

**UNDERGRADUATE COURSES**

| Department / Program | Course Name                                                  | Direct    | indirect  | Sustainability Content                                                                                                                                                                                                                                                        |
|----------------------|--------------------------------------------------------------|-----------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ALL PROGRAMS</b>  | Tamaulipas and development challenges                        | <b>85</b> |           | At the end of the course the student has an integral knowledge of organization and their professional work contribute improvements to the state in a sustainable way.                                                                                                         |
| <b>ALL PROGRAMS</b>  | Natural environment and sustainable development              | <b>85</b> |           | Collaborates with the efficient and rational management of natural resources, so it could be possible to improve the wellbeing of the present population without compromising the quality of life for future generations.                                                     |
| <b>ALL PROGRAMS</b>  | Culture and globalization                                    |           | <b>85</b> | The objective of the course is to develop student elements relating to appreciate and analyze critically and creatively culture so that they can distinguish reflexively transcendent works from ephemeral and purely commercial.                                             |
| <b>ALL PROGRAMS</b>  | Career and values                                            |           | <b>85</b> | At the end of the course, students will be sensitized to identify, adopt and / or strengthen core values to make ethical decisions, both in their personal areas so in the future professional practice and a way of life that promotes human development and social welfare. |
| Nursing              | Public health                                                |           | 1         | Develop making a diagnosis of community health skills and abilities for planning, implementation and evaluation of nursing interventions required in each specific health situation.                                                                                          |
|                      | Community nursing                                            |           | 1         | Is a much more comprehensive than individual nursing field, as it assumes aims to benefit a wider population group.                                                                                                                                                           |
| Environment          | Introduction to the security, health and natural environment | 1         |           | To analyze several activities that prevention work accident plan makes, people's health protection and care and preservation of the environment during work projects.                                                                                                         |
|                      | Environmental pollution                                      | 1         |           | Contribute to the environment preservation, strengthening recycling culture, natural resources uses, contributions exchange, experience work and socialization.                                                                                                               |
|                      | Fundamental security                                         |           | 1         | Based on the health and life safety study.                                                                                                                                                                                                                                    |
|                      | Hygiene risks evaluation                                     |           | 1         | It focuses in the process by which a risk analysis carried out on a number of criteria or endogenous and exogenous factors is made.                                                                                                                                           |

Safety, health and natural envi

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|                        | Security risks evaluation           |   | 1 | The student will develop skills and special knowledge of the protection of the field security risks.                                                                                                              |
|                        | Sociology                           |   | 1 | The student will try to describe and explain the most comprehensive and objective way, how and why people interact in groups inside an specific environment                                                       |
|                        | Environmental policy                | 1 |   | It is based on the precaution principles, prevention, source pollution rectifying and 'polluter pays'.                                                                                                            |
|                        | Risks administration I              |   | 1 | They will know about the process by which a company or organization management runs the full spectrum of risks to which they are willing to risk as its strategic objectives.                                     |
|                        | Risks administration II             |   | 1 | They will know about the process by which a company or organization management runs the full spectrum of risks to which they are willing to risk as its strategic objectives.                                     |
|                        | Environmental monitoring            | 1 |   | Identify and quantify the air pollution, water, soil and noise potential in order to demonstrate due diligence in the work and/or project activities development.                                                 |
|                        | Environmental professional practice | 1 |   | Development activities that contribute to the commitments fulfillment country relating to multilateral level forums or environmental agreements.                                                                  |
| Economy                | Human resources management          |   | 1 | The objective of the subject is to know about human resources administration as the performance improvement and staff contributions to the organization, as part of an ethical and socially responsible           |
| Information Technology | Human resources management          |   | 1 | The objective of the subject is to know about human resources administration as the performance improvement and staff contributions to the organization, as part of an ethical and socially responsible           |
|                        | Ecology                             | 1 |   | It's the study of the affecting different ecosystems components and factors, to eliminate or mitigate the risk level that the human activities development involved in the evolution of the same.                 |
|                        | Aquatic Ecology                     | 1 |   | The objective of the subject is to give conceptual tools to understand the diversity of aquatic systems, the studied methods and the preserved means.                                                             |
|                        | Water quality                       |   | 1 | Is implemented as the study of water quality affected by various factors such as land use, industrial and agricultural production, treatment is given before being discharged back into the water bodies, and the |
|                        | Air quality                         |   | 1 | Is studied the level of each pollutant in isolation or in association with others, whose establishment involves obligations under conditions to be determined each.                                               |

