



GRADUATE COLLEGE

CETYS UNIVERSITY GRADUATE COLLEGE

Graduate Educational Model

Graduate College Mission

The Graduate College is an academic unit of the CETYS University System that has the firm goal of preparing specialists of the highest level in its various areas of specialization, as well as the design and development of applied research projects that contribute to the improvement and innovation of the organizations in which students/alumni work, and thus through the preparation of students and their projects, the Graduate College contributes to the improvement of the state of Baja California as well as the region and nation.

Graduate College Vision

The vision of the Graduate College is to be an academic unit within CETYS University that strongly promotes the development of the region by way of academic programs that are linked with companies and organizations of the same region, where applied research is systematically used for the development of projects that are focused on the solution of current problems within these organizations, always seeking to enhance their quality and competitiveness.

Graduate Educational Model

The Educational Model of the Graduate College is based on the four essential aspects that the institution has established for curricular development and design: (1) Academic Program Structure; (2) Differentiation Elements or “shades”; (3) Pedagogical Principles; and (4) Philosophical Principles. For further explication and greater understanding of each of these dimensions, please refer to the document titled Institutional Educational Model [1].

In this document the Graduate Educational Model and its implementation will be explained in a brief and concise manner.

The Graduate Educational Model is based on application, which means that there is a strong emphasis on professional practice. This is achieved by expecting professors to assist students in linking the contents of the courses with the students’ work environment and practice, while also helping them to learn how to develop their own knowledge relative to the topics of the particular

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course. To achieve this, the professor designs activities so that the students may apply the four pedagogical principles: learn to learn, learn to do, learn to coexist and learn to be. It is expected that based on individual and group work that is guided by the professor, the student will be able to identify, assess, and solve problems in his/her own specialized and professional context, as well as to be able to articulate and discuss his/her ideas with others. Our model considers that our students are working adults and that their educational interests come primarily from their work experience. At the same time, our model requires that our professors have ample knowledge and experience relevant to the courses they teach and also be knowledgeable of educational methods so as to be able to function as a consultant and professor to the students.

The focus of the courses is centered on the activities that students develop, with faculty guidance and review, inside or outside of the classroom. The faculty use teaching-learning systems that are based on innovative practices, such as case studies, simulations of organizational decision making, conferences, project development based on the student's work experience, and always emphasizing team work and group activity.

Our model also establishes three differentiation elements or "shades": applied research, internationalization, and continuous improvement. To promote these nuances throughout the model, we contract professors with experience in research as well as professors from foreign universities, and a methodology of personalized follow-through with students so they receive much valuable feedback.

A substantial percentage (at least 33%) of the faculty who teach in the masters programs have a doctoral degree in their area of expertise as well as outstanding research projects and publications and/or consulting projects in their fields. The faculty that do not have a doctoral degree, have a masters degree at the minimum and outstanding professional work experience in high level administrative and specialized jobs, and also have the skills and ability to transmit their experience and knowledge.

In the case of our doctoral programs, 100% of the professors have a doctoral degree and extensive experience in research and publications.

Distinctive aspects of our educational model:

1. The academic programs foster the development of skills through continuous improvement projects relating to the students' jobs. This is achieved because our students regularly use their job projects as examples for their academic work and the professor is able to act as a "consultant" and provide personalized follow-through.
2. We provide knowledge and skills pertaining to tools that help solve problems that students may face regularly. Our courses function as a technology transfer project that is based on the professors' problem solving experience.
3. The professors have extensive experience in their fields because they are also frequently immersed in the workforce, and also participate in research and publications. This is achieved by recruiting nationally and internationally known professors, a fundamental activity of our academic coordinators.



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4. Professors routinely promote teamwork and interaction through various activities so that students are engaged and regularly interact with other students to discuss differing points of view and experiences. The majority of the professors regularly use collaborative and group techniques, so teamwork becomes one of the distinctive features of our graduate programs.
5. In class, theory and practice are covered and discussed and students are expected to apply their knowledge and skills. The application of knowledge and skills is achieved during the course as students use their class projects to address real issues pertaining to their jobs and professional environments.
6. Flexible scheduling allows students to participate in our graduate programs while also being employed full-time; also, students do not have to be enrolled full-time. Our programs are scheduled in the afternoon-evening hours and Saturdays, making it relatively easy and convenient for our students to arrange classes around their employment schedules.

