



Conceptual Framework

University of Puerto Rico at Mayagüez
Precondition 4 for First NCATE Accreditation

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Precondition 4.1 The vision and mission of the institution and unit

INTRODUCTION

The University of Puerto Rico at Mayagüez (UPRM) was established as a land grant college in 1911. The campus has the most selective student admission criteria in Puerto Rico. Its graduates are recruited by over one hundred companies and government agencies every year. For the past five years the total enrollment has been fairly stable averaging 12,200 students with roughly 40% enrolled in the College of Engineering.

The University of Puerto Rico was created by an act of the Legislative Assembly on March 12, 1903. Following the extension of the benefits of the second Morrill-Nelson Act to Puerto Rico in 1908, what is now the University of Puerto Rico, Mayagüez Campus (UPRM) began with the establishment in Mayagüez of a College of Agricultural Sciences in 1911 and a College of Engineering in 1913, conjointly known as the College of Agriculture and Mechanical Arts (CAAM). In 1942 the campus was reorganized and given partial autonomy under the direction of a vice chancellor. A division of science, which eventually became the College of Arts and Sciences, was created in 1943, and the College of Business Administration was added in 1970. In 1966, the Legislative Assembly reorganized the University of Puerto Rico into a system of semi-autonomous campuses, each under the direction of a chancellor and CAAM became UPRM. Today, UPRM continues its development in the best tradition of a Land Grant institution as a coeducational, bilingual, and nonsectarian institution as stated in the Middle States Commission on Higher Education UPRM Report of 2005. In the semester of fall 2006, UPRM has an enrollment of 12,338 students, of which 6,098 (49.4 %) are female, and 1,080 (8.75 %) are graduate students (Figures 1 & 2). Among the four colleges, the largest enrollment is in the College of Engineering with 4,899 (39.7%) students (as stated in the Registered Students Report in August 2006, <http://oiip.uprm.edu/informes/>)

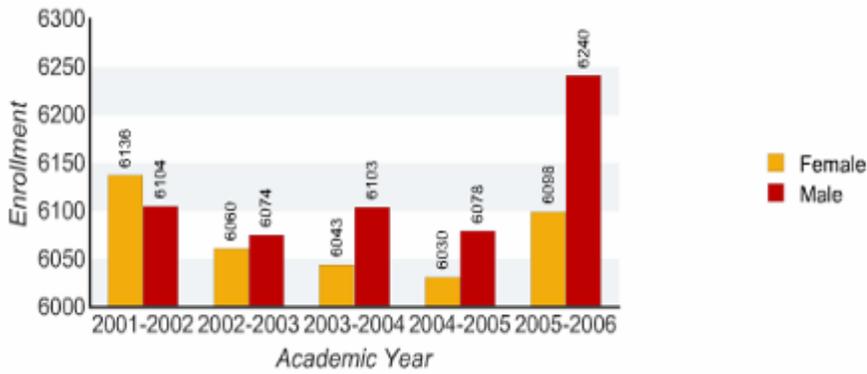


Figure 1. Enrollment by gender, fall 2006 -2007 session

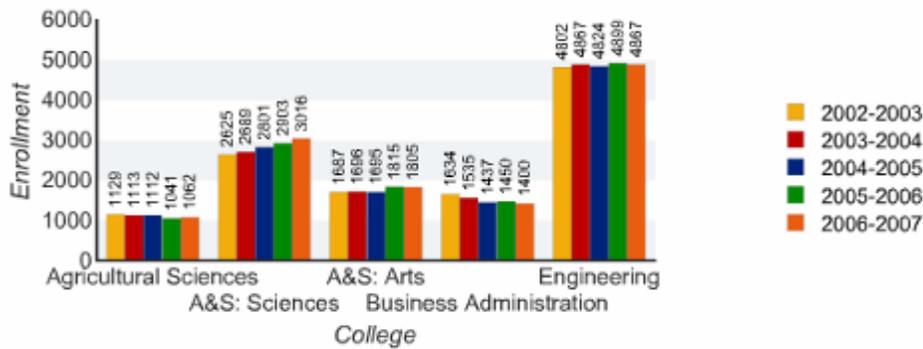


Figure 2. Enrollment by college, fall 2006 -2007 session

See dynamic up-to-date charts of student enrollment in http://oiip.uprm.edu/charts_menu.php

Description of the Teacher Preparation Programs

The unit with the primary authority and responsibility for teacher preparation programs at the University of Puerto Rico, Mayagüez Campus is the Academic Affairs Deanship. The Teacher Preparation Program of Secondary Education housed in the Division of Continued Education and Professional Studies and the Department of Agricultural Education under the College of Agricultural Sciences, respond to the Dean of Academic Affairs for its overall administration and operation.

The Teacher Preparation Program of Secondary Education offers a curricular sequence of courses in education required by the Puerto Rico Department of Education for certification as a secondary education teacher. The Teacher Preparation Program of

Secondary Education does not offer a bachelor's degree, so the students must either have already completed a bachelor's degree or be enrolled in a bachelor's program in the College of Arts & Sciences, the College of Business Administration, or the College of Engineering. The Teacher Preparation Program in Secondary Education offers an intensive multidisciplinary curricular sequence designed for students that are completing or have completed a bachelor's degree in the College of Arts and Sciences or in the College of Business Administration. Candidates that satisfactorily complete the program requirements and approve the state licensing exam (PCMAS in Spanish) are certified by the Puerto Rico Department of Education as secondary school teachers.

The Department of Agricultural Education offers both a bachelor's degree and a curricular sequence of courses for students who wish to become certified agriculture teachers. These programs prepare candidates to teach agriculture in secondary schools and to do public relations work related to agriculture in federal and state agencies, business, commerce, and industry.

A distinctive aspect of UPRM has been its commitment, to a combination of high quality programs in agricultural sciences, engineering, arts and sciences, and business administration. UPRM has effectively integrated the curricular sequence of the teacher preparation into the bachelors' programs of the disciplines taught in secondary schools. For many years UPRM candidates have had the highest individual and institutional average scores on the teacher's state licensing exam in Puerto Rico. School districts from Texas, Connecticut, Pennsylvania, New York, the Virgin Islands, and Aruba recruit graduates from the UPRM teacher preparation programs.

UPRM commitment to excellence

Recognizing that success of an academic institution in today's changing environment requires processes aimed at continuous improvement, the UPRM requires every program and organization to develop a strategic plan for improvement that includes professional accreditation when available. For example, ABET accreditation is a top priority for the College of Engineering and currently all engineering programs are accredited under the new ABET EC 2000 Criteria. ABET 2000 is based on outcomes,

rather than simply input, and requires the implementation of a continuous quality improvement (CQI) process in each accredited program, as well as within the College itself. Currently efforts are underway at UPRM to accredit all its programs and organizations by the year 2010, such as: the teacher preparation programs, the business administration programs, the museum, and the library (Middle States Commission on Higher Education UPRM Report [MSCHE-UPRM], 2005).

Another distinguishing element has been the campus effort to institutionalize the Continuous Improvement Educational Initiative (CIEI). This is a campus wide three year effort initiated in 2003 that envisions the development of a new outcomes based academic environment to help ensure that students will receive the best education possible. The initiative recognizes that learning is a complex process and that student learning is the responsibility of all academic stakeholders. This long term effort entails assessing not only what students know but what they can do with what they know; it involves not only knowledge and abilities but values, attitudes, dispositions and habits of mind that affect both academic success and professional performance. It entails comparing educational performance with educational purposes and expectations, those derived from the institution's vision and mission, from faculty intentions in programs and course design, and from students' own goals. Thus understood, CIEI is not a task for small groups of experts but a collaborative activity; its aim is wider, better-informed attention to student learning by all parties with a stake in its improvement. One important result of this process is to have institutionalized a process to be prepared for any program or institutional accreditation (MSCHE-UPRM, 2005).

The profile of a UPRM student includes the following characteristics: one who is a self learner (hundreds of students participate annually in student competitions presenting their research projects in the US and obtaining top positions), interested in multidisciplinary activities, talented (the student athlete grade point average is significantly higher than the general population of students grade point average and UPRM has also been successful in the graduation rate of student-athletes as measured by the NCAA), hard working, and one who values a total educational experience (thousands of students participate in over 175 student organizations). More than one

hundred and fifty students participate every semester in service learning projects in over forty projects in communities throughout PR sponsored by the University Institute to Support Communities and the EPICS program. Wide-ranging student services (including, for example, internships, mentoring, undergraduate research, professional opportunities, community service learning, and student leadership services such as student government) also expanded since the last Middle States Commission on Higher Education (MSCHE) accreditation visit to match the educational offer to the student profile. Strong student involvement and awareness supports a broad athletics program that is highly successful while adhering to the student-athlete model (our athletes rank in the first or second positions in the overall intercollegiate athletic competitions in PR). UPRM was accepted in 2004 as a full member of Division II of NCAA.

Vision and mission of UPRM Institution

The **vision** of the University of Puerto Rico at Mayagüez (UPRM) is to become a leading institution of higher education in Puerto Rico and throughout the entire American hemisphere while responding to the needs of a modern society within dynamic and diverse surroundings, constantly searching for truth, knowledge, justice and peace.

Its **mission**, encompassing its eight strategic goals, is to:

Develop educated and cultured citizens, able to think critically and professionally, competent in the fields of agricultural sciences, engineering, sciences, arts and business administration, who can contribute to the cultural, social, technological and economic development of Puerto Rico and collaborate internationally in an environment of solidarity and democracy.

Perform research and creative activities to serve the local, regional and international needs of society.

Provide an exemplary service to the local, regional and international community to contribute to a sustainable and balanced development of our society and disseminate knowledge making it available to all those concerned.

The updated Institutional Strategic Plan, which evolved as a result of extensive collaboration with the offices of the seven deans and other divisions of UPRM, comprises the eight strategic goals of (1) Leadership, (2) Students and Alumni, (3)

Academic Affairs, (4) Research, Creative Work and Graduate Studies, (5) Community and Social Service, (6) Human Resources, (7) Effective and Efficient Administration, and (8) Infrastructure.

The Institutional Strategic Plan is based on a system of accountability, and its main purpose is to improve institutional performance. The structure and scope of this plan flows directly from its mission and goals in which the assessment of institutional effectiveness is conceived as part of strategic planning, thus ensuring that assessment activities reflect the mission and goals of the institution and its individual units. At the core of the Institutional Assessment Plan is the Plan for the Assessment of Student Learning Outcomes, whose primary focus is to improve academic programs and to meet accreditation requirements. Together these plans, as shown in Figure 3, range from being fully implemented to being in various stages of implementation.

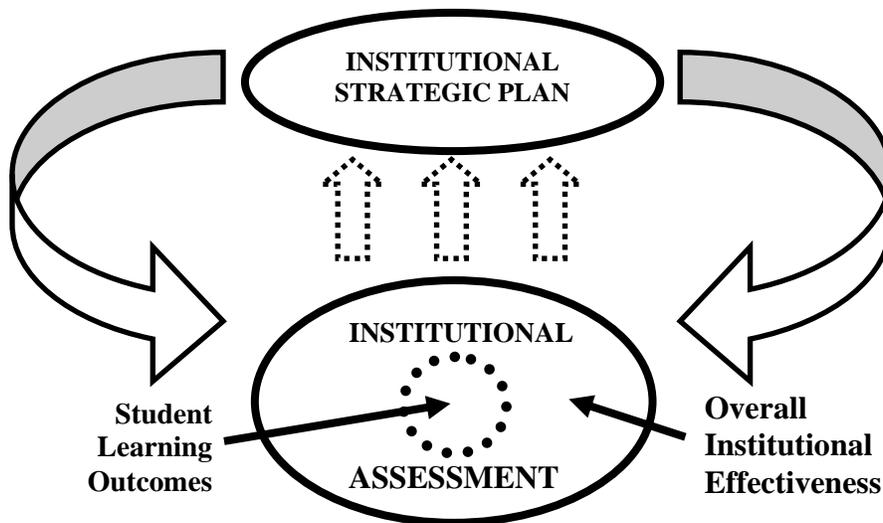


Figure 3. Conceptual Diagram of Strategic Planning and Assessment at UPRM

The Plan for the Assessment of Student Learning Outcomes stipulates that by the time of their graduation, UPRM students will be able to:

- a. **Communicate effectively.**
- b. **Identify and solve problems, think critically, and synthesize knowledge appropriate to their discipline.**

- c. Apply mathematical reasoning skills, scientific inquiry methods, and tools of information technology.**
- d. Apply ethical standards.**
- e. Recognize the Puerto Rican heritage and interpret contemporary issues.**
- f. Appraise the essential values of a democratic society.**
- g. Operate in a global context, relate to a societal context, and demonstrate respect for other cultures.**
- h. Develop an appreciation for the arts and humanities.**
- i. Recognize the need to engage in life-long learning.**

While accreditations serve as external mechanisms to provide quality assurance in education, the larger goal is to move toward internalization of continuous improvement processes across the institution. As part of its 2002 Accreditation Board for Engineering and Technology (ABET) re-accreditation process, the College of Engineering established a permanent System for the Evaluation of Education (SEED) Office. The success of this “pilot project” (all six programs were re-accredited) served as a model in the subsequent creation of an institution-wide Continuous Improvement Educational Initiative (CIEI) Office by the Chancellor. The CIEI Office, under the aegis of the Office of Institutional Research and Planning (OIRP) has a larger responsibility of conducting regular assessments to bring about data-driven change. As further evidence of its long-term commitment, UPRM recently entered an agreement to participate in the Building Engagement and Attainment of Minority Students (BEAMS) Project, which is offered jointly by the American Association for Higher Education (AAHE) and the National Survey of Student Engagement (NSSE). With this, we aspire to complement our own internal efforts on enhancing student engagement, learning, and success (MSCHE-UPRM, 2005).

