NEAR EAST UNIVERSITY

VOCATIONAL SCHOOL OF HEALTH SERVICES

MEDICAL IMAGING TECHNIQUES

COURSE CATALOGUE

2021-22 FALL

* **QUALIFICATION AWARDED**

The students who successfully complete the program are awarded the degree of medical imaging technıques.

* **LEVEL OF QUALIFICATION**

This is a associated program.

* **SPECIFIC ADMISSION REQUIREMENTS**

In the framework of the regulations set by Higher Education Council of Turkey (YÖK), student admission for this undergraduate program is made through a university entrance examination called ÖSYS. Following the submission of students’ academic program preferences, Student Selection and Placement Center (ÖSYM) places the students to the relevant program according to the score they get from ÖSYS.

International students are accepted to this undergraduate program according to the score of one of the international exams they take such as SAT, ACT and so on, or according to their high school diploma score.

Exchange student admission is made according to the requirements determined by bilateral agreements signed by NEU and the partner university.

Visiting students can enroll for the courses offered in this program upon the confirmation of the related academic unit. Additionally, they need to prove their English language level since the medium of instruction of the program is English.

* **QUALIFICATION REQUIREMENTS AND REGULATIONS**

The students studying in this undergraduate program are required to have a Cumulative Grade Points Average (Cum. GPA) of not less than 2.00/4.00 and have completed all the courses with at least a letter grade of DD/S in the program in order to graduate. The minimum number of ECTS credits required for graduation is 240. It is also mandatory for the students to complete their compulsory internship in a specified duration and quality.

* **RECOGNITION OF PRIOR LEARNING**

At Near East University, full-time students can be exempted from some courses within the framework of the related bylaws. If the content of the course previously taken in another institution is equivalent to the course offered at NEU, then the student can be exempted from this course with the approval of the related faculty/graduate school after the evaluation of the course content.

* **PROFILE OF THE PROGRAM**

The aim of the program is to equip graduates with the basic scientific principles that form the basis of medical imaging technologies, as well as medical imaging skills that enable these principles to be applied in practice. Upon graduation, students should be equipped to pursue a career as medical imaging technicians or to pursue further academic studies if they wish.

* **PROGRAM OUTCOMES**

|  |  |
| --- | --- |
| Program Outcomes | |
| 1 | Knows the anatomical structure and physiological functions of the human body.. |
| 2 | Lists the steps related to the use of medical imaging devices. |
| 3 | It fully explains the methods used in medical imaging. |
| 4 | Knows professional field terminology effectively. |
| 5 | Has sufficient knowledge about the security of imaging devices used in the field and identifies the problems that arise, lists them and produces appropriate solutions. |
| 6 | Acts in accordance with the legal regulations related to the field. |
| 7 | Have knowledge and skills about preparing and using all devices and equipment used in medical imaging. |
| 8 | It creates a safe environment according to current guidelines on radiation safety. |
| 9 | Applies medical imaging tests correctly and uses imaging devices. |
| 10 | Elip members have the responsibility of working in angiography and interventional radiology units.. |
| 11 | Makes the recording and archiving of the examinations made. |
| 12 | Gains the ability to do regular physical activity for a healthy life and increase in work efficiency. |
| 13 | In the working environment; applies first aid and emergency care in accordance with the guide/directive in emergency situations. |