Academic Credit Model

All of our graduate programs are offered in a mixed modality, which means that in each course there will be two types of learning activities:

1. Learning activities which are guided directly by a professor on-site at CETYS University or at another site.
2. Learning activities that are independently completed by the student on or off site but which are directly related to the course. It should be noted that “independent” projects are also supervised and evaluated by the faculty.

In general the student must work 16 hours, combining both types of activities to obtain one credit. In most cases, graduate courses are 6 credits, implying 96 hours of academic work that integrates both types of activities. Thus, courses have 36 hours that are scheduled as “professor-guided” learning activities on or off site, and 60 hours of learning activities that are “independently” completed by the student.

Depending on the graduate program, courses may require 2, 4, 5, 6, 12 or 25 credits. The general rule for obtaining the maximum number of class hours is $[(credits)*16/2.67]$. However, there are situations in which all activities are completed independently by the student who in turn is given guidance by the program coordinator or an independent tutor. This is common in dissertation courses.

The masters programs are comprised of 14, 15 or 16 courses depending on the area of study. Business and Engineering programs have 14 courses, as do Psychology and Social Sciences while the Masters in Education has 15. The 14-course masters programs have 84 academic credits, which means academic work equivalent to 1344 hours in which 504 of those hours are guided instruction and 840 hours are independent work.

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The doctoral programs are comprised of 14 courses, where 3 courses are dedicated to the dissertation. The doctoral programs have 88 academic credits (beyond a master's degree). This means academic work equivalent to 1408 hours in which 440 are guided instruction and 968 are independent (including the doctoral thesis).

Curricular Management of the Graduate Programs

By this we mean the way in which a student undertakes his masters or doctoral program over time. It is important to note that the masters and doctoral programs are designed in a way that there is no strict serialization of courses, instead there are specific knowledge and skill requirements that the student must fulfill to obtain effective learning in the course and this is indicated in the official course programs.

Each academic coordinator is responsible for the scheduling of courses that will be offered during the year for the programs he/she coordinates, so the students may know which courses are offered for the masters or doctoral programs. To select a course, students must consult the masters program and its suggested sequence of courses. However, there are cases in which the student petitions, to the academic coordinator, to take a course that is out of the suggested sequence; the request requires approval before the student may enroll in the course. It is important to note that our students are adults who are employed and have other responsibilities (e.g., families) that take up much of their time and they themselves generally know how many and which course they should take; in cases where students need assistance, the academic coordinator serves as an advisor and helps them make the best decision.

The masters and doctoral programs have 14, 15 or 16 courses. The courses are programmed in trimesters, 4 times a year. The time it takes to complete a masters degree depends on how many courses a student takes in one trimester (usually 1 or 2), and the frequency of re-enrollment. Our re-enrollment rules allow a student to choose if he/she will enroll or not in a given trimester. This allows a student to complete a masters program in a minimum of 1 year 7 months or a maximum of 3.5 years for the 14-course programs (14 trimesters), assuming he/she maintains active status (re-enrollment) throughout this time. If not, the time to finish could extend for up to a maximum of 10 years for doctoral programs and 6 years for masters programs.

There is a legal consideration which we consider requires some additional explanation. The educational authorities in Mexico consider each emphasis within the graduate programs as separate and distinct degrees. For example: if a student obtains an MBA degree with an emphasis in finance he obtains a degree that is legally different from a student that obtains an MBA with a marketing emphasis requiring separate legal documentation and student registries. The operation of the graduate programs does not use this distinction since it serves no academic purpose and considers all MBA students as being in the same program, even to the point of granting just a single merit award upon graduation. Also, if there is any change made to the graduate program, this requires that it be registered as a new program even though it may only imply adding an additional course or updating

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the content of an existing course. These reasons would explain the fairly large number of official programs that appear in our data tables.

