



University of Puerto Rico at Bayamón

Self Study Report Middle State Commission of Higher Education

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Self-Study Report
to the Middle States Commission on Higher Education

University of Puerto Rico at Bayamón

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Chancellor

**Moving to a Culture of Information and Evidence
Self-Study 2011**

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Chair of Visiting Team

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Executive Summary

The University of Puerto Rico at Bayamon (UPRB) was re-accredited in June 2001 for ten years and in June 2006 submitted its Periodic Review Report. Since the last accreditation, the Institution has met new challenges; such as, new accreditation standards set by the MSCHE, decreased educational offerings for the UPRB's associate degrees, budget limitations, greater competition in the higher education market, increase in distance education, and a world-wide economical crisis which has limited institutional resources, among others.

The UPRB Self-study Report followed the comprehensive self-study model. As opposed to the UPRB's last accreditation of 2001, the UPRB has initiated and acquired additional program accreditations and certifications. Not only did this lead to identifying program strengths and challenges, but it also helped to better prepare the Institution in meeting the MSCHE standards for this self-study. While these accreditations and certifications examined programs and curriculums in particular, the MSCHE Self-study has examined the Institution as a whole. This has allowed the UPRB to reflect upon its accomplishments and how effectively it has met its mission and goals. Through this report the University has identified its present academic and administrative strengths and challenges and what the Institution needs to focus on to continue improving and developing. The following presents a summary of the primary findings in each of the chapters.

Summary of Findings

Standards 1 and 6: Mission, Goals and Integrity

The UPRB has defined its mission, vision and goals, which are aligned with all the documentation that establishes institutional policies and procedures. The vision, mission and goals are known and their implications are recognized by the faculty and non-teaching personnel of the institution; however, this is not the case regarding students. The mission and institutional policies are presented and disseminated through institutional documentations as well as through various other means (UPRB web page and promotional materials). On the other hand, institutional integrity is observed through the established institutional procedures and is continually evaluated by internal and external organisms.

Standards 2 and 3: Planning, Resources Allocation, Institutional Renewal and Institutional Resources

The University of Puerto Rico has a strategic guide Ten for the Decade (*Diez para la Década*), which provides a frame of reference for the UPRB's five-year Strategic Plan (2006-2016). This plan is the basis for the operational working plans of the Institution's offices and departments and is audited by internal and external auditors. Annually these operational working plans are evaluated to measure their level of fulfillment.

The budgeting and planning processes should be better articulated to more effectively address the economical limitations that have been observed in the University's general funds. However, the UPRB is working with successful strategies; such as, searching for external funds, increasing the student enrollment in the evening session, reducing energy costs, developing an intramural practice plan for the faculty, and applying precautionary measures established by the Board of Trustees to achieve economies. Lastly, the UPRB has limitations in its physical facilities that need to be gradually addressed as allowed by the University's plan of Capital Improvement.

Standard 4 and 5: Leadership, Governance and Administration

The governmental and leadership structure, at both systemic and institutional levels, are clearly defined with rightful delimiting responsibilities. The positions are occupied by personnel with the academic and professional credentials needed. However, communication and the openness for advising in decision making among the aforementioned group and the community needs to improve through new relationship strategies. On the other hand, the training program for administrative personnel and directors needs to be strengthened.

Standards 8 and 9: Student Admissions, Retention and Student Support Services

Through its official documentation, the UPRB has clear policies and criteria for the admission processes and student retention. These are coordinated and applied by qualified employees who offer a wide range of services to students. These service areas measure their effectiveness through the established institutional processes. From this measurement, it is inferred that students want to broaden the communication channels and their participation in making decisions on areas that affect them.

Standard 10: Faculty

For the most part, the UPRB faculty is full-time, tenured, has at least a master's degree and is mainly dedicated to teaching. The institutional resources fostering research, post-graduate studies and professional development are limited. Fair policies and procedures for the hiring of faculty in tenured or contract positions exist. In the past few years, due to the fiscal limitations of the Institution, the number of contract personnel (adjunct professors) hired has increased.

Standard 11: Educational Offerings

The UPRB has undergraduate academic offerings which are comprised by 12 bachelor's degrees, 4 associate degrees and more than 30 articulated transfers with other units of the UPRB system. Six of the aforementioned programs are offered during the evening session. The academic programs include educational experiences in their curriculum; such as, practicums, internships, research, information literacy, and student exchange.

