

OBJECTIVE:

To train graduates in Computer Science and Computational Technologies, capable of designing and implementing solutions based on Information Technologies that contribute to the increase of technological development in the areas of programming and software engineering, IT project management, information processing and emerging technologies, with Entrepreneurial spirit, critical, innovative, high ethical, humanistic and socially responsible.

PROFILE OF THE ASPIRANT:

Based on the institutional norms, the applicant for undergraduate studies must apply the corresponding entrance examination.

It is desirable that the applicant to enter the Curriculum of the Degree in Computer Science and Computer Technologies show the following features:

- Analysis and synthesis of information
- Capacity and interest to solve problems logically
- Good level of reading, comprehension and writing in Spanish
- Ability to visualize creative solutions
- Ability to expose your knowledge and ideas
- Management of study techniques
- Interest in learning to learn
- Provision for collaborative and team work
- High degree of responsibility and service.

PROFILE OF THE GRADUATE:

The graduation profile of the Graduates in Computer Science and Computational Technologies is structured with a set of skills, knowledge, attitudes and values that the student will develop in the areas of professional performance of programming and software engineering, IT project management, Information and emerging technologies.

The profile of this professional is shown below:

SKILLS FOR:

1. Analyze, establish and design strategic information systems that integrate the best practices of software architecture modeling in a way that contributes to the improvement of administrative processes and organizational decision-making.
2. Develop, maintain and evaluate quality IT services and systems based on theories, models, methodologies and techniques of Software Engineering in order to extend the life cycle of the technology used by the company or organization.
3. Manage, direct, control and apply techniques and methodologies for the development and implementation of successful IT projects.
4. Apply Emerging Information Technologies (IT) to add value and innovate in business, as well as in the areas of research, production and service.
5. Design and manage organizational communication networks that consider the standards of service, communication and security protocols in order to share and safeguard information.
6. Automate tasks and solve problems in diverse fields of knowledge in a creative way, based on the logic, standards and paradigms of the programming languages to efficiently productivity through the restructuring of the specific processes of the application area.
7. Develop and apply IT techniques and tools for the intelligent treatment, use and exploitation of information that allows the generation and control of organizational knowledge.
8. Apply process reengineering methodologies and IT implementation based on needs analysis, parameterization and knowledge of emerging technologies.
9. Identify risks and establish strategies for the protection and security of information in order to guarantee its integrity and validity.
10. Listening, speaking, reading and writing in the English language at a basic level

BASIC SCIENCES CENTER**BACHELOR DEGREE IN INFORMATICS AND COMPUTING TECHNOLOGIES**

ATTITUDES:

1. Entrepreneurial and innovative spirit.
2. Leadership and direction of projects.
3. Interest in system modeling.
4. Technological change agent.
5. Initiative to stay updated on technological trends through the discipline of self-learning.
6. Willingness to work in a team and in a multidisciplinary way
7. Creative and assertive in the technological solutions implemented for the exploitation of information.
8. Analytical and ethical in technological solutions.

VALUES:

1. Autonomy and social responsibility
2. Pluralism
3. Humanism
4. Quality

WORK FIELD:

The graduate of the Degree in Informatics and Computer Technology has a natural field of work in a wide variety of public or private organizations. That is, in the educational, business, scientific, social and governmental sectors at local, regional, national and international level, that require infrastructure in computer technology or have the need to build, select, implement and integrate technological solutions in areas of programming and software engineering, technology project management, data processing and emerging technologies.

DURATION:

Nine semesters.

CURRICULUM

First Semester	T	P	C	CENTER	DEPARTMENT
COMPUTATIONAL ALGORITHMS	1	4	6	BASIC. SC.	INFORM. SYST.
PRINCIPLES OF INFORMATION TECHNOLOGY	2	3	7	BASIC. SC.	INFORM. SYST.
BASIC MATH	3	2	8	BASIC. SC.	MATH AND PHY.
BASIC ACCOUNTING	2	3	7	ECONOMIC S.	ACCOUNTING
COMMUNICATIVE COMPETENCES	2	3	7	SOCIAL AND HUMAN SC.	COMMUNICATION
INTRODUCTION TO BUSINESS FUNCTION	3	2	8	ECONOMIC S.	MANAGEMENT
Institutional Program of Humanist Formation Institutional Program of Foreign Languages					
Second semester					
STRUCTURED PROGRAMMING	3	2	8	BASIC. SC.	INFORM. SYST.
MATHEMATICS FOR COMPUTING	3	2	8	BASIC. SC.	MATH AND PHY.
HUMAN RESOURCES MANAGEMENT	3	2	8	ECONOMIC S.	HUMAN RES.
COST ACCOUNTING	2	3	7	ECONOMIC S.	ACCOUNTING
SOCIETY OF KNOWLEDGE	3	2	8	SOC. AND HUMAN SC.	SOCIOLOGY
BASIC MARKETING	3	2	8	ECONOMIC S.	MARKETING
Institutional Program of Humanist Formation Institutional Program of Foreign Languages					
Third Semester					
EVENT-ORIENTED PROGRAMMING	3	2	8	BASIC. SC.	INFORM. SYST.