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Types of students

For the masters programs: students should be graduates of baccalaureate programs who are employed in business or industry, public or private, in the region and that demand specialized and high quality education and training via a graduate program. Also, students must meet a general profile to be accepted into the Graduate College which considers the following aspects: (1) currently working or having previous work experience (at least two years); (2) skills in reading and comprehension of English language documents relating to his/her professional field of knowledge; and (3) skills and aptitudes for graduate studies (measured by the PAEP examination which is similar to the GRE).

For the doctoral programs: students should be graduates of masters programs in the same field of study pertaining to the doctoral program or graduates of other masters programs but with extensive experience in the field of study pertaining to the doctoral program. By the term “extensive experience” we mean at least 4 years of documented work experience in the field of study pertaining to the pertinent doctoral program, including work that may have been done professionally or academically. Candidates are also required to have an acceptable score on the PAEP examination and have English proficiency equivalent to at least a 540 TOEFL score.

Types of professors

For the masters programs all professors should be experts in the program area in which they teach, and have at least the degree of the level at which they are teaching. Currently, at least 33% of out professors have a doctoral degree for the masters programs (33% is the minimum standard established by FIMPES, our Mexican private university accreditation organization). Furthermore, we seek to maintain a balance of professors with professional experience and professors with careers in higher education. This latter type of professor may be CETYS University professors or professors from other prestigious national or foreign universities. The ideal mixture for the college would be 50:50.

For the doctoral programs all professors should be scholars and experts in the areas in which they teach as well as have experience in applied research and posses a doctoral degree (or equivalent). These professors may be CETYS University professors or professors from other prestigious national or foreign universities.



Quality of the Graduate Programs

The quality of the graduate programs is achieved and maintained through a focus on continuous improvement by the academic coordinators, and is centered on 4 dimensions: (1) professors; (2) programs; (3) academic resources; and (4) learning outcomes.

1) **Professors:** two aspects are analyzed:

Preparation, training and experience: In this aspect the curriculum vitae of the professor is evaluated, seeking a degree in the area of study in which he/she teaches, recognized professional experience, and evidence of knowledge and experience in using educational techniques and methodologies appropriate to our educational model.

Performance during the course: Although educational diversity, innovation, and academic freedom are promoted, every professor is evaluated by his/her students at the end of the course. The evaluation is centered on the professor's performance during the course. Some evaluation topics and items follow:

- a. The level of expertise that the professor demonstrated regarding the course material.
- b. Clarity and explanation of learning outcomes, goals, evaluation method and student responsibilities.
- c. The ability of the professor to communicate the content of the course in a clear and effective way, by discussions, explanations or other methods.
- d. Learning outcomes and the evaluation process (exams, homework, etc.).
- e. Availability and disposition of the professor to attend to questions, tutoring, etc.
- f. Given the nature and learning outcomes of the course, the way in which the professor organized the course.
- g. Selection and usefulness of the course materials (books, presentations, etc.).
- h. Level of interest generated by the class activities.
- i. Level of professor's academic involvement with the students.
- j. Overall evaluation of the professor of this course.

The evaluation of each item by the students is based on a scale of 1 to 5, where 1 is the lowest score and 5 is the highest. A quality standard that has been used in the graduate programs is to maintain a global evaluation with a score of or around 4 as minimum to continue as an instructor in the program (an average of 3.5 would be sufficient). If a professor's evaluation is below 3.5 4 then a detailed analysis is undertaken by the academic coordinator and the dean of the graduate school that includes letting the professor know the areas that need improvement and may be considered for other periods if there are circumstances that might support such assignment the next time he/she teaches.

2) **Academic Programs:** two aspects are analyzed:

Academic Review: Every two years academic programs undergo a review regarding content and the needs pertaining to the environment to which the particular program is oriented; this includes reviews by employers and comparison with other programs from national and



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foreign universities. The results are then used to determine what changes, if any, need to be made to academic programs.

Academic Consultant: The graduate programs now counts on an external academic consultant from a U.S. doctoral-granting, Research I university who has over 30 years of experience in graduate education, program evaluation, program development, and accreditation and whose primary responsibility includes continuous program evaluation of the graduate level programs, with a particular emphasis on the doctoral programs.

3) **Academic Resources:** two aspects are analyzed:

Quality: The graduate programs must have high quality materials and the information required for courses and for the participants to complete their projects and dissertations.