Vision of the Unit

In the context of the vision and mission of the University of Puerto Rico at Mayagüez, the Teacher Preparation Program aspires to develop subject matter specialists who are active teachers and lifelong learners that are highly capable, effective, dedicated educators in their fields.

Mission of the Unit

The mission of the Mayaguez Campus Unit reflects the mission of the University of Puerto Rico. The unit's mission is to serve society by preparing professional educators who are subject matter specialists with dispositions of social, cultural, humanistic sensibilities and ethical values, who also possess competence, skills and general knowledge, all of which will allow them to be highly effective teachers. The unit prepares subject matter specialists as professional educators, committed to vanguard educational paradigms, with an inquisitive attitude, capable of creative and critical thinking, and with mastery of pedagogical and conceptual knowledge in their discipline.

Precondition 4.2 Unit philosophy, purposes, and goals

Unit philosophy

This unit's philosophy is expressed in the core beliefs and dispositions that drive the conceptual framework, and the delivery of courses within our programs. Framed inside the mission and vision of UPRM, the teacher preparation program directs its actions and reflections towards the development of an efficient professional with the required conceptual and pedagogical knowledge for their discipline. The search for excellence in teaching is our ultimate goal and begins with the examination of established national, state, and unit standards for teaching and learning and the review of curriculum experiences and expectations in all programs. Unit constituents hold these beliefs and dispositions to be central to the accomplishment of national and Puerto Rican standards for teaching excellence leading to teacher candidates who are prepared to make a significant contribution to student learning. These tenets are intended to influence the teacher candidate beyond the program and throughout his or her professional development. The unit's core beliefs direct the development and revision of programs, courses, design of instruction, research, service, and assessment. They influence the unit's organization and design of what teacher candidates should know, the dispositions they should reflect, the skills they should be able to exhibit, and the kinds of assessment and evaluation used to gauge the performance of the teacher candidate.

Core Beliefs

The faculty of the Teacher Preparation Programs of the Mayagüez Campus recognizes that:

- An educated society should be made up of free individuals who think, critically and creatively.
- The education programs should foster the integral formation of candidates by developing their intellectual, psychomotor, emotional and communication skills along with ethical, esthetic, civic and moral values.
- Each teacher has the right and responsibility to contribute to the solution of social, cultural, ecological and scientific problems –both local and global– in the quest for a culture of justice and peace.
- Education programs should be developed within the framework of leading-edge sociological, psychological, philosophical, scientific and technological fundamentals.
- Educational excellence is achieved through the integration of knowledge in all disciplines.
- Every student has the right to have a competent effective teacher who actively collaborates in his/her personal development.
- Diversity, in all its manifestations, should be recognized, accepted, and respected.
- The effectiveness of the teaching-learning process requires constant assessment and development of self-evaluation skills that sustain lifelong learning and continuous growth.
- The effectiveness of the teaching-learning process requires the use of diverse active methodologies with a constructive, practical focus.
- Teachers can improve their effectiveness by examining carefully what students learn, reflecting on how to respond to their needs, and using instructional strategies demonstrated to be effective by educational research.

Goal of the Education Unit

The principal goal of the Education Unit, as stated in Certifications No. 27 2003-04 and No. 47 2004-05 of the Board of Trustees of the University of Puerto Rico, is to offer the curricular sequence for teacher certification in secondary education in accordance with the norms and regulations of the Puerto Rico Department of Education. Consistent with the University's vision and mission, the program offers a sequence designed to update and strengthen knowledge and skills of professional educators, Certification No. 190 2000-01 of the Board of Trustees of the University of Puerto Rico.

The goal of the Teacher Preparation Program of the Mayagüez Campus of the University of Puerto Rico is to prepare professional educators committed to new educational paradigms, leaders in education with an inquisitive attitude, creative and critical thinkers, with a mastery of pedagogical and conceptual content in their discipline. The program seeks to foster that the candidate develop cognitive, affective, psychomotor, research, technological and communication skills. The intention is that the candidate becomes a lifelong learner in order to be a competent, effective teacher.

Precondition 4.3 Knowledge Bases theories, research, and the wisdom of practice.

The ten candidate competencies guide the Teacher Preparation Program. These competencies were articulated to meet established constructivist theoretical frameworks, to incorporate the results of current educational research, and to take into account what has been shown to be effective teaching practice in Puerto Rico. To attain these competencies the Teacher Preparation Program requires candidates to obtain a bachelor's program in the discipline they propose to teach. Top scores on certification exams consistent with strong career performances by former graduates have shown this to be effective.

The goal of the Teacher Education Program at UPR Mayaguez is to prepare candidates with the following competences:

1. Possess content knowledge - Prepare teachers that understand the central concepts, tools of inquiry, and structure of their discipline in a way that they can provide learning experiences that make these aspects of the subject matter meaningful to students. Encourage teachers to seek to deepen their knowledge in their discipline, be it natural sciences, social sciences, mathematics, physical education, Spanish, English, health, humanities, business, agriculture, technology or other.

To have a rational, flexible and conceptual understanding of the material is indispensable for a teacher to be effective (Borko & Putnam, 1997). This understanding of the material must include knowledge of the organization of the main ideas, the connections between concepts, the patterns of change in the discipline, unifying themes and fundamental ideas and the ability to transfer ideas to and from the discipline. The University of Puerto Rico at Mayagüez is noted for offering intensive, multi-disciplinary programs designed for students that have finished or are finishing a bachelor's degree in the Colleges of Arts and Sciences, Business Administration, and Agriculture. By design, these programs provide candidates with a strong content knowledge base.

Candidates in some disciplines such as social sciences, humanities, physics, history, Spanish, and English must meet all of the requirements for a bachelor's degree in that discipline. Candidates in other disciplines such as mathematics and chemistry complete bachelor's programs in the discipline that are designed to meet teacher preparation needs. These specialized programs require substantial course work in the discipline. For example, the Bachelor of Science program in Mathematics Education includes 34

credit hours in mathematics including Differential Equations and Linear Algebra. The Bachelor of Science program in Chemical Education approved by the Academic Senate on January 24 this year (2006) will require 33 credit hours of chemistry including Organic and Physical Chemistry.

2. Possess pedagogical content knowledge - Develop pedagogical content knowledge and an understanding of a broad variety of active methodologies of teaching-learning that allows planning instruction that reflects professional standards and curriculum goals.

Effective teachers command a repertoire of teaching practices known to stimulate student motivation, to enhance student achievement, to develop higher-level thinking, and to produce self-regulated learners (Arends, 2004). These teachers understand the cognitive processes associated with various kinds of learning, set high goals for the students, and organize learning activities to help them reach those goals (Pintrich and Schunk, 2002). The goals are set with specific criteria for measuring student success in a way that reflects professional and curricular state standards. As they plan, effective teachers reflect and think about how to make learning challenging, interesting, and feasible using constructivist and pragmatist principles. Miller (1996) advocates that pragmatism and constructivism must be the dominant philosophical and theoretical underpinnings of the teacher preparation for work-based education programs. The pragmatist-constructivist teacher sees his or her role as one of providing opportunities that will enable students to build upon their experiences, make connections, and construct new meanings (Lynch, 1996). In particular, the constructivist approach to learning emphasizes that individuals construct their own knowledge and develop deep conceptual understanding through reflection. A teacher with an active and constructivist approach to teaching plans and uses strategies to propitiate a learning experience characterized by the following:

1. *Learners construct relationships among ideas to*
 - a. explain concepts in multiple ways
 - b. identify examples and non-examples
 - c. make hypotheses and develop procedures for testing the hypotheses
 - d. build explanatory models, revise the models in order to explain anomalies, and to defend and critique the models

- e. construct relationships among ideas
 - f. fit new knowledge into an already existing, complex network of interrelated ideas
 - g. build upon current knowledge and understanding
 - h. consciously examine an idea and its ramifications
2. *Learners extend and apply their knowledge to new situations in order to*
- a. identify where an idea applies or does not apply
 - b. develop different strategies to approach a problem or situation
 - c. relate ideas to areas outside of their field of origin
 - d. work on real-world problems encountered in daily life
3. *Learners reflect on their own and others' experiences to*
- a. work efficiently and progress towards a solution
 - b. make ongoing improvements and verify progress towards a goal
 - c. check reasonableness of results
 - d. verify solutions
 - e. adapt and assimilate new learning
 - f. critique peers constructively
 - g. ask thoughtful, meaningful, and constructive questions
 - h. examine and improve their learning skills
4. *Learners communicate what they know*
- a. in diverse manners as needed for the situation
 - b. while listening carefully to others
 - c. using sound reasoning and facts to present and defend a point of view
 - d. framing arguments in the appropriate conceptual structure
5. *Learners actively seek to acquire knowledge by*
- a. identifying and locating important knowledge sources
 - b. asking probing questions
 - c. using multiple means to seek answers to questions raised
6. *Learners show understanding of the fundamental ideas described in the state standards by*
- a. identifying the central ideas in different disciplines and explaining why these ideas are important.

In short, the teacher knows and applies the best available pedagogy in the discipline to stimulate learning with understanding.

3. Possess knowledge of human development and learning. Prepare teachers that understand how children learn and develop so that they can provide opportunities that support their intellectual, social, and personal development promoting the integration of knowledge in all its manifestations. Prepare teachers to be consumers of sound research with the purpose of identifying fundamental strategies to encourage academic proficiency.

The educational research of the past three decades has propelled a paradigm shift in the education process changing the focus from the teaching to the learning. The accumulated research knowledge on how students learn serves as the center and foundation framework to model best teaching practices. As stated in *How People Learn; Brain, Mind, Experience and School* (2000), the classroom environment has to be designed taking in to consideration the following fundamental guides to optimize learning:

1. **Learner centered.** Schools and classrooms must be learner centered. In order to promote a learner centered classroom and school, teachers must determine (assess) and take into account the knowledge, the skills, and the interests that learners bring to the classroom.
2. **Knowledge centered.** In order to create a knowledge-centered classroom environment, teachers must consider carefully what is taught (information, subject matter), why it is taught (understanding) and what competence or mastery means. The knowledge-centered environment provides depth of study meaningful to the student, assessing student understanding rather than memorization of dead facts, and incorporates the development of metacognitive strategies that facilitate future learning. Knowledge is constructed in the mind of the student by integrating new concepts to old, confronting misconceptions, and connecting to the day to day life of the student.
3. **Assessment centered.** Formative assessments – ongoing assessments designed to make student thinking visible to both teacher and student – are essential. They permit the teacher to grasp the students’ preconceptions, understand where the students are in the “developmental corridor” from informal to formal thinking, and design learning activities accordingly. In the

assessment-center classroom environment, formative assessments help students recognize, appreciate, and contribute to their own progress.