All of the UPRB's academic programs have developed an alumni profile and should continue submitting five-year revisions to these or professional accreditation associations (ACBSP, NCATE and ABET) to maintain updated on new developments in the various specialized fields. These programs have support personnel to facilitate the teaching-learning process (LRC) and are evaluated positively by employers and alumni regarding satisfaction towards the academic preparation given.

Standards 12 and 13: General Education and Related Educational Activities

The General Education component has defined educational goals in the areas of oral and written communication, scientific and qualitative reasoning, technology and information literacy, and critical thinking. These goals are measured through the assessment process of student learning (pre- and post-tests). This component of General Education, although global, is adapted according to students' needs in each academic program and is measured regarding the level of employers and alumni's satisfaction. Both of these groups demonstrate high levels of satisfaction with the elements of the General Education component that are evaluated. This component should be evaluated every five years, and the faculty should continue to reinforce the competencies related to the educational goals when integrating these in the specialized courses.

The Educational Services Program, Athletic Program and the Division of Continuing Education and Professional Studies (DECEP) provide additional activities that contribute to the educational endeavor of

the UPRB. These programs and departments attend populations with particular characteristics and give students support in diverse areas.

Standards 7 and 14: Institutional Assessment and Assessment of Student Learning

The Institution has developed an institutional assessment plan as well as an assessment plan of student learning. These plans are related and at times support each other. Both accumulate qualitative and quantitative information in a systematic manner, which supports the decisions made through information sources developed in the Institution. However, this area needs to continue with the training of personnel and with the reinforcement of the processes and flow of information at all levels of the Institution, as well as, with the participation and support of larger groups in the university community. In this way the UPRB may continue with its movement towards documentation and evidence.

Probationary Status

It is important to note that on June 24, 2010, the MSCHE placed the UPRB on probation along with ten other campuses of the UPR system. This was due to a student conflict which began in April at the Río Piedras campus and spread to all the other units with the exception of the Medical Sciences Campus (*Ciencias Médicas*). As a result, the UPRB was closed for approximately 40 working days (From April 26, 2010, until June 18, 2010) and had to make adjustments to complete the semester that was in progress and on the summer and fall schedules that followed. The conflict was in protest to Certification 98 of the Board of Trustees, which contained the restraint of student institutional financial aids (Tuition Exemptions). This meant that students would be required to choose between grants or exemptions as an effort to avoid double *dipping*. In addition, the Board established a special stabilizing quota of \$400 per semester to the regular registration fee. The purpose of the quota was to help the dire economical situation the UPR was facing. Students were opposed to the aforementioned and as a result held a demonstration causing the closing of ten UPR campuses and leading to the probationary status by the MSCHE.

The MSCHE placed the UPR campuses on probationary status based upon lack of evidence with two accreditation standards: *Leadership and Governance* and *Educational Offerings*. On the other hand, supplementary information regarding the standard of Institutional Resources was also required.

Complying with the requirements and procedures established by the MSCHE, the UPRB presented its monitoring report on September 1, 2010, and had an evaluation team visit on September 15, 2010. The UPRB fully complied with the accreditation standard of Educational Offerings, but lacked the evidence for the standards of Leadership and Governance. Therefore, the Middle States Commission sustained the UPRB's probation in November 18, 2010, and requested a second monitoring report for March 1, 2011, and added the standard of Institutional Resources as another standard to be addressed.

Introduction

Institutional Overview

The University of Puerto Rico (UPR) is a public institution of higher education that is composed of 11 campuses and the Central Administration Office. The UPR has emerged as the leading national teaching and research institution of higher education. It offers programs from associate to the doctoral degree level.

The highest governing body of the UPR is the **Board of Trustees**, which has representation of the community (appointed by the governor of Puerto Rico), faculty, and students. The Board prescribes the policy for the UPR system, guides its development, allocates its budget, and appoints the President and the Chancellors of the campuses.

The **President** is the executive director and official representative of the University. He acts as a representative of the Board of Trustees, who, in collaboration with the University Board, coordinates and supervises the UPR's activities and takes the initiative in promoting the development of the Institution. The President, advised by the University Board, submits for consideration to the Board of Trustees a plan for the integral development of the UPR. He also submits to the Board of Trustees a total budget for the campuses and the University with the advice of the campuses' chancellors.

The Central Administration is composed by five offices that oversee the essential aspects of institutional policy: Academic Affairs, Students Affairs, Planning and Development, Budget and Finance, and Administration. The directors of these offices, who are members of the University Board, work directly with the President of the UPR to implement the systemic institutional policies among all the academic units.

