GENERAL PURPOSE:

Educate Food Engineer's with an integral view, capable of generate added value in agricultural raw material, promoting the industrial progress through applying, adapting, innovating, generating manufacturing processes, managing quality and food safety in agroindustrial companies, contributing to the social development and answering to the global needs; conscious of sustainability and efficient use of the resources under an humanistic, ethical, and social responsibility approach.

ADMISSION PROFILE:

In accordance with the Institutional Normative, the admission profile it's adjusted to the area of appliance evaluated by the admission test who corresponds to the Food Engineer degree.

Additionally, it's preferable that the candidate has the next characters

- Academic Aptitud.
- Good health.
- Studying technics and a reading habit.
- Capable of establishing interpersonal relationships.
- Spirit of service and sensible to his environment.
- High degree of responsibility and service.
- Team work willingness.

GRADUATE PROFILE:

KNOWLEDGE OF:

- Agroindustrial production systems, from the production of raw material, going to the transformation until its consumption.
- The procedures used in the nature and exact sciences, vital to understanding the transformation processes that are applied in the food.
- The procedures for the acquisition, search and interpretation of the relevant information in several education areas.
- The food processing in the agroindustrial's chains context .
- Engineering processes applied to the operation and design of the equipments and agroindustrial facilities.
- Food legislation and food quality & safety.
- Methodologies for the innovation and developing of agroindustrial products.

- Agroindustrial economic and administrative aspects of the management and build-up of projects.

SKILLS FOR:

- Develop and/or adapt conservation methods and industrialization processes from the correct selection of supplies and raw material to optimize the agroindustrial activity.
- Contribute to the sustainable development of food productive chains by integrating different links in the processes.
- The interpretation and correct use of the information generated from the analysis and evaluation of raw material to the final product, to support the decision making.
- Frame and solve engineering problems that contribute to the decision making in their work fields.
- Implement production control systems in agroindustrial facilities to efficiently manage the resources of the food sector.
- Optimizing the agroindustrial processes by participating in the selection, shaping or design of equipments and tools used in the industrialized food.
- Increase the productivity and competitiveness by planning, supervise and evaluate the manufacturing of food products.
- Develop, evaluate and implement sustainable agroindustrial projects, managing all the necessary resources like the key of productivity, for the economic and social benefit.
- Apply the investigation methodology for the development and innovation of food products under the normative regulation and quality & safety protocols.
- Access, select and responsibly use the information sources employing the information and communications technologies; as well as the use of a second language tu utilize the global opportunities.

ATTITUDES:

- Responsable
- Enterprising and leadership
- Compromise and service
- Assertivenes and empathy
- Positive and open-ended
- Collaborative
- Constancy and discipline

VALUES:

- Unity, respect, identity. With a broad vision of the world in the context of which they get the notion of their studies.

- Loyalty and awareness of the human and social development, respect to the environment and social diversity.
- Solidarity, communicability and subsidiarity. With a sense of belonging to the team work sharing goals, tasks and giving the best of himself.
- Beauty and good. With esteem for the beauty, kindness, order and time.
- Truthfull. Attached to the scientific truth and the honest use of knowledge, technology and resources.
- Freedom of thought. Act in base of the personal convictions formed from the scientific knowledge and the accumulated experience.
- Closeness. With the conviction of learning through all the life.

WORK FIELD:

The graduated profile of the Food Engineer it's structured with a set of knowledge, skills, abilities, attitudes and values that the student will develop in his scope of competence: manufacture processes, agroindustrial products, quality & safety management, food investigation and development, business management and agribusiness. The context in which the Food Engineer will perform is:

- Rural unit productions with agroindustrial activities.
- Food industrializers companies.
- Food distributors companies.
- Suppliers of agroindustrial inputs and equipment .
- Food service companies.
- Government dependencies.
- Investigation and academic institutes.
- Extension services.
- Own business.

LENGHT:

- Eight semesters.

