

HIGHER UNIVERSITY TECHNICIAN IN AQUACULTURE PROJECTS SPECIALIST

COURSE SYLLABUS WITH BREAKDOWN OF THEMATIC UNITS

1. Course Name	Administration
2. Competencies	Direct the production of auxiliary organism cultured, based on the conditions evaluation of the aquaculture systems to contribute to the profitability of the organization. Develop sustainable aquaculture projects, based on market needs and established regulations, to contribute
3. Four Month Period	Second
4. Practical Hours	32
5. Theoretical Hours	28
6. Total Hours	60
7. Week Total Hours Four Month Period	4
8. Course Objective	The student will coordinate a process of aquaculture production, through the administrative tools, to contribute to the achievement of the objectives of the organization.

Theme Units	Hours		
	Practical	Theoretical	Total
I. Administration Fundamentals	2	6	8
II. Planning	12	8	20
III. Organization	14	10	24
IV. Control	4	4	8
Total	32	28	60

WRITTEN BY: COMMITTEE OF DIRECTORS OF TSU
CAREER IN AQUACULTURE.

APPROVED BY: C. G. U. T.

REVISED BY: ACADEMIC AND LIAISON COMMISSION OF THE AREA

EFFECTIVE DATE: SEPTEMBER 2010

F-CAD-SPE-28-PE-5B-01-A2

ADMINISTRATION

THEMATIC UNITS

1. Theme Unit	I. Administration Fundamentals
2. Practical Hours	2
3. Theoretical Hours	6
4. Total Hours	8
5. Objective	The student will distinguish the elements that integrate the administration and the organization, to contribute to the objectives achievement of the Aquaculture project.

Themes	Learning to know	Learning to do	Learning to be
Administration Principles	Define the administration concept, its elements and application.		Analytical and synthesis ability Organized Systematic
Administrative Process	Identify the methodology of the administrative process.	Distinguish the stages of the administrative process in an organization.	Observer Analytical and synthesis ability Organized Systematic
Organization	Define the concept and elements of the organization, as an entity: material, human, financial and technological resources.	Distinguish the resources and elements that the organization has.	Observer Analytical and synthesis ability Organized Systematic

ADMINISTRATION

Evaluation Process		
Learning outcomes	Learning sequence	Instruments and type of reagents
<p>From a case study, the student will elaborate a report that contains:</p> <ul style="list-style-type: none"> - Conceptual map on the terms of Administration and organization as social entity and its resources. - Diagram of an organization and its interrelationships with the different areas: <ul style="list-style-type: none"> - Human resources. - Material resources. - Financial resources. - Technological resources. - Diagram of the administrative process. 	<ol style="list-style-type: none"> 1. Understand the concept of administration. 2. Understand the stages of the administrative process. 3. Understand the concept of organization as a social entity and its components. 4. Relate the stages of the administrative process to the organizational structure. 	<p>Essay. Checklist.</p>

ADMINISTRATION

Teaching Learning Process	
Methods and teaching techniques	Media and didactic materials
Collaborative Teams Research Tasks Case Analysis	Audiovisual Material Computer Internet Projector Printed case studies

Learning Space		
Classroom	Laboratory / Workshop	Company
X		

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THEMATIC UNITS

1. Thematic Unit	II. Planning
2. Practical Hours	12
3. Theoretical Hours	8
4. Total Hours	20
5. Objective	The student will elaborate the SWOT analysis, to contribute to the achievement of the organization objectives.

Themes	Learning to know	Learning to do	Learning to be
Planning Principles.	Identify the basic principles of planning.		Analytical and synthesis ability Organized Systematic
Long-term Planning Principles.	Identify the concepts and characteristics of: mission, vision, values, philosophy, strategies, objectives and policies. Identify the external and internal factors that intervene in the achievement of the organizational objectives. Explain the methodology of the SWOT analysis.	Propose mission, vision, values, philosophy, strategies, objectives and policies of an organization. Develop an organization SWOT analysis.	Analytical and synthesis ability Proactive Methodical Observer Responsible Effective Communicator
Operative Planning.	Describe the concepts and characteristics of programs.	Develop a work program.	Analytical and synthesis ability Proactive Methodical Observer Responsible Effective Communicator