Industrial safety engineering

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| Environmental monitoring                            | 1 |   | The subject is constantly looking for advertising issues that affect the work environment.                                                                                                                                                                                                                                                                                   |
| Matter and energy balance                           |   | 1 | Is done as a MB based on the conservation of matter law, which, strictly speaking must be applied to all matter-energy, not matter or energy separately.                                                                                                                                                                                                                     |
| Environmental legislation                           | 1 |   | Environmental law is based on and influenced by principles of environmentalism, ecology, conservation, management, accountability and sustainability of the century.                                                                                                                                                                                                         |
| Industrial hygiene                                  |   | 1 | Teach the student to take charge and ensure that development meets the needs of the present without compromising the ability of future generations to meet their needs.                                                                                                                                                                                                      |
| Environmental impact                                | 1 |   | Evaluate impacts that the activity, work or project may cause on the environment, to prevent, control, mitigate and offset them.                                                                                                                                                                                                                                             |
| Occupational health                                 |   | 1 | A multidisciplinary activity that promotes and protects the health of workers. This discipline seeks to control accidents and disease by reducing risk conditions.                                                                                                                                                                                                           |
| Environmental energy unit operations and processes  | 1 |   | Develop environmental engineering student skills for handling unit systems, processes and unity operations of environmental significance from the perspective of the matter conservation law.                                                                                                                                                                                |
| Characterization and management of industrial waste |   | 1 | The student learns to the collection, transportation, processing or treatment, recycling or disposal of waste material, produced by human activity usually, in an effort to reduce harmful effects on human health and the environment aesthetics, currently although working not only to reduce the harmful effects caused to the environment but to recover its resources. |
| Environmental management                            | 1 |   | Became into a professional who is able to manage environmental issues scientifically and resource supply in the biophysical and socio-cultural level, to the criteria generation that promote regional and sustainable development.                                                                                                                                          |
| Water Treatment System                              |   | 1 | The study of wastewater treatment system whose function is to create a comfortable and healthy habitat for the city inhabitants to provide them with welfare and life quality.                                                                                                                                                                                               |
| Emission control systems                            |   | 1 | The subject focuses on the study of the issued laws for that purpose in each country where even specified for each city.                                                                                                                                                                                                                                                     |
| Environmental risk and processes                    | 1 |   | Determine the identification and regulatory tracking requirements, and information distribution.                                                                                                                                                                                                                                                                             |

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|                                 | Management of Solid and Hazardous Waste          |   | 1 | Provide optimal information and knowledge in the population, to become aware of environmental problems creating in her willingness, motivation, responsibility sense and individual and collectively work commitment in managing solid waste.                                     |
|                                 | Water treatment plants design                    |   | 1 | Develop comprehensive calculations and drawings of purification units.                                                                                                                                                                                                            |
|                                 | Emissions of control equipment design            |   | 1 | Having considered the problem of air pollution, its impacts and scattering phenomena, it is essential to the environmental engineer to know the control technologies for air pollution and address another labor camp to develop.                                                 |
| Production system engineering   | Environmental management                         | 1 |   | Became into a professional who is able to manage environmental issues scientifically and resource supply in the biophysical and socio-cultural level, to the criteria generation that promote regional and sustainable development.                                               |
| Petroleum Engineer              | Industrial security and environmental protection | 1 |   | The subject objective is to strengthen the security information process, environment and energy use.                                                                                                                                                                              |
| Chemical Engineer               | Matter and energy balance                        |   | 1 | Is done as a MB based on the conservation of matter law, which, strictly speaking must be applied to all matter-energy, not matter or energy separately.                                                                                                                          |
|                                 | Environmental chemistry                          | 1 |   | To the young people, who are inheriting this problem, aware and be able to compromise as an adult to develop to curb and return Earth and its biodiversity lost health.                                                                                                           |
| Industrial engineer             | Matter science                                   |   | 1 | To study the fundamental knowledge on the materials macroscopic physical properties and applies in several science and engineering areas, obtaining that they can be used in construction, machinery and diverse, or converted into needed products or tools required by society. |
| Industrial chemical engineering | Water analysis                                   |   | 1 | It focuses on studies about the environment in which most physical, chemical and biochemical reactions that are essential for life are produced.                                                                                                                                  |
|                                 | Ground analysis lab                              |   | 1 | Knowing about the soil and plant analysis that are the basis for developing fertilization programs to ensure high performance and monitor crop nutrition.                                                                                                                         |
| Nutrition and food science      | Quality Control Program on Food Handling         |   | 1 | Explain the basic components of national food control system and ways in which to operate these components to achieve maximum efficiency.                                                                                                                                         |
|                                 | Bioethics                                        |   | 1 | The student will analyze the human condition viewed from different outlooks (biological, social, cultural and psychological) associated with the ethical and the bioethics and contemporary discipline emergence.                                                                 |

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| Medicine              | Public health and preventive medicine      |   | 1 | The student has the ability to know the conceptual and scientific developments, social and legal changes, and the current population health demands.                                                                                                                   |
|                       | Occupational and legal medicine            |   | 1 | Get the knowledge of the forensic work to ensure the workers welfare; and the institutions that provides help solving health problems that result from some work execution.                                                                                            |
| Agronomist            | Ecology                                    | 1 |   | It's the study of the affecting different ecosystems components and factors, to eliminate or mitigate the risk level that the human activities development involved in the evolution of the same.                                                                      |
|                       | Meteorology and climatology                |   | 1 | Analyze each individual factor such as temperature, pressure, humidity, etc. in order to discover the government law and to make accurate forecast weather.                                                                                                            |
|                       | Plants program                             |   | 1 | Student develops general and specific knowledge enabling it to identify the components of plants with integrated processes and functions; to join the planning and operation of the same.                                                                              |
|                       | Water, soil, plant, atmosphere association |   | 1 | Includes the study between the interrelationship systems, in order to understand and explain them scientifically and use them for optimum crop production, using resources efficiently, and maintaining ecological balance.                                            |
|                       | Irrigation                                 | 1 |   | Lead to rehabilitation, complementation, modernization and technification of the irrigation units infrastructure.                                                                                                                                                      |
| Environmental science | Ecology                                    | 1 |   | It's the study of the affecting different ecosystems components and factors, to eliminate or mitigate the risk level that the human activities development involved in the evolution of the same.                                                                      |
|                       | Environmental lab                          | 1 |   | The subject aims analytical studies and measurement related to environmental components.                                                                                                                                                                               |
|                       | Environmental microbiology                 | 1 |   | Is the study of microorganisms or disease-causing agents, biogeochemical elements recycling and environment active participation.                                                                                                                                      |
|                       | Meteorology                                |   | 1 | Is the study of daily variations in atmospheric conditions, the study of the electrical, optical and others; climate studies, average and longtime extreme conditions, the meteorological variation elements near the ground in a small area and many other phenomena. |
|                       | Water, air and soil quality                |   | 1 | The course objectives are to develop air, water and soil theoretical environmental concepts. Its specific composition and its current environmental problems and applications will be discussed.                                                                       |