* **COURSE & PROGRAM OUTCOMES MATRIX**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Program Outcomes | | | | | | | | | | | | |
| Course Code | Course Name | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 1st Year   -  1st Semester | | | | | | | | | | | | | | |
| AİT103 | Ataturk’s Principles and history of Turkish Revolution I | - | - | - | - | - | - | - | - | - | - | 4 | - | 3 |
| COM101 | Computer | - | - | - | - | - | - | - | 3 | 3 | 3 | - | - | 1 |
| ENG101 | English I | - | - | - | - | - | - | - | 1 | - | - | 1 | - | 3 |
| VSH101 | Medical Terminology | - | - | - | 5 | - | - | - | - | - | - | - | - | - |
| CHC100 | Cyprus: History and Culture | 5 | - | 3 | - | - | - | - | - | - | - | - | - | - |
| VSH109 | Basic First Aid | 5 | - | - | - | - | - | - | - | - | - | - | - | 5 |
| VSH111 | Basic Anatomy | 5 | - | - | - | - | - | - | - | - | - | - | - | - |
| RAT101 | Radiology Physics | - | - | - | - | - | - | - | - | 5 | 4 | - | 2 | - |
| RAT103 | Basic Professional Practices | - | - | 5 | - | 4 | - | - | - | - | 5 | 4 | - | - |
| YİT101 | Turkish For Foreigners I | - | - | - | - | - | - | - | - | - | - | 5 | - | - |
| CAM100 | Campus Orientation | - | - | - | - | - | - | - | - | - | - | - | - | 3 |
| 1st Year   -  2nd Semester | | | | | | | | | | | | | | |
| VSH102 | Diseases Knowledge | - | - | - | - | - | - | - | - | - | - | 4 | - | 3 |
| VSH104 | Physiology | 1 | - | 2 | 1 | - | 2 | - | - | - | 2 | 2 | - | - |
| RAT102 | Medical Imaging I | 5 | 2 | - | 2 | - | - | - | - | - | - | - | - | 1 |
| RAT104 | Radiological Anatomy I | 5 | 2 | 2 | 1 | 4 | 1 | - | - | - | - | - | - | - |
| RAT106 | Clinical Education and Practice I | 1 | 3 | 3 | 5 | - | 3 | - | - | - | - | - | - | - |
| RAT50 | Summer Internship | - | - | - | - | - | - | 5 | - | 5 | - | 3 | - | - |
| SPM104 | Sterilization Principles and Methods | - | - | 3 | - | 4 | - | - | - | - | 2 | - | - | - |
| AİT104 | Ataturk’s Principles and history of Turkish Revolution II | 1 | - | - | - | - | - | - | - | - | - | - | - | - |
| ENG102 | English II | 1 | - | - | - | - | - | - | - | - | - | - | - | - |
| CAR100 | Career Planning | 2 | - | - | 3 | - | - | - | 4 | - | - | - | - | - |
| YİT102 | Turkish For Foreigners II | 1 | - | - | - | 4 | - | - | - | 3 | - | - | - | - |
| 2nd Year   -  1st Semester | | | | | | | | | | | | | | |
| RAT201 | Radiological Anatomy II | 4 | 4 | 3 | 4 | - | - | - | - | - | - | - | - | - |
| RAT203 | Nucleer Medicine II | - | 4 | 5 | 4 | 4 | - | - | - | - | - | - | - | - |
| RAT205 | Nuclear Medicie | 5 | 3 | 3 | 2 | 3 | 1 | - | - | - | - | - | - | - |
| RAT207 | Radiotherapy | 5 | 2 | - | 2 | - | - | - | - | - | - | - | - | 1 |
|  | | | | | | | | | | | | | | |
| RAT209 | Clinical Education and Practice II | - | - | - | - | 5 | - | 5 | - | - | 4 | - | - | 2 |
| RAT211 | Biomedical Device Technology | - | - | 3 | - | - | - | - | - | - | 5 | - | - | - |
| RAT213 | Organization in Radiology | - | - | - | - | - | - | - | - | - | 5 | - | - | - |
| RAT215 | Radiation Health and Protection | - | - | - | - | - | - | - | 5 | - | - | - | - | 3 |
| VSH201 | Measurement and Evaluation | - | - | - | - | - | - | - | - | - | - | 3 | - | 1 |
| 2rd Year   -  2st Semester | | | | | | | | | | | | | | |
| VSH202 | Public Health | 1 | 3 | 3 | 5 | 1 | 2 | - | - | - | - | - | - | - |
| VSH204 | Professional Ethics | 3 | 3 | 4 | 4 | 4 | - | - | - | - | - | - | - | - |
| VSH206 | Health Care Management | - | - | - | - | - | - | - | - | - | - | 4 | - | 3 |
| VSH208 | Radional Drug USe | 5 | 2 | - | 2 | - | - | - | - | - | - | - | - | 1 |
| VSH210 | Quality in Health Services | - | - | - | - | - | - | 5 | - | - | - | - | - | 3 |
| RAT202 | Term Implementation | - | 2 | - | - | 3 | - | 5 | - | - | 4 | - | - | 3 |