The **University Board** is lead by the President and includes the directors of the five offices of the Central Administration, the chancellors of all campuses, three additional officials appointed by the President with the approval of the Board of Trustees, a student representative, and a faculty representative elected by each Academic Senate. The Board's essential functions are to promote the overall administrative and academic development as well as advise the President in such matters. This body establishes the General Student Regulations and submits them for the final consideration of the Board of Trustees. It considers the integral development plan and budget proposal for the University presented by the President and then submits them to the Board of Trustees for their approval.

As in all the campuses of the UPR, the University of Puerto Rico at Bayamón (UPRB) is under the direction of the **Chancellor**. The **Chancellor** exercises administrative and academic authority in accordance to the provisions of the University law and other University regulations. The President of the University submits nominations to the chancellor's positions for consideration to the Board of Trustees after consultation with the corresponding Academic Senate. The chancellors preside over their respective Academic Senate, the Administrative Board, and campus meetings. They also develop the budget proposal, which is submitted to the President and the University Board after approval by the Administrative Board.

The **Administrative Board** of the UPRB examines and approves the general rules stated by the University's legislative and administrative organisms in agreement with the University of Puerto Rico's bylaws and supervises the general progress of the unit. Among its functions the board advises the Chancellor regarding his/her duties and works on the budget and academic procedures regarding tenure, promotions, and leaves of absence according to the University bylaws. The board also intervenes in all other academic affairs submitted to them that need to be addressed by the Chancellor accordingly.

The **Academic Senate**, as in the others campuses of the UPR, constitutes the official forum of the academic community for the discussion of the general problems of the university, development of academic policies and other matters of concern to the community.

In the UPRB the **Chancellor** works directly with the **Dean of Academic Affairs**, the **Dean of Administrative Affairs**, and the **Dean of Student Affairs**. Among their responsibilities, the deans participate in the development and implementation of the campus' strategic plan, support all steps taken to collaborate with the teaching-learning and research processes, and promote all institutional efforts directed toward a culture of assessment. They also are responsible for the development and implementation of the operational plans of their respective deanships.

The University of Puerto Rico at Bayamón (UPRB) was established in August 1971 as a community college and was part of the Regional Colleges Administration until 1998. During this year the UPRB became an autonomous campus for the University of Puerto Rico (UPR) System. Located at the northeastern part of Puerto Rico in an area of rapid industrial and economic development, it is oriented to fulfill the growing academic needs of such a community. The UPRB mostly serves students from the municipalities of Bayamón, Guaynabo, San Juan, Cataño, Dorado, Comerío, Naranjito, Toa Alta, Corozal, Toa Baja, and Vega Alta.

The UPRB is an institution of higher education whose mission is to facilitate significant, continuous and long-lasting learning with the ultimate goal of having students become responsible citizens who will help transform their world with a heightened sense of ethics, esthetics and actions that will contribute to change. To achieve this, the Institution should advocate the establishment of support systems for learning, research and collaboration with the Puerto Rican society.

The Institution offers its undergraduates academic programs in the content areas of technology [*BS Computer Science, BS Electronic Engineering Technology, BA Materials Management, AD Civil Engineering Technology; Land Surveying and Highway Construction, AD Civil Engineering Technology in Construction, AD Instrumentation Technology, and AD Electronics (in moratorium)*]; business [*BBA Accounting, BBA Marketing, BBA Management, BBA Finance, BOS Office Systems*]; science [*BS Human Biology, and BS General Biology*]; and education [*BA in Special and Elementary Physical Education and BA in Preschool and Elementary Education*] content areas. The UPRB also offers academic coordinated transfer programs in several of the aforementioned disciplines, as well as in the liberal arts areas.

The UPRB is a 100 percent Hispanic serving institution with total headcount enrollment of 4,992 in the fall of 2010. A total of 86.4 percent of the student population studied full time and 57.8 percent were

female. Most of our students are enrolled in bachelor's degree programs (78.2 percent) while 6.2 percent are in associate degrees, and 13.3 percent in transfer programs. The remaining 2.3 percent of our students is classified in other categories. The student body is served by 304 non-faculty personnel and 287 faculty members.