4. **Community centered.** Learning is influenced in fundamental ways by the context in which it takes place. A community – centered approach requires the development of norms for the classroom and school, as well as connections to the outside world, that support core learning values. The school environment that values and respects the knowledge and participation of all learners offers the best opportunity for all students to become highly proficient and fosters the development of long-lasting social skills.

Teachers have to be savvy consumers of evidence based research, particularly research concerning human growth, development, and learning with the intention of adopting new learning-teaching strategies to advance academic proficiency at any developmental stage. Learning about educational research and its methodology increases the opportunity for candidates to become involved in action-research (Gay & Airasian, 2000).

4. Demonstrate creative critical thinking - Contribute to the formation of free human beings who are reflexive, creative, critical thinking individuals to whom these attributes are important in their professional, social, and personal lives.

Our teacher preparation programs aspire to promote the integral development of each candidate in a way that not only develops a specialist in the material he or she will teach, but an educator with a solid grasp of socio-humanistic fundamentals and a strong sense of civic responsibility. This aspiration was originally expressed by José Ortega y Gasset in *The Book of Missions* (1976), where he states that "the mission of the university should be this. The proposed dual formation will prepare the candidate to participate in the community incorporating a commitment to change in his or her professional, social and personal life. This condition is satisfied only as the educator views teaching and learning as a continuous process of reconstruction of experience. As Dewey said, ". . . education must be conceived as a continuing reconstruction of experience; that the process and the goal of education are one and the same thing." (Null, J.W. & Ravitch D. ed. 2006) and in this process, the candidate should be a leader whose actions for social reconstruction are directed by free, reflective thinking and a

critical conscience capable of "questioning, discovering, impacting and provoking" (Freire, 1979). In summary, and consistent with Lev Vygotsky, given the inevitable "reciprocal relation between the individual and the historical, socio-cultural in which he lives," (Papalia y Wenkos, 1998) it becomes imperative to take advantage of the individual-society link, to prepare men and women capable of diagnosing and intervening in their society to improve it.

5. Exhibit comprehensive formation – communication leadership skills -

Contribute to the comprehensive formation of a human being by developing his or her intellectual, emotional, and psychological abilities and his or her communication and leadership skills, as well as esthetical and ethical values. Prepare teachers to use effective verbal, nonverbal, and the use of technology to foster active inquiry, collaborations, and supportive interaction.

"The emerging science of learning underscores the importance of rethinking what is taught, how it is taught, and how learning is assessed" (National Research Council, 2000, p.13). Learning is a process of exploring and interpreting the world in a way that makes sense to the learner. In order to facilitate this process, the teacher needs to consider the cognitive, physical, social, emotional, aesthetic and ethical aspects needed to support learning with understanding. The quality of learning in a classroom is dependent on many factors. Knowledge of the material is an essential factor, but to persuade learners to engage intellectually with the material requires genuine enthusiasm supported by practical and esthetic appreciation. Intellectual engagement requires a broad palette of communication skills: verbal interaction skills that begin with listening to the learner, non-verbal skills that convey interest in the material and concern for the learner, and media communication skills to compete with the many visual and auditory distractions that surround the learner. Preparing candidates to make clear expositions or capture the learner's attention is secondary to preparing them to communicate in terms the learner can understand and use. Candidates take one course specifically on the use of technology in the classroom and technology is integrated into their learning experiences. The primary purpose of using technology is to stimulate learning, cultivate social interaction, promote inquiry, and increase communication.

Understanding how people learn is an important factor in effective teaching and therefore in preparing candidates to be effective teachers. Research shows that asking good questions that lead the learner to reconstruct his or her naive knowledge is superior to explaining the teacher's own understanding. Fostering attitudes of inquiry in learners is more effective than inundating them with facts and explanations. In the process of helping learners to develop their understanding, the teacher must deal with many learning styles. In order to do this the candidate, must first recognize his or her own learning preferences. Finally, to interact successfully with learners, parents or guardians, colleagues, community organizations, the many individuals and groups that affect learning requires considerable leadership and social interaction skills. The social interactions essential for effective teaching require candidates to develop psychological skills and emotional stability, as well as communication skills.

In summary, as stated in the National Research Council's landmark publication *How People Learn*, "Teachers are key to enhancing learning in schools. In order to teach in a manner consistent with new theories of learning, extensive learning opportunities for teachers are required." (National Research Council, 2000, p.192).

6. Demonstrate community building skills - Prepare teachers to foster relationships with school colleagues, parents, and educational partners in the larger community to support student learning and well-being thereby encouraging the development of ethical, civic, moral and esthetic values in harmony with individual and collective necessities for achieving a culture of peace and justice.

Effective teachers understand the importance and propitiate establishment of strong good relationship with parents and tutors of their students because take into consideration how factors in the students' environment outside of school (e.g. family circumstances, community environments, health and economic conditions) may influence students' life and learning. They have to invite and motivate parents and caretakers to participate as colleagues' in their children education. Teachers should foster excellent relations with school colleagues and administrators to set up the foundation of learning communities as support systems that beneficiate the learning environment (Santrock, 2002). They understand schools as organizations within the larger community context and understand the operations of the relevant aspects of the

system within which she or he works. They examine and use available resources in the school and the larger community to enrich classes. The teacher understands and implements laws related to students' rights and teacher responsibilities (e.g. for equal education, appropriate education for handicapped students, confidentiality, privacy, appropriate treatment of students, reporting in situations related to possible child abuse).

7. Assessment of student learning - Prepare teachers to use formal and informal assessment strategies to provide experiences that contribute to the continuous intellectual, social and physical development of each learner. Use the evaluation process to improve the quality and effectiveness of the teaching-learning process.

Competent teachers evaluate students in relation to learning goals and adapt their instruction accordingly (Mc Millan, 2004). Classroom assessment helps teachers find out what students are learning and how well they are learning it (Angelo & Cross, 1993). When teachers understand the characteristics, uses, advantages, and limitations of different types of assessments, they have the tools to figure out what students know, what they are able to do, and what kinds of experiences will support their further growth and development. Properly designed and used, assessment can help students monitor their own learning progress, give them greater control over their own development, and in so doing stimulate internal motivation for learning.

Assessment plays an essential role in evaluating students' effort, engagement, and performance, but the power of assessment to enhance learning only comes when it is integrated with instruction and not left an isolated outcome done only after instruction. This means that effective teachers must integrate instruction and assessment into current views on learning and motivation. That is, they view students as active learners who construct meaning, and in accordance with this view they select, construct, and use assessment strategies and instruments appropriate to the learning objectives (Santrock, 2002). Finally, teachers committed to their own learning and development, utilize assessment as an integral tool to reflect on the effectiveness of their teaching practices.

8. Demonstrate caring dispositions - Prepare teachers to confront new challenges, social as well as educational, and to contribute to the improvement of Puerto Rico and the world. Further, prepare teachers that can promote worthwhile personal relationships

that provide stability, trust, and caring in order to increase learners' sense of belonging, self-respect and self-acceptance, and generate a positive climate for learning.

Every candidate should develop awareness that society is dynamic and is constantly changing and that new social challenges are extremely relevant to the teacher's success in the school. The school is a mirror of society that reflects and manifests everything that follows from social interactions. A myriad of social problems can be viewed as educational challenges. Problems, such as use and abuse of alcohol, tobacco and drugs; sexual precocity with the undesired effects of rising teenage pregnancy and sexually transmitted diseases; domestic violence and child abuse in all its forms; the growing number of single parent families in low socioeconomic and low education levels and the surrounding social circumstances that turn them into serious educational challenges because education is no longer seen as a means to attain personal goals and school desertion appears to be a desirable option. As problems grow in scale and impact, so does the need for sophisticated socio-cultural understanding. By surrounding every student with a caring atmosphere that nourishes the mind in a safe environment and helps them make and meet high expectations, education can be personally empowering, intellectually challenging and socially beneficial. (Humphreys, 2006).

As stated by the American Psychological Association in the Learner- Centered Psychological Principles (1997), the learning settings that the teacher creates can foster circumstances that “allow for social interactions, and that respect diversity, encourage flexible thinking and social competence. In interactive and collaborative instructional contexts, individuals have an opportunity for perspective taking and reflective thinking that may lead to higher levels of cognitive, social, and moral development, as well as self-esteem.” Family influences, positive interpersonal support, and instruction in self-motivation strategies can offset factors that interfere with optimal learning such as negative beliefs about competence in a particular subject, high levels of test anxiety, negative sex role expectations, and undue pressure to perform well. Positive learning climates can also help establish the context for healthier levels of thinking, feeling, and behaving. Such contexts help learners feel safe to share ideas, actively participate in

the learning process, and create a learning community inside and outside the classroom.

9. Demonstrate sensibility to diversity - Prepare teachers to recognize and value a diversity of learning styles, social and cultural experiences, intelligences and talents. Further, prepare teachers to respond to this diversity of learners with the variety of instructional opportunities that promotes the development of critical thinking, problem solving, and performance skills of each individual.

Effective teachers can identify, understand, and value different learning styles, multiple intelligences, and performance mode preferences, and design instruction that responds to these differences in a way that helps students use their strengths to grow academically and personally. Cross cultural contact is increasing in the present day world challenging the teacher to create a climate of tolerance and respect for these multiple social and cultural differences, ideally in a way that all learn to celebrate diversity in the classroom and in the community. Teachers must be sensible to the diversity of needs of the students. (Sadker & Sadker, 2000). The number of students with identifiable exceptional learning needs is growing, so it has become essential that teachers know about areas of exceptionality in learning, including learning disabilities, visual and perceptual difficulties and special physical or mental challenges and or abilities. The teachers need to understand how learning is influenced by students' individual experiences, talents, and prior learning, as well as their native language, culture, family, and community values in order to facilitate learning. The principle that all children can attain high levels of understanding is key to teacher persistence in helping all children succeed and making them feel valued for their potential as people of diverse skills, talents and interests.

10. Demonstrate reflective practice - Empower teachers to keep abreast of educational innovations and promote the commitment to continual learning in order to meet the technological, educational, scientific, social, and cultural demands of the working world. Develop the reflective habits of continual evaluation of the effectiveness of classroom practices that lead to continuous professional development.

Being an effective teacher requires a deep commitment and internal motivation that are distinguished by a positive attitude, genuine concern for the students, and a continual enthusiasm for teaching. This enthusiasm is sustained by the teacher's commitment to

his or her own academic, pedagogical, social, cultural, and technological learning. Effective teachers develop their technology skills to integrate computers, the Internet, and other readily available information technology into their classrooms because such technology and the skills to use it are essential to their students. They continually assess the effectiveness of technology use for learning with an emphasis on the student as an active, constructive learner (International Society for Technology in Education, 2001). Teachers need to develop a thorough understanding of the inquiry method, because it offers them self-evaluation and problem-solving strategies that encourage them to reflect on their own practice even as it increases the effectiveness of their interactions with students.

Since being an effective teacher involves directing student conduct in a way that keeps all students working on challenging and interesting learning tasks, the ability to monitor and the habit of evaluating the efficacy of instructional and motivational strategies utilized is an important part of successfully managing a classroom (Charles 2005, Alderman 2004). The teacher who is committed to reflection, self-directed learning, and self-assessment values and pursues professional development as an ongoing and life long endeavor (Fried, 2001).

Precondition 4.4

UPRM teacher candidate's proficiencies profile:

UPRM's conceptual framework is consistent with institutional UPR-M standards, state Puerto Rico Council for Higher Education standards, NCATE standards, Specialized Professional Association (SPA) standards and with INTASC performance standards. UPRM has identified a set of ten core outcomes that represents the expectations for all UPRM candidates in professional education programs. The UPRM teacher candidate's proficiencies profile based on the previously described educational theory, research, and wisdom of practice assures the development of the knowledge, skills, and dispositions to become an effective teacher in Puerto Rico school systems. The knowledge, skills, and dispositions that the candidate of the UPRM Education unit will develop are exactly the ten proficiencies classified as follows.

Knowledge

1. Possess content knowledge - Prepare teachers that understand the central concepts, tools of inquiry, and structure of their discipline in a way that they can provide learning experiences that make these aspects of the subject matter meaningful to students. Encourage teachers to seek to deepen their knowledge in their discipline, be it natural sciences, social sciences, mathematics, physical education, Spanish, English, health, humanities, business, agriculture, technology or other.
2. Possess pedagogical content knowledge - Develop pedagogical content knowledge and an understanding of a broad variety of active methodologies of teaching-learning that allows planning instruction that reflects professional standards and curriculum goals.
3. Possess knowledge of human development and learning. Prepare teachers that understand how children learn and develop so that they can provide opportunities that support their intellectual, social, and personal development promoting the integration of knowledge in all its manifestations. Prepare teachers to be consumers of sound research with the purpose of identifying fundamental strategies to encourage academic proficiency.

