

UNIVERSIDAD TÉCNICA DEL NORTE



**FACULTAD DE INGENIERÍA EN CIENCIAS APLICADAS
CARRERA DE INGENIERÍA EN SISTEMAS COMPUTACIONALES**

**PROYECTO PREVIO A LA OBTENCIÓN DEL TÍTULO
DE INGENIERO EN SISTEMAS COMPUTACIONALES**

TEMA:

**“SISTEMA WEB DE GESTIÓN DE LA INFORMACIÓN DEL INSTITUTO DE
EDUCACIÓN FÍSICA DE LA UNIVERSIDAD TÉCNICA DEL NORTE” SIGIEF-
UTN”.**

RESUMEN TÉCNICO

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**“SISTEMA WEB DE GESTIÓN DE LA INFORMACIÓN DEL
INSTITUTO DE EDUCACIÓN FÍSICA DE LA UNIVERSIDAD
TÉCNICA DEL NORTE SIGIEF – UTN”**

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Summary.- Web System Information Management Technical University North SIGIEF - UTN has been developed based on the need for continuous improvement that occurs daily in any institution and especially if it is an educational institution, as future challenges are made more visible by the very fact of technological advancement that the contemporary world.

With this background, this system is one of the most convenient alternatives in an effort to reduce the execution time of different processes and above all quickly and safely, always ahead with the predisposition to engage as needed to generated.

I. INTRODUCTION

The control, administration and information management are key aspects determine the proper functioning of any institution, we must consider that in times past was handled information in a manual and

this was stored in physical files that caused damage and even loss of these external factors, but at present automation processes has enabled better management and reduction in run-time processes, which has led to increasing quality standards in services.

The purpose of this thesis is to solve the problem of information management in order to contribute to the fulfillment of the vision and institutional mission, hand in hand with the latest technology trends.

II. CONTENIDO

A. SCOPE

This project aims to:

Develop and implement a software application that solves the problems institutional management and

information management at the Institute of Physical Education TECHNICAL COLLEGE NORTH, which consist of 5 modules listed below:

a) "OUR CONSTITUTION" which will detail the information the staff working with the school, the legal basis, staff payroll with the counting and the functions they perform.

b) "Physical SUPPLEMENTATION PROGRAM," which consist of student information, faculty with their specialized and course, also the sport that is pursuing together with the schedule, the physical location and registration number.

c) "USE OF SCENARIOS", in which an inventory of existing physical spaces in the UTN also will have knowledge of the administrative staff responsible for certain physical space, will be managed schedules for each physical space will be taken into account when teacher responsible for each group and also will be a distribution of spaces.

d) "sports programming" refers to the various sports programs run by the Institute of Physical Education, which will determine the type of activity to perform, with its own schedule and track the status of it and the physical space to be developed.

e) "Reports and Statistics", which will show reports, both general and detailed by sport.

B. Positioning

This system will allow the UTN automate information management within the Institute of Physical Education, and you will get a simple and rapid access to information, to display an interface that is uncomplicated in design and is especially friendly and easy use, taking into account that the required information may be accessed in real time and will have the accuracy, security and constant updating, advantages of a system that meets the quality standards necessary for

its development and implementation at the Technical University of North.

C. Defining the problem

The problem with	<p>The Institute of Physical Education, an agency of the Technical University North does not have a computer system to perform the various processes in an orderly, effective and efficient.</p> <p>There are processes that are performed manually.</p> <p>In the absence of a systematic, physical documents are impaired and in some cases lost or mislaid by the vast number.</p>
It affects	administrative staff, teachers and students of the Institute of Physical Education at

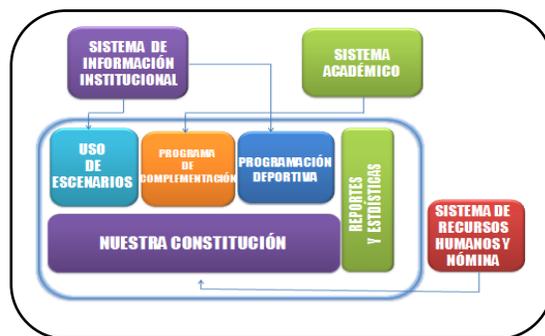
	the Technical University of the North that are part of the different processes that take place in this unit, such as registration, evaluation, sporting events and use of physical settings
The impact of this is	Generate systematic, organized and accessible from locations outside of the institution, without the need for large bandwidth and that this process becomes simple, fast, automated, also has a friendly interface that allows better interaction between user and system.
A successful solution should	systematize the different processes that are generated at the Institute of

	Physical Education, as well as to integrate this system already implemented at the institution.
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Source: Own
Table 1 Definition of the Problem

D. Product Overview

The product to be developed is a system for information management at the Institute of Physical Education North Technical University, and is developed to automate all processes and activities performed under this unit of the institution.