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PROBABILITY AND STATISTICS (EST-B21)	3	2	8	BASIC. SC.	STATISTICS
DATA STRUCTURES	2	3	7	BASIC. SC.	COMP. SCIENCE
ECONOMY	1	4	6	ECONOMIC S.	ECONOMY
OPERATIVE ADMINISTRATION	3	2	8	ECONOMIC S.	HUMAN RES.
INFORMATION SYSTEMS	2	3	7	BASIC. SC.	INFORM. SYST.
Institutional Program of Humanist Formation					
Institutional Program of Foreign Languages					
Fourth Semester					
OBJECT-ORIENTED PROGRAMMING	3	2	8	BASIC. SC.	INFORM. SYST.
STATISTICAL METHODS (EST-B22)	3	2	8	BASIC. SC.	STATISTICS
COMPUTER ARCHITECTURE	2	3	7	BASIC. SC.	ELECT. SYST.
PROJECT EVALUATION	2	3	7	ECONOMIC S.	FINANCES
REQUIREMENTS ENG. AND RISK ANALYSIS	3	2	8	BASIC. SC.	INFORM. SYST.
ELEMENTS OF COMPUTER LAW	3	2	8	SOC. AND HUMAN SC.	LAW
Institutional Program of Humanist Formation					
Institutional Program of Foreign Languages					
Fifth Semester					
DATABASE	2	3	7	BASIC. SC.	INFORM. SYST.
OPERATIONS RESEARCH (IO-A2)	3	2	8	BASIC. SC.	MATH AND PHY.
COMPUTATIONAL ORGANIZATION	3	2	8	BASIC. SC.	ELECT. SYST.
USABILITY ENG. AND SOFTWARE DESIGN	3	2	8	BASIC. SC.	INFORM. SYST.
SYSTEMS ANALYSIS AND DESIGN	3	2	8	BASIC. SC.	INFORM. SYST.
PROFESSIONAL ETHICS	2	2	6	SOC. AND HUMAN SC.	PHILOSOPHY
Institutional Program of Humanist Formation					
Institutional Program of Foreign Languages					
Sixth Semester					
SQL and PL / SQL	2	3	7	BASIC. SC.	INFORM. SYST.
COMPUTERS AND RESEARCH	2	2	6	BASIC. SC.	INFORM. SYST.
OPERATING SYSTEMS	3	2	8	BASIC. SC.	ELECT. SYST.
SIMULATION SYSTEMS	2	3	7	BASIC. SC.	INFORM. SYST.
SOFTWARE ENGINEERING	2	2	6	BASIC. SC.	INFORM. SYST.
MULTIMEDIA	3	2	8	BASIC. SC.	INFORM. SYST.
Institutional Program of Humanist Formation					
Institutional Program of Foreign Languages					
Seventh semester					
ADMINISTRATION AND WEB DESIGN	2	3	7	BASIC. SC.	INFORM. SYST.
DATABASE MANAGEMENT	2	3	7	BASIC. SC.	INFORM. SYST.
STRATEGIC PLANNING	3	2	8	ECONOMIC S.	MANAGEMENT
COMPUTER NETWORKS	3	2	8	BASIC. SC.	ELECT. SYST.
SYSTEMS IMPLEMENTATION AND MAINTENANCE	3	2	8	BASIC. SC.	INFORM. SYST.
ANIMATION	2	3	7	BASIC. SC.	INFORM. SYST.
Institutional Program of Humanist Formation					
Institutional Program of Foreign Languages					
Eighth Semester					
MOBILE DESIGN	2	3	7	BASIC. SC.	INFORM. SYST.
ADVANCED DATA PROCESSING	2	3	7	BASIC. SC.	COMP. SCIENCE
OPTIONAL PROFESSIONAL I	--	--	--	-----	-----
SYSTEMS SECURITY	3	2	8	BASIC. SC.	INFORM. SYST.
EMERGENT DEVELOPMENT METHODOLOGIES	3	2	8	BASIC. SC.	INFORM. SYST.

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BACHELOR DEGREE IN INFORMATICS AND COMPUTING TECHNOLOGIES

GEOGRAPHIC INFORMATION SYSTEMS	2	3	7	BASIC. SC.	INFORM. SYST.
Institutional Program of Humanist Formation					
Institutional Program of Foreign Languages					
Ninth semester					
VIDEO GAME DESIGN	2	3	7	BASIC. SC.	INFORM. SYST.
COMPUTER FUNCTION MANAGEMENT	3	2	8	BASIC. SC.	INFORM. SYST.
OPTIONAL PROFESSIONAL II	--	--	--	-----	-----
MODERN COMPUTER TECHNIQUES	2	3	7	BASIC. SC.	INFORM. SYST.
THEORY					
BUSINESS PLAN	2	2	6	ECONOMIC S.	MANAGEMENT
LOGISTIC INFORMATION SYSTEMS	2	3	7	BASIC. SC.	INFORM. SYST.
Institutional Program of Humanist Formation					
Institutional Program of Foreign Languages					

DEGREE REQUIREMENTS

The graduate must adhere to the provisions of chapter XIV of the degree in technical, technical and higher education, article 156 of the General Teaching Regulations (NI-20300-19), which states the following:

"Once all the subjects and requirements indicated in the curriculum of technical, technical and baccalaureate degrees have been accredited, the graduate may request the issuance of his degree in the Department of School Control, after complying with the following elements:

- I.- To have fulfilled the requirements of Social Service, Humanistic Training Professional Practices and Foreign Languages, defined in the institutional programs;
- II.- Check that there is no debt with the Autonomous University of Aguascalientes;
- III.- Have covered the quota established in the plan of taxation to obtain the title; and
- IV.- Have submitted the exit exam¹ ".

¹ Approved by the Honorable University Council in an ordinary session held on December 15, 2011.