CENTER OF AGRICULTURAL SCIENCES

FOOD ENGINEERING

DEGREE CURRICULUM

PLAN 2017
DEGREE 42

First Semester	**T**	**P**	**C**	**CENTER**	**DEPARTMENT**
MATHEMATICS	4	2	10	BASIC SCI.	MATH. & PHY.
PHYSICS	4	2	10	BASIC SCI.	MATH. & PHY.
CHEMISTRY	4	2	10	BASIC SCI.	CHEMISTRY
VEGETAL PRODUCCTION	2	3	7	AGRO. SCI.	CROP SCIENCES
ANIMAL PRODUCCTION	2	3	7	AGRO. SCI.	ANIMAL HUSBANDRY
Institutional program for humanistic education					
Institutional program for foreign languages					
Second Semester					
BIOCHEMISTRY	4	2	10	BASIC SCI.	CHEMISTRY
THERMODYNAMICS	4	2	10	BASIC SCI.	BIOCHEMISTRY ENG.
POST HARVEST TECHNOLOGY	2	3	7	AGRO. SCI.	CROP SCIENCES
ANIMAL PRODUCTION AGENTS	2	3	7	AGRO. SCI.	LIVESTOCK SCI.
AGROINDUSTRIAL PRODUCTION	2	3	7	AGRO. SCI.	FOOD TECH.
Institutional program for humanistic education					
Institutional program for foreign languages					
Third Semester					
MICROBIOLOGY	3	3	9	BASIC SCI.	MICROBIOLOGY
PHYSICOCHEMISTRY	4	2	10	BASIC SCI.	BIOCHEMISTRY ENG.
FIRST TRANSFORMATION AGROINDUSTRY	0	5	5	AGRO. SCI.	FOOD TECH.
BIOSTATISTICS I (EST-B11)	2	3	7	BASIC SCI.	STATISTICS
FOOD CONSERVATION METHODS INTRO.	3	2	8	AGRO. SCI.	FOOD TECH.
PRODUCTION COST	3	2	8	ECON & ADM SCI.	ACCOUNTING
Institutional program for humanistic education					
Institutional program for foreign languages					
Fourth Semester					
ENERGY AND MATTER BALANCE	3	2	8	BASIC SCI.	BIOCHEMISTRY ENG.
FOOD CONSERVATION METHODS	3	3	9	AGRO. SCI.	FOOD TECH.
SENSORY EVALUATION	2	4	8	AGRO. SCI.	FOOD TECH
FOOD INNOVATION AND DEVELOPMENT	2	3	7	AGRO. SCI.	FOOD TECH
PRODUCT MARKETING	2	2	6	ECON & ADM SCI.	MARKETING
PROFESSIONAL OPTIONAL COURSE I					
Institutional program for humanistic education					
Institutional program for foreign languages					
Fifth Semester					
FLUID MECHANICS	3	2	8	BASIC SCI.	BIOCHEMISTRY ENG.
ENGINEERING METHODS	2	3	7	AGRO. SCI.	FOOD TECH.
FOOD MANUFACTURING PROCESS	1	4	6	AGRO. SCI.	FOOD TECH.
FOOD ADDITIVES AND COADJUVANTS	2	4	8	AGRO. SCI.	FOOD TECH.
QUALITY & SAFETY IN THE FOOD INDUSTRY	2	3	7	AGRO. SCI.	FOOD TECH.
PROFESSIONAL OPTIONAL COURSE II					
PROFESSIONAL OPTIONAL COURSE III					
Institutional program of social service (Induction course)					

Sixth Semester

HEAT TRANSFER	3	2	8	BASIC SCI.	BIOCHEMISTRY ENG.
FOOD FACILITIES AND SERVICES	1	4	6	DSG & CONST. SCI.	CONST.& ESTRUCTURES
FOOD ENGINEERING I	3	2	8	AGRO. SCI.	FOOD TECH.
FOOD INDUSTRY MANAGEMENT AND PLANNING	2	2	6	AGRO. SCI.	FOOD TECH.
PROFESSIONAL ETHICS	2	2	6	HUM. &. SOC.	PHILOSOPHY
PROFESSIONAL OPTIONAL COURSE IV					
PROFESSIONAL OPTIONAL COURSE V					

Institutional program of social service

Seventh Semester

CONTROL PROGRAMS	2	3	7	AGRO. SCI.	FOOD TECH.
AGROINDUSTRIAL FACILITIES DESIGN	2	3	7	AGRO. SCI.	FOOD TECH.
INGENIERÍA DE ALIMENTOS II	3	2	8	AGRO. SCI.	FOOD TECH.
HEATH TREATMENTS	3	2	8	AGRO. SCI.	FOOD TECH.
BUSINESS PLANNING	2	2	6	ECON & ADM SCI.	ADMINISTRATION
PROFESSIONAL OPTIONAL COURSE VI					

Institutional program of social service
Institutional program of Professional Internship (Induction Course)

Eighth Semester

FINAL PROJECT	0	25	25	AGRO. SCI.	FOOD TECH.

Institutional program of social service

DIPLOMA REQUIREMENTS:

The graduated should stick to the stablished in the chapter XIV of the technical certification, bachelor and high level technician, article 156 of the Teaching General Regulation (NI-20300-19) which establishes the next:

> "Once accredited all the courses and requisites stipulated by the degree curriculum of the technician, high-level technician and bachelors careers, the graduated could request the issuing of his diploma in the Academic Management Department, after fulfill all the next requirements
> I.- Complete all the requisites of the Social Service, Humanistic Education, Professional Internship and Foreign Language, defined in the institutional programs"
> II.- Probe that there is no debit with Autonomous University of Aguascalientes;
> III.-Cover the stablished quota in the arbitrary planning for the diploma obtainment; and
> IV.- Accomplish the graduated exam."