Skills

4. Demonstrate creative critical thinking - Contribute to the formation of free human beings who are reflexive, creative, critical thinking individuals to whom these attributes are important in their professional, social, and personal lives.
5. Exhibit comprehensive formation – communication leadership skills - Contribute to the comprehensive formation of a human being by developing his or her intellectual, emotional, and psychological abilities and his or her communication and leadership skills, as well as esthetical and ethical values. Prepare teachers to use effective verbal, nonverbal, and the use of technology to foster active inquiry, collaborations, and supportive interaction.
6. Demonstrate community building skills - Prepare teachers to foster relationships with school colleagues, parents, and educational partners in the larger community to support student

learning and well-being thereby encouraging the development of ethical, civic, moral and esthetic values in harmony with individual and collective necessities for achieving a culture of peace and justice.

7. Assessment of student learning - Prepare teachers to use formal and informal assessment strategies to provide experiences that contribute to the continuous intellectual, social and physical development of each learner. Use the evaluation process to improve the quality and effectiveness of the teaching-learning process.

Dispositions

8. Demonstrate caring dispositions - Prepare teachers to confront new challenges, social as well as educational, and to contribute to the improvement of Puerto Rico and the world. Further, prepare teachers that can promote worthwhile personal relationships that provide stability, trust, and caring in order to increase learners' sense of belonging, self-respect and self-acceptance, and generate a positive climate for learning.

9. Demonstrate sensibility to diversity - Prepare teachers to recognize and value a diversity of learning styles, social and cultural experiences, intelligences and talents. Further, prepare teachers to respond to this diversity of learners with the variety of instructional opportunities that promotes the development of critical thinking, problem solving, and performance skills of each individual.

10. Demonstrate reflective practice - Empower teachers to keep abreast of educational innovations and promote the commitment to continual learning in order to meet the technological, educational, scientific, social, and cultural demands of the working world. Develop the reflective habits of continual evaluation of the effectiveness of classroom practices that lead to continuous professional development.

The theoretical and philosophical background of these competencies was discussed in the previous section.

Candidates' Proficiencies-Standards Alignment Matrix

Candidate proficiencies aligned with the expectations in professional, state, and institutional standards. For candidates to demonstrate each of the listed competencies, they must meet the applicable institutional learning standard. As we understand it, meeting the applicable institutional learning standard fulfills the corresponding state Puerto Rico Council for Higher Education standard. The following matrix shows how state standards align with Professional NCATE Standards and INTASC Principles.

Candidate Competencies at UPRM	Alignment with Applicable Professional Standards INTASC Principles	Alignment with Applicable Professional NCATE Standard	Alignment with applicable State Standards (PR Council on Higher Education)	Alignment with Applicable Institutional Learning Standard By the time of graduation UPRM students will:
<p>1. Possess content knowledge Contribute to the formation of free human beings who are reflexive, creative, critical thinking individuals to whom these attributes are important in their professional, social, and personal lives.</p>	<p>INTASC 1: Knowledge of Subject Matter The teacher understands the central concepts, tools of inquiry, and structure of the disciplines he or she teaches and can create learning experiences that make these aspects of subject matter meaningful to students.</p>	<p>Content Knowledge for Teacher Candidates: Initial and Continuing Teacher candidates <u>have in-depth knowledge of the subject matter that they plan to teach</u> as described in professional, state, and institutional standards. They demonstrate their knowledge through inquiry, critical analysis and synthesis of the subject.</p>	<p>Section 2.1.1: The teacher candidate understands the central concepts, tools of inquiry and structures of the discipline(s) within the context of a global society and creates learning experiences that make these aspects of subject matter meaningful for students.</p>	<p>Identify and solve problems, think critically, and synthesize knowledge appropriate to their discipline.</p>
<p>2. Possess Pedagogical Content Knowledge Develop pedagogical content knowledge and an understanding of a broad variety of active methodologies of teaching-learning that allows planning instruction that reflects professional standards and curriculum goals.</p>	<p>INTASC 7: Instructional Planning Skills The teacher plans instruction based upon knowledge of subject matter, students, the community, and curriculum goals.</p>	<p>Pedagogical content knowledge for teacher candidates: Initial and continuing Teacher candidates reflect a thorough understanding of <u>pedagogical content knowledge</u> delineated in professional state and institutional standards. They <u>have in-depth understanding of the subject matter that they plan to teach</u>, allowing them to</p>	<p>Section 2.1.4: The teacher candidate recognizes the importance of long-range planning and curriculum development and develops, implements, and evaluates curriculum based upon student, district, and state performance standards.</p>	<p>Identify and solve problems, think critically, and synthesize knowledge appropriate to their discipline.</p> <p>Apply mathematical reasoning skills, scientific inquiry methods, and tools of information technology.</p> <p>Develop an appreciation for the arts and humanities.</p>

Candidate Competencies at UPRM	Alignment with Applicable Professional Standards INTASC Principles	Alignment with Applicable Professional NCATE Standard	Alignment with applicable State Standards (PR Council on Higher Education)	Alignment with Applicable Institutional Learning Standard By the time of graduation UPRM students will:
<p>3. Possess knowledge of human development and learning Prepare teachers that understand how children learn and develop so that they can provide opportunities that support their intellectual, social, and personal development promoting the integration of knowledge in all its manifestations. Prepare teachers to be consumers of sound research with the purpose of identifying fundamental strategies to encourage academic proficiency.</p>	<p>INTASC 5: Classroom Motivation and Management The teacher uses an understanding of individual and group motivation to create a learning environment that encourages positive social interactions, active engagement in learning and self motivation</p>	<p>Professional and pedagogical knowledge and skills for teacher candidates Teacher candidates reflect a <u>thorough understanding of professional and pedagogical knowledge and skills</u> delineated in professional, state and institutional standards. They develop <u>meaningful learning experiences to facilitate learning for all students.</u></p>	<p>Section 2.1.6: The teacher candidate uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.</p>	<p>Identify and solve problems, think critically, and synthesize knowledge appropriate to their discipline.</p>
<p>4. Demonstrate creative critical thinking Contribute to the formation of free human beings who are reflexive, creative, critical thinking individuals to whom these attributes are important in their professional, social, and personal lives.</p>	<p>INTASC 1: Knowledge of Subject Matter The teacher understands the central concepts, tools of inquiry, and structure of the disciplines he or she teaches and can create learning experiences that make these aspects of subject matter meaningful to students.</p>	<p>Content Knowledge for Teacher Candidates: Initial and Continuing Teacher candidates <u>have in-depth knowledge of the subject matter that they plan to teach</u> as described in professional, state, and institutional standards. They <u>demonstrate their knowledge through inquiry, critical analysis and synthesis of the subject.</u></p>	<p>Section 2.1.1: The teacher candidate understands the central concepts, tools of inquiry and structures of the discipline(s) within the context of a global society and creates learning experiences that make these aspects of subject matter meaningful for students.</p>	<p>Identify and solve problems, think critically, and synthesize knowledge appropriate to their discipline.</p>

Candidate Competencies at UPRM	Alignment with Applicable Professional Standards INTASC Principles	Alignment with Applicable Professional NCATE Standard	Alignment with applicable State Standards (PR Council on Higher Education)	Alignment with Applicable Institutional Learning Standard By the time of graduation UPRM students will:
<p>5. Exhibit comprehensive formation – communication leadership skills Contribute to the comprehensive formation of a human being by developing his or her intellectual, emotional, and psychological abilities and his or her communication and leadership skills, as well as esthetical and ethical values. Prepare teachers to use effective verbal, nonverbal, and the use of technology to foster active inquiry, collaborations, and supportive interaction.</p>	<p>INTASC 6: Communication Skills The teacher uses knowledge of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction.</p>	<p>Professional and pedagogical knowledge and skills for teacher candidates Teacher candidates reflect a thorough understanding of professional and pedagogical knowledge and skills delineated in professional, state, and institutional standards.</p> <p><u>They know how students learn and how to make ideas accessible to them.</u></p>	<p>Section 2.1.7: The teacher candidate models effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.</p>	<p>Communicate effectively.</p>
<p>6. Demonstrate Community Building Skills Prepare teachers to foster relationships with school colleagues, parents, and educational partners in the larger community to support student learning and well-being thereby encouraging the development of ethical, civic, moral and esthetic values in harmony with individual and collective necessities for achieving a culture of peace and justice.</p>	<p>INTASC 10: Partnerships The teacher fosters relationships with school colleagues, parents and agencies in the larger community to support student's learning and well being.</p>	<p>Dispositions for all Candidates Candidates work with students, families, and communities in ways that reflect the dispositions expected of professional educators as delineated in professional, state, and institutional standards. Candidates recognize when their own dispositions may need to be adjusted and are able to develop plans to do so.</p>	<p>Section 2.1.10: The teacher candidate fosters relationships with school colleagues, parents, and educational partners in the larger community to support student learning and well being.</p>	<p>Recognize the Puerto Rican heritage and interpret contemporary issues.</p> <p>Appraise the essential values of a democratic society.</p>

Candidate Competencies at UPRM	Alignment with Applicable Professional Standards INTASC Principles	Alignment with Applicable Professional NCATE Standard	Alignment with applicable State Standards (PR Council on Higher Education)	Alignment with Applicable Institutional Learning Standard By the time of graduation UPRM students will:
<p>7. Demonstrate Skills for Assessment of Student Learning Prepare teachers to use formal and informal assessment strategies to provide experiences that contribute to the continuous intellectual, social and physical development of each learner. Use the evaluation process to improve the quality and effectiveness of the teaching-learning process.</p>	<p>INTASC 8: Assessment of Student Learning The teacher understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.</p>	<p>Student Learning for Teacher Candidates Teacher candidates accurately assess and analyze student learning, make appropriate adjustments to instruction, monitor student learning, and have a positive effect on learning for all students.</p>	<p>Section 2.1.8: The teacher candidate understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner</p>	<p>Identify and solve problems, think critically, and synthesize knowledge appropriate to their discipline.</p>
<p>8. Demonstrate Caring Dispositions Prepare teachers to confront new challenges, social as well as educational, and to contribute to the improvement of Puerto Rico and the world. Further, prepare teachers that can promote worthwhile personal relationships that provide stability, trust, and caring in order to increase learners' sense of belonging, self-respect and self-acceptance, and generate a positive climate for learning.</p>	<p>INTASC 10: Partnerships The teacher fosters relationships with school colleagues, parents and agencies in the larger community to support student's learning and well being.</p>	<p>Dispositions for all Candidates They reflect on their practice and make necessary adjustments to enhance student learning. They know how students learn and how to make ideas accessible to them. They consider school, family, and community contexts in connecting concepts to students' prior experience and applying the ideas to real-world problems.</p>	<p>Section 2.1.10: The teacher candidate fosters relationships with school colleagues, parents, and educational partners in the larger community to support student learning and well being.</p>	<p>Operate in a global context, relate to a societal context, and demonstrate respect for other cultures.</p>

Candidate Competencies at UPRM	Alignment with Applicable Professional Standards INTASC Principles	Alignment with Applicable Professional NCATE Standard	Alignment with applicable State Standards (PR Council on Higher Education)	Alignment with Applicable Institutional Learning Standard By the time of graduation UPRM students will:
9. Demonstrate Sensibility to Diversity Prepare teachers to recognize and value a diversity of learning styles, social and cultural experiences, intelligences and talents. Further, prepare teachers to respond to this diversity of learners with the variety of instructional opportunities that promotes the development of critical thinking, problem solving, and performance skills of each individual.	INTASC 3: Adapting Instruction to Individual Needs The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.	Dispositions for all Candidates They reflect on their practice and make necessary adjustments to enhance student learning. They know how students learn and how to make ideas accessible to them. They consider school, family, and community contexts in connecting concepts to students' prior experience and applying the ideas to real-world problems.	Section 2.1.3: The teacher candidate understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.	Identify and solve problems, think critically, and synthesize knowledge appropriate to their discipline.
10. Demonstrate Reflective Practice Empower teachers to keep abreast of educational innovations and promote the commitment to continual learning in order to meet the technological, educational, scientific, social, and cultural demands of the working world. Develop the reflective habits of continual evaluation of the effectiveness of classroom practices that lead to continuous professional development.	INTASC 9: Professional Commitment and Responsibility The teacher is a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.	Dispositions for all Candidates They reflect on their practice and make necessary adjustments to enhance student learning. They know how students learn and how to make ideas accessible to them. They consider school, family, and community contexts in connecting concepts to students' prior experience and applying the ideas to real-world problems.	Section 2.1.9: The teacher candidate is a reflective practitioner who continually assesses the effects of choices and actions on others. This reflective practitioner actively seeks out opportunities to grow professionally and utilizes the assessment and professional growth to generate more learning for more students.	Recognize the need to engage in life-long learning

Precondition 4.5: A description of the unit's system for evaluating its operations, the quality of its offerings, the performance of candidates on proficiencies described in 4.4 and the effectiveness of its graduates.

