
Agricultural Engineering

Duration

Ten semesters

Degree

Agricultural Engineer

Objectives

Career objectives

In the Agricultural Engineering program, the aim is for the future graduate to:

- Be a professional with adequate scientific knowledge that allows them to participate in different agricultural and livestock production processes and in environmental conservation, in order to increase productivity and sustainability.
- Have analytical and critical training that enables them to understand production as part of social and economic development, giving them the capacity to question and transform it.
- Possess the basic and professional knowledge to: detect, study, and solve, interdisciplinarily, scientific and technological problems. Interpret the relationship between Science, Technology, Nature, and Society to contribute to the development of the last one within a framework of environmental respect.

2. 2. Career objectives in relation to the region

- Promote regional and national development by identifying the factors that characterize agriculture as a socio-economic activity. The implications that the agricultural production process has on the environment. The methods and techniques for agricultural experimentation, research, and development. The elements for efficient technology transfer and rural extension.

Professional profile

The Agricultural Engineer graduate will possess an integral foundational education in the management of resources within productive systems in arid and semi-arid regions, which will allow them to do research and carry out extension, technical assistance, administration and management of agricultural systems activities. They will acquire knowledge to analyze and comprehend the ecosystem, generate and transfer appropriate technology, and plan sustainable production systems. Additionally, they will be capable of participating in the



formulation of agricultural-food policies and acting as agents of change for the development of the potentialities of arid and semi-arid regions, aiming to achieve a sustainable development model.

Requirements

To obtain the title of Agricultural Engineer, the student must pass the forty-three (43) subjects and the three (3) Integrative Workshops of the Study Plan, pass the proficiency test in the English language, and complete the Final Project.

Study Plan

YEAR	SEM.	N°	SUBJECTS	HOURLY CREDIT
1	1	1	Morphological Botany	6.00
1	1	2	General and Inorganic Chemistry	7.00
1	1	3	Maths	8.00
1	1	4	Seminary	25.00
1	2	5	Agricultural Systematic Botanic	5.00
1	2	6	Statistics and Experimental Design	6.00
1	2	7	Organic Chemistry	4.00
1	2	8	Physics	8.00
2	3	9	Agricultural Zoology	5.00
2	3	10	Topography	4.00
2	3	11	Agricultural Biochemistry	6.00
2	3	12	Analytic Chemistry	4.00
2	4	13	Phytopathology	5.00
2	4	14	Agricultural Microbiology	5.00
2	4	15	Agricultural Climatology	6.00
2	4	16	Agricultural Economy	5.00
2	4		Proficiency Test in English Language	0.00
3	5	17	Plant Physiology	6.00
3	5	18	Edaphology	7.00
3	5	19	Genetics and Improvement	8.00
3	5	20	Extension and Rural Sociology	5.00
3	6	21	Animal Anatomy and Physiology	5.00



3	6	22	Water Resource Management I	4.00
3	6	23	Farm Equipment	6.00
3	6	24	Ecology	6.00
3	6		Integrative Workshop I	3.00
4	7	25	Plant Protection	5.00
4	7	26	Water Resource Management II	4.00
4	7	27	Animal Nutrition	6.00
4	7	28	Animal Production	5.00
4	8	28	Animal Production	5.00
4	8	29	Soil Management and Conservation	5.00
4	8	30	Agricultural Management and Commercialization	5.00
4	8	31	Grassland and Pasture Management	5.00
4	8	32	Geographic Information Systems	3.00
4	8		Integrative Workshop II	3.00
5	9	33	Fruticulture	7.00
5	9	34	Horticulture I	6.00
5	9	35	Forestry	4.00
5	9	36	Elective I	3.00
5	9	37	Elective II	3.00
5	9	38	Special Agriculture	6.00
5	10	39	Viticulture	6.00
5	10	40	Olive Growing	3.00
5	10	41	Planning and Sustainable Rural Development	3.00
5	10	42	Elective III	3.00
5	10	43	Elective IV	3.00
5	10		Integrative Workshop II	3.00
6	11	44	Final Work	0.00
				TOTAL = 49



ELECTIVES	
SUBJECTS	HOURLY CREDIT
Oenology	6.00
Horticulture II	6.00
Pressurized Irrigation	6.00
Management of Saline and Sodic Soils	6.00
Formulation and Evaluation of Investment Projects	6.00
Environmental Management	6.00