

On Friday September ten two thousand ten at 10 am, the academy of Industrial Engineering met in the classroom of the third floor of the Community Library at the Ensenada Campus to carry out the working meeting with the following agenda:

1. List of attendees.
2. Objectives of the meeting.
3. To show the Learning Outcomes of Industrial Engineering vs. Competencies.
4. Proposed curriculum redesign of Industrial Engineering for the 2011 plan.
 - a. Axis 1 of courses.
 - b. Proposal of Basic Sciences
 - c. Proposal of the academic program of Industrial Engineering.
5. Assessment:
 - i. SLO Eng01
 - ii. SLO Eng02
6. General issues.

1. Attendees.

The members of the academy that met were: César Barraza, Dr. Carlos Solorio, Enrique Fitch, Dr. Salvador Chiu, and Socorro Lomelí.

They were accompanied by the following invited experts: Mauro Chávez, Luisa Rojas, Dr. Carlos González, and Dr. Isaac A. Azuz.

2. Objective.

To develop learning outcomes of the program of Industrial Engineering and perform the cross reference with the proposed competencies, to propose the curriculum of the 2011 program in compliance with the commitments made for the revision of the syllabus, and to submit the program based on Competencies and Learning Outcomes Assessment.

3. To show the Learning Outcomes of Industrial Engineering vs. Competencies.

Agreement 1. - In view of the assessment process and the alignment of the learning outcomes with the mission of the program, the academy agrees to reduce to three learning outcomes presented for WASC, which are the following:

SLO_II1: ... develop and manage quality management systems with focus on continuous improvement, in to generate competitive processes pertaining to the generation of products and services.

SLO_II2: ... develop and manage the supply chain with an integral vision, beginning with the needs of the client, and ending with the delivering of the product or service.

SLO_II3: ... apply models of optimization to design, manage and improve systems that respond to global strategies to make an organization competitive in the production of products and services.

Agreement 2. - With regard to the definition of the Competencies and their Cross reference with Learning Outcomes, the academy agrees to use the model of competencies provided by Mr. Vargas for their design; having as a result the competencies of the program of industrial engineering (attachment 1- archive mapping of SLO's Industrial Engineering):

<i>The Industrial Engineer student of CETYS University will be able to ...</i>	
SLO_II1: ... develop and manage quality management systems with focus on continuous improvement, in to generate competitive processes pertaining to the generation of products and services.	<i>The student will design and manage systems of Quality and Continuous Improvement for the production of competitive goods and services in global markets, and by using methodologies and models of Industrial Engineering, with proactive attitude, an ethical behavior, and a willingness for collaborative work. (we believe that this is in the nuances and in the generics of Eng)</i>
SLO_II2: ... develop and manage the supply chain with an integral vision, beginning with the needs of the client, and ending with the delivering of the product or service.	<i>The student will integrate knowledge and methodological skills for the development and administration of the supply chain in the industry, with a systemic vision and creative application of information technologies, working in interdisciplinary teams, and by respecting the current regulations in the industry in an ethical, honest, and sustainable manner.</i>
SLO_II3: ... apply models of optimization to design, manage and improve systems that respond to global strategies to make an organization competitive in the production of products and services.	<i>The student shall apply optimization models to incorporate the best manufacturing practices in the design, administration, and improvement of systems that make the organization competitive in a global environment; by working in interdisciplinary teams and by respecting the current regulations in the industry in an ethical, honest, and sustainable manner.</i>

Agreement 3. - Use the levels of Introductory, Development, and Mastery assessment to carry out the curricular mapping of the syllabus against the defined learning outcomes and competencies for the program of industrial engineering:

LEVEL LEGEND:	
SU	SUFFICIENT - (INTRODUCTION): <i>"At the end of the course, students know, understand, comprehend, and are familiar with the concepts."</i> Students are expected to have little or no prior knowledge in the topics covered by the course. We take as a basis the knowledge, skills, and abilities of prior courses to reinforce and develop the student in the solution of problems of average difficulty. New topics are introduced with a basic level of application; just sufficient for the student to understand the issues and learn its field of application. It is expected that the student relates prior concepts and integrates them to his/her new base of knowledge by identifying applications through the approach and solution of problems and case studies on a basic level.
IM	IMPROVABLE - (DEVELOPMENT): <i>"At the end of the course, the students may analyze and apply the concepts in different contexts which pose different degrees of difficulty."</i> We take as a basis the knowledge, skills, and abilities of prior courses for the development of solutions to application problems related to the field of specialized study of the academic program. It is expected that the student will develop a greater level of analysis and learn to use in an efficient and correct manner the design tools and techniques peculiar to his/her academic program and field of application.
OU	OUTSTANDING - (MASTERY): <i>"At the end of the course, students exhibit a correct understanding of the concepts and know how and when to apply them."</i> Knowledge, abilities, and skills acquired in previous courses are integrated for the development of specialized application projects in which it is expected that the student can design and integrate solutions based on proposed implementation problems that will that will solve real needs. The student must be familiar with the design tools and techniques peculiar to his/her academic program and field of application, and it is expected that he/she uses them to a level that is the required one in the labor field.

4. Proposed Curriculum Redesign.

Agreement 4.- Starting from the proposal of changes in the submitted curriculums to be considered by the Academy of Basic Sciences, the proposal and location of the rest of the courses that will make up the industrial engineering program curriculum was determined (Attachment 2: 2011 Industrial Engineering Curriculum).

5. General issues and agreements.

Agreement 5. - In order for the academy of industrial engineering to continue the work, it will meet Fridays at 11:00 am by video conference.

Agreement 6. - We will continue with the curricular mapping of courses vs. proposed learning outcomes, and with the definition of courses, products, and learning outcome assessment of the engineering program.

Attendees of the Academy

César Barraza Montoya

Enrique Fitch Manjarres

Salvador Chiu Tamayo

María del Socorro Lomelí Sánchez

Carlos Solorio

Guests

Carlos A. González Campos

. Mauro Chávez López

Luisa Rosas Hernández

Isaac A. Azuz