Accessibility: Every student must have access to the materials and information needed for their programs, courses, projects, and dissertation.

For evaluating this component, all students are asked to respond to a survey regarding the academic resources they needed for their programs and courses and the support they received from the library.

4) **Learning Outcomes/Students:** every two years there is an analysis of the learning outcomes of the alumni. This evaluation attempts to determine if the curricular learning outcomes are being achieved and at what level. The results are then used to determine the adjustments that need be made to our model. The learning outcomes of our programs can be explained as follows:

- a) Our alumni acquire abilities and competencies in the development of projects that improve the organizations in which they work.
- b) Our alumni acquire competencies in methods and strategies pertaining to their area of expertise.
- c) Our alumni understand and apply research methodologies to addressing current issues and problems related to their area of expertise.

For realizing this evaluation, open sessions are conducted with alumni, employers and professors of our graduate programs, as a result of these activities a report is generated with suggestions for short, medium, and long-term initiatives and strategies. The most recent of these sessions was conducted in September 2006 and the results were used in preparing the Graduate College Development Plan *Towards 2015*.



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Table 1. Structure and Organization of the Graduate College

STRUCTURE OF THE GRADUATE COLLEGE			
TOTAL NUMBER OF PEOPLE (21)			
<p>COLLEGE DIRECTOR (1 full-time)</p> <ul style="list-style-type: none"> The Director's primary responsibility is to guide and oversee the work of the College, including presenting to the president and administrative vice-president an annual work plan and budget. The Director must seek research projects and develop special activities and events that enhance the image and positioning of the Graduate College in the greater community. The Director must establish external linkages, including collaborative agreements with governmental organizations and business groups. The Director must also report directly to the president and board members. 			
<p>ACADEMIC COORDINATOR (4 full-time)</p> <ul style="list-style-type: none"> Defines, manages and supervises the operation of the strategies of the academic programs under his/her responsibility. Coordinates student admissions. Supports the enrollment process. Decides which courses will be offered (annually and by trimester). Defines academic requirements for budgeting. Defines equipment requirements for budgeting purposes. Seeks and recruits professors. Provides external linkage. Academic guidance for students. Academic assistance for students. Promotes research projects. Evaluation of professors and learning outcomes. Curricular evaluation and improvement. 	<p>OPERATIONS COORDINATOR (3 full-time)</p> <ul style="list-style-type: none"> Design and management of the budget according to the requirements of the other co-ordinations. Manages and operates the graduate admissions process. Manages and operates the enrollment process. Manages and operates the student billing and payment process. Manages and operates the administrative hiring process pertaining to professors. Provides internal linkage. Manages and operates class logistics. Works with other campus departments and support areas. Spokesman of the Graduate College. 	<p>LINKAGE COORDINATOR (1 full-time)</p> <ul style="list-style-type: none"> Design and organizing of professional community and governmental linkage programs. Defines requirements for budgeting purposes. Manages event logistics. Manages and operates business relations. Manages and operates government relations. Manages and operates the IDE. 	<p>RESEARCH COORDINATOR (1 full-time)</p> <ul style="list-style-type: none"> Manages the presentation of proposals to research funding agencies. Manages research with external funds. Linkage with government, foundations and other research funding agencies. Conducts research projects. Represents the Graduate College in research meetings. Manages the publishing of research reports. Manages the evaluation of research.
<p>ACADEMIC SUPPORT COORDINATOR (4 part-time)</p> <ul style="list-style-type: none"> Reports directly to the Academic Coordinator. Conducts the same activities as the academic coordinator but within the context of one specific program. The programs that have a specific coordinator are: <ul style="list-style-type: none"> Doctorate in Business Doctorate in Education Masters in Taxes Masters in Environmental 	<p>ADMINISTRATIVE SUPPORT ASSISTANTS (4 part-time)</p> <ul style="list-style-type: none"> Each Operations Coordinator has one administrative support assistant. In the case of Mexicali, there are 2 administrative support assistants. 	<p>RESEARCH ASSISTANTS (1 part-time)</p> <ul style="list-style-type: none"> Currently there is one strategic project assistant who provides administrative support for projects. 	<p>PROJECT ASSISTANTS (1 part-time)</p> <ul style="list-style-type: none"> Currently there is one strategic research assistant who provides administrative support for research projects.