The UPRB is characterized as an institution with a strong labor union representation through the Workers Union (*Sindicato de Trabajadores*) and the Brotherhood Union (*Hermandad de Empleados no Exentos de la Universidad de Puerto Rico* [HEEND]). In addition, there is representation through two faculty associations the *Asociación Puertorriqueña de Profesores Universitarios* (APPU) and *Confederación de Asociaciones de Profesores Universitarios* (CONAPU). The UPRB students are also known as being active participants in the University issues through all institutional bodies (Academic Senate, Administrative Board and General Student Council). However, it is important to note that the university community is highly committed to the Institution and the university is also highly regarded by the surrounding community. The UPRB is seen as a large extended family with elements that make it unique as an institution.

Probationary Status

It is important to note that on June 24, 2010, the MSCHE placed the UPRB on probation along with nine other campuses of the UPR system. This was due to a student conflict which began in April at the Rio Piedras campus and spread to all the other units with the exception of *Ciencias Medicas*. As a result, the UPRB was closed for approximately 40 working days (From April 26, 2010, until June 18, 2010) and had to make adjustments to complete the semester that was in progress and on the summer and fall schedules that followed. The conflict was in protest to Certification 98 of the Board of Trustees, which contained the restraint of student institutional financial aids (Tuition Exemptions). This meant that students would be required to choose between grants or exemptions as an effort to avoid double dipping. In addition, the Board established a quota of \$400 per semester to the regular registration fee. The purpose of the quota was to meet the dire economical situation the UPR was facing. Students were opposed to the aforementioned and as a result held a demonstration causing the closing of ten UPR campuses and leading to the probationary status by the MSCHE.

The MSCHE placed the UPR campuses on probationary status based upon lack of evidence with two accreditation standards: *Leadership and Governance* and *Educational Offerings*. On the other hand, supplementary information regarding the standard of Institutional Resources was also required.

Complying with the requirements and procedures established by the MSCHE, the UPRB presented its monitoring report on September 1, 2010, and had an evaluation team visit on September 15, 2010. The UPRB complied with the accreditation standard of Educational Offerings, but the MSCHE requested documenting evidence to demonstrate that it has achieved and can sustain ongoing compliance with Standards 3 and 4, Institutional Resources and Leadership and Governance, respectfully. Therefore, the Middle States Commission sustained the UPRB's probation in November 18, 2010, and requested a second monitoring report for March 1, 2011. These concerns have been addressed through this self-study.

Self-Study Process

The UPRB selected the comprehensive self-study model with a reorganization of standards that reflects the interdependence that should exist among the diverse processes occurring in the Institution in support of the offerings of academic programs of excellence. On the other hand, this model allows for an ample appreciation of all relevant information in all Institutional areas regarding standards of excellence, and also promotes the ample participation of the entire institutional sector and its dependents.

Beginning with the comprehensive model selected, the self-study will be developed into eight main chapters with the participation of the diverse components of the university community in each of these chapters. This is in response to the interest in presenting, in an extensive manner, information relevant to the institutional areas in the Standards of Excellence, as well as promoting the ample participation of all sectors and dependencies of the institution.

The Steering Committee was appointed by the Chancellor taking into consideration the diverse areas of expertise and responsibilities that will be addressed in the self-study. Each member of the committee was in charge of one topic and recommended to the Chancellor a maximum of eight persons to be part of the sub-committee working groups that would be responsible for developing the topic assigned. This member was not necessarily presiding over the sub-committee; however, s/he was the liaison between the Steering Committee and the Sub-committee working group assigned.

The Steering Committee received two progress reports from the sub-committee working groups (December 2009 and February 2010) for review and feedback. Later the drafts of the chapters (March and July 2010) were received, reviewed and integrated into one document. It should be noted that the Steering Committee developed official homogeneous formats for the sub-committee working groups to acquire minutes of agreements made during meetings, generate reports of work done, request information and sub-committee reports. This action allows for the systematic and standardized documentation of the re-accreditation process.

The Steering Committee received the reports from the subcommittees, which were received and sent to them with recommendations. Once this process was completed, the Steering Committee submitted the self-study, which was then made available through diverse means to the UPRB university community and the UPR Central Administration. Recommendations from the aforementioned bodies was received and integrated into the report. The final version was submitted and approved by the Chancellor and the pertinent institutional bodies.

This self-study process was one of profound reflection and evaluation where the Institution's strategic, operational and academic changes are founded on a short, average and long-range time span. Moreover, the document facilitated for the collection of responses that help us to deeply understand how institutional processes come about, the relationship and pertinence of the academic programs to the area we serve, and the search and strengthening of diverse modalities of study (Extended University, and Continuing Education and Professional Studies Division).

