

## **Doctorate (PhD) Programme in Agricultural Genetic Engineering Department**

### **General Information**

Doctoral program in Agricultural Genetic Engineering Department has been initiated with No. 36041 dated 06.07.2013 decision of the Board of Higher Education and started recruiting students from the 2013-2014 academic year.

Within the Department, there are currently 2 professors, 2 associate professors, 4 assistant professors and 4 research assistant making a total of 12 academic staff.

In recent years, the agricultural sector has entered into a rapid change, particularly technological advances in gene technology and technological advances in all areas has make agriculture a sector that requires use of knowledge and technology in advanced. In parallel with the developments in gene technology, the international seed market has shown rapid growth. As a result, in recent years, encouragement and investments have increased on issues of the native cultivar breeding and seed production in our country. However, background knowledge about cultivar breeding and the number of trained personnel are extremely limited in our country. Also, depending on developments in biotechnology in recent years, molecular techniques have been used widely in plant breeding. Therefore, to compete domestic firms with the global breeding companies, integration of modern biotechnological methods with breeding program has become mandatory. At this point, there has been an intense demand to professionals who know and apply conventional and biotechnological breeding methods. Agricultural Genetic Engineering Doctoral Program, offers an unique different alternative in our country, for especially agricultural engineers, those who want to master the field of agriculture and those who concentrate on topics such as plant breeding and genetics, biotechnology, seed production, agricultural genetic resources and bioinformatics.

Agricultural Genetic Engineering Program with modern building, laboratories equipped with the latest technology devices required by department and distinguished academic staff, has been a right choice for domestic and foreign students who want to study graduate program.

### **Aims and Objectives**

#### **Aims :**

- In addition to the basic knowledge of agricultural engineering, to train agricultural certified engineers focusing on plant genetics, seed technology with conventional and biotechnological breeding methods and specializing in agricultural genetic engineering field by a contemporary educational program based on scientific principles.

#### **Objectives :**

- To give graduates having a vision and well-equipped with scientific, technological, and social area by using all the modern facilities required for the field of education and implementing international joint training programs and to be a primarily preferred department by domestic and foreign students in terms of education system.
- Also, basic objectives of our department are to be a reference center in the field of Agricultural Genetic Engineering in terms of scientific research and to be master department which actualize university-private sector cooperation by executing product-oriented projects.

### **Level of Qualification and Qualification Awarded**

Upon successful completion of this program, students are awarded with the qualification of **DOCTOR OF PHILOSOPHY (PhD) DEGREE IN AGRICULTURAL GENETIC ENGINEERING.**

A PhD Program in **AGRICULTURAL GENETIC ENGINEERING** is a 240 ECTS Credits, 4-year (8 semesters) program. The program meets the requirements by both the ECTS credits and level descriptors of the first 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) degree or Second Cycle (MSc) in Agricultural Genetic Engineering or in areas related to agriculture and natural sciences
- To have at least 55 score for a foreign language proficiency taken from national exams or equivalent score taken from international exams accepted by Interuniversity Board (OSYM).
- To have ALES (Entrance Exam for Academic Personnel and Postgraduate Education) with minimum score of 65 (or equivalent GRE score) after graduating from master degree with the thesis and to have at least 80 graduation point in 100 scale for the master degree including thesis.
- To have ALES (Entrance Exam for Academic Personnel and Postgraduate Education) with minimum score of 80 (or equivalent GRE score) for the candidates who want to apply to the program after graduating from BSc and to have at least 80 graduation point in 100 scale for Bachelor degree.
- The candidates with a Bachelor's or Master's Degree from abroad must have the certificate of equivalence from the Council of Higher Education (YOK).
- ALES score is valid for 3 years; however, after master degree is completed or the master program is ended by itself, a new ALES point for the candidates who want to apply Master program maximum one semester later is not required.
- If the graduate score is submitted with respect to 4-point system, this score must be translated to 100-point system according to the score translation table prepared by the Council of Higher Education (YOK).

For further information, please contact to Nigde Ömer Halisdemir University International Office.

## **Contact :**

### **International Office**

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### **Specific Arrangements for Recognition of Prior Learning**

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

### **Profile of the Programme**

Doctorate Degree program in Department of Agricultural Genetic Engineering was established to provide a high-quality program to follow and to learn about the latest technologies and at the same time to ensure the participation of applied and theoretical research. The program is prepared in accordance with the understanding of a joint training strategy and gain experience with practicing. The students also develop skills to participate in scientific activities, and share the results with scientific community.

Doctorate Degree program in **Agricultural Genetic Engineering** (Third Cycle in QF-EHEA and 8th level in TYYÇ) is an academically-oriented program giving access to degree and non-degree research program and professional practice demanding high levels of knowledge and skills. The classification of the program with respect to "ISCED (The International Standard Classification of Education) 2011" and "NQF-HETR (The Turkish Qualifications Framework for HE)" and the codes of the fields of education can be listed as follows:

- **ISCED Field of Education:** 62 – Agriculture, Forestry and Fishery
- **ISCED 2011 Level: 8, Orientation (Profile): 64, Subcategory: 645** - Academically-oriented "third cycle", doctorate degree
- **NQF-HETR Field of Education:** 62 - Agriculture, Forestry and Fishery
- **NQF-HETR Profile of Education:** Academically-oriented "third cycle" 8. degree

### **Learning and Teaching Methods:**

The most frequently used Instructional Methods of the educational programs of Nigde Ömer 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 Agricultural Genetic Engineering 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
- Internship
- Technical Visit
- Web Based Learning
- Implementation/Application/Practice
- Practice at a workplace
- Occupational Activity
- Social Activity
- Thesis Work
- Field Study
- Report Writing

#### **Occupational profiles of graduates with examples**

The global natures of agricultural production and genetic engineering ensure many career opportunities in Turkey as well as in Europe and beyond. Students who will graduate from the department will have the opportunity of employment in companies operating in the fields of seed production, cultivar improvement, marketing etc. and in companies operating in the fields of molecular genetics, tissue culture, and biotechnology.