\* 1 Lowest, 2 Low, 3 Average, 4 High, 5 Highest

* **OCCUPATIONAL PROFILES OF GRADUATES**

Graduates of the program can work as Medical Imaging Technicians in the "radiological examination departments" within the health institutions and organizations in the public and private sectors.

* **ACCESS TO FURTHER STUDIES**

The students graduating from this program may apply to graduate programs.

* **PROGRAM STRUCTURE**

The undergraduate program in Computer Engineering consists of 37 courses with 240 ECTS credits in total.

There are at least 5 courses in each semester, excluding common compulsory courses and elective courses.

In each program, there are common compulsory courses identified by the Higher Education Council of Turkey (YÖK) and other common courses determined by the University Senate.

|  |  |  |
| --- | --- | --- |
| COURSES OFFERED THROUGHOUT THE UNIVERSITY | | |
| Common University Courses | Campus Orientation | The students are registered to this course at the beginning of the first semester of the freshman year to familiarize them with the campus life at NEU. |
| Career Planning | The students are registered to this course at the beginning of their second semester of the freshman year to help them prepare for work life after graduation. |
| Cyprus History and Culture | This course is taken by students in their freshmen year and it aims to help them to familiarize them with the local history and culture. |
| Common Compulsory Courses (YÖK Courses) | Turkish Language I-II  (Turkish for Foreigners I & II to replace this course for international students)  Principles of Atatürk and History of Revolution I-II | These are the compulsory courses which are required to be offered in all of the associate and undergraduate programs in Turkey according to the Higher Education Legislation. |
| Information Technologies | This course is anticipated in all the associate and undergraduate programs in Turkey in order to make the students gain the qualifications related to basic information technologies. |
| Foreign Language (ENGLISH) I & II | This course is offered in the first and second semester and conducted according to the program curriculum of each faculty. |

