MODULAR PROJECTS

Universidad de Guadalajara
Centro Universitario de Ciencias Exactas e Ingenierías
División de Tecnologías para la Integración Ciber-Humana

Presentation

The Universidad de Guadalajara, the Centro Universitario de Ciencias Exactas e Ingenierías and the División de Tecnologías para la Integración Ciber-Humana have as:

Mission

To be a public, public, secular, and autonomous institution, with social commitment and international vocation, that satisfies the educational needs of higher and higher education with quality and relevance. Promotes scientific and technological research, as well as the linkage and extension to influence the sustainable and inclusive development of society. It is respectful of cultural diversity, honors humanist principles, equity, social justice, democratic coexistence, and collective prosperity.

Vision

To be a University Network with global recognition and prestige, inclusive, flexible, and dynamic. It is a leader in transformations and promoter of social mobility. Promotes innovative approaches to teaching and learning for the generation of knowledge for the benefit of society.

The Modular Projects aim to enhance the interest of students in the areas of engineering taught in the Cyber-Human Integration Technologies Division: Communications and Electronics Engineering, Computer Engineering, Computer Engineering, Biomedical Engineering, Botanical Engineering and Robotics Engineering. In addition to the collaborations with other divisions of the center or institutions external to our center. external to our center.

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Basis

1. Objectives

Modular projects seek to encourage the creativity of the students with the contribution of solutions to real world problems and to raise interest for the engineering studies.

2. For the participants
   a. Groups of participants must have a maximum of 3 members. Each student can only be part of one group.
   b. Students of the respective undergraduate levels who are not in the situation of articles 33, 34 and 35 may participate.
   c. Students must present documentation and defense of the projects according to the following table:

CAREER	MODULE I Semester	MODULE II Semester	MODULE III Semester	MODULE IV Semester
INCE	6th	7th	8th	8th
INBI	6th	7th	8th	-
INCO	6th	7th	8th	-
INNI	-	6th	7th	8th
INRO	6th	7th	8th	-
IGFO	6th	7th	-	-

3. Consultant professors
   a. The professor's main function is to support the student's groups with consultancies and resolution of questions, that contribute to the development of the project, as well as fostering teamwork.
   b. Professors can support several groups if they wish to.

4. Projects

With the porpoise of encouraging technological innovation within the Communications and Electronic Engineering, Computer Engineering, Informatic Engineering, Biomedical Engineering, Photonics Engineering and Robotics Engineering the projects are divided into categories according to the different participation areas as shown in Table 1

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http://www.cucei.udg.mx/carreras/computacion/sites/default/files/reglas_de_operacion.pdf

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Table I. Participation Areas

Area	Challenges
Environment	- Natural phenomena and risks prevention - Integrated water management - Mitigation and adaptation to climate change - Protection of ecosystems and biodiversity
Universe knowledge	- Studies on physics, mathematics, chemistry, and their applications - Study of geo-science and its application
Education	- Application of ICTs for education - Learning process
Sustainable development	- Foods and their production - Biotechnology for food and health - Cities and urban development - Recovery of contaminated spaces
Technological development	- Automation - Biotechnology - Internet of Things - Engineering (Electronic, Computer, etc) - High-tech manufacturing - Nanotechnology - Robotics - Information Technologies (ICT's)
Energy	- Sustainable energy consumption - Harnessing renewable and clean energies
Health	- Human behavior and addiction prevention - Diseases of national importance - Preventive medicine and health care - Bioengineering development
Society	Public safety

In accordance with:

- PROGRAMA ESPECIAL DE CIENCIA TECONOLOGÍA E INNOVACIÓN 2014-2018 PECITI.
- PLAN NACIONAL DE DESARROLLO 20 MAYO 2013.
- LA META NACIONAL III (EDUCACIÓN DE CALIDAD).

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a. The projects must:

   i. Attend one or several of the areas of participation described in the current document, preferably.

   ii. Apply technologies that allow for innovation on products, processes, or services with an evident grade of improvement in their performance.

   iii. Conduct prior research on the state of the art of the projects according to the module.

   iv. Demonstrate the innovation of the product through a prototype, as well as a report explaining its design, justifying its innovation or improvement.

   v. Prepare a presentation for its defense, where concisely and briefly explain your design.

   vi. The projects may be multidisciplinary and/or interinstitutional, students from any career may participate, in which case they may be advised by up to two advisors (internal or external), of which it is mandatory that at least one is assigned to the DIV-TIC. External advisors must submit their curriculum vitae, so that their possible participation as advisors may be evaluated.

b. Registration and evaluation of the project

Phase 1:

Approach a teacher to be guided in the making of the "State of the Art", who will evaluate firsthand the viability of the project and redirect, until establishing the necessary conditions for the possible realization of the project.

Phase 2:

The project registration must be submitted to the respective career coordination office using the electronic format established in the coordination's official web page, with the endorsement and signature of the advisor(s).
In case that the proposal is approved, the degree committee will deliver the project registration report, which includes the modules that will be evaluated to the applicant.

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Phase 3:

Upon completion of the project, the student must submit the project completion form with the approval of his or her advisor to the Career Coordination Office. The Department Head will be informed and will designate two reviewers for the evaluation of the project, who will decide if the project is accredited.

Phase 4:

Only projects that comply with the delivery of supporting documentation will be evaluated, as well as those whose prototypes are shown to be fully functional and present their Oral Evaluation (project defense).

The time for the project defense is of a maximum of 30 minutes, distributed as the following:

i. Maximum of 10 minutes for presentation (for each student member of the team), where the functioning and/or operation of the project will be present.
ii. Maximum of 10 minutes for questions and answers
iii. Maximum of 10 minutes for project evaluation

Phase 5:

The result of the evaluation for each module, if favorable, will be "Accredited" and the respective career coordinator will be responsible for managing the placement of such result in SIIAU.

5. Evaluation Committee
   a. It is the body in charge of evaluating the projects.
   b. It will be formed by professors appointed by the department heads.
   c. In order to promote the degree, it will propose the outstanding modular projects to the Degree Committees, who will decide whether they meet the requirements of any of the degree modalities in force.

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