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| Comunication                                   | Human resources administration and management              |   | 1 | The subject objective is to know about human resources administration as the performance improvement and staff contributions to the organization, as part of an ethical and socially responsible activity.                |
| Nursing                                        | Community nursing                                          |   | 1 | Is a much more comprehensive than individual nursing field, as it assumes aims to benefit a wider population group.                                                                                                       |
|                                                | Health and sociology                                       |   | 1 | Its broader aim to provide some theoretical and practical elements about the relationship Health Sociology from the perspective of public health.                                                                         |
| History                                        | Ethic and values                                           |   | 1 | It is a study under ethics considered a subfield of philosophy; ethical value can be considered a subset of the broader philosophical value.                                                                              |
| Educational science with a minor in biological | Ecology                                                    | 1 |   | It's the study of the affecting different ecosystems components and factors, to eliminate or mitigate the risk level that the human activities development involved in the evolution of the same.                         |
| Nursing                                        | Public health                                              | 1 |   | Develop making a diagnosis of community health skills and abilities for planning, implementation and evaluation of nursing interventions required in each specific health situation.                                      |
| Architecture                                   | Sustainable Design                                         | 1 |   | Its aim is to prepare future proffesionals with bioclimatic technologies in order to provide sustainable solutions for architectural projects                                                                             |
|                                                | Earth construction                                         | 1 |   | Its aim is to learn sustainable building techniques, in order to provide options using natural resources such as earth.                                                                                                   |
|                                                | University, sustainability and context                     | 1 |   | Develop professionals capable of analize sustainability and its relationships with the built environment and the university objectives.                                                                                   |
|                                                | Housing construction                                       |   | 1 | Its goal is to know how, what and where is built, rehabilitated and demolished. It is a basic source of information system of indicators for monitoring the housing policy.                                               |
|                                                | Natural environment and physical architecture relationship | 1 |   | Environmental conditioning concerning.                                                                                                                                                                                    |
|                                                | Urban environmental workshop                               | 1 |   | It's specialized in urban environmental problems identifying and solutions propose workshop.                                                                                                                              |
| Interior design                                | Gardening and landscaping                                  |   | 1 | Develop professionals capable of creating and organizing indoor and outdoor spaces conducive to follow a certain way of life in the way that is pleasant and functional at the individual activities carried out in them. |

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| interior design | Eco environmental alternatives applied to interior design | 1   |     | The student will get the interior design ability to develop projects to ensure environmental, social, cultural and economic sustainable development.                                                                                                                                  |
| Civil Engineer  | Environmental and health engineering                      | 1   |     | It's aimed at developing environmental solutions that contribute to the growth of the region and the country from the sustainable development context, in order to move towards the improvement and environmental restoration as a source of wealth and preservation of life species. |
|                 | Environmental engineering lab                             | 1   |     | The subject is developed through basic and applied work research on issues such as: treatment, management and water reuse (drinking, waste, and water bodies), leachate treatment from landfills, characterization and contaminated soil remediation, among others.                   |
|                 | Supplying and water                                       |     | 1   | It aims to study of the correct supply and drinking water to a community, including deposit facilities, valves and pipes.                                                                                                                                                             |
| TOTAL           |                                                           | 201 | 211 |                                                                                                                                                                                                                                                                                       |