* **Course Structure Diagram with Credits**

To see the course details (such as objectives, learning outcomes, content, assessment and ECTS workload), click the relevant Course Code given in the table below.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 1st Year Fall Semester | | | | | | |
| Course Code | Pre. | Course Name | Theory | Application/ Laboratory | Local Credits | ECTS |
| AİT103 |  | Ataturk’s Principles and history of Turkish Revolution I | 2 | 0 | 2 | 2 |
| COM101 |  | Computer | 3 | 0 | 3 | 3 |
| ENG101 |  | English I | 3 | 0 | 3 | 3 |
| VSH101 |  | Medical Terminology | 2 | 0 | 2 | 3 |
| CHC100 |  | Cyprus: History and Culture | 2 | 0 | 2 | 2 |
| VSH109 |  | Basic First Aid | 3 | 0 | 3 | 3 |
| VSH111 |  | Basic Anatomy | 3 | 0 | 3 | 3 |
| RAT101 |  | Radiology Physics | 3 | 0 | 3 | 3 |
| RAT103 |  | Basic Professional Practices | 3 | 0 | 3 | 3 |
| YİT101 |  | Turkish For Foreigners I | 2 | 0 | 2 | 2 |
| CAM100 |  | Campus Orientation | 0 | 0 | 0 | 2 |
| Total | | | | | | 30 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 1st Year Spring Semester | | | | | | |
| Course Code | Pre. | Course Name | Theory | Application/ Laboratory | Local Credits | ECTS |
| VSH102 |  | Diseases Knowledge | 2 | 0 | 2 | 2 |
| VSH104 |  | Physiology | 3 | 0 | 3 | 3 |
| RAT102 |  | Medical Imaging I | 3 | 2 | 4 | 4 |
| RAT104 |  | Radiological Anatomy I | 2 | 0 | 2 | 2 |
| RAT106 |  | Clinical Education and Practice I | 0 | 8 | 4 | 4 |
| RAT50 |  | Summer Internship | 0 | 0 | 5 | 5 |
| SPM104 |  | Sterilization Principles and Methods | 2 | 0 | 2 | 2 |
| AİT104 |  | Ataturk’s Principles and history of Turkish Revolution II | 2 | 0 | 2 | 2 |
| ENG102 |  | English II | 3 | 0 | 3 | 3 |
| CAR100 |  | Career Planning | 0 | 0 | 0 | 2 |
| YİT102 |  | Turkish For Foreigners II | 2 | 0 | 2 | 2 |
| Total | | | | | | 30 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 2nd Year Fall Semester | | | | | | |
| Course Code | Pre. | Course Name | Theory | Application/ Laboratory | Local Credits | ECTS |
| RAT201 |  | Radiological Anatomy II | 2 | 0 | 2 | 3 |
| RAT203 |  | Nucleer Medicine II | 3 | 2 | 4 | 5 |
| RAT205 |  | Nuclear Medicie | 2 | 0 | 2 | 3 |
| RAT207 |  | Radiotherapy | 2 | 0 | 2 | 3 |
| RAT209 |  | Clinical Education and Practice II | 0 | 10 | 5 | 6 |
| RAT211 |  | Biomedical Device Technology | 1 | 2 | 2 | 2 |
| RAT213 |  | Organization in Radiology | 2 | 0 | 2 | 3 |
| RAT215 |  | Radiation Health and Protection | 1 | 0 | 1 | 2 |
| VSH201 |  | Measurement and Evaluation | 3 | 0 | 3 | 3 |
| Total | | | | | | 30 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 2nd Year Spring Semester | | | | | | |
| Course Code | Pre. | Course Name | Theory | Application/ Laboratory | Local Credits | ECTS |
| VSH202 |  | Public Health | 3 | 0 | 3 | 4 |
| VSH204 |  | Professional Ethics | 3 | 0 | 3 | 4 |
| VSH206 |  | Health Care Management | 3 | 0 | 3 | 4 |
| VSH208 |  | Radional Drug USe | 1 | 0 | 1 | 1 |
| VSH210 |  | Quality in Health Services | 3 | 0 | 3 | 4 |
| RAT202 |  | Term Implementation | 0 | 26 | 13 | 13 |
| Total | | | | | | 30 |

|  |
| --- |
| Additional Notes |
|  |
| A total of 240 ECTS credits of courses are required to graduate. The Computer Engineering students must complete technical and non-technical elective courses to provide a total of 240 ECTS credits. Otherwise they will not be deemed to fulfill the conditions to graduate from the program. |
| If you need support for these courses due to your disability, please refer to Disability Support Unit. Contact; [engelsiz@neu.edu.tr](mailto:engelsiz@neu.edu.tr) |

**Exam Regulations & Assessment & Grading**

Exam Regulations and, Assessment, and Grading

For each course taken at NEU, the student is given one of the letter grades below by the instructor as the semester course grade.  Each grade has also its ECTS grade equivalent

The table below provides the detailed information about the local letter grades, coefficients and ECTS grade equivalents.

|  |  |  |  |
| --- | --- | --- | --- |
| SCORE | GRADE | COEFFICIENT | ECTS Grade |
| 90-100 | AA | 4.0 | A |
| 85-89 | BA | 3.5 | B\* |
| 80-84 | BB | 3.0 | B\* |
| 75-79 | CB | 2.5 | C\* |
| 70-74 | CC | 2.0 | C\* |
| 60-69 | DC | 1.5 | D |
| 50-59 | DD | 1.0 | E |
| 49 and below | FF | 0.0 | F |

\*for these ones, the higher grade is applied

In order to be successful in a course, short cycle (associate degree) and first cycle (bachelor’s degree) students have to get a grade of at least DD, second cycle (master's degree) students have to get a grade of at least CC, and third cycle (Ph.D.) students have to get a grade of at least CB to pass a course. For courses which are not included in the cumulative GPA, students need to get a grade of S.