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Table 2. Masters Programs: Coordination, Faculty, and Students.

BUSINESS & ADMINISTRATION	ENGINEERING & APPLIED SCIENCES	SOCIAL SCIENCES & HUMANITIES	
		PSYCHOLOGY AND SOCIAL SCIENCES	EDUCATION
<ul style="list-style-type: none"> • Masters in Business Administration (MBA) with 11 tracks: <ul style="list-style-type: none"> ○ Finance ○ Human Resources ○ Marketing ○ International Business ○ Economic Development ○ High Level Management ○ Technology Management ○ Public Management ○ Quality ○ Supply Chain ○ Health Resources Management • Masters in Marketing • Masters in Human Resources • Masters in Finance • Masters in International Business • Masters in Taxes • Masters in Public Management • Masters in Economic Development 	<ul style="list-style-type: none"> • Masters in Science in Industrial Management • Masters in Science in Materials Management and Logistics • Masters in Science in Quality and Productivity • Masters in Science in Distributed Computer Systems • Masters in Science in Networks and Telecommunications • Masters in Sciences in Automation and Process Control • Masters in Science in Manufacturing Design and Processes • Masters in Science in Environmental and Sustainable Development 	<ul style="list-style-type: none"> • Masters in Psychology with 5 tracks: <ul style="list-style-type: none"> ○ Clinical Psychology ○ Family Therapy ○ Special Education ○ Organizational Development ○ Criminology • Masters in Criminology • Masters in Corporate Law 	<ul style="list-style-type: none"> Masters in Education
STUDENTS	STUDENTS	STUDENTS	STUDENTS
Mexicali 300 Tijuana 150 Ensenada 60 BCS 20 SONORA 0 TOTAL 510	Mexicali 150 Tijuana 90 Ensenada 15 BCS 0 SONORA 0 TOTAL 255	Mexicali 40 Tijuana 20 Ensenada 10 BCS SONORA 0 TOTAL 70	Mexicali 120 Tijuana 100 Ensenada 40 BCS SONORA 40 TOTAL 290
ACADEMIC COORDINATORS	ACADEMIC COORDINATORS	ACADEMIC COORDINATORS	ACADEMIC COORDINATORS
1 full-time 2 part-time	1 full-time 1 part-time	1 full-time 1 part-time	1 full-time 2 part-time
FACULTY	FACULTY	FACULTY	FACULTY
TOTAL 50 CETYS 10 EXTERNAL 40 FOREIGN PROFESSORS 5	TOTAL 25 CETYS 15 EXTERNAL 10 FOREIGN PROFESSORS 4	TOTAL 16 CETYS 5 EXTERNAL 11 FOREIGN PROFESSORS 0	TOTAL 20 CETYS 12 EXTERNAL 8 FOREIGN PROFESSORS 0



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Table 3. Doctoral Programs: Coordination, Faculty, and Students.

BUSINESS & ADMINISTRATION	ENGINEERING & APPLIED SCIENCES	SOCIAL SCIENCES & HUMANITIES	
		PSYCHOLOGY AND SOCIAL SCIENCES	EDUCATION AND VALUES
• Doctorate in Business	• Doctorate in Engineering	• Doctorate in Psychology	• Doctorate in Education
STUDENTS	STUDENTS	STUDENTS	ALUMNOS
Mexicali 28 (8 inactive) Tijuana 10 Ensenada 4 TOTAL 42 (5 graduated)	Mexicali 8 (all inactive) Tijuana 0 Ensenada 0 TOTAL 8 (1 graduated)	Mexicali 0 Tijuana 22 (all inactive) Ensenada 0 TOTAL 22 (5 graduated)	Mexicali 10 Tijuana 8 Ensenada 0 TOTAL 18
ACADEMIC COORDINATORS	ACADEMIC COORDINATORS	ACADEMIC COORDINATORS	ACADEMIC COORDINATORS
1 full-time	1 part-time	1 full-time	1 part-time
FACULTY	FACULTY	FACULTY	FACULTY
TOTAL 24 CETYS 2 OTHER UNIV. 22 NATIONAL 5 FOREIGN 21 Currently there are three cohorts/generations: Gen 2004, concluded 14 courses. Gen 2005, concluded 10 courses. Gen 2006, concluded 3 courses.	TOTAL 16 CETYS 1 OTHER UNIV. 15 NATIONAL 1 FOREIGN 14 Currently there are no scheduled courses, only dissertation guidance and follow up by student demand.	TOTAL 9 CETYS 4 OTHER UNIV. 5 NATIONAL 9 FOREIGN 0 Currently there are no scheduled courses, only dissertation guidance and follow up by student demand.	TOTAL 6 CETYS 1 OTHER UNIV. 5 NATIONAL 1 FOREIGN 5 Currently there is only one cohort/generation that began in January of 2006 and there are 5 scheduled courses.