**UNIVERSIDAD AUTONOMA DE TAMAULIPAS**

**POSTGRADUATE COURSES**

| Program /department                                                                               | COURSE NAME                        | Direct | Indirect | Description                                                                                                                                                                                                                                                                                                                                      |
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| <b>Dip. Nursing</b>                                                                               | Laboral Stress                     |        | 1        | Is given to the student the value of work in this society, the amount of time spent at work and the current changes that are affecting the nature of work                                                                                                                                                                                        |
|                                                                                                   | Ecology, Health and Environment    | 1      |          | Our Ecology, Health and Environment programme gives students a thorough knowledge of the relevant science, and prepares them for employment and the protection on the environmental sector                                                                                                                                                       |
| <b>Master in Agro-Food Technology</b>                                                             | Plants Design                      |        | 1        | Integrating the knowledge acquired during the race for the selection and development of a group project for an industrial plant in the food area                                                                                                                                                                                                 |
|                                                                                                   | Food Microbiology                  |        | 1        | They may review the evolution, principles and techniques aplicaciones of microbiological analysis also students form a criterion that will allow you to decide on the best method to avoid microbial contamination                                                                                                                               |
|                                                                                                   | Food Preservation<br>Select Topics |        | 1        | Students will study commercial preservation technologies used in the preservation of foods in terms of their objectives, mode of action ant the unit operatins, materials and equipment employed                                                                                                                                                 |
| <b>Master in Architecture with emphasis in Architectural Design, Architectural Rehabilitation</b> | Regional<br>Arquitecture           | 1      |          | The aim of this course is to teach students the implementation of thre aspects in the local architecture: respecto for cultural and social regionality; adaptation or regionalization, the shape and the materials from which local buildings are built. This holistic view will help them to develop sustainable projects for local communities |
|                                                                                                   | Sustainable<br>Arquitecture        | 1      |          | This course is based on the implementation of passive and active strategies in order to design sustainable buildings. The implementationsof renewable energy technologies in the built environment and the basic bio climatic design concept.                                                                                                    |
|                                                                                                   | Soil and Dwelling                  |        | 1        | The aim of this course is to teach students to work with the natural environment surroundig the build environment, generatina Sustainable Architecture                                                                                                                                                                                           |
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| <b>Master in Business Management</b>                  | Supply Chain Management                 |  | 1 | Developing habilities for aplication and manage of methodological aspects for the administration and context of integration strategies                                                                                                                                                                                                         |
|                                                       | Strategic Remunerations Management      |  | 1 | Identify the function area of compensation and its role in the current context, also acquire the basic knowledge of planning and administration of compensation in salary structures                                                                                                                                                           |
|                                                       | Strategic Management                    |  | 1 | A systematic study of the nature of a business considering changes that occur every day, defining long-term objectives, identifying quantitative goals and objectives. systematic study of the nature of a business considering the changes that occur every day, defining long-term objectives, identifying quantitative goals and objectives |
|                                                       | Organizational and Global Communication |  | 1 | It works as a economic and social process that occurs between members of a social community.                                                                                                                                                                                                                                                   |
| <b>Master in Human Resource Development</b>           | Human Resources Management              |  | 1 | The objective of the subject is to know about human resources administration as the performance improvement and staff contributions to the organization, as part of an ethical and socially responsible activity                                                                                                                               |
|                                                       | Human Resources Fundaments              |  | 1 | This course examines the human resource within implications of legal and global environments and current issues such as diversity training                                                                                                                                                                                                     |
|                                                       | Adult Educational Strategies            |  | 1 | The main purpose of the course is to the student investigate resources features strategies to facilitate learning in the adult education classroom                                                                                                                                                                                             |
| <b>Master in Veterinary and Zootechnical Sciences</b> | Fresh Underwater Aquaculture            |  | 1 | At the end of the course students will know the basic biology of the main species grown in México in a framework of sustainable development                                                                                                                                                                                                    |
|                                                       | Aquaponics and Intearated Systems       |  | 1 | Introducing students to the knowledge of the theoretical and practical aspects of aauaponics                                                                                                                                                                                                                                                   |
|                                                       | Agricultural Business Management        |  | 1 | That students contextualize the principles of agricultural in a personal way for being capable to handle jointly in order to maximize and complete the established goals                                                                                                                                                                       |
|                                                       | Wildlife                                |  | 1 | Transfer and introduce students to the knowledge and valuation of wildlife, with enfansis in the management and sustainable use of wildlife resources in the region                                                                                                                                                                            |

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|  | Environmental Management and Impact                          | 1 |   | The student will be able to assess the environmental impacts generated in their environment during the development of their professional activities also will know the policy required by various levels of environmental management                                                                                                                           |
|  | Protected Agriculture                                        |   | 1 | At the end of the course the student will have the scientific and technical elements to manage greenhouses focused on the production of horticultural crops                                                                                                                                                                                                    |
|  | Water Control and Uses                                       |   | 1 | This course offers a wide basic coverage of principles and practices in integrated water resources                                                                                                                                                                                                                                                             |
|  | Agricultural and Environmental Projects Operation and Design | 1 |   | In this program, the students will recognize the key to providing the agriculture and environment to increase agricultural productivity and food and water security, while ensuring environmental sustainability. We support research that fosters sound environmental management policies and long-term economic development that benefits local communities. |
|  | Animal Production Systems Analysis                           |   | 1 | Introduce the student to improve operating mechanics course in addition to defining the framework of animal production and its influence on the regional economy of the countries                                                                                                                                                                              |
|  | Irrigation Methods                                           |   | 1 | Understand and analyze the national context regarding the origin, significance and use of water                                                                                                                                                                                                                                                                |
|  | Soil Microbiology                                            |   | 1 | Review of basic concepts of microorganisms and their location in nature                                                                                                                                                                                                                                                                                        |
|  | Water Quality                                                |   | 1 | student will understand and apply concepts of water quality and pollution processes in rivers and lakes; understanding the basic concepts of groundwater through the application of statistical techniques for water quality data evaluation.                                                                                                                  |
|  | Soil and Water Conservation                                  |   | 1 | Students will learn the nature and properties of soil, soil management principles, and techniques needed to preserve soil nutrients and prevent erosion                                                                                                                                                                                                        |
|  | Environmental Technology: Bioremediation                     | 1 |   | Students in this course will learn the importance of the environmental technology for the treatment of contaminated environments and restoration                                                                                                                                                                                                               |