Apart from that, each local grade has it is equivalent ECTS grade which makes it easier to transfer the grades of mobility periods of students. The chart above shows the ECTS grading system at NEU.

Also, among the Letter Grades;

|  |  |
| --- | --- |
| I | Incomplete |
| S | Satisfactory Completion |
| U | Unsatisfactory |
| P | Successful Progress |
| NP | Not Successful Progress |
| EX | Exempt |
| NI | Not included |
| W | Withdrawal |
| NA | Non-Attendance |

Grade of I (Incomplete), is given to students who are not able to meet all the course requirements at the end of the semester or summer school due to a valid justification accepted by the instructor. Students who receive a letter grade “I” must complete their missing course requirements and receive a letter grade within one week following the date the end of semester grades or summer school grades submitted. However, in the event of special cases, this period can be extended until two weeks before the beginning of registration for the next semester, upon the recommendation of the respective Graduate School department head and the decision of that academic unit’s administrative board. Otherwise, grade of “I” will automatically become grade of FF, or grade of U.

Grade of S (Satisfactory) is given to students who are successful in non-credited courses.

Grade of U (Unsatisfactory) is given to students who are unsuccessful in non-credited courses.

Grade of P (Successful Progress) is given to students, who continue to the courses that are not included in the GPA that has a period exceeding one semester, and regularly performs the academic studies for the respective semester.

Grade of NP (Not Successful Progress) is given to students, who do not regularly perform the academic studies for the respective semester for courses that are not included in the GPA and have a period exceeding one semester.

Grade of EX (Exempt), is given to students who are exempt from some of the courses in the curriculum.

Grade of NI (Not included) is issued to identify the courses taken by the student in the program or programs which are not included in the GPA of the student. This grade is reported in the students’ transcripts with the respective letter grade. Such courses are not counted as the courses in the program that the student is registered to.

Grade of W (Withdrawal) is used for the courses that the student withdraws from in the first ten weeks of the semester following the add/drop period, upon the recommendation of his/ her advisor and the permission of the instructor that teaches the course. A student is not allowed to withdraw from courses during the first two semesters of his/ her associate/undergraduate degree program and from those courses he/she has to repeat and received grade “W” before, which are not included in the grade average. A student is allowed to withdraw from two courses at the most during his/ her associate degree study, and four courses during his/her undergraduate study upon the recommendation of the advisor and the permission of the instructor that teaches the course. A student has to take the course that he/she withdrew from, the first semester in which it is offered.

Grade “NA” (Non-Attendance) is issued by the instructor for students who fail to fulfil the attendance and/or requirements of the course and/or who lose their right to take the end of semester exam because they failed to take any of the exams administered throughout the semester. Grade “NA” is not considered in the average calculations.

Both the ECTS grades and the local grades of the students are displayed on the official transcript of the students.

* **GRADUATION REQUIREMENTS**

In order to graduate from this undergraduate program, the students are required;

to succeed in all of the courses listed in the curriculum of the program by getting the grade of at least DD/S with a minimum of 240 ECTS

to have a Cumulative Grade Point Average (CGPA) of 2.00 out of 4.00

to complete their compulsory internship in a specified duration and quality.

* **MODE OF STUDY**

This is a full time program.

* **PROGRAM DIRECTOR (OR EQUIVALENT)**

Associated Prof Dr Meryem Güvenir, Head of Department, Vocational School of Health Sciences, Near East University

* **EVALUATION QUESTIONNAIRES**

Evaluation Survey

Graduation Survey

Satisfaction Survey