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| **NECMETTIN ERBAKAN UNIVERSITY FACULTY OF SCIENCE** |
| **MOLECULAR BIOLOGY AND GENETICS UNDERGRADUATE PROGRAM** |
| **1. CLASS** |
| **COURSE KODU** | **1 ST SEMESTER** | **T+U** | **K** | **AKTS** | **COURSE KODU** | **2 ND SEMESTER** | **T+U** | **K** | **AKTS** |
| 0040050001 | General Biology I | 3+2 | 4 | 8 | 0040050007 | General Biology II | 3+2 | 4 | 8 |
| 0040050002 | General Chemıstry I | 3+2 | 4 | 8 | 0040050008 | General Chemıstry II | 3+2 | 4 | 8 |
| 0040050003 | Mathematics | 3+0 | 3 | 6 | 0040050009 | Biophysics | 3+0 | 3 | 6 |
| 0040050004 | English I | 2+0 | 2 | 2 | 0040050010 | English II | 2+0 | 2 | 2 |
| 0040050005 | Turkısh Language I | 2+0 | 2 | 3 | 0040050011 | Turkish Language II | 2+0 | 2 | 3 |
| 0040050006 | Prıncıples Of Ataturk And Hıstory Of Turkısh Revolutıon I | 2+0 | 2 | 2 | 0040050012 | Ataturk's Principles and History of Turkish Revolution II | 2+0 | 2 | 2 |
| OZS100 | Akademik Yazım COURSEi | 2+0 | 2 | 2 |  |  |  |  |  |
|  | Ortak Elective I | 1+0 | 1 | 1 |  | Ortak Elective II | 1+0 | 1 | 1 |
| **Total** | **18+4** | **20** | **32** | **Total** | **16+4** | **18** | **30** |
| **COURSE KODU** | **1 ST SEMESTER-ELECTİVE COURSES** | **T+U** | **K** | **AKTS** | **COURSE KODU** | **2 ND SEMESTER-ELECTİVE COURSE** | **T+U** | **K** | **AKTS** |
| OS101 | Introduction to University Life | 1+0 | 1 | 1 | OS102 | Social Responsibility and Healthy Living | 1+0 | 1 | 1 |
| 0040050077 | Akademik Türkçe | 1+0 | 1 | 1 | 0040050079 | Akademik Türkçe II | 1+0 | 1 | 1 |
|  **2. CLASS** |
| **COURSE KODU** | **3 RD SEMESTER** | **T+U** | **K** | **AKTS** | **COURSE KODU** | **4 TH SEMESTER** | **T+U** | **K** | **AKTS** |
| 0040050013 | Biochemistry I | 3+0 | 3 | 5 | 0040050019 | Biochemistry II | 3+2 | 4 | 6 |
| 0040050014 | Molecular Biology I | 3+0 | 3 | 5 | 0040050020 | Molecular Biology II | 2+2 | 3 | 5 |
| 0040050015 | Biostatistics | 3+0 | 3 | 5 | 0040050021 | Histology | 2+0 | 2 | 4 |
| 0040050016 | Bioanalytical | 3+2 | 4 | 6 | 0040050022 | Organic Chemistry | 3+2 | 4 | 6 |
| 0040050017 | Genetics I | 3+2 | 4 | 6 | 0040050023 | Genetics II | 3+2 | 4 | 6 |
| 0040050018 | Professıonal Englısh I | 2+0 | 2 | 3 | 0040050024 | Professıonal Englısh II | 2+0 | 2 | 3 |
| **Total** | **17+4** | **19** | **30** | **Total** | **15+8** | **19** | **30** |
|  **3. CLASS** |
| **COURSE KODU** | **5 TH SEMESTER** | **T+U** | **K** | **AKTS** | **COURSE KODU** | **6 TH SEMESTER** | **T+U** | **K** | **AKTS** |
| 0040050025 | Physiology I | 3+2 | 4 | 6 | 0040050034 | Physiology II | 3+2 | 4 | 6 |
| 0040050026 | Microbiology | 3+2 | 4 | 6 | 0040050070 | Molecular Biotechnology | 3+0 | 3 | 4 |
| 0040050027 | Recombinant DNA Technology | 3+0 | 3 | 4 | 0040050036 | Genetic Engineering | 3+2 | 4 | 6 |
| 0040050078 | Molecular Biology of Cancer | 3+0 | 3 | 4 | 0040050037 | Instrumental Analysis Laboratory | 2+2 | 3 | 4 |
