. Ayla EKER SARIBOYACI |  |