Through the self-study process it is hoped that a broad and homogeneous knowledge of the Institution's reality was generated to all members of the university community. This knowledge will be translated into ample participation based upon information of this community in the search for solutions to the different challenges faced.

Finally, this process, in conjunction with the specialized certification or accreditation processes in the programs or divisions of Business Administration (ACBSP), Preschool and Elementary School (NCATE), Adapted Physical Education (NCATE), Engineering (ABET), Electronics (ABET), Computer Sciences (ABET), Office Systems (ACBSP), Library (ACRL) and the Counseling and Orientation Department (IACS), will help us to continue developing a culture of information and evidence that will continually support decision making at all administrative levels of the Institution in a systematic and reliable manner.

Self Study Committees

Steering Committee

Dr. Edna Miranda
 Mr. Abdiel Martínez
 Professor Nelson Vázquez
 Dr Fernando Fernández
 Dr. Jorge Rovira
 Mr. Rafael Rosado
 Professor Judith Díaz
 Professor Margarita Ramos
 Dr. María Aguirre
 Professor Miguel Vélez
 Dr. Maritza Sostre
 Ms. Edith Moreu
 Mr. Javier Zavala

Mission, Goals and Integrity Committee

Dr. Elizabeth Crespo
 Professor María L. Rodríguez
 Professor Antonio Huertas
 Mr. Juan Nieves
 Professor Ángel La Torre
 Ms. Jessica Hernández
 Dr. Fernando Fernández

Planning, Resources Allocation and Institutional Renewal Committee

Dr. Jorge F. Rovira
 Ms. Iris Molina
 Ms. Evelyn Rivera
 Mr. Wilfredo Ortiz
 Mr. Samuel Torres

Leadership, Governance and Administration Committee

Mr. Rafael Rosado
 Ms. Betzaida Miranda
 Professor Judith Díaz
 Professor Evaristo Medina
 Dr. Rosa Alers
 Ms. Minerva Collazo
 Ms. Aissha Flores
 Professor Jaime Laracuenta
 Ms. Lourdes Tañon

Student Admissions and Student Support Services Committee

Professor Nelson Vázquez Espejo
 Professor Edith Moreu López
 Mr. Marcos De Jesús Rosado
 Ms. Luz N. Mercado Hernández
 Ms. Carmen I. Montes Burgos
 Ms. Nathalí López Díaz
 Dr. Ana Morales Zeno

Faculty Committee

Professor Margarita Ramos
 Ms. Luis Forna
 Dr. Samuel Díaz
 Dr. Carmen Rivera
 Dr. Ilia Ramírez
 Sr. Javier Zavala

Educational Offerings Committee

Professor Miguel Vélez
 Professor Fernando Sulsona
 Mr. Jeanlouis Betancourt Gaztambide
 Dr. Amaury Samalot
 Dr. Aminda Sierra
 Professor Ivette Maldonado
 Dr. Eugenio García

General Education and Related Educational Activities Committee

Dr. Maritza Sostre
 Professor Sonia Feliciano
 Prof. Nora Medina
 Ms. Luz Idalia Morales
 Ms. Angie Torres
 Professor María de los Ángeles Zavala

Institutional Assessment and Assessment of Student Learning Committee

Professor Guadalupe Vega Gutiérrez
 Professor Alba Osorio
 Professor Sonia Morales
 Professor Norma Pérez
 Dr. María Aguirre Ortiz
 Dr. Elena Maldonado
 Professor Anabel Torres
 Mr. Evaristo Medina Cucurella
 Mr. Héctor J. Navedo Aldarondo

Collaborators

Dr. María C. López-Adams
 Ms. Anilda González
 Professor Sonia Morales

MISSION, GOALS AND INTEGRITY

The Mission, Goals and Integrity Sub-committee studied aspects of the mission in relation to how this clearly defines its purpose in the context of higher education we serve and what we hope to achieve. It examined if the institutional goals were consistent with the Institution's aspirations and with meeting the mission. The sub-committee noted how much the university community knows about the mission and the goals and how much support is being given for their achievement and development. It also analyzes how the institutional mission and goals are founded, the development and maintenance of the academic programs, the institutional practices and the evaluation of the Institution's effectiveness. On the other hand, institutional integrity was evaluated through an analysis of its compliance with institutional and external regulations. This demonstrates how to promote the participation of all members of the university community indiscriminately and how institutional behavior is based upon ethical principles.

Mission and Goals

Are the mission, goals and objectives clearly understood by all sectors (students, faculty, and non-faculty personnel)?