Source: Own
Figure 1 Product Overview

E. Project Overview

As part of the automation process established by the Department of Computing, is considered necessary the creation of the Web of Information Management at the Institute of Physical Education NTU to improve the management of activities related to the university community, likewise greater control and efficiency in the processes that are developed in this unit.

Based on information collected from the various meetings with Stakeholders identified the main activities which are detailed below:

Within the submodule "OUR CONSTITUTION" is specified the details of history of the Institute of Physical Education, and its legal basis.

You can make inquiries related to payroll and personnel functions performed at the Institute.

In the submodule "COMPLEMENTACIÓN FÍSICA PROGRAM", we have access to information of each student, the faculty with their specialized and course, also the sport that is pursuing together with the schedule, the physical location and registration number.

In the submodule "USE OF SCENARIOS" allow us to carry out inventories of existing physical spaces in the UTN also will have knowledge of the administrative staff responsible for certain physical space, will be managed schedules for each physical space so that no cross or problems, consideration shall be given to the teacher responsible for each group and also will be a distribution of spaces.

In the submodule "SPORTS PROGRAMMING" is recorded various sports programs run by the Institute of Physical Education, which will determine the type of activity to perform, with its own schedule and track the status of it

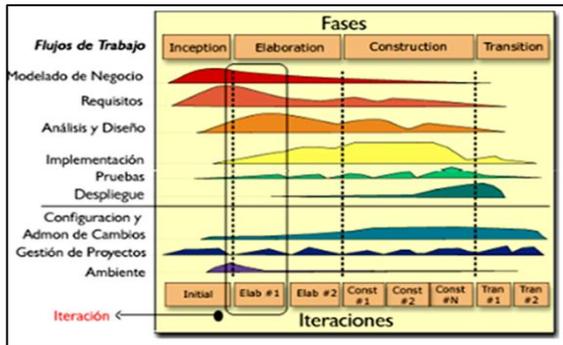
and the physical space to be developed.

Finally, in the form of "Reports and Statistics" will show various reports, both general and detailed by sport.

F. RUP

The iterative and incremental process of RUP is characterized by the parallel realization of all development disciplines throughout the project, which most of the artifacts are generated very early in the project but are developing a greater or lesser degree of according to phase and iteration of the project. (Wikipedia)

The following figure illustrates this approach, it overshadowed the brand's emphasis each discipline (work flow) at a particular time of development. (Scrib)



Fuente:^[3]

Figura 2.1 Fases y Flujos de trabajo en Metodología Rational Unified Process (RUP)

III. CONCLUSIONS

- The development and implementation of Web System Management Information Institute of Physical Education at the Technical University of North SIGIEF-UTN, possible to standardize the processes for automating the various activities it performs, always within the fulfillment of the objectives institutional.
- The implementation of this Information System has helped meet all requirements of the Institute of Physical Education and the university community services such as information management: evaluating the process of physical supplementation programs, using scenarios, constitution and legal basis, payroll and personnel

functions, sports programming, information will be valuable to this agency in making decisions that may affect the smooth running of the institution.

- The development of this system allowed to increase the quality of management information, streamlined manual processes consume resources and time, and had not the necessary security nor with the updated information, as now you can do so Through this system.

- Thanks to the Web Management System of Information of the Institute of Physical Education (SIGIEF-UTN), significantly reduced the vulnerability of information and optimized its management, improving its integrity and credibility.

- This system achieved a significant reduction in the time of execution of the processes performed by the Physical Education Institute, improving service for users of this dependence and compliance deadlines for carrying out the activities it performs .

- Using Oracle Database ® and is guaranteed data security and access to them, assuring users that the required information is correct and accurate.

- The use of Oracle ® Discovery will allow authorities to better manage

[3] "RUP Etapa diseño", 2007, <http://www.scribd.com/doc/395783/RUP-etapa-diseno>

information and help in making decisions because they can make their own inquiries and statistics according to current needs and obtaining information online.

IV. RECOMMENDATIONS

To ensure the proper functioning of Web Management System of Information of the Institute of Physical Education, you must:

- Active participation of individual users and their familiarity with the mechanisms established for the different processes.

- It is recommended that socialization phase of the process activities that have the Institute of Physical Education, especially the process of Complementation Physics Programs, so that users know what to do and how, in order that the information entered is correct.

- A post, a major recommendation to control physical access to facilities of the Institute of Physical Education would be to implement admission

control using a magnetic card which is registered in the system SIGIEF-UTN, that in this way can perform control using sensors, of those entering the facility and whether they are students, teachers, administrative and general public.

- For the fact that APEX is a simple to use tool and above all to develop enterprise applications are highly secure and fast recommended a thorough investigation of the tool to implement a virtual tour of the physical spaces of the Institute and generate more attractive to college.

- The APEX tool has a wide range of benefits, which could add functionality to the Web Management System The Institute of Physical Education implemented sub-modules that have not been considered in developing this project which will be generated according to the need for the Institute of Physical Education.

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