INTRODUCTION

The System Engineering Project Practicum provides the opportunity to apply System Engineering concepts in developing a real system and create documents that formally describe the system. Students review documents and validate them with clients and customers through formal presentations. Teams are self-managed and assign roles to control planning, quality, requirements, design, and implementation.
System Overview

The University of Texas at El Paso has planned to develop online programs that would be suitable for people who want to enroll in continuing their superior education. In the college of engineering, a systems engineering online program has been proposed. To achieve full extent of this idea, contributions are being managed by the services of Extended University (EU). Several departments are also involved and each has their own responsibilities. Service systems components (departments) may help delivering a part of a service or they may offer a service by themselves. Moreover, programs are controlled from its inception to its deployment for public access.

The project’s applicable documents, description, and parameters are defined in the Systems Engineering Management Plan. This document strictly focuses on documenting and analyzing the quality metrics obtained from the development of the Online Programs Service System.

The problem resides in the fact that there’s no longer an organizational structure for the stakeholders to identify the providing services. This includes what type of services are offered, and also there is not a service agreement in place.

Problems of this program include the various stakeholders responsible for providing services, the type of services being offered, whether or not service agreements exist, and how service requests and service incidents are handled.

The project will provide an analysis through different documents in order to communicate to our customer the overall quantitative and qualitative system characteristics for Extended University. The main objective is that it will focus on making the assessment to the current system.

System Description

The problem resides in the fact that there’s no longer an organizational structure for the stakeholders to identify the providing services. This includes what type of services are offered, and also there is not a service agreement in place.

The various stakeholders involved in who is responsible for providing services, the type of services being offered, whether or not service agreements exist, and how service requests and service incidents are handled.
Industrial, Manufacturing, & Systems Engineering
College of Engineering

Systems Engineering Project Practicum
Summary

USE CASE FOR EXTENDED UNIVERSITY SYSTEM FOR
DEVELOPMENT FOR FULLY ONLINE DEGREE PROGRAMS

INTAKE
CORE COURSE CAROUSEL
MARKETING
BUDGET
COURSE DEVELOPMENT AND MANAGEMENT
SCHEDULING
PAYMENT
RMS

Academic Department
President's Office
VPBA
Vendors

Extended University
Registrar Office
Academic Technology
Provost Office
[Insert activity diagram of the two main services]
Industrial, Manufacturing, & Systems Engineering
College of Engineering

Systems Engineering Project Practicum Summary

Course Carousel

<table>
<thead>
<tr>
<th>I/O/C</th>
<th>Extended University</th>
<th>Academic Department</th>
<th>Provost Representative</th>
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<tbody>
<tr>
<td>Input/Program Goal</td>
<td>Schedule meeting with Provost Representative and Academic Department</td>
<td>Attend Meeting with Provost Representative and Academic Department</td>
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<tr>
<td>Output/Curriculum Mapping Outline</td>
<td>Begin Curriculum Mapping</td>
<td>Develop Program Structure</td>
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<td>Output/Program Assessment, Outcomes, and Objectives</td>
<td>Develop Course Cardosel</td>
<td>Approved?</td>
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<td>Output/Outline of Courses and Foundation Classes</td>
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<td>Output/Course Cardosel</td>
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PROJECT OUTCOMES

Provide a brief description for the impact of this system in the organization.

The proposed project is important because it will impact the growth of people enrolling in a graduate systems engineering online program. Some of the goals to achieve is that the program needs to be developed in a cost effective and timely manner, and also surpass the customer expectations by at least 75%. This would provide another option for the potential graduate students, thanks to the proposed flexibility of a high level academic program.

Provide your impression on how reviews impact the quality of the system under development [insert a picture of the excel quality dashboard]

The quality of a project needs to be conducted in order to analyze any defects that may need improvement along the process. It is of high importance to review the material by using checklists and defect logs. At the end of the project, all phases that became part of the system are converted into data percentage as demonstrated in the next page:
Soft skills.

Leadership, teamwork, organization, communication, and creative skills

What did we learn?

The development of this project helped to demonstrate the skills developed towards this graduate systems engineering degree. It became a substantial contribution in terms of increasing confidence, teamwork, communication, and leadership skills. All this that can be put into effect towards engineering professionalism

What impact had this class in our job?

The systems engineering project practicum served as a good contribution towards jobs as technical programmers, in the way of learning how to verify errors from an algorithm and managed them on a checklist. Moreover, from the six sigma perspective, it helped to improve observations about knowing how to implement the DMAIC methodology in a project.
Mathematical logic, engineering, and technology, underlie the functionality of almost every process from a simple workplace up to full-time research positions. It is this diversity of applications that intrigues and makes people want to study the field of complex systems in depth. Moreover, logistic and reasoning abilities are pivotal for virtually all areas of study, consequently giving a very strong base for a wide range of careers. Because of these observations, students enroll in the graduate program of systems engineering.

Learning the essential functions of integration, validation, and management, as well as an insight into manufacturing processes, will enhance academic preparation and can also help to make substantial contributions into engineering professionalism.

Activity diagrams, who became an essential part to the program, also play a vital role in engineering. In the working field, constructing activity diagrams will help to obtain a better visualization of the process or lifecycle of the system that is being studied, as well as the information that is being flowed.

This program, contains a variety of courses to help understand many aspects about working in the industry, learning the applications of Six Sigma and CMMI methodology, and permitting a student to increase its confidence, teamwork, communication, and leadership skills; developing the student into a solid candidate with professional capabilities towards the engineering environment.