INTERDISCIPLINARY INFORMATION SCIENCES AND TECHNOLOGIES MASTER'S PROGRAM

General Information

The Interdisciplinary Information Sciences and Technologies Department is structured to closely follow the technologies needed in today's rapidly evolving digital world and to develop academic and industry collaborations. The program aims to train qualified human resources who are specialized in critical areas such as big data analytics, artificial intelligence, cybersecurity, cloud computing, the Internet of Things (IoT), and blockchain technologies, and who will drive digital transformation. Thanks to the interdisciplinary structure of the program, it is aimed to contribute to our country's global competitiveness in science and technology by bringing together different disciplines.

Aims and Objectives

Aim: Today, a country's ability to have a voice on a global scale is directly related to the knowledge it produces and the innovative technologies it develops. In this context, the main objective of the program is to train highly qualified experts and researchers who will manage digital transformation in strategic sectors such as industry, education, health, and defense, and contribute to the development of domestic and national information systems. The program aims to equip students with the competence to conduct independent research with an interdisciplinary perspective, analyze complex IT problems using scientific methods, and produce innovative solutions to these problems at global standards.

Objectives: The program aims to equip its graduates with the competence to solve complex problems in the field of information sciences and technologies using scientific research methods, design experiments, and synthesize the results by evaluating them from a broad perspective. In this process, students are expected to proficiently use modern software tools and communication technologies, actively participate in interdisciplinary working groups to produce innovative solutions, and develop the ability to present their scientific work orally, in writing, or visually at national and international levels. Furthermore, a fundamental goal is to cultivate professionals who are instilled with a lifelong learning mindset, constantly follow new and emerging technologies in the field of information technology, are ready to advance in academic careers, and possess scientific competence at global standards.

Degree Awarded

Students who successfully complete the program will be awarded a Master's Degree in Interdisciplinary Information Sciences and Technologies.

Level

The Interdisciplinary Information Sciences and Technologies Master's Program is a two-year (four-semester) program comprising a total of 120 ECTS credits. The program fulfills the ECTS credit requirements and level descriptors defined for the "Second Cycle" within the European Higher Education Area Qualifications Framework (QF-EHEA) established under the Bologna Process, as well as the "Level 7" qualifications specified in the Turkish Qualifications Framework for Higher Education (TQF-HE). In addition, it meets the "Level 7" qualification requirements defined in the European Qualifications Framework for Lifelong Learning (EQF-LLL).

Some Admission Requirements

Admission requirements are determined in accordance with the regulations set by the Turkish Higher Education Council. Information regarding the necessary conditions for application and admission to Master's programs is announced on the university's website at the beginning of each academic year. Graduates of Engineering and Science Faculties of universities, as well as graduates of the Management Information Systems department of the Faculty of Economics and Administrative Sciences, graduates of the Computer and Instructional Technologies Education department of the Faculty of Education, and graduates of other departments deemed appropriate by the department board, with at least a bachelor's degree, are accepted as students into the Interdisciplinary Information Sciences and Technologies Master's Program. The procedures and principles regarding application, admission, registration, and evaluation processes for the program are carried out in accordance with the provisions of the Niğde Ömer Halisdemir University Graduate Education and Examination Regulation.

Identifying Prior Learning

Niğde Ömer Halisdemir University, based on the principle of lifelong learning, recognizes courses previously taken at another institution and exempts students from graduation credits if the learning outcomes of these courses are compatible with those of the Niğde Ömer Halisdemir

University Master's program. The compatibility of learning outcomes and exemption issues are decided by the Institute Board in accordance with relevant laws and regulations.

Program Profile

The Interdisciplinary Information Sciences and Technologies Master's Program was established to provide a high-quality education that enables students to follow current and advanced technologies in the field of information technology, to use these technologies effectively, and to develop them. The program also encourages students to actively participate in research and development activities by integrating theoretical knowledge with practical application.

The Master's program is designed in accordance with an interdisciplinary education approach, a problem-solving-oriented learning model, and an application-based experience-based understanding. The program aims to provide in-depth knowledge and competencies in fundamental and current topics in the field of information technology, such as artificial intelligence, data science, big data analytics, cybersecurity, software technologies, and decision support systems. Integrating the knowledge of students from different disciplines to develop innovative solutions is among the program's key priorities.

The Interdisciplinary Information Sciences and Technologies Master’s Program (positioned at the Second Cycle level within the Bologna Process Qualifications Framework and at Level 7 in the Turkish Qualifications Framework for Higher Education, TQF-HE) is an academically oriented graduate program designed to equip its graduates with advanced theoretical and applied knowledge, analytical thinking skills, research competence, and the ability to work in interdisciplinary contexts. The program is structured to enable graduates both to specialize in the field of informatics and to pursue further studies at the doctoral level.