The unit with the primary authority and responsibility for teacher preparation programs at the University of Puerto Rico, Mayagüez Campus is the Academic Affairs Deanship. The Teacher Preparation Program of Secondary Education housed in the Division of Continued Education and Professional Studies and the Agriculture Teacher Preparation Program housed in the Department of Agricultural Education under the College of Agricultural Sciences, respond to the Dean of Academic Affairs for their overall administration and operation.

UPR – Mayagüez has two initial level Teacher Preparation Programs, The Teacher Preparation Program in Secondary Education assigned directly to the Office of Academic Affairs and the Agricultural Education Program assigned directly to the College of Agricultural Sciences. The Teacher Preparation Program in Secondary Education (PPMES, in Spanish) is an intensive, multidisciplinary program, designed for students that are completing or have completed a bachelor's degree in the College of Arts and Sciences or in the College of Business Administration. Candidates practice teaching for one semester under the supervision of content and education faculty in the classroom of a cooperating teacher. Note: A cooperating teacher is an experienced teacher that has met Puerto Rico Department of Education requirements for receiving teacher candidates. Candidates that satisfactorily complete the program requirements and approve state licensing exam (PCMAS in Spanish) are certified by the Puerto Rico Department of Education as Secondary Teachers. An important goal of the assessment system is to demonstrate that candidates meet the proficiencies of the program and the standards of the Puerto Rico Department of Education, NCATE, INTASC Principles and the Specialized Professional Associations (SPA'S).

The Agricultural Education Department offers a program leading to the degree of Bachelor of Science in Agriculture with majors in Agricultural Education or Extension Education. These programs prepare candidates to teach agriculture and to do public relations work related to agriculture in federal and state agencies, business, commerce,

and industry. Employment in these positions requires agricultural experience, preparation in basic sciences and technical agriculture, and an understanding of the principles and techniques of the teaching learning process, as well as the ability to work with people. The Department of Agricultural Education also offers an advanced level teacher preparation program, a Master of Science Program

This following will describe how candidate proficiencies are evaluated in each of these programs.

Unit candidate assessment occurs on a continual basis. Through coursework, field experiences, self-evaluations, interviews, and other methods described below, candidate progress is reviewed regularly and the candidate is advised accordingly.

The UPR-Mayagüez Campus Teacher Preparation Programs created a standards-based curriculum and assessment system for candidates. The standards-based curricula reflect the integration of content, pedagogy, and professional development. The unit's conceptual framework links course work to the assessment system that includes portfolio evaluation to systematically monitor a candidate's progression through the program. When candidates apply to any teacher preparation program they are required to pass through a screening step. Candidates who meet screening criteria successfully must subsequently pass through a series of assessment points.

Admission to the UPRM Institution

Admission, to the University of Puerto Rico system, is to a specific degree program on a specific campus. Admission to an undergraduate program offered by the Mayagüez Campus, is determined by the General Admission Index (IGS in Spanish) established for that particular program. The General Admission Index (IGS in Spanish) is a weighted average of the high school grade point average (50%) and the mathematical aptitude and verbal aptitude scores on the College Board Entrance Examination (50%). The IGS required for admission to each program is set according to the capacity of that program to meet the demand, and consequently is different for each program.

Teacher Preparation Program - Division of Continuing Education and Professional Studies

Transition Point #1

Prospective candidates may enroll in the Teacher Preparation Program of the Division of Continuing Education and Professional Studies (DECEP, in Spanish) after completing a bachelor's program or while pursuing a bachelor's degree at UPR-Mayagüez. The DECEP Teacher Preparation Program is not a traditional university program. It is a curricular sequence specifically defined and authorized by Certification #47 of the Board of Trustees of the University of Puerto Rico to complement a bachelor's program to prepare candidates to meet the teacher certification requirements established by the Department of Education of Puerto Rico. Prospective candidates who have completed a bachelor's degree from any of the university colleges or from another institution can apply for admission or re-admission to UPR-Mayagüez through the Professional Development option in the DECEP to complete a curricular sequence in the Teacher Preparation Program. Prospective candidates who are pursuing a bachelor's program at UPR-Mayagüez in the College of Arts and Sciences or in the College of Business Administration can apply for the curricular sequence for the Teacher Preparation Program. To be admitted to the program applicants must have an overall grade point average of 2.5, a grade point average of 2.5 in the major, completed 6 credits from the Foundations of Education (Human Growth and Development I, Human Growth and Development II, Social Foundations of Education, and Philosophical Foundations of

Education) with a grade point average of 2.5 or better, passed a written essay (in Spanish: *Sistema de Evaluación de las Destrezas de Redacción, SEDeRe*), and successfully completed an interview with the Teacher Preparation Program Candidate Assessment Committee. Note: members of the general public may enroll in any of the four Foundations of Education courses for professional development.

Prospective candidates whose essays are not satisfactory are advised to take the communications courses or use the tutoring services offered by the Editing and Writing Center in the Department of Hispanic Studies. These prospective candidates may repeat the essay and reapply the following year. Prospective candidates whose interviews do not convince the Teacher Preparation Program Candidate Assessment Committee with regards to their disposition towards teaching are direct to career counseling. After counseling, prospective candidates may reapply and request a new interview in the following year.

Transition Point #2: Enrollment in Theory and Methodology Course

To enroll in the Theory and Methodology course candidates must have completed the four Foundations of Education courses (Human Growth and Development I, Human Growth and Development II, Social Foundations of Education, and Philosophical Foundations of Education) with a grade point average of 2.5 or better, scored 80% or higher on the course rubrics for Social Foundations of Education and Philosophical Foundations of Education, have at least 18 credits in their major with grade point averages of 2.5 or better overall and in their major.

Transition Point #3: Entrance to Practicum

To enroll in the Teaching Practice course candidates must have completed the Theory and Methodology course with a grade of B or better. They have to score 80% or higher on the Educational Philosophy Essay Rubric and on the evaluation of the Electronic Portfolio with the Teacher Candidate Work Sample. They should also have at least 21 credits in their major with grade point averages of 2.5 or better overall and in their major.

Transition Point #4: Program Completion

In the Student Teaching course the candidates have to satisfactorily develop an Electronic Portfolio with Teacher Candidate Work Sample (TCWS) that demonstrates the candidate's content knowledge, applied knowledge of human development and learning, sensibility to diversity, pedagogical content knowledge skills and reflective habits on the effectiveness of their practice. In the TCWS the candidate has to include artifacts such as lesson or unit plans, exams with their analysis, and classroom management techniques. A systemic assessment process database that addresses the candidate's proficiencies is being designed by the unit.

Teacher Candidates seeking certification for Secondary or Middle School (undergraduate) must complete the following requirements:

Foundations of Education Courses:

- EDFU 3001 Human Growth and Development I
- EDFU 3002 Human Growth and Development II
- EDFU 3007 Social Foundations of Education
- EDFU 4019 Philosophical Foundations of Education

Education Courses:

- EDPE 4006 Exceptional Children
- EDPE 3129 Use of microcomputers in the classrooms
- EDPE414* Theory and Methodology in the Teaching of the specialty area: science, mathematics, social studies, arts, theater, business education, physical education (elementary and secondary), health, Spanish and English
- and one of the following
- EDPE 4136 Student teaching of general science of secondary school
- EDPE 4137 Student teaching of biology of secondary school
- EDPE 4138 Student teaching of physics of secondary school
- EDPE 4139 Student teaching of chemistry of secondary school
- EDPE 4146 Student teaching of mathematics of secondary school
- EDPE 4156 Student teaching of social studies of secondary school
- EDPE 4157 Student teaching of history of secondary school
- EDPE 4166 Student teaching of arts of secondary school
- EDPE 4186 Student teaching of theatre of secondary school
- EDPE 4187 Student teaching of business education of secondary school
- EDPE 4216 Student teaching of physical education of secondary school
- EDPE 4227 Student teaching of health of secondary school

EDPE 4236 Student teaching of Spanish of secondary school

EDPE 4246 Student teaching of English of secondary school

History Courses:

HIST 3111 or HIST 3112 – History of the United States

HIST 3241 or HIST 3242 – History of Puerto Rico

Content Courses:

Candidates must complete a minimum of 21 credit hours in a specific area (specialization) to be certified by the Department of Education of Puerto Rico to teach that area in secondary or intermediate school.

Transition Point #1: Entrance to the Teacher Preparation Program of Secondary Education			
Candidates Proficiencies (k=knowledge, s=skill, d=disposition)	Assessment Tools	Benchmarks	Person in charge
#1 Possess content knowledge of the discipline that the candidates aspires to teach (k)	Transcript	2.5 GPA in major 2.5 GPA overall	Registrar's Office
#2 Possess pedagogical content knowledge (k) #3 Possess knowledge of human development and learning (k)	Completion of 6 credits in any of the following courses: <ul style="list-style-type: none"> • EDFU 3001- Human Growth and Development I • EDFU 3002 - Human Growth and Development II • EDFU 3007 - Social Foundations of Education • EDFU 4019 Philosophical Foundations of Education 	Approval of 6 credits in courses of Education Fundamentals with a 2.50 GPA or better	Registrar's Office
#4 Demonstrate creative critical thinking (s) #5 Exhibit comprehensive formation – communication skills (s)	Essay rubric SEDeRe	Satisfactory completion of Essay (College Board)	College Board
#5 Exhibit comprehensive formation – communication skills (s) #8 Demonstrate caring dispositions toward professional and personal development (d)	Interviews	Successful completion of interview	Faculty / Program Assessment Committee
Use of the results: GPA is used to monitor enrollment to the Program and to provide immediate feedback to the Registrar's Office regarding admission to the Program. Academic progress of courses in education fundamentals and content courses is monitored as well and the academic advisor makes program and course recommendations to candidates based on this and other information. Results from the essay and the interview are the basis for recommending specific actions to candidates. For example, candidates not presenting a satisfactory level of competence in the essay are either advised to seek tutoring or to take courses in communication skills prior to repeating the essay for admission to the program in a subsequent year. Candidates not presenting satisfactory dispositions to teach are directed to career counseling.			

Transition Point #2: Enrollment in Theory and Methodology Course			
Candidates Proficiencies (k=knowledge, s=skill, d=disposition)	Assessment Tools	Benchmarks	Person in charge
#1 Possess content knowledge of the discipline that the candidates aspires to teach (k)	Completion of 18 credit hours in the area of specialization (major) Transcript	2.5 GPA in major 2.5 GPA overall	Registrar's Office
#2 Possess pedagogical content knowledge (k) #3 Possess knowledge of human development and learning (k)	Completion of all the Education Fundamentals courses: EDFU 3001- Human Growth and Development I EDFU 3002 - Human Growth and Development II	Approval of all the Education Fundamentals courses with a 2.50 GPA or better	Registrar's Office
#3 Possess knowledge of human development and learning (k)	EDFU 3007 - Social Foundations of Education	80% or higher on Course Rubric	Professors of EDFU 3007
#4 Demonstrate creative critical thinking (s) #5 Exhibit comprehensive formation – communication skills (s) #8 Demonstrate caring dispositions toward professional and personal development (d)	EDFU 4019 Philosophical Foundations of Education	80% or higher on Course Rubric	Professors of EDFU 4019
Use of Results: GPA is used to monitor candidate's proficiencies in content and pedagogical knowledge. Academic advisors use GPA and other measures of academic progress to help candidates make informed decisions about their programs of study. Candidates not presenting a satisfactory level of performance are advised to take or repeat the appropriate courses.			