The mission, vision and objectives of the University of Puerto Rico at Bayamón (UPRB) are well defined. They establish the purpose and explain whom we serve and how we achieve our goals and objectives, which are in accord with the vision established by the University of Puerto Rico.

The documents that comprise the mission, vision and educational goals, as well as the Institutional Strategic Plan, were developed using official mechanisms with ample participation by the university community. These documents have been approved by the Academic Senate and Administrative Board, two governing organisms of the UPRB.

The last amendments to the institutional mission and vision were approved in 2007 through the Academic Senate's Certification 14-2007-2008 (See Appendix M-1). These amendments read as follow:

Mission

To facilitate significant, continuous and long-lasting learning with the ultimate goal of having students become responsible citizens who will help transform their world with a heightened sense of ethics, esthetics and actions that will contribute to change. To achieve this, the Institution should advocate the establishment of support systems for learning, research and collaboration with the Puerto Rican society.

Vision

To be an institution of higher learner whose goal is to prepare professionals who, through their university experience, combine technological, scientific, and humanistic knowledge with their experience in research and creativity. This will result in individuals who will develop in an integral manner and function as informed, responsible, and critical citizens capable of actively participating in a dynamic world that demands competent persons.

The Institution's educational goals and objectives have been incorporated into the strategic plan, which was approved by the Administrative Board through Certification 16-2008-2009 (See Appendix M-2). The UPRB is committed to making the Institutional mission and vision's content, significance and importance known through all sectors of the university. This is why the mission and vision are included in all important documents of the Institution, such as, the catalog (See Appendix M-3) and the UPRB's web

page (www.uprb.edu). The institutional mission and vision serve as the fundamental principle in the creation of the missions and visions of the academic departments and administrative offices.

With the aim of learning about the effectiveness of the dissemination of the aforementioned documents, the Self-Study Committee administered a questionnaire to the different university sectors (See Appendix M-4). These questionnaires were administered at random to the three main sectors of the university community: faculty, non-faculty members and students.

Appendix M-5 presents the findings of this investigation in detail. In summary, these findings demonstrated that eight out of ten faculty and non-faculty know the Institution's mission, vision and goals. From this same group, seven out of the ten who completed the questionnaire understand the implications of the mission and vision.

Recognizing the importance of the student body, the Self-study Committee set precedent by having this sector of the university complete the questionnaire. A sample of students who were members of the UPRB's student organizations was chosen to complete the questionnaire. In it, only three out of ten students recognized the mission and vision and two out of ten students understood their implications completely. These results indicate that the distribution and publication of the mission and vision should be done with alternate means of dissemination since those presently used only partially obtain the results sought from the student body, which are clear understanding of the Institution's mission, vision and objectives.

Could the mission of the Institution be identified in its programs, policies, activities, and other characteristics? How does each department integrate the policies, priorities, and objectives of the Institution?

The mission of the Institution is "to facilitate significant, continuous and long-lasting learning with the ultimate goal of having students become responsible citizens who will help transform their world with a heightened sense of ethics, esthetics and actions that will contribute to change." Each academic department has developed its mission, goals and system for the assessment of learning aligned to the Institution's mission and vision (See Appendix M-6 "Mission and Vision of the Administrative and Student Departments").

On the other hand, the institutional policies require that the educational programs' curriculums fulfill the University mission. The educational goals are clearly stated in the UPRB catalog. As part of the process for the assessment of student learning, the Institution has articulated these goals in terms of the competencies it wants to foster in its students (See Appendix M-7 "Alignment among the Educational Goals of the Institution, the areas of Student Learning, the Alumni Profile and Standard 12 of the MSCHE").

The administrative departments provide learning support services and the investigation needed for the UPRB to meet its mission and vision. Each administrative department has elaborated its mission and has submitted it for approval from the deanships to ensure that the particular roles are articulated within the policies, priorities, objectives and institutional mission (See Appendix M-6 "Mission and Vision of the Administrative and Student Departments"). The institutional objectives of the UPRB are included in the strategic plan and are evaluated through the institutional assessment plan (See Appendix M-8).

The UPRB mission is expressed in other documents, including the University's promotional presentations, whose reach exceeds the immediate university community and impacts possible students and the community in general. The orientation activities that are given to new incoming students, the development of activities by the socio-cultural office and the programs for the professional development of faculty also express and support the UPRB mission. The mission of the academic and administrative departments as well as the policies established are presented in the UPRB web page and are visible in each one of the departments.