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| <b>Master of Science in<br/>Agricultural Systems<br/>and Environment</b> | Ecosystems<br>Degradation                    | 1 |   | In this course the student will learn about the deterioration of the environment through different resurses such as air, water and soil; as well as the destruction of the ecosystems and the posible extinction of wildlife.                                |
|                                                                          | Waste<br>Management                          |   | 1 | The aim of this course is to understand organizational and legislative developments and practices and financial implications of handling wastes                                                                                                              |
|                                                                          | Social<br>Environmental<br>Impact            |   | 1 | This course provides students with the framework for environmental and social Impact Assemssments as an effective tool. Students will be able to evaluate Environmental and social impact assessments studies and prepare evaluation reports.                |
|                                                                          | Environmental<br>Laboratory                  |   | 1 | The aim of this course is to facilitate experimental work for students in order to learn from different anaalytical techniques that could be applied to understanding the properties and behavior of water, soil and the organic substrates of the biosphere |
|                                                                          | Production Systems                           |   | 1 | Understand, describe and planer some management strategies cattle to keep maintaining and improving animal production parameters in a sustainable way                                                                                                        |
|                                                                          | Agroecology                                  |   | 1 | Student will learn the environmentally appropriate technologies necessary to overcome the limitations in agro ecosystems in order to meet production targets                                                                                                 |
|                                                                          | Animal Production<br>Systems and<br>Analysis |   | 1 | Management of cattle and sheep, through sustainable techniques and according to the socioeconomic conditions of farmers and peasant production system                                                                                                        |
|                                                                          | Environmental<br>Chemestry                   |   | 1 | To the young people, who are inheriting this problem, aware and be able to compromise as an adult to develop to curb and return Earth and its biodiversity lost health.                                                                                      |
|                                                                          | Advanced<br>Environmental<br>Chemestry       |   | 1 | It works within the practical environmental chemistry experience to provide straightforward, understandable explanations of the chemistry considerations and issues that impact important environmental compliance management considerations.                |

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| <b>Master's in Political Science and Public Administration</b> | Regional and National Sustainable Development       | 1 |   | After completing the course , students widely conoceran the concept of sustainability and its implications, will be able to model regional and national problematic diagrams relating the variables to simulate future scenarios                                                                        |
|                                                                | Business Politics, Ethics and Social Responsibility | 1 |   | The goal is knowing what it is right or wrong in the workplace and doing what's right as create an authentic work environment in regard to effects of products/services                                                                                                                                 |
|                                                                | Human Rights International Protection               |   | 1 | To reflect critically upon the role played by international law in the promotion and protection of human rights and develop natural care skills                                                                                                                                                         |
| <b>MSc in Agro-Food Technology</b>                             | Agrobusiness Management                             |   | 1 | In this course students will learn the production activities in order to generate agricultural and livestock products in the most efficient way possible, generating higher levels of potential income                                                                                                  |
|                                                                | Irrigation Engineering                              |   | 1 | Students in this course will learn the methods for the rational, efficient and economical use of water resources in agricultural production processes, as well as the design, construction, operation and modernization of irrigation and drainage system and agricultural and hydro constructions.     |
|                                                                | Agrofood Legislation                                |   | 1 | The students will learn about new legislation harmonized in other countries in order will to be capable producers to place their products on other markets. This should contribute to increase the volume of food products production, while strengthening the agribusiness sector in general.          |
|                                                                | Agroindustrial Waste Disposition and Manage         |   | 1 | In this course, the student will learn about the world wide traditional agricultural practice that are based on the addition of biowaste, especially manure and slurry, to the soil. This reuse of biowaste allowed the recycling of nutrients and improved the level of organic matter for agriculture |
|                                                                | Organic Agriculture                                 |   | 1 | Student will consider potential environmental and social impacts by eliminating the use of synthetic inputs, such as synthetic fertilizers and pesticides, veterinary drugs, genetically modified seeds and breeds, preservatives, additives and irradiation                                            |
|                                                                | Food Safety and Quality                             |   | 1 | Dispose of a sustained and sufficient quantity and quality by biological needs.                                                                                                                                                                                                                         |
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| <b>MSc in Ecological Systems and Production</b> | Livestock Production Systems |   | 1 | Knowing and applying livestock production systems for technological, industrial and food sustainably use                                                                                                                                                                                               |
|                                                 | Fruit Production             |   | 1 | Information efficiently manage the production of fruit and interaction that has this with the processes of production and integrated pest and diseases in order to obtain maximum yields always within the framework of sustainable development                                                        |
|                                                 | Environmental Impact         | 1 |   | The objective of this course is to give students the tools in order to reduce the significant negative impacts on the environment through the application of a systematic process which aims to identify, predict and evaluate the environmental effects of proposed actions and projects              |
|                                                 | Biodiversity and Sistematic  |   | 1 | Students will learn to classify the variability of living organisms and the ecosystems they form in a sustainable environment                                                                                                                                                                          |
|                                                 | Productive Chain             |   | 1 | It will be analyzed, discussed and contrasted the classical theories and new approaches in the intensive forage production system                                                                                                                                                                      |
|                                                 | GreenHouses Manage           |   | 1 | The student develop the concept of protected agriculture and learn the different ways to generate income by exploiting protected production systems                                                                                                                                                    |
|                                                 | Hydrology                    |   | 1 | the aim of this cours is to train proffesionals which interperate the knowlege, technologies and tools required to carry out an integrated water resources management; developing thecnical and scientific knowledge of the interactions and interrelationships of water resources in the environment. |
|                                                 | Water Sanitation             |   | 1 | The will learn to collect insects in the environment where they live to preserve, conserve and properly label for a defined time student                                                                                                                                                               |
|                                                 | Coastal Communities Ecology  |   | 1 | Teaching the theoretical and practical orientation conociemientos applied to the study of the ecology of coastal communities so that students acquire an optimal learning and updated, necessary for professional development                                                                          |
|                                                 | Mountains Ecosystems         |   | 1 | That students know the basics of marine ecology as well as the characteristics of the marine environment and major groups of oraanisms that live there                                                                                                                                                 |