Transition Point #3 : Admission to Practicum			
Candidates Proficiencies (k=knowledge, s=skill, d=disposition)	Assessment Tools	Benchmarks	Person in charge
#1 Possess content knowledge of the discipline that the candidates aspires to teach (k)	Completion of 21 credit hours in the area of specialization (major) Transcript	2.5 GPA in major 2.5 GPA overall	Registrar's Office
#2 Possess pedagogical content knowledge (k) #3 Possess knowledge of human development and learning (k) #4 Demonstrate creative critical thinking (s) #5 Exhibit comprehensive formation – communication leadership skills (s) #7 Assessment of student learning (s) #9 Demonstrate sensibilities to diversity (d) #10 Demonstrate reflective practice (d)	EDPE 41** Theory and Methodology in the Teaching of ... (the area of specialization) <ul style="list-style-type: none"> Educational Philosophy Essay/ Rubric Portfolio with candidate work (i.e. lesson plans, integration of assessments for diverse students) 	Approval of the course with a B or better 80% or higher on the Educational Philosophy Essay Rubric 80% or higher on the Portfolio Rubric	Registrar's Office Professors of Theory and Methodology courses
<p>Use of Results: GPA is used to monitor candidate's proficiencies in content and pedagogical knowledge. Academic advisors use GPA and other measures of academic progress to help candidates make informed decisions about their Program of studies. Candidates not presenting a satisfactory level of performance are advised to take or repeat the appropriate courses. Candidates are required to keep a Portfolio through the methodology and practicum courses that is part of the formative assessment of the candidate.</p>			

Transition Point #4 : Program Completion			
Candidates Proficiencies (k=knowledge, s=skill, d=disposition)	Assessment Tools	Benchmarks	Person in charge
#2 Possess pedagogical content knowledge (k) #3 Possess knowledge of human development and learning (k) #4 Demonstrate creative critical thinking (s) #5 Exhibit comprehensive formation – communication leadership skills (s) #6 Demonstrate community building skills (s) #7 Assessment of student learning (s) #8 Demonstrate caring dispositions #9 Demonstrate sensibilities to diversity (d) #10 Demonstrate reflective practice (d)	EDPE 41** Student Teaching of (the area of specialization) <ul style="list-style-type: none"> • Protocol for Classroom observation • Electronic Portfolio with Teacher Candidate Work Sample (i.e. lesson plans, integration of assessments for diverse students, involvement in school activities) 	Approval of the course with a B or better 80% or higher on the Protocol for Classroom 80% or higher on the Electronic Portfolio with Teacher Candidate Work Samples Rubrics	Registrar's Office Supervising Professors of Student Teaching
#2 Possess pedagogical content knowledge (k) #3 Possess knowledge of human development and learning (k) #9 Demonstrate sensibilities to diversity (d) #5 Exhibit comprehensive formation – communication leadership skills (s)	Completion of: EDES 4006 –Nature and Needs of Exceptional Children EDPE3129 -The use of microcomputers in the classroom HIST 3111 or HIST 3112 – History of United States HIST 3241 or HIST 3242 – History of Puerto Rico	80% or higher on Course Rubric Approval of the course with a B or better Approval of the course with a B or better	EDES 4006 Professor Registrar's Office
<p>Use of Results: GPA is used to monitor candidate's proficiencies in content and pedagogical knowledge. Academic advisors use GPA and other measures of academic progress to help candidates make informed decisions about their Program of studies. Candidates not presenting a satisfactory level of performance are advised to take or repeat the appropriate courses. Candidates are required to keep a Portfolio through the methodology and practicum courses that is part of the formative assessment of the candidate.</p>			

Teacher Preparation Program - Department of Agricultural Education

Transition Point #1 - Admission to the Agriculture Teacher Preparation

The Department of Agricultural Education offers a Teacher Preparation Program to prepare candidates to teach agriculture and to do public relations work related to agriculture in federal and state agencies, business, commerce, and industry. Admission to this degree program is based on the current General Admission Index set for the program.

Students from other Agricultural Science Programs can apply for the Agriculture Teacher Preparation Curricular Sequence. To be admitted the students must have a 2.50 grade point average or higher overall and in their major, complete either Methods in Teaching Vocational Agriculture (EDAG 4005) or Audiovisual Media in Teaching Vocational Agriculture (EDAG 4016), and receive a favorable recommendation from the Teacher Preparation Committee. The Teacher Preparation Committee interviews potential candidates and evaluates their essays to determine the disposition for teaching. Potential candidates who are not admitted will be offered career counseling, remedial courses or a tutoring program. After completion of the counseling, remedial courses or tutoring program, the Teacher Preparation Committee reviews the potential candidate's progress in reconsidering admission to the program.

Transition Point #2: Completion of Organization and Administration in Vocational Agriculture course

After completing 12 credits in required Agricultural Education courses, the candidate must have a 2.50 GPA or higher. Candidates take a pre and post diagnostic tests during the Organization and Administration in Vocational Agriculture (EDAG 4007) course to evaluate their pedagogical and content knowledge. Candidates who score less than 70% on the post diagnostic test must participate in career counseling, a remedial program or a tutoring program. The EDAG 4007 course uses a number of instruments to assess candidate proficiencies. Candidates must design, implement and evaluate a curriculum guide and instructional materials to be used during their field experience. Candidates also analyze educational case studies and observe an Agricultural Education class for which they write reflective essays applying their pedagogical and content knowledge. Candidates perform a microteaching activity during and a one time

field experience in a school that has an agricultural education program. Candidates develop a portfolio in which they demonstrate and provide evidence of their applied pedagogical, content, human development and learning knowledge skills, reflective habits, and sensibility to diversity. These outcomes must be demonstrated with artifacts such as lesson and unit plans and classroom management techniques. Academic advisors use the assessment instruments of this course to help candidates make informed decisions about their program of studies. Candidates not presenting a satisfactory level of performance are given the opportunity to participate in formal tutoring or mentoring experiences.

Transition Point #3: Admission to Teaching Practice Courses

To be admitted to the Teaching Practice Courses, the candidate must have a 2.5 grade point average overall and in the major. The candidate must also present his or her educational portfolio in an interview with the Teacher Preparation Program Committee. Finally the candidate must take a diagnostic test and have completed 12 credits in the Agricultural Education Courses.

Agricultural Education Courses

- 1) EDAG 4005- Methods in Teaching Vocational Agriculture
- 2) EDAG 4006- Curriculum Development
- 3) EDAG 4007- Organization and Administration in Vocational Agriculture
- 4) EDAG 4016- Audiovisual Media in Teaching Vocational Agriculture
- 5) EDES 4006-Nature and Needs of Exceptional Children

Transition Point #4: Exit from the second Teaching Practice Course

In this transition point candidates will exit the student-teaching experience with 192 hours of direct contact with students in a classroom under the supervision of qualified academic supervisor and a certified cooperative teacher. Candidates are encouraged to take the State standardized tests (PCMAS). Candidates are recommended for program completion if they have a 2.5 grade point average overall and in their major and have satisfactorily met all other program requirements. At this point, candidates evaluate the unit operation and the quality of the offerings, among others.

Transition point #5: Program Completion

Candidates are evaluated with multiple instruments that include standardized tests (PCMAS), grade point average, coursework, teaching/performance, and portfolios. Candidates must achieve a minimum rank of “Proficient” on all evaluations. Candidate's portfolios must include artifacts and supporting documentation. These artifacts may include, but are not limited to: lesson plans, assessment and evaluation items, classroom management plans, and educational philosophy. Candidates must show how they integrate technology into their instructional planning and assessment.

Undergraduate candidates in Agriculture must complete all coursework with an overall grade point average of 2.5 or better and a grade point average of 2.5 or better in the major. In addition to the 15 credits in General Education Courses, candidates must complete:

- Teaching Practice I – EDAG 4018 (3 credit hours)
- Teaching Practice II – EDAG 4019 (3 credit hours)
- Nature and Needs of Exceptional Children - EDES 4006 (3 credit hours)
- Audiovisual Media - EDAG 4016 or The Use of Microcomputers in the Classroom - EDPE3129 (3 credit hours)
- U.S. History - HIST 3111 or HIST 3112 (3 Credit hours)
- Puerto Rican History - HIST 3241 or HIST 3242 (3 Credit hours)

On completing the Agriculture Teacher Preparation Program candidates will have at least 142 credits distributed as follows:

- General education courses (60 credits)
- Faculty requirements (33 credits)
- Departmental requirements (19 credits)
- Professional electives (18 credits)
- Free electives (12 credits)

To become certified as an agricultural education teacher in Puerto Rico, candidates must submit a teacher certification application form to the Puerto Rico Department of Education and pass the teacher certification exams (PCMAS). Candidates may graduate without completing a teacher certification application, but will not be certified to teach in Puerto Rico.

Transition Points in the Agriculture Teacher Preparation Program

Transition Point #1: Admission to the Agriculture Teacher Preparation			
Candidates Proficiencies (k=knowledge, s=skill, d=disposition)	Assessment Tools	Benchmarks	Person in charge
#8 Demonstrate caring dispositions toward professional and personal development (d)	<ul style="list-style-type: none"> *General Admission Index (IGS in Spanish) and College Board Entrance Examination. 	2.5 GPA in major 2.5 GPA overall	Registrar's Office
#1 Possess content knowledge of the discipline that the candidates aspires to teach (k)	<ul style="list-style-type: none"> UPRM Report Transcript 	<ul style="list-style-type: none"> 2.5 GPA in major 2.5 GPA overall 	Registrar's Office
#2 Possess pedagogical content knowledge (k) #3 Possess knowledge of human development and learning (k)	<ul style="list-style-type: none"> Completion of 3 credits in courses of Agricultural Education either: <ul style="list-style-type: none"> EDAG 4005- Method in Teaching Vocational Agriculture, Or EDAG 4016- Audiovisual Media in Teaching Vocational Agriculture Candidates must submit the application form for the Secondary School Teacher Preparation Program. 	<ul style="list-style-type: none"> Approval 3 credits in courses of Agricultural Education with a 2.50 GPA or better. Approval admission to the program. 	<ul style="list-style-type: none"> Registrar's Office Teacher Preparation Program committee.
#4 Demonstrate creative critical thinking (s) #5 Exhibit comprehensive formation – communication skills (s) #8 Demonstrate caring dispositions toward professional and personal development (d)	<ul style="list-style-type: none"> Essay rubric Essay rubric 	<ul style="list-style-type: none"> Satisfactory completion of Essay (College Board) Satisfactory completion of Essay in EDAG 4005- Method in Teaching Vocational Agriculture or EDAG 4016- Audiovisual Media in Teaching Vocational Agriculture 	<ul style="list-style-type: none"> College Board Teacher Preparation Program committee.