On the other hand, the Institution has a strategic plan which is periodically revised. The annual work plans of each deanship and department are elaborated according to the strategic plan. The format used requires that there be an alignment with the institutional goals and with important projects of the Institution. This makes up an essential part of our institutional policies.

In addition, the Institution has the systematic mechanisms to maintain the operational and strategic operations coordinated, as well as the objectives established by the mission of the UPRB and the strategic plan. Some examples of these mechanisms include meetings with the Administrative Board, Academic Senate, the Chancellor's Office, the administrative, student and academic deanships, and directors of the academic departments as well as the mechanisms that the academic departments and their committees internally carry out. These organisms are systematic mechanisms of institutional *governance* and act as instruments for the follow-up and integration of the institutional objectives and projects.

How could the institutions' constituencies be involved in re-thinking the mission and/or redirecting activities inconsistent with it.

Our mission lauds the Institution's purpose in an academic university context and indicates who it will serve and its goal. Since our last self-study and following the recommendations of the MSCHE, the mission and vision have been submitted for discussion with the faculty. As a result, on October 18, 2007, the Academic Senate approved a revised version of the mission and vision; it also adjusted the institutional vision so it reflected the level and place academic research (scholarship) occupies in an undergraduate institution (See Appendix M-1: Academic Senate's Certification 14-2007-08). Afterwards, the constituents of a faculty assembly held in May 2008 assigned a faculty committee the task of carrying out a process to discuss and make recommendations on the UPRB's mission and vision as part of the institutional assessment process. This committee prepared an outline of topics to be discussed, and at a faculty meeting held in December 2009, recommended that representatives of the academic departments meet to present the views and suggestions of their department. This recommendation was accepted by the faculty assembly, and the following motion was approved: Each department was to select one or two representatives to participate in a discussion to revise and make recommendations on the UPRB's mission and vision as part of the institutional assessment process (See Appendix M-9: Certification 5-2009-2010). The meeting was scheduled for May 2010; but because of the university conflict, it was rescheduled for the first semester of the 2010-11 academic year.

On November 12, 2010, representatives from academic departments met to discuss the vision and mission of the UPRB. Some faculty observed that the current vision actually better expresses our mission (who we are, what we do, why, how and for whom). Faculty reaffirmed the mission of preparing professionals who through their university experience, integrate technological, scientific, humanistic and social sciences competencies, research and creative experiences. These result in individuals who will function as informed, responsible, critical, and ethical citizens capable of actively participating in a

dynamic world. Some faculty suggested that our vision should articulate directions for the future, who we serve, how we differentiate ourselves and what values we support. Some faculty suggested the possibility of presenting ourselves as an educational alternative not only for residents of our immediate geographical area and Puerto Rico, but also for students from Latin America, the Caribbean and the United States.

One of the findings in the questionnaire prepared by the Self-Study Mission, Vision and Integrity Committee to learn the scope, understanding and implementation of the UPRB's mission and vision, suggests ways in which sectors, in addition to the faculty, could participate in the process of re-thinking the mission and vision. Upon examination of the informative leaflets/ brochures of the student organizations, the committee noted that a major emphasis was placed on the objectives of the national organizations or chapters, while a minor one was placed on the UPRB's mission and vision.

With the goal of broadening student's knowledge and participation in the dissemination and development of the institutional mission, it is important that the mechanisms for student participation in the institutional governance be effective. These mechanisms should include an orientation and invitation for student organizations to articulate the ways in which these may contribute to the institutional mission. In this manner they can also articulate how the objectives of the national organizations they are assigned to and the activities that they develop contribute to the UPRB's mission, vision and goals (See Appendix M-10 with the activities developed by the student organizations). The student leaders can become effective vehicles to promote and disseminate to other students information about the UPRB's mission, vision and goals.

Integrity

How do the Institution's Catalog, class schedules, Student Handbook, and all other documents related to student recruitment and orientation provide appropriate and accurate information to students and prospective students regarding academic policies and curricula?

The University of Puerto Rico at Bayamon provides new incoming students information related to the General Catalog, the General Student Regulations and other academic policies and curriculum through various means. One of these is the UPRB web page (www.uprb.edu) where all important documents of the institution are available.