Since graduates also have general information about agricultural engineering; they will be employed in all companies operating in agricultural production and in related fields. Moreover, graduates can also be employed in the public sector relevant to agriculture such as Ministry of Food, Agriculture and Livestock, Ministry of Environment and Urban Development and Ministry of Industry and Trade; General Directorate of State Hydraulic Works, The Central Union of Turkish Agricultural Credit Cooperatives, producer associations related to agriculture (eg, Taris, Çukobirlik, Pankobirlik, etc.); General Directorate of Agricultural Enterprises, etc. They can also establish their own enterprises on agricultural production, consulting.

#### **Qualification Requirements and Regulations**

Doctorate Degree program (second cycle) in Agricultural Genetic Engineering 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 BB or S in the program.

- Completion of all the courses designated within the curriculum of the programme, having a total of 240 ECTS Credits, with passing grades.
- Achievement of a cumulative grade point average (CGPA) of at least 3.00 out of 4.00.
- Prepared and defended a thesis successfully.
- Have completed all the courses (240 ECTS) with at least a letter grade of BB or S in the program.

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

### **Access to Further Studies**

The graduates of our PhD programme can be appointed as lecturer at the related departments, and can continue to their academic career.

### **Examination Regulations, Assessment and Grading**

The methods applied for assessment of the achievement of the expected program learning outcomes for the entire Second Cycle program of **AGRICULTURAL GENETIC ENGINEERING** are shown below and 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
- Short Exam
- Homework Assessment
- Presentation of Report
- Computer Based Presentation
- Presentation of Thesis
- Presentation of Document

The success of students in achieving the expected learning outcomes of the each course unit within the curriculum of AGRICULTURAL GENETIC ENGINEERING programme is evaluated via assessments of in-term activities and final examination which takes place at the end of each semester.

Assessment of in-term activities includes a minimum number of a mid-term examination, a homework and a short-exam (quiz) as compulsory assessment methods for all the course units within all degree programmes defined by the Regulations. The programmes are encouraged to define more assessment methods for the in-term activities depending on their needs for measuring the achievements of the outcomes at the programme and course unit levels in order to ensure the educational aims and objectives. The nature and number of the assessment methods used for each course unit together with their contribution the final grades are given under the title of "Assessment and Grading" in the sections of course descriptions. These arrangements are announced in advance, at the beginning of each semester and published in the sections of the course descriptions on this web site.

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 could be at most 40% and that of the final exam cannot be less than 40 % and higher than 60% for all for all the course units within all degree programmes defined by the Regulations.

Course units, which do not require a mid-term, homework, short-exam and/or a final exam, such as work placement, are determined by the administration of the related departments and specific assessment and grading methods for these courses are also announced through the same channels described above. Evaluation of such activities is made through the procedures defined by the Senate and assessed by Pass (P) or Fail (F) grades.

### **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 taking into account the standard deviation of grades and grade point average of the class and using the relative evaluation method, principles of which have been set by the Senate.

A student is considered to be successful in a course if he/she gets one of the following grades: AA, BA, BB, or S 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:

<b>Course Score</b>	<b>Course Grade</b>	<b>Grade Points</b>
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

Please see the section of "[Grade Evaluation](#)" for detailed information.

### **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 **DOCTORAL PROGRAM OF AGRICULTURAL GENETIC ENGINEERING**, the following conditions must to be met:

- Completed 240 ECTS credits with passing grades for the candidates who has master degree ( with condition of taking at least 21 credits and 7 courses including seminar course, qualification exam, thesis proposal and thesis studies for 4 semesters). On the other hand, completed 300 ECTS credits with passing grades for the candidates who has bachelor science degree (with condition of taking at least 42 credits and 14 courses including seminar course, qualification exam, thesis proposal and thesis studies for 4 semesters).
- Achievement of a cumulative grade point average (CGPA) of at least 3.00 out of 4.00.
- Prepared and defended a thesis successfully.
- Have completed all the courses (240 ECTS) with at least a letter grade of BB or S in the program.
- As from 2015-2016 education term, in order to enter the thesis defending exam for the registered Phd students in our institute, at least 1 journal paper related with the thesis must be published or accepted given as DOI number in SCI, SCI-Expanded or AHCI journal.

Please see "Nigde Ömer Halisdemir University's Rules & Regulations for Graduate Education"

### **Mode of Study:**

Doctorate Degree of Science Programme in Agricultural Genetic Engineering at Nigde Ömer Halisdemir University is a full time / face to face programme.

### **Contact (Program Director or Equivalent)**

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