The classification of the program in accordance with the International Standard Classification of Education (ISCED) 2011 and the Turkish Qualifications Framework for Higher Education (TQF-HE), along with its field codes, is provided below:

TQF-HE Fundamental Field Code: 48 – Computing

TQF-HE Qualification Type (Profile): Academically oriented Master’s Degree at Level 7

Teaching and Learning Methods

- Lessons and Classroom Activities
- Group Work
- Laboratory
- Reading
- Homework
- Project Preparation
- Seminar
- Web-Based Learning
- Application
- Thesis Preparation
- Fieldwork
- Report Writing

Professional Profiles of Graduates

The global and rapidly transforming nature of the IT sector offers graduates of the Interdisciplinary Information Sciences and Technologies Master's Program broad career opportunities in Turkey and internationally. Graduates, leveraging their interdisciplinary knowledge and analytical thinking skills, can work in a wide variety of fields such as software development, data science, artificial intelligence applications, cybersecurity, big data analytics, system design, decision support systems, and digital transformation processes.

Graduates can work in various fields such as research and development (R&D), software and systems design, product development, project management, data analytics, consulting, marketing, and technology management, depending on their personal interests and areas of specialization. Public institutions, private sector organizations, technology companies, startup ecosystems, and multinational corporations constitute the main employment areas for graduates.

Graduates of this program are equipped to take active roles in innovative projects and R&D activities conducted at national and international levels, going beyond routine IT applications. Their interdisciplinary problem-solving skills, in particular, enable them to lead digital transformation processes in various sectors. Furthermore, they can pursue academic careers by

applying to relevant doctoral (PhD) programs at universities in Turkey and abroad. They also have the opportunity to work as lecturers in higher education institutions and conduct scientific research.

Exam Regulations, Evaluation and Grading System

The methods used to measure whether the planned program learning outcomes have been achieved during the Interdisciplinary Information Sciences and Technologies Master's program are listed below:

- Midterm Exam
- Final Exam
- Make-up Exam
- Report Presentation
- Computerized Presentation
- Thesis Presentation
- Document Presentation

Midterm and final exams are held on the dates, times, and at the locations determined and announced by the university. Students' final grades are given by the instructors based on their midterm and final exam results, taking into account whether the students have met the attendance requirements.

Assessment

A student's performance is assessed by the instructor for each course, based on the defined assessment (midterm assignments and final exam). Assessments are given out of 100 points and, at the end of the semester, are converted to letter grades using a relative grading method, the principles of which are determined by the Senate, taking into account standard deviation and the class average.

A student who receives one of the grades AA, BA, BB, CB, and S (Passing) in a course is considered to have passed that course. Students' academic status is determined by their semester academic average and overall academic average, calculated out of 4.0, and announced at the end of each semester. The weighted grade for a course is calculated by multiplying the course credit by the coefficient of the passing grade received in that course. The semester academic average is calculated by dividing the sum of the weighted grades of the courses required in that

semester by the total credits of the courses. Annual courses are included in the spring semester academic average. The overall academic average is calculated by dividing the sum of weighted grades obtained from all courses the student is required to take during their studies by the total number of credits for those courses (at least 120 ECTS). Course grades and their coefficients are determined as follows:

Note	Letter Grade	Coefficient
90-100	AA	4
85-89	BA	3.5
80-84	BB	3
75-79	CB	2.5
70-74	CC	2
65-69	DC	1.5
60-64	DD	1
50-59	FD	0.5
0-49	FF	0

Classification of Competencies

Students with a GPA of 2.00-2.99 are considered Successful Students, those with a GPA of 3.00-3.49 are considered Honor Students, and those with a GPA of 3.50-4.00 are considered High Honor Students.

Graduation Requirements

To graduate from the Interdisciplinary Information Sciences and Technologies Master's Program, a student must meet the following requirements:

- Completion of 120 ECTS credits with passing grades (50 ECTS credits for 7 master's courses, 6 ECTS credits for the Seminar Course, 4 ECTS credits for 2 Specialized Field Courses, and 60 ECTS credits for Thesis Studies conducted over 2 consecutive semesters)
- Maintaining a minimum overall GPA of 2.50 out of 4.00
- Preparing and successfully submitting a thesis

Type of Education

Niğde Ömer Halisdemir University's Interdisciplinary Information Sciences and Technologies Master's program offers full-time, face-to-face education.

Communication

Position: Head of Department

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