**MSc in Ecology and  
Natural Resource  
Management**

|                              |   |   |                                                                                                                                                                                                                                                                                                                             |
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| Soil Science                 |   | 1 | The overall objective of this program is that students have the ability to apply diagnostic methods as well as compare different taxonomies within the classification of existing soil                                                                                                                                      |
| Forest Sanitation            |   | 1 | Will know the main pests and diseases that affect forest trees, the measurement and evaluation of their damage to the implementation of prevention strategies                                                                                                                                                               |
| Preservation Biology         |   | 1 | Study the causes of the biological diversity loss at all levels and how to minimize it.                                                                                                                                                                                                                                     |
| Reproductive Biology         |   | 1 | The main purpose is to study the genetic changes that occur in the human body for the preservation of the species, and thus its own continuity                                                                                                                                                                              |
| Aquatic Ecosystems           |   | 1 | This course aims to provide scientists and managers with practical experience and ready-to-use skills in analysing processes in aquatic ecosystems and with the proper tools to integrate ecological knowledge into management of these systems                                                                             |
| Natural Resources Evaluation | 1 |   | It studies land forms, soils, vegetation, climate and other aspects of land in order to identify and make a comparison of promising kinds of land and natural resources.                                                                                                                                                    |
| Ecology Fundamentals         |   | 1 | To bring ecosystems issues in the mainstream of public consciousness.                                                                                                                                                                                                                                                       |
| Environmental Legislation    |   | 1 | The students will learn about environmental law in response to emerging awareness of and concern over issues impacting the entire world. While laws have developed piecemeal and for a variety of reasons, some effort has gone into identifying key concepts and guiding principles common to environmental law as a whole |
| Forest Ecosystems Management |   | 1 | The students will learn about the forest ecosystems are areas of the landscape that are dominated by trees and consist of biologically integrated communities of plants, animals and microbes, together with the local soils (substrates) and atmospheres (climates) with which they interact                               |

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| Territory System                   | 1 |   | The object is knowing every property within a territory that affords agents, especially newer ones, an easy way to differentiate his or her services from thousands of competitors.                                                                                                                                                          |
| Soil Restoration                   |   | 1 | Students in this course will learn Physical, chemical and biological characteristics of soils and their relationship to restoration. Soil fertility; importance of soil flora and fauna. Types of soil disturbance in agriculture, forestry, mining and urban environments; soil restoration strategies; planning pre- and post-disturbance. |
| Ecological Processes<br>Simulation |   | 1 | students will learn simulation and prediction tools in order to generate ecological systems scenarios of the environmental impact and climatology. Generating applications for the efficient management of natural resources.                                                                                                                |
| Natural Resources                  |   | 1 | The aim of this course is to provide students the basic knowledge on the use and exploitation of Mexico's main natural resources and their environmental consequences. It also aims to address the ecological principles of sustainable management of natural resources.                                                                     |
| Agroforestry                       |   | 1 | The main purpose is to diversify and optimize production for sustainable management.                                                                                                                                                                                                                                                         |
| Landscape Integral<br>Analysis     |   | 1 | Its aim is to allow students to obtain an inventory of the existing geospatial ecosystems.                                                                                                                                                                                                                                                   |
| Environmental<br>Ecology           |   | 1 | Develop skills to consolidate their training care environment and the area of natural sciences, applying his cognitive, affective and values development, inviting them to reflection, criticism, research and participation in environmental issues that may contribute to development sustainable planet and its natural environment.      |
| Communities<br>Ecology             |   | 1 | Community ecology seeks to explain the underlying mechanisms that create, maintain, and determine the fate of biological communities. Typically, patterns are documented by observation, and used to generate hypotheses about processes which are tested.                                                                                   |
| Insects Ecology                    |   | 1 | Studying the ecology of insects in their natural habitat and biodiversity, behavior and function of ecosystems.                                                                                                                                                                                                                              |

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|                                     | Population Ecology              |   | 1 | Study and determine the population dynamics and distribution, evolutionary ecology, ecological genetics, theoretical models, conservation biology, agro-ecosystem studies and bioresource management.                                                                       |
|                                     | Dry Zones Ecology               |   | 1 | Allows level knowledge on ecology and integrated management of ecosystems, the variability between arid areas, with emphasis on biodiversity and variability of the components of the environment, including climate, topography, vegetation, wildlife, soils and land use. |
|                                     | Coastal Zones Ecology           |   | 1 | Study the conservation of natural, cultural and natural environment resources, emphasis in the area of biology and coastal areas that allow training to identify, assess and provide solutions in this area.                                                                |
|                                     | Evolutionary Ecology            |   | 1 | Studies the interactions and co-evolution between animals, ectoparasites and pathogens, and investigates the dynamics of pollutants in the environment.                                                                                                                     |
|                                     | Forest Ecology                  |   | 1 | To increase the postulant interest in communication between scientists in disparate fields who share a common interest in ecology and forest management, bridging the gap between research workers and forest managers that care about it.                                  |
|                                     | Chemistry Ecology               |   | 1 | It focuses on the production of and response to signalling molecules and toxins.                                                                                                                                                                                            |
| <b>MSc in Industrial Management</b> | Sustainable Development         | 1 |   | Learn to identify and interpret the various instruments and indicators of sustainable development in the industrial sector.                                                                                                                                                 |
|                                     | Industrial Security and Hygiene |   | 1 | At the end of this course the student will know the importance of keeping work areas and safe operation for the elimination of hazards to prevent accidents and occupational diseases as well as also identify the negative impact on operating costs involving accidents.  |
|                                     | Work Security                   |   | 1 | The student performs comparative studies in different ecosystems and various regional areas.                                                                                                                                                                                |
| <b>MSc in Public Health</b>         | Public Health                   |   | 1 | Developing a diagnosis of community health skills and abilities for planning, implementation and evaluation of nursing interventions required in each specific health situation.                                                                                            |