| 0040050068 | Information Technologies | 1+2 | 2 | 2 |  | Elective COURSE III | 2+0 | 2 | 4 |
|  | Elective COURSE I | 2+0 | 2 | 4 |  | Elective COURSE IV | 2+0 | 2 | 4 |
|  | Elective COURSE II | 2+0 | 2 | 4 | 0040050038 | Staj | - | - | 2 |
| **Total** | **17+6** | **20** | **30** | **Total** | **15+6** | **18** | **30** |
| **COURSE KODU** | **5 TH SEMESTER-ELECTİVE COURSES** | **T+U** | **K** | **AKTS** | **COURSE KODU** | **6 TH SEMESTER -SELECTİVE COURSES** | **T+U** | **K** | **AKTS** |
| 0040050029 | Enzyme and Protein Chemistry | 2+0 | 2 | 4 | 0040050039 | Biosafety and Bioethics | 2+0 | 2 | 4 |
| 0040050030 | Immunology | 2+0 | 2 | 4 | 0040050040 | Cell and Tissue Culture | 2+0 | 2 | 4 |
| 0040050031 | Hormones | 2+0 | 2 | 4 | 0040050072 | Biomaterials | 2+0 | 2 | 4 |
| 0040050032 | Laboratory Quality Assurance | 2+0 | 2 | 4 | 0040050042 | Monoclonal Antibodies | 2+0 | 2 | 4 |
| 0040050071 | Membrane Biology | 2+0 | 2 | 4 | 0040050043 | Microbial Genetics | 2+0 | 2 | 4 |
| 0040050080 | Gönüllülük Çalışmaları | 2+0 | 2 | 4 |  |  |  |  |  |
|  **4. CLASS** |
| **COURSE KODU** | **7 TH SEMESTER** | **T+U** | **K** | **AKTS** | **COURSE KODU** | **8 TH SEMESTER** | **T+U** | **K** | **AKTS** |
| 0040050044 | Proteomics and Genomics | 3+0 | 3 | 5 | 0040050054 | Bioinformatics | 3+0 | 3 | 6 |
| 0040050045 | Genetic Diseases and Diagnosis | 3+2 | 4 | 6 | 0040050055 | Genetic Breeding | 3+0 | 3 | 6 |
| 0040050046 | Molecuar Biology and Genetics Practises I | 3+2 | 4 | 6 | 0040050056 | Molecular Biology & Genetics Practices II | 3+2 | 4 | 6 |
| 0040050067 | Entrepreneurship Culture | 1+0 | 1 | 1 |  | Elective COURSE VIII | 2+0 | 2 | 4 |
|  | Elective COURSE V | 2+0 | 2 | 4 |  | Elective COURSE IX | 2+0 | 2 | 4 |
|  | Elective COURSE VI | 2+0 | 2 | 4 |  | Elective COURSE X | 2+0 | 2 | 4 |
|  | Elective COURSE VII | 2+0 | 2 | 4 |  |  |  |  |  |
| **Total** | **16+4** | **18** | **30** | **Total** | **15+2** | **16** | **30** |
| **COURSE KODU** | **7 TH SEMESTER-ELECTİVE COURSES** | **T+U** | **K** | **AKTS** | **COURSE KODU** | **8 TH SEMESTER ELECTİVE COURSES** | **T+U** | **K** | **AKTS** |
| 0040050047 | Plant Stress Physiology | 2+0 | 2 | 4 | 0040050057 | Gene Control Mechanisms | 2+0 | 2 | 4 |
| 0040050048 | Genetically Modified Organisms | 2+0 | 2 | 4 | 0040050058 | Advanced Cell Signalling | 2+0 | 2 | 4 |
| 0040050073 | Transgenic Plant Technologies | 2+0 | 2 | 4 | 0040050075 | Stem Cell Biology | 2+0 | 2 | 4 |
| 0040050050 | Industrial Microbiology | 2+0 | 2 | 4 | 0040050061 | Virology | 2+0 | 2 | 4 |
| 0040050051 | Immunogenetics | 2+0 | 2 | 4 | 0040050062 | Secondary Metabolites | 2+0 | 2 | 4 |
| 0040050074 | Experimental Animals and Applications | 2+0 | 2 | 4 | 0040050076 | Synthetic Biology | 2+0 | 2 | 4 |
| 0040050053 | Pharmacology | 2+0 | 2 | 4 | 0040050064 | Embriology | 2+0 | 2 | 4 |
| **General Credit Total** | **148** | **General Credit Total** | **242** |

**T:** Theoric **U:** Application **K:** Credit **AKTS:** European Credit Transfer System