Academic Support and Faculty

The graduate programs have two types of academic support:

1. **Academic Coordination.** These individuals are responsible for the administrative and academic support activities pertaining to the graduate programs, including providing academic support for both professors and students. The activities of the Academic Coordinator are as follows:
 - a. Defines, manages and supervises the operations and strategies of the academic programs.
 - b. Manages the student admission process.
 - c. Supports the student enrollment process.
 - d. Identifies which courses will be offered (annually and by trimester).
 - e. Identifies academic requirements for budgeting purposes.
 - f. Identifies equipment requirements for budgeting purposes.
 - g. Seeks and recruits professors.
 - h. Provides external linkage.
 - i. Provides academic guidance and support for students.
 - j. Provides academic assistance for professors.
 - k. Promotes research projects.
 - l. Manages learning outcomes and faculty evaluations.
 - m. Manages curricular evaluation and improvement.

Currently there are 4 full-time coordinators, each assigned to an academic area. Also, there are 4 academic areas that have specific academic support coordinators. These coordinators are CETYS University professors and are full-time professors in the Undergraduate Schools of the CETYS University campuses. However, they are fully qualified and thus hired by the Graduate College as associated professors in support of the academic coordination and work closely with the graduate academic coordinator.

2. **Faculty.** These are the professors who teach classes, participate in research projects, and provide guidance on student theses/dissertations. Currently there are 130 professors that participate throughout the academic year; of these, 30 are hired to teach courses for the doctoral programs. These latter professors are primarily individuals who hold doctorates and are also professors at other national or foreign universities. On the other hand, 100 professors participate in the masters programs, of which 50% are full-time CETYS University professors who are hired to teach graduate courses and also provide guidance and tutoring to students. The other 50% are professors that come from the workforce, other universities, and the business community. One of the Graduate College's quality indicators is to achieve a goal of having at least 33% of the professors in the masters program having a doctoral degree. As noted above, our Mexican accrediting agency, FIMPES, requires 33%. Of course, our goal and commitment are to continue to increase this percentage.

The following table, Table 4, presents the academic areas and their corresponding Academic Coordinators and Academic Support Coordinators:

Table 4. Academic coordination for graduate programs

AREA	FULL TIME ACADEMIC COORDINATORS	ACADEMIC SUPPORT COORDINATORS
ENGINEERING <ul style="list-style-type: none"> • Masters of Sciences • Doctor of Engineering 	M.S. Miguel Salinas (currently enrolled in a doctoral program)	Dr. Isaac Azuz
BUSINESS <ul style="list-style-type: none"> • MBA • Master of <u>specific administration themes</u> <u>Finance, Human Resources, Marketing, Tax Policy.</u> • Doctor of Business Administration 	MBA Mario Dipp (currently enrolled in a doctoral program)	Dr. Héctor Maymi MA Hector Gíterrez Taxes MA Carmina Contreras Mkt MA Cinthia Carrasco HR
SOCIAL SCIENCES AND HUMANITIES <ul style="list-style-type: none"> • Master of Psychology • Master of Law • Master of Education • Doctor of Education • Doctor of Psychology 	Dr. José Gpe. Hernandez M.S. Rosa María Lamadrid (currently enrolled in a doctoral program)	MDC. María Luisa Walther Dr. Alberto Gárate M.A. Teresa Mercado Ponce (currently enrolled in a doctoral program)

References

[1] *Institutional Educational Model*. Internal Report. Academic Director. CETYS System.