ADMINISTRATION

Evaluation Process		
Learning outcomes	Learning sequence	Instruments and type of reagents
<p>From a real case, the student will prepare a report that integrates:</p> <ul style="list-style-type: none"> - Identification of organizational philosophy, mission, vision, values, philosophy, strategies, objectives and policies of an organization. - Results of the SWOT analysis, the strategies of: <ul style="list-style-type: none"> - Fortress-Opportunity. - Fortress-threat. - Weakness-opportunity, and - Threat weakness. - Work program. 	<ol style="list-style-type: none"> 1. Understand the concept of planning. 2. Understand the elements of long-term planning. 3. Understand the SWOT methodology. 4. Understand the elements of operational planning. 	<p>Case Studies Checklist</p>

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Teaching Learning Process	
Methods and teaching techniques	Media and didactic materials
Collaborative Teams Research Tasks Cases Analysis	Audiovisual Material Computer Internet Projector Printed Cases

Learning Space		
Classroom	Laboratory / Workshop	Company
X		X

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THEMATIC UNITS

1. Thematic Unit	III. Organization
2. Practical Hours	14
3. Theoretical Hours	10
4. Total Hours	24
5. Objective	The pupil will present a proposal of organization of the resources of a productive project, to optimize them and to contribute to the achievement of the organizational objectives.

Themes	Learning to know	Learning to do	Learning to be
Basic Principles of Organization	Identify the basic principles of the organizational stage.		Analytical and synthesis ability Organized Systematic
Human Resources	Identify the concepts related to the organizational stage, of human resources: Division of labor, hierarchies, organizational charts, position and task. Describe the technical development of position profile.	Elaborate position profiles.	Analytical and synthesis ability Proactive Methodical Observer Responsible Effective Communicator
Procedures	Identify the concepts related to the stage of the work organization: process, procedure and manuals. Describe the technique of procedure elaboration.	Elaborate work procedures.	Analytical and synthesis ability Proactive Methodical Observer Responsible Effective Communicator

Themes	Learning to know	Learning to do	Learning to be
Materials and technology	<p>Identify the concepts related to the organization stage of material resources: equipment, and raw material.</p> <p>Describe the techniques of warehouse control and raw materials.</p>	Propose a warehouse control system and raw materials.	<p>Analytical and synthesis ability</p> <p>Proactive</p> <p>Methodical</p> <p>Observer</p> <p>Responsible</p> <p>Effective</p> <p>Communicator</p>

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Evaluation Process		
Learning outcomes	Learning sequence	Instruments and type of reagents
<p>From a practical case, the pupil will write a proposal for the organization of a productive project, including the following:</p> <ul style="list-style-type: none"> - Diagram of the production process. - Profiles of positions according to the production process. - Position procedures. - Inventory and warehouse control system. 	<ol style="list-style-type: none"> 1. Understand the concept and principles of the organizational stage. 2. Understand the elaboration procedures of job profiles. 3. Understand the procedure-making methodology. 4. Identify the inventory control systems. 5. Elaborate an organizational proposal. 	<p>Case Studies Checklist.</p>

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THEMATIC UNITS

1. Thematic Unit	IV. Control
2. Practical Hours	4
3. Theoretical Hours	4
4. Total Hours	8
5. Objective	The student will verify the indicators of a productive aquaculture process to propose control actions.

Themes	Learning to know	Learning to do	Learning to be
Control Principles	Identify the basic principles of the control stage.		Analytical and synthesis ability Organized Systematic
Indicators	Identify the concept of indicator, its characteristics and importance. Identify the technique of elaboration of control indicators.	Verify the achievement of control indicators of an aquaculture production process. Interpret control indicators. Propose control actions.	Analytical and synthesis ability Proactive Methodical Observer Responsible Communicator

ADMINISTRATION

Evaluation Process		
Learning outcomes	Learning sequence	Instruments and type of reagents
<p>From a case of aquaculture production process, the student will prepare a report including the following:</p> <ul style="list-style-type: none"> - Diagram of the production process. - Achievement verification of the control indicators. - Propose control indicators. 	<ol style="list-style-type: none"> 1. Understand the concept, characteristics and principles of control. 2. Understand the concept and procedure of indicators development. 3. Understand the indicator verification procedure. 4. Relate control indicators to the aquaculture production process. 	<p>Case studies Checklist</p>

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**CAPACITIES DERIVED FROM THE PROFESSIONAL COMPETENCES TO WHICH
THE COURSE CONTRIBUTES**

