# PhD Degree (Third Cycle) Program in Energy Science and Technologies

## **General Information**

Niğde Ömer Halisdemir University, Energy Science and Technologies higher education program started recruiting students for higher education since 2019-2020.

Students who graduate from this program are especially interested in renewable energy, nuclear energy, hydrogen and fuel cells, thermal energy storage, electricity generation, distribution and storage, energy efficiency, smart material technologies, nanotechnological materials, etc. they will be very competent in matters. Also a number of national and international projects are carried out by the research groups of the program.

## Aims and Objectives

## Aims:

In a reality, a country has a voice in the world in terms of the information it produces, the technology it develops and the innovations it finds. Countries that can manage their R&D and innovation activities gain global competitiveness. The number of companies operating in the field of energy and energy technology in our country and the need for qualified personnel is increasing day by day, and the aim of this program is to train expert personnel and researchers who can keep up with the developing and developing technological developments.

## **Objectives:**

To become one of the best PhD programs of Energy Science that follows technological developments and pursues advanced level scientific research, to train energy expertise whoare critical thinkers possessing leadership skills and capable of interdisciplinary collaboration and who are innovative and can produce original solutions.

## **Qualification Awarded**

Upon successful completion of this program, students are awarded with the qualification of PhD Degree in Energy Science and Technologies.

## Level of Qualification

PhD Degree with thesis in Energy Science and Technologies is a 240 ECTS Credits, 4-year program. The program meets the requirements by both the ECTS credits and level descriptors of the "Third cycle" degree qualifications of the Overarching Framework of European Qualifications Framework HE(QF-EHEA) and the 8th level qualifications of the Turkish Qualifications Framework for HE (TYYÇ, NQF-HETR). The level descriptors also meet the 8th level requirements of the qualifications of the European Qualifications Framework for Lifelong Learning (EQF-LLL).

## Specific Admission Requirements

Admission requirements are determined in line with the regulations set by Higher Education Council of Turkey. Information on application for graduate programs and access requirements are announced on the web page of the university at the beginning of each academic year. The following requirements are applied for both national and foreign students:

• To have a First Cycle (BSc) or Second Cycle (MSc) degree.

• Having received at least 55 points from the international foreign language exams accepted as equivalent to the central foreign language exams accepted by the Higher Education Council other than their mother tongue, or an equivalent score in the international foreign language exams whose equivalence is accepted by the Measurement, Selection and Placement Center Presidency (ÖSYM).

- Candidates with a master's degree with thesis must have obtained at least 65 points from the numerical score type, ALES or the equivalent score in the GRE exam, and the graduate grade point average with the thesis must be at least 80 out of 100.
- Candidates applying with a bachelor's degree must have obtained at least 80 points from the numerical score type, ALES or the equivalent score from the GRE exam, and their undergraduate graduation average should be at least 80 out of 100.
- Candidates who have completed their undergraduate and/or graduate education abroad must have an equivalence certificate from the Higher Education Council.

## **Information**

1. ALES score is valid for 5 years. ALES score is valid for 5 years. However, it is not required for a candidate who graduated or left from a Master program one semester ago.

2. The graduation scores in Cumulative Grade Point Average (CGPA) systems will be evaluated according to the YOK's conversion table.

3. The candidates must apply in person. The applications with incomplete documents will not be evaluated.

For further and detailed information please visit General Admission Requirements and Registration Procedures in the menu items of the Information on the Institution.

For further information on the admission requirement for foreign students, please contact to Nigde Omer Halisdemir University International Office.

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## Specific Arrangements for Recognition of Prior Learning

With an understanding of lifelong learning, Nigde Omer Halisdemir University recognizes the previously taken courses in another institution and exempt them from graduation credit, as long as the courses match with the learning outcomes of the registered program at Nigde Omer Halisdemir University. The learning outcome match and the exemption are decided by the Institute Board in line with the related laws and regulations.

#### Profile of the Programme

The Department of Energy Science and Technologies PhD Program has been established to provide a high quality program for students to follow and learn the latest technologies and also

to participate in applied and theoretical research. The PhD program is prepared in accordance with the understanding of gaining experience by making an interdisciplinary joint education strategy and practice.

PhD Degree program in Energy Science and Technologies ("Third Cycle" in QF-EHEA and "8th Level" in TYYÇ ) is an academically-oriented program giving access to degree and nondegree research programs and professional practice demanding advanced levels of knowledge, skills and competencies. The program can be classified in regards to ISCED (The International Standard Classification of Education) 2011 and NQF-HETR (The Turkish Qualifications Framework for HE) profiles and fields of education as follows:

- ISCED Field of Education: 52 Engineering And Engineering Trades
- NQF-HETR Field of Education: 52 Engineering And Engineering Trades
- NQF-HETR Profile of Education: Academically-oriented "Third Cycle" degree.