The majority of the students admitted to the UPRB come from high schools in the Bayamon region. Therefore, orientation through the Office of Admissions in conjunction with the academic departments has been established. During these recruitment orientations, the students are informed of the importance of accessing the UPRB web page and of the documents, services and information they can obtain from it. Appendix I-1 includes all documents required for admission to the UPR that are available on the web page. In addition to the electronic means, documents are produced in written form to summarize the academic and legal procedures that facilitate understanding in potential students. During the general orientation, each academic department offers presentations that explain in greater detail the services offered (See Appendix I-2: List of departments that participate in the general orientation).

The General Catalog is the document that establishes the relationship among the Institution and its students and represents the official source of information for the programs and academic requirements of the UPRB. The catalog is prepared every four years and is available in English and Spanish. The Institution has a formal process established to revise and approve changes to the catalog. The amendments to this document, while it is in effect, are established in the procedures.

The UPRB General Catalog includes the curriculum course offerings of each of the departments and discusses these curriculums with students when they begin their studies. The curriculums of each program are updated through periodic revision established by the institutional policy (See Appendix I-3). These revisions are first presented to the department members and its director. If approved these continue on to the Academic Senate for its approval. If at the end of process the revisions are approved, the curriculum changes go into effect for the new students admitted into the program. This revision process ensures that accurate information is provided to students.

The departments also offer leaflets/ brochures with important information about curricular sequences, objectives and alumni profile, among others (See examples in Appendix I-4). Furthermore, during this general orientation, each academic department has the opportunity to present the educational objectives related to the academic programs, the program's curriculum and the course sequence emphasizing the "bottleneck courses." The general orientation has been evaluated favorably by the students (See Appendix I-5 *Encuesta 2009* [2009 Survey]).

Each course that makes up a curriculum must have a syllabus. The institutional policy indicates that the syllabi are discussed with students during the first week of classes. Through the syllabi the general and specific course objectives are established. In addition, students are clearly informed of how they will be evaluated; they will also have a clear panorama of the topics covered, skills to be developed and expectations, among others.

Each syllabus must include a paragraph which guarantees the rights of students with disabilities. Through this document the UPRB is committed to fulfilling the laws which guarantee access to this population of the University. A change in the Law of Vocational Rehabilitation required the immediate updating of syllabi to include this policy.

The academic calendar is the document where the Institution establishes the dates and durations of student related activities for each semester or summer session. This calendar is regulated by Certification and is required by the Registrar's Office to ensure that each course meets the established contact hours. The academic calendar must be approved by the Administrative Board (See Appendix I-6: Certification Sample).

On the other hand, the list of courses that will be offered each semester are published in the registration system, known by its Spanish acronym as *SIS*. The students are able to see the complete list of courses and sections available. In addition, they can view the professors who will be giving each of the courses. The list of courses is established by the Dean's Office of Academic Affairs that seeks to integrate the best possible use of professors' resources, classrooms, and laboratories, as well as dealing with students' scheduling conflicts.

To ensure that the published information is correct, the Institution has established the following procedures. A protocol has been created for the UPRB web page where the director of the Information Systems Office is the person responsible for making changes to this page. At the same time, there is a person assigned by department to periodically verify the documentation that appears in this important means of communication that is used today. On the other hand, written documents, such as the department leaflets/ brochures (administrative and academic) are revised and must be approved by the corresponding deanships before publication. Furthermore, each announcement, correspondence or letter addressed to the students must be approved the Dean's Office of Student Affairs and/or the Dean's Office of Academic Affairs.

How does the Institution demonstrate impartiality in its procedures and requirements for the selection of new students and for the recruitment of faculty and non-teaching personnel?

The UPR system has a uniform admissions standard for undergraduate students as established in Certification 25-2003-2004 of the Board of Trustees (See Appendix I-7). Candidates for admission as first year students to the UPR must file an application with the Admissions Office. They must have a high school diploma or its equivalent from an educational institution accredited by the Puerto Rico Department of Education. In addition, those seeking admission as first year students must take the admission test (PEAU) administered by the College Entrance Examination Board (CEEB). This test consists of two areas: aptitude and achievement. Applicants may take the English version of the test (SAT) instead of the PEAU. To process the admission application, they must submit an official high school academic transcript, an official report of the test scores of PEAU or SAT and the completed application form with admission's fee proof of payment. Applicants can also choose to apply for admission using the on line application available in the UPR Website where they can also pay by electronic payment.

Admission to the UPR is based on an admission index formula. The IGS or General Application Index is calculated as follows: 50% is based on the high school academic index; 25% is based on the mathematical score, and 25 % on the verbal score obtained on the aptitude test of the PEAU or SAT. These raw scores are then converted to obtain the General