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|                                               | Public and<br>Communitary<br>Health             |   | 1 | It aims to benefit a wider population group, the student                                                                                                                                                                                               |
| <b>MSc in Safety and<br/>Work Environment</b> | Industrial Hygiene II                           |   | 1 | Student will learn to identify the chemicals agents and interpret the results of the evaluation and decide whether the exposure is or it is not acceptable for the working environment.                                                                |
|                                               | Industrial Security I                           |   | 1 | Is proposed as a study of this multidisciplinary area to minimize industry and pollution risks.                                                                                                                                                        |
|                                               | Occupational<br>Health                          |   | 1 | This discipline seeks to control accidents and disease by reducing risk conditions and protecting work enviroment.                                                                                                                                     |
|                                               | Industrial Security II                          |   | 1 | Identify, assess and promote industrial safety measures that the equipment, tools and production processes as well as the efficient and safe production in a business suit                                                                             |
|                                               | Work Medicine I                                 |   | 1 | To get the knowledge related on the work medicine to ensure the workers welfare.                                                                                                                                                                       |
|                                               | Work Medicine II                                |   | 1 | Continuing the program with topics covered include work-related injury and illness, accident and illness prevention, health promotion, occupational disease and health education.                                                                      |
|                                               | Work Hygiene                                    |   | 1 | Assess chemical and biological risks to which workers are exposed in the work environment and establish alternative solutions to help manage these risks by applying Official Rules                                                                    |
|                                               | Geography and<br>Territorial System<br>Theories | 1 |   | Students will learn the relationship between man and the environment analysing the overlaps that exists between the natural space and social space, leading to the need for regional planning and regulations of the resulting environmental conflicts |
|                                               | Sustainable<br>Economy                          | 1 |   | This course explores the application of environmental and economic development planning, policy and management approaches to urban neighborhood community development.                                                                                 |

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| <b>MSc in Tourism</b>       | Tourism Development and Sustainability       | 1 |   | The students will know about Sustainable tourism development guidelines and management practices that are applicable to all forms of tourism in all types of destinations, including mass tourism and the various niche tourism segments, as well as learn about the sustainability principles refer to the balance of the environmental, economic, and socio-cultural aspects. |
|                             | Sustainable Tourism Product Design           | 1 |   | In this course, the students will learn the proper tourist product characteristics and market opportunities by the recipients of the tourist market, aiming at the support of the sustainable tourism design process                                                                                                                                                            |
| <b>MSc. In Comunication</b> | Communication, Culture and Globalization     |   | 1 | The objective of the course is to develop student elements relating to appreciate and analyze critically and creatively culture so that they can distinguish reflexively transcendent works from ephemeral and purely commercial.                                                                                                                                               |
|                             | Economy, Politics, Society and Globalization |   | 1 | The course introduces different perspectives from the social sciences, humanities and the natural sciences used in the study of globalization in order to create a global economy of an open betterment of the society political market                                                                                                                                         |
|                             | Public Opinion and Globalization             |   | 1 | An introduction to the logic and methods of research in politics and public administration. Students will learn the goals and the process of conducting social research and globalization.                                                                                                                                                                                      |
|                             | Urban Politics and Economy                   |   | 1 | The students will understand the main topics of the theory on the overall functioning of economic system maintaining the traditional division of microclimate and political economy as well to provide an analytical basis for understanding                                                                                                                                    |
|                             | Urban Design Planning Theory                 |   | 1 | This course overviews critical issues of human settlement and urban development. Students will learn to include all dimensions such as financial, administrative, political for planning, design and development; including the social, and cultural relationships between people and their built and natural environment                                                       |
|                             | Urbanistic Management                        |   | 1 | To enable the students at the end of the course learn the techniques of project management and technical process. The sequence of methodological moments                                                                                                                                                                                                                        |

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| n, development and ur         | Environment and Sustainable Development | 1 |   | At the end of the course the student will understand the importance of the preservation of the environment in favor of a sustainable urban and regional development by analyzing conflicts from a global perspective to understand the impact on the regional context                                                                                                                                       |
|                               | Urban Projects Methodology              |   | 1 | This course is based on the exhibition of conceptual aspects of urban design and its exploration and interpretation through the urban form                                                                                                                                                                                                                                                                  |
|                               | Urban Normativity                       |   | 1 | To enable the students to acquire theoretical and normative legal knowledge existing urban are entitled to support urban planning projects                                                                                                                                                                                                                                                                  |
|                               | Urban/Dwelling Processes                |   | 1 | Provide students with the fundamental knowledge for clear understanding of problems associated with urbanization and housing endowment for groups of workers and collective sectors considered in poverty                                                                                                                                                                                                   |
|                               | Urban Antropology and Sociology         |   | 1 | The student will understand the evolution of cultures , considering the anthropological perspective and will have a program of urban anthropology that will allow you to analyze the most important theories as well as its main proposals in relation to urban culture                                                                                                                                     |
|                               | Urban Sustainable Development           | 1 |   | Analyzing models of traditional economic development as a tool for sustainable development models implementar with strict                                                                                                                                                                                                                                                                                   |
|                               | Urban and Dwelling Planning             | 1 |   | This course will allow students to gain a comprhensive understanding of the urban development and town planning, has well as the principles of land use planning, public housing management systems and the mechanisms on how succesfully developm sustainable programs. Students will learn core areas and advanced topics in sustainable urban futures, linking academic research to policy and practice. |
| <b>MSc. In Digital Design</b> | Digital Sustainable Design              | 1 |   | The goal of the Digital Design in Sustainable course was to introduce students into the new world of possibilities in digital design; especially in the shift in thinking design through the use of algorithmic processes and parametric modeling.                                                                                                                                                          |
| <b>MSc. In Family therapy</b> | Gender Culture and Family               |   | 1 | This course will provide a critical and analytical thinking for students to lear how to analyse and study the relation of nature and science in the context of families                                                                                                                                                                                                                                     |