Transition Point #1: Admission to the Agriculture Teacher Preparation			
Candidates Proficiencies (k=knowledge, s=skill, d=disposition)	Assessment Tools	Benchmarks	Person in charge
#5 Exhibit comprehensive formation – communication skills (s) #8 Demonstrate caring dispositions toward professional and personal development (d)	<ul style="list-style-type: none"> • Student’s Interviews 	<ul style="list-style-type: none"> • Satisfactory completion of Interview 	<ul style="list-style-type: none"> • Teacher Preparation Program committee
<p>Use of the results: Direct Admission to the Department of Agricultural Education is based on student’s General Admission Index and College Board Entrance Examination. GPAs are collected with the purpose of monitoring enrollment to the Program and to provide immediate feedback to the Registrar’s Office regarding admission to the Program. Academic progress of courses in education fundamentals and content courses is monitored, and the academic advisor recommends to the candidates the next courses they should take. Results from the essay and the interview are used to provide specific services to candidates. For example, candidates not presenting a satisfactory level of competence in the essay are either recommended to participate in tutoring experiences or to take courses in communication skills prior to request admission to the program again. Candidates not presenting satisfactory dispositions to teach participate in professional career counseling.</p>			

Transition Point #2: Completion of Organization and Administration in Vocational Agriculture course			
Candidates Proficiencies (k=knowledge, s=skill, d=disposition)	Assessment Tools	Benchmarks	Person in charge
#1 Possess content knowledge of the discipline that the candidates aspires to teach (k) #2 Possess pedagogical content knowledge (k) #3 Possess knowledge of human development and learning (k)	Completion of 12 credits in courses of Agricultural Education: <ul style="list-style-type: none"> • EDAG 4005- Method in Teaching Vocational Agriculture. • EDAG 4006- Curriculum Development. • EDAG 4007- Organization and Administration in Vocational Agriculture. • EDAG 4016- Audiovisual Media in Teaching 	<ul style="list-style-type: none"> • Approval 12 credits in courses of Agricultural Education with a 2.50 GPA or better. 	<ul style="list-style-type: none"> • Teacher Preparation Program committee

Transition Point #2: Completion of Organization and Administration in Vocational Agriculture course			
Candidates Proficiencies (k=knowledge, s=skill, d=disposition)	Assessment Tools	Benchmarks	Person in charge
	Vocational Agriculture.		
#1 Possess content knowledge of the discipline that the candidates aspires to teach (k) #2 Possess pedagogical content knowledge (k) #3 Possess knowledge of human development and learning (k) #4 Demonstrate creative critical thinking (s) #7 Assessment of Students Learning	<ul style="list-style-type: none"> • Essay rubric offered in EDAG 4007- Organization and Administration in Vocational Agriculture • Pre-Post Diagnostic Test Rubric offered in EDAG 4007- Organization and Administration in Vocational Agriculture 	<ul style="list-style-type: none"> • Satisfactory completion of Essay • Satisfactory completion of Pre-Post Diagnostic Test rubric 	<ul style="list-style-type: none"> • Teacher Preparation Program committee • Teacher Preparation Program committee
#1 Possess content knowledge of the discipline that the candidates aspires to teach (k) #2 Possess pedagogical content knowledge (k) #3 Possess knowledge of human development and learning (k) #4 Demonstrate creative critical thinking (s) #5 Exhibit comprehensive formation – communication skills (s)	<ul style="list-style-type: none"> • Design, Implementation and Evaluation of Curriculum Guides Rubrics (need assessment questionnaire, assessment tools, and lesson plans). 	<ul style="list-style-type: none"> • Satisfactory completion of rubrics 	<ul style="list-style-type: none"> • Teacher Preparation Program committee

Transition Point #2: Completion of Organization and Administration in Vocational Agriculture course

Candidates Proficiencies (k=knowledge, s=skill, d=disposition)	Assessment Tools	Benchmarks	Person in charge
#7 Assessment of student learning			
#1 Possess content knowledge of the discipline that the candidates aspires to teach (k) #2 Possess pedagogical content knowledge (k) #3 Possess knowledge of human development and learning (k) #4 Demonstrate creative critical thinking (s) #5 Exhibit comprehensive formation – communication skills (s) #7 Assessment of student learning	<ul style="list-style-type: none"> Design, Implementation and Evaluation of instructional material Rubrics (digital video, webpage, posters, and interactive instructional activities). 	<ul style="list-style-type: none"> Satisfactory completion of rubrics 	<ul style="list-style-type: none"> Teacher Preparation Program committee
#1 Possess content knowledge of the discipline that the candidates aspires to teach (k) #2 Possess pedagogical content knowledge (k)	Microteaching activity Rubric	<ul style="list-style-type: none"> Satisfactory completion of rubric 	<ul style="list-style-type: none"> Teacher Preparation Program committee

Transition Point #2: Completion of Organization and Administration in Vocational Agriculture course

Candidates Proficiencies (k=knowledge, s=skill, d=disposition)	Assessment Tools	Benchmarks	Person in charge
<p>#3 Possess knowledge of human development and learning (k) #4 Demonstrate creative critical thinking (s) #5 Exhibit comprehensive formation – communication skills (s) #6 Demonstrate community building skills (s) #7 Assessment of student learning</p>			
<p>#1 Possess content knowledge of the discipline that the candidates aspires to teach (k) #2 Possess pedagogical content knowledge (k) #3 Possess knowledge of human development and learning (k) #4 Demonstrate creative critical thinking (s) #5 Exhibit comprehensive formation – communication skills (s) #6 Demonstrate community building skills (s) #7 Assessment of student learning. #8 Demonstrate</p>	<p>One time Field Experience Exercise Rubric and Essay Field Observation report</p>	<ul style="list-style-type: none"> • Satisfactory completion of rubrics • Satisfactory completion of report. 	<ul style="list-style-type: none"> • Teacher Preparation Program committee

Transition Point #2: Completion of Organization and Administration in Vocational Agriculture course			
Candidates Proficiencies (k=knowledge, s=skill, d=disposition)	Assessment Tools	Benchmarks	Person in charge
caring disposition. #9 Demonstrate sensibility to diversity. #10 Demonstrate reflective practice.			
#1 Possess content knowledge of the discipline that the candidates aspires to teach (k) #2 Possess pedagogical content knowledge (k) #3 Possess knowledge of human development and learning (k) #4 Demonstrate creative critical thinking (s) #5 Exhibit comprehensive formation – communication skills (s) #7 Assessment of student learning. #10 Demonstrate reflective practice.	Portfolio	<ul style="list-style-type: none"> Satisfactory completion of portfolio and rubrics. 	<ul style="list-style-type: none"> Teacher Preparation Program committee
<p>Use of the results: GPA is collected with the purpose of monitoring candidate's proficiencies in content knowledge, and to provide feedback to the Registrar's and Admission's Offices regarding future admissions to the Program. This data is also used on the Unit's Student-Tracking System. The results of the rubrics are used by academic advisors to help candidates make informed decisions about their Program of studies. Candidates not presenting a satisfactory level of performance participate in formal tutoring or mentoring experiences.</p>			

Transition point #3: Admission to Teaching Practice Courses			
Candidates Proficiencies (k=knowledge, s=skill, d=disposition)	Assessment Tools	Benchmarks	Person in charge
#1 Possess content knowledge of the discipline that the candidates aspires to teach (k)	<ul style="list-style-type: none"> UPRM Report Transcript 	<ul style="list-style-type: none"> 2.5 GPA in major 2.5 GPA overall 	<ul style="list-style-type: none"> Registrar's Office

Transition point #3: Admission to Teaching Practice Courses			
Candidates Proficiencies (k=knowledge, s=skill, d=disposition)	Assessment Tools	Benchmarks	Person in charge
#2 Possess pedagogical content knowledge (k) #3 Possess knowledge of human development and learning (k)			
#1 Possess content knowledge of the discipline that the candidates aspires to teach (k) #2 Possess pedagogical content knowledge (k) #3 Possess knowledge of human development and learning (k)	Completion of 15 credits in courses of Agricultural Education: <ul style="list-style-type: none"> EDAG 4005- Method in Teaching Vocational Agriculture. EDAG 4006- Curriculum Development. EDAG 4007- Organization and Administration in Vocational Agriculture. EDAG 4016- Audiovisual Media in Teaching Vocational Agriculture. EDES 4006- Nature and Needs of Exceptional Children 	<ul style="list-style-type: none"> 2.5 GPA in major 2.5 GPA overall 	<ul style="list-style-type: none"> Registrar's Office
#1 Possess content knowledge of the discipline that the candidates aspires to teach (k) #2 Possess pedagogical content knowledge (k) #3 Possess knowledge of human development and learning (k)	<ul style="list-style-type: none"> Student's Interviews 	<ul style="list-style-type: none"> Satisfactory completion of Interview 	<ul style="list-style-type: none"> Teacher Preparation Program committee
#1 Possess content knowledge of the discipline that the candidates aspires to teach (k) #2 Possess pedagogical content knowledge (k) #3 Possess knowledge of human development and learning (k) #4 Demonstrate creative critical thinking (s)	<ul style="list-style-type: none"> Pre-Post Diagnostic Test Rubric 	<ul style="list-style-type: none"> Satisfactory completion of Pre-Post Diagnostic Test rubric 	<ul style="list-style-type: none"> Teacher Preparation Program committee
#1 Possess content knowledge of the discipline that the candidates aspires to teach (k) #2 Possess pedagogical content	<ul style="list-style-type: none"> Portfolio 	<ul style="list-style-type: none"> Satisfactory completion of portfolio and rubrics. 	<ul style="list-style-type: none"> Teacher Preparation Program committee

Transition point #3: Admission to Teaching Practice Courses			
Candidates Proficiencies (k=knowledge, s=skill, d=disposition)	Assessment Tools	Benchmarks	Person in charge
knowledge (k) #3 Possess knowledge of human development and learning (k) #4 Demonstrate creative critical thinking (s) #5 Exhibit comprehensive formation – communication skills (s) #7 Assessment of student learning. #10 Demonstrate reflective practice.			
<p>Use of the results: GPA is collected with the purpose of monitoring candidates' content and pedagogical knowledge before entering to the student-teaching experience. This data is also used on the Unit's Student-Tracking System. All data from the assessment instruments and the transcript are reviewed by the academic advisor and the student-teaching coordinator. Candidates are admitted in the student-teaching experience if they have successfully performed in the above mentioned criteria. Candidates not presenting a satisfactory level must participate in a tutoring/mentoring program before enrolling in to student-teaching. The data are used to modify or improve program based on need.</p>			

Transition point #4: Exit from the Second Teaching Practice Course			
Candidates Proficiencies (k=knowledge, s=skill, d=disposition)	Assessment Tools	Benchmarks	Person in charge
#1 Possess content knowledge of the discipline that the candidates aspires to teach (k) #2 Possess pedagogical content knowledge (k) #3 Possess knowledge of human development and learning (k)	<ul style="list-style-type: none"> UPRM Report Transcript 	<ul style="list-style-type: none"> 2.5 GPA in major 2.5 GPA overall 	<ul style="list-style-type: none"> Registrar's Office
#1 Possess content knowledge of the discipline that the candidates aspires to teach (k) #2 Possess pedagogical content knowledge (k) #3 Possess knowledge of human development and learning (k)	<ul style="list-style-type: none"> Approved EDAG 4018-Teaching Practice I. 	<ul style="list-style-type: none"> 2.5 GPA or more 	<ul style="list-style-type: none"> Registrar's Office
#1 Possess content knowledge of the discipline that the candidates aspires to teach (k) #2 Possess pedagogical content knowledge (k)	<ul style="list-style-type: none"> Student teaching evaluation rubrics 	<ul style="list-style-type: none"> Satisfactory completion of both evaluations. 	<ul style="list-style-type: none"> Cooperating teachers and a University supervisor

Transition point #4: Exit from the Second Teaching Practice Course

Candidates Proficiencies (k=knowledge, s=skill, d=disposition)	Assessment Tools	Benchmarks	Person in charge
<p>#3 Possess knowledge of human development and learning (k) #7 Assessment of student learning. #9 Demonstrate sensibility to diversity #10 Demonstrate reflective practice.</p>			
<p>#1 Possess content knowledge of the discipline that the candidates aspires to teach (k) #2 Possess pedagogical content knowledge (k) #3 Possess knowledge of human development and learning (k) #4 Demonstrate creative critical thinking (s) #5 Exhibit comprehensive formation – communication skills (s) #7 Assessment of student learning. #10 Demonstrate reflective practice.</p>	<ul style="list-style-type: none"> Portfolio including evidence of lesson plans, evaluations tools such as, exams, quizzes, assignments, reflective essays, self-evaluation report, cooperative teacher evaluations, attendance records and research written papers. 	<ul style="list-style-type: none"> Satisfactory completion of portfolio and rubrics. 	<ul style="list-style-type: none"> Teacher Preparation Program committee
<p>#1 Possess content knowledge of the discipline that the candidates aspires to teach (k) #2 Possess pedagogical content knowledge (k) #3 Possess knowledge of human development and learning (k) #4 Demonstrate creative critical thinking (s) #5 Exhibit comprehensive formation – communication skills (s) #6 Demonstrate community building skills (s) #7 Assessment of student learning. #8 Demonstrate caring disposition.</p>	<ul style="list-style-type: none"> Field Experiences 	<ul style="list-style-type: none"> Completion of 192 hours 	<ul style="list-style-type: none"> Teacher Preparation Program committee. Registrar's Office