# Learning and Teaching Methods

The most frequently used Instructional Methods of the educational programs of Nigde Omer Halisdemir University are given below. Programs commonly apply these methods as appropriate instructional approaches in accordance with their aims and objectives. The instructional methods applied for achieving the goal of meeting the expected learning outcomes at the Energy Science and Technologies program at large are indicated in the section of 'program learning outcomes', and those methods utilized for individual course units are indicated in the relevant section of "description of individual course unit'.

# Examples of Learning and Teaching Methods:

- Lecture & In-Class Activities
- Land Surveying
- Group Work
- Laboratory
- Reading
- Assignment (Homework)
- Project Work
- Seminar
- Web Based Learning
- Implementation/Application/Practice
- Thesis Work
- Field Study
- Report Writing

# Occupational Profiles of Graduates With Examples

To have a global nature of the energy industry, Turkey, offers career opportunities in Europe and elsewhere. Our graduates can work in many fields such as research and development, design, production, marketing, after-sales services and project development according to their personal interests and preferences. Our graduates can find employment opportunities in Small and Medium Enterprises (SMEs), large-scale companies and multinational companies operating in the fields of energy systems. by registering for graduate and doctoral programs on the universities in Turkey and abroad can also academic careers Energy Science and Technology PhD program graduates, outside of routine practice in their daily engineering problems in national and international projects and can work in R & D activities. They can work as lecturers in higher education institutions. They can apply to PhD programs in related fields at Niğde Ömer Halisdemir University other higher education institutions.

## **Qualification Requirements and Regulations**

PhD Degree program (third cycle) in Energy Science and Technologies is awarded to students who have scored a Cumulative Grade Point Average (CGPA) of not less than 3.00 /4.00, defended his/her thesis successfully, and have completed all the courses (240 ECTS) with at least a letter grade of CB or S in the program.

For detailed information: Please see "Nigde Omer Halisdemir University's Rules & Regulations for Graduate Education"

## Access to Further Studies

Upon successful completion of this program, students may apply to doctorate (third cycle) degree programs in or related fields of Energy Science and Technologies.

## Examination Regulations, Assessment and Grading

The methods applied for assessment of the achievement of the expected program learning outcomes for the entire PhD program of Energy Science and Technologies are shown below and those those for the individual course units are given in the relevant section of the course description with their contribution to the final grades.

- Mid-Term Exam
- Final Exam
- Make-up Exam
- Homework Assessment
- Presentation of Report
- Computer Based Presentation
- Presentation of Thesis
- Presentation of Document

Mid-term and final examinations are conducted in dates, places and times determined and announced by the University. The students' final semester grade is given by their instructors based on mid-term examination, homework evaluation, short-examinations, final examination and, if there is any other assessment results taking into account the students' compliance with attendance to the course activities. The contribution of assessment grades of the in-term activities to the final grade is 40% and that of the final exam is 60% for all the course units.

## Grading:

The success of a student for each assessment (in-term and final) defined for each course unit is evaluated by the instructor. Evaluations are made over a scale of 100 points and converted to the letter grades at the end of the semester. A student is considered to be successful in a course if he/she gets one of the following grades: AA, BA, BB, CB or S (Successful). The student's

academic standing is calculated in the form of a Grade Point Average (GPA) out of a scale of 4.00 and announced at the end of each semester. The total grade point of a course is obtained by multiplying the grade point by the course ECTS credit. The semester GPA is calculated by dividing the total amount of grade points of courses gained in that semester by the total amount of ECTS credits of courses taken in the semester. The yearlong courses are included in the spring semester GPA. Cumulative Grade Point Average (CGPA) is calculated by dividing the total amount of grade points of all the courses in the curriculum to be taken by the total amount of 240 ECTS credits. For each course taken, the student is given one of the following letter grades and grade points:

Course Score	Course Grade Grade Points	
90-100	AA	4,00
85-89	BA	3,50
80-84	BB	3,00
75-79	CB	2,50
70-74	CC	2,00
65-69	DC	1,50
60-64	DD	1,00
50-59	FD	0,50
0-49	FF	0,00

# Classification of the qualification

A student who obtains a CGPA of 2.00-2.99 is considered as a Satisfactory Student, the one who obtains a CGPA of 3.00-3.49 is considered as a Honours Student, and the one who obtains a CGPA of 3.50-4.00 is considered as a High Honours Student.

## **Graduation Requirements**

In order for a student to graduate from the Energy Science and Technologies PhD program the following conditions must to be met:

• Completed 240 ECTS credits with passing grades (56 ECTS credits for 7 graduate courses and 21 credits; Seminar Course; thesis study; Special Topics Courses taken at 4 consecutive semesters, and Thesis Studies taken at 4 consecutive semesters).

- Achievement of a cumulative grade point average (CGPA) of at least 3.00 out of 4.00.
- Prepare and successfully defend your thesis.

• In order for doctoral students to enter the thesis defense, "At least one scientific article related to the doctoral thesis should be published in the journals indexed by the Science Citation Index (SCI), SCI-Expanded or AHCI (Art and Humanities Index), or the DOI number should be obtained for the article in these journals and one national or international paper about the thesis must have been presented oral, in writing or visually." condition must be met.

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