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| <b>MSc. in Family Therapy</b>                       | Family Therapy and Psychodynamics                               |   | 1 | It focuses in the study on the interaction between family members, analyzing the role played by each member in maintaining the psychoanalysis system                                                                                                                                                                                                     |
| <b>MSc. Public Health</b>                           | Environmental Health                                            | 1 |   | Develop the capacity to conceptualize the current dimension of basic sanitation and lines of action to be executed in a professional capacity                                                                                                                                                                                                            |
| <b>PhD in Strategic Business Management</b>         | Competitiveness, Cooperation and Globalization Seminar          |   | 1 | The purpose is to acquire a minimum level of knowledge about the fundamentals of the business strategy in the context of cooperation in an environment of global competition. It aims to identify and evaluate strategies, agents and development cooperation policies in business competition                                                           |
| <b>PhD Science: Farming Systems and Environment</b> | Geographic Information for Agricultural and Environment Systems |   | 1 | Students in this course will learn Geographic Information Systems that could be used as a technology of choice for urban and resource planning and management in order to generate projects in several fields such as wildlife distribution, vegetation management, wildlife and parks management, resource planning and wetlands mapping and monitoring |
|                                                     | SIG for Agricultural and Environmental Management               | 1 |   | You will strengthen your competencies within the environmental field and be able to better plan, develop, and communicate aspects on the topic                                                                                                                                                                                                           |
|                                                     | Productive Sustainable Systems                                  | 1 |   | This course will give the students the opportunity to enhance production systems in order to allow people in the rural communities to have an alternative to use the biodiversity of their location socially, environmentally, economically and culturally sustainable                                                                                   |
|                                                     | Integrated Pesticides Management                                |   | 1 | At the end of the course students will learn the integration of two or more control techniques for pest management with an ecological approach and minimization of additional adverse effects                                                                                                                                                            |
|                                                     | Rural Development                                               | 1 |   | In this course, the students will learn about the process of improving the quality of life and economic well-being of people living in relatively isolated and sparsely populated areas.                                                                                                                                                                 |

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| <b>PhD. In Ecology and Management of Natural Resources</b> | Wildlife Conservation and Manage                     | 1 |   | In this course the students will learn about the wildlife manage that attempts to balance the needs of wildlife with the needs of people using the best available science. Wildlife management can include game keeping, wildlife conservation and pest control                                                                               |
|                                                            | Ecosystems Ecology                                   |   | 1 | Identify and examine the structures and physical and biological characteristics of the ecosystem interact. Perform functional processes, ecological mechanisms that preserve the structure and services produced by ecosystems.                                                                                                               |
|                                                            | Water Resources Uses and Economy                     |   | 1 | This course offers a multidisciplinary exploration of the engineering, economic, and institutional principles involved in water system development and management                                                                                                                                                                             |
| <b>PhD. In Environment</b>                                 | Port and Coastal Environmental System                | 1 |   | Designs and manufactures weather stations, meteorological, <b>environmental</b> monitoring instrumentation, and data acquisition <b>systems</b>                                                                                                                                                                                               |
|                                                            | Ecological Territory System and Environmental Impact | 1 |   | The main purpose is to encourage the environmental wellness on making decisions and consider the environmental impacts when deciding whether or not to proceed with a project.                                                                                                                                                                |
|                                                            | Environmental Law                                    | 1 |   | Through the course Environmental Law, the students will learn about the state, federal, and international treaty law pertaining to issues of concern to the environment and protecting natural resources, as well as Administration of Environmental Regulations, Pollution Control and Remediation and Violations of Environmental Law       |
|                                                            | Rural Development and Regional                       | 1 |   | Students will learn about the process of improving the quality of life and economic well-being of people living in relatively isolated and sparsely populated areas, as well as the conservation of regional animals                                                                                                                          |
|                                                            | Natural Resources Energy and Bioremediation          | 1 |   | The students will learn about environment protection and restoration as an area in which biotechnology can have a very positive impact. Bioremediation involves very little energy input; therefore it does not waste the already depleting resources of the earth and also avoids the potential pollution involved in most energy production |

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|                                                     | Environmental Management and Ecological Development Planification | 1 |  | Students in this course will develop their understanding of biodiversity and how ecosystems function and how we can use resources more sustainable.                                                                                      |
|                                                     | Territory Planning, Urban and Rural Development                   | 1 |  | Students in this course will develop practical knowledge and skills needed to analyse, plan, implement and evaluate rural development, agricultural extension, community development and stakeholder engagement programs and activities. |
| <b>PhD in Architecture with emphasis on housing</b> | Housing Complexes                                                 | 1 |  | Student will learn to develop sustainable housing complex, in order to generate new perspectives for living spaces in developing cities.                                                                                                 |
|                                                     | Dwelling Design                                                   | 1 |  | Students will learn basic design strategies for housing design, including passive strategies in order to generate sustainable design considering the location.                                                                           |