Transition point #4: Exit from the Second Teaching Practice Course			
Candidates Proficiencies (k=knowledge, s=skill, d=disposition)	Assessment Tools	Benchmarks	Person in charge
#9 Demonstrate sensibility to diversity. #10 Demonstrate reflective practice.			
#1 Possess content knowledge of the discipline that the candidates aspires to teach (k) #2 Possess pedagogical content knowledge (k) #3 Possess knowledge of human development and learning (k) #4 Demonstrate creative critical thinking (s) #5 Exhibit comprehensive formation – communication skills (s)	<ul style="list-style-type: none"> Standardized Test (PCMAS) 	<ul style="list-style-type: none"> 95 or higher 	<ul style="list-style-type: none"> College Board
<p>Use of the results: GPA is collected with the purpose of monitoring candidate's proficiencies in content knowledge, and to provide feedback to the Registrar's and Admission's Offices regarding future admissions to the Program. This data is also used on the Unit's Student-Tracking System. All data from the assessment instruments and the transcript are reviewed by the academic advisor and the student-teaching coordinator. The data are used to modify or improve program based on need.</p>			

Transition point #5: Program Completion			
Candidates Proficiencies (k=knowledge, s=skill, d=disposition)	Assessment Tools	Benchmarks	Person in charge
#1 Possess content knowledge of the discipline that the candidates aspires to teach (k) #2 Possess pedagogical content knowledge (k) #3 Possess knowledge of human development and learning (k) #4 Demonstrate creative critical thinking (s) #5 Exhibit comprehensive formation – communication skills (s) #6 Demonstrate community	<ul style="list-style-type: none"> UPRM- Transcript 	Agricultural Education Program Candidates- <ul style="list-style-type: none"> General education courses 60 Faculty requirements 33 Departmental requirements 19 Professional electives 18 Free electives 12 Total 142 credits	<ul style="list-style-type: none"> Registrar Office

Transition point #5: Program Completion			
Candidates Proficiencies (k=knowledge, s=skill, d=disposition)	Assessment Tools	Benchmarks	Person in charge
building skills (s) #7 Assessment of student learning. #8 Demonstrate caring disposition. #9 Demonstrate sensibility to diversity. #10 Demonstrate reflective practice.			
#1 Possess content knowledge of the discipline that the candidates aspires to teach (k) #2 Possess pedagogical content knowledge (k) #3 Possess knowledge of human development and learning (k) #4 Demonstrate creative critical thinking (s) #5 Exhibit comprehensive formation – communication skills (s) #6 Demonstrate community building skills (s) #7 Assessment of student learning. #8 Demonstrate caring disposition. #9 Demonstrate sensibility to diversity. #10 Demonstrate reflective practice.	<ul style="list-style-type: none"> • UPRM- Transcript 	Teacher Preparation Program Candidates- <ul style="list-style-type: none"> • General Education Courses (15) • Student Teaching I – EDAG 4018 (3) • Student Teaching II – EDAG 4019 (3) • Nature and Needs of Exceptional Children EDES 4006 (3) • Audiovisual Media EDAG 4016 or The Use of Microcomputers in the Classroom EDPE3129 (3) • U.S. History HIST 3111 or HIST 3112 (3) • Puerto Rican History HIST 3241 or HIST 3242 (3) 	<ul style="list-style-type: none"> • Registrar Office
Use of the results: Candidates are recommended for program completion if they have the required GPA, pass the student-teaching experience with “B” or higher and have satisfactorily met all of the requirements. Data are used to identify needed improvements for both candidates and the program. Data			

Transition point #5: Program Completion			
Candidates Proficiencies (k=knowledge, s=skill, d=disposition)	Assessment Tools	Benchmarks	Person in charge
from the Report Card is also used to evaluate the overall program quality and to monitor the unit operation.			

Master of Science Program in Agriculture Education - Department of Agricultural Education

Transition Point #1: Admission to the Program

The Department of Agricultural Education offers a Master of Science Program in Agriculture Education. Admission to this program requires a Bachelor's degree in Home Economics, Agricultural Education, or Agriculture with an overall grade point average of 2.8, a successful interview, and a writing sample.

Transition Point #2: Program Completion

Completion of the Master of Science Program requires a Master's Thesis and 27 credits in non-thesis graduate courses, with a minimum of 18 of these credits in courses offered by the Department of Agricultural Education or by the Division of Continuing Education and Professional Studies. The candidate chooses the remaining nine credits in consultation with his or her graduate advisor and the approval of the Department Chairman.

Transition Points in the Agriculture Teacher Preparation Program

Transition Point	Assessments Used
Transition Point #1: Admission	Undergraduate GPA of 2.8 Interview Writing sample
Transition Point #2: Program Completion	Completion of: - Graduate courses (27 credits) - Research Thesis

Insuring Consistency, Accuracy, and Fairness of Assessment

Institutional Assessment Guiding Principles

A commitment to the assessment of institutional effectiveness requires a parallel commitment to ensuring its use in the improvement of programs and services. The following five principles serve to unify the assessment practices at UPRM, while allowing for flexibility in approach for each unit. The principles emulate the five fundamental criteria of assessment planning identified by Middle States Commission in Higher Education (MSCHE, 2005).

1. The mission, goals, and objectives of the institution (and the unit) serve as the foundation for assessment planning.
2. Assessment tasks are shared – plans are developed and implemented with the support and collaboration of both faculty and administration.
3. Assessment plans and processes utilize multiple measures, taking existing practices and requirements into consideration (e.g., external accreditation agencies) to avoid duplication of effort.
4. Assessment is not an event or an outcome, but a process of continuous improvement where findings are used to inform planning and resource allocation.
5. Assessment plans identify realistic (rather than idealistic) goals, timetables, and resources.

Assessment of institutional effectiveness at UPRM occurs on both the institutional and unit levels. The Office of Institutional Research and Planning and the Continuous Improvement Education Initiative serve to develop and monitor efforts at the institutional level. In addition, several campus units collect data on key institutional indicators of interest. At the unit level, the assessment plan is part of the strategic plan.

At the unit level, faculty members review program expectations for candidate's proficiencies and make sure that candidates are provided with opportunities to achieve them. In addition, there are programmed experiences to assure that the candidates understand the expectations so that they can effectively work to achieve them. The faculty aligned the program assessment system with the NCATE, state education, and professional organization standards. Each assessment instrument, revised or created,

is subjected to a continuous improvement review to verify consistency, fairness, and accuracy. The faculty discusses the changes to the instruments among themselves and with the candidates. All rubrics currently used for assessment of knowledge, skills and dispositions have been systematically validated for inter-rater reliability. Collected data is systematically analyzed.

Technology Used to Maintain the System

The Institutional Research and Planning Office, which is under the direct supervision of the chancellor maintains a database for collecting and maintaining assessment information related to academic progress of all students. The Registrar's Office, in collaboration with the Technology Information Center, provides the Teacher Preparation Program with a database system with College Entrance Examination Board (CEEB) scores, high school grade point average, UPR General Admission Index (IGS, according to its name in Spanish), university course grades and other academic information stored in the Registrar's Office. Data from measures directly related to the course work and areas of specialization are obtained from the faculty, collected by the Teacher Preparation Program, and provided to the Program Assessment Committee.

Implementation of the Assessment System

The directors of the Teacher Preparation Programs together with the Program Assessment Committees oversee the implementation of the assessment system. They work hand in hand with the faculty to guarantee the successful development and validation of the techniques needed to assess candidates' progress and to assure the proper administration of the assessment measures as candidate's progress from one transition point to another. The Program Assessment Committee is responsible for the collection of data, data entry, statistical analysis, and studies required to assess the effectiveness of the Teacher Preparation Program. The Program Assessment Committee, the program coordinators, and the program directors, share the responsibility for the interpretation of the assessment results.

Dissemination of the Results

The Institutional Research and Planning Office, in collaboration with the Program Assessment Committee, is responsible for the dissemination of assessment data. Aggregated data on Teacher Preparation Candidates is posted on the Institutional Research and Planning Office Web page (<http://oiip.uprm.edu/>). The assessment results are subject to discussion in diverse forums with concerned UPRM constituents, school personnel and alumni. The ideas and opinions of the university community are taken into consideration for overall program improvement. The discussion of the results is a periodic agenda item in Department meetings and in meetings with the Dean of Academic Affairs. These discussions lead to corrective actions when necessary.

The institution's Office of Continuous Improvement and Assessment considers the results of the program assessment when assigning priorities for budget allocation. The Office of Continuous Improvement and Assessment uses the assessment information to better target its evaluation and professional development activities. Teacher Preparation Program candidates participate in annual forums and workshops to help them understand the implications of the results of these assessments and to give them the opportunity to participate in the development of action plans.

References:

- Alderman, M. K. (2004). *Motivation for achievement*. Mahwah, NJ: Erlbaum.
- Angelo, T. A., & Cross, K. P. (1993). *Classroom Assessment Techniques, A Handbook for College Teachers*. (2nd ed.). Jossey Bass.
- Arends, R.I. (2004). *Learning to teach*. New York: McGraw Hill.
- Board of Trustees of the University of Puerto Rico. (2004). *Certification No. 27 2003-04*.
- Board of Trustees of the University of Puerto Rico. (2005). *Certification No. 47 2004-05*.
- Borko, H., & Putnam, R. T. (1996). *Learning to teach – Handbook of educational psychology*. New York: Mcmillan.
- Charles, C. M. (2005). *Building classroom discipline*. (8th ed.). Boston: Allyn & Bacon.
- Null, J.W. & Ravitch D. ed. (2006). *Forgotten Heroes of American Education: The Great Tradition of Teaching Teachers (Readings in Educational Thought)*. New York, Information Age Publishing.
- Freire, P. (1979). “*Educación y Cambio*”. Buenos Aires: Ediciones Búsqueda. 37.
- Fried, R. L. (2001). *The Passionate teacher: A practical guide*. Boston: Beacon Press.
- Gay, L. R., & Airisaian, P. (2000). *Educational Research*. Columbus, OH: Merrill.
- Humphreys, D. (2005). *Making the Case for Liberal Education: Responding to Challenges*. Washington, D.C.: Association of American Colleges and Universities Press.
- International Society for Technology in Education (2001). *National educational technology standards for teachers – Preparing teachers to use technology*. Eugene, OR: Author.
- Learner-Centered Psychological Principles: A Framework for School Redesign and Reform. (1997). [Retrieved December 21, 2005 from <http://www.apa.org/ed/lcp.html/Social>]
- Lynch, R. L. (1997). *Designing vocational and technical teacher education for the 21st century: Implications from the reform literature*. (Information Series, No. 368) Columbus, OH:ERIC Clearinghouse on Adult, Career, and Vocational Education
- McMillan, J.H. (2004). *Educational Research*. (4th ed.). Boston: Allyn & Bacon.

- Middle States Commission on Higher Education [MSCHE]. (2005, June). "MSCHE-UPRM Report." Report to the Faculty, Administration, Trustees, and Students of UPRM by an evaluation team representing the MSCHE.
- Miller, M.D. (1996). Philosophy: The conceptual framework for designing a system of teacher education. In N.K. Hartley and T. L. Wentling (Eds.), *Beyond tradition: Preparing the teacher for tomorrow's workforce* (pp. 53-71), Columbia: University Council for Vocational
- National Panel Report. (2002). *Greater Expectations: A new vision for learning as a nation goes to college*. Association of American Colleges and Universities.
- National Research Council. (2000). *How People Learn: Brain, Mind, Experience and School*. National Academy Press.
- Ortega y Gasset, J. (1976). "El Libro de las Misiones", Colección Austral. (9^{na} ed.) Madrid : Espasa-Calpe.
- Papalia, D. & Wenkos, S. (2001). "Psicología del Desarrollo". (8^{va} ed.). Mc Graw Hill.
- Pintrich, P.R., & Schunk, D. H. (2002). *Motivation in education*. (2nd ed.). Uper Saddle River, NJ: Prentice may.
- Puerto Rico Math and Science Partnership -AIACiMa (2004). *Características del Aprendizaje con entendimiento*. Río Piedras: (in press).
- Sadker, D. M. P. & Sadker, D. M. (2000). *Teachers, schools and society*. (5th ed.). New York: McGraw Hill.
- Santrock, J. W. (2002). *Psicología de la educación*. Mexico: McGraw Hill.
- University of Puerto Rico at Mayagüez Registered Students Report (2006, August 15). [Retrieved November 1, 2006, from <http://oiip.uprm.edu/informes/>]