Capacity	Performance Criteria
<p>To inspect the operating conditions of the productive process through the analysis of the infrastructure, personnel and supplies, based on good management practices, to contribute to the quality of production.</p>	<p>Prepare an evaluation file according to the guidelines of the good practices manual for the respective species or species that includes:</p> <ul style="list-style-type: none"> - The internal verification forms of good production practices duly completed - Formats of corrective recommendations for non-conformities detected - Schedule of corrections.
<p>Schedule aquaculture system conditioning activities, product demand and climatic conditions, to optimize resources and meet production goals.</p>	<p>Elaborate a program of the productive cycle based on the manual of good practices and that contains:</p> <ul style="list-style-type: none"> - water quality monitoring - water refills - disinfection activities of the infrastructure and the system - acquisition of supplies
<p>Schedule aquaculture system conditioning activities, product demand and climatic conditions, to optimize resources and meet production goals.</p>	<p>To elaborate a program of the productive cycle based on the manual of good practices for the respective species or species and that includes:</p> <ul style="list-style-type: none"> - planting period (climatic and biology of the species) - morphometric measurements of the organisms - homogenization of sizes of the organisms - harvest period - feeding schedules - water quality monitoring - water refills - disinfection activities of the infrastructure and the system - acquisition of supplies

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Capacity	Performance Criteria
<p>To diagnose the environment, social, economic, physical environmental and normative according to the criteria of regional diagnostic study, to identify the possibility of developing aquaculture projects</p>	<p>To prepare a technical report on the regional context of the aquaculture sector, describing the following aspects:</p> <ul style="list-style-type: none"> - Social character of the population: composition, mortality rate, fertility, growth, education, migration, economically active population. - Economic nature: productive sectors, GDP, economic activities, - Physical-environmental character: geographical, biological, climatological characterization. - Normative character: applicable regulations - Opinion on the possibility for developing aquaculture projects.
<p>State the potential market of an aquaculture product through an analysis of the situation of the markets, to identify marketing opportunities.</p>	<p>Prepare a report about the market analysis of aquaculture products that includes:</p> <ul style="list-style-type: none"> - Characteristic of the markets of the main products and supplies. - Channels of distribution and sale. - Conditions and mechanisms for supplying raw materials and supplies. - Plan and marketing strategy: <ul style="list-style-type: none"> A) Price structure of products and by-products, as well as sales policies. B) Competitiveness analysis. C) Income projection <p>Letters of Intent and/or contracts for the purchase and sale of raw materials and products.</p>

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Capacity	Performance Criteria
<p>Calculate the production capacity of a sustainable aquaculture project through a technical study, to establish the species and the required aquaculture production system.</p>	<p>To prepare a report that reflects the productive potential of the sustainable aquaculture project, which should include:</p> <ul style="list-style-type: none"> - Location and specific description of the project site - Infrastructure and equipment - The species to work with - The processes and technologies to be used. - The capacity of processes and production programs. - Scenarios with different processes of volumes. - Programs of execution, administrative, training and technical assistance. - Applicable regulatory framework. - Project production and investment costs. - Production costs and investment of the project. - Opinion on the technical feasibility of the Project.

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BIBLIOGRAPHY

Author	Year	Title	City	Country	Publisher
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Joaquín Rodríguez Valencia	(2000)	Como elaborar y usar los manuales administrativos	México D.F.	México	Ediciones contables, administrativas y fiscales
Munch Galindo, Lourdes García Martínez, José	(2009)	<i>Fundamentos de Administración</i>	México D.F.	México	Trillas
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Munch Galindo, Lourdes	(2008)	<i>Planeación Estratégica: El rumbo hacia el éxito.</i>	México D.F.	México	Trillas
García Cantu, Alfonso	(2010)	<i>Almacenes: Planeación, organización y control</i>	México D.F.	México	Trillas
Reyes Ponce, Agustin	(2000)	<i>El análisis de puesto</i>	México D.F.	México	Limusa Noriega
Chapman, Stephen N.	(2006)	<i>Planificación y control de la producción</i>	México D.F.	México	Pearson Educación.
Álvarez Toores, Martin G.	(2008)	<i>Manual para elaborar manuales de política y procedimientos: la guía mas practica y efectiva del mercado</i>	México D.F.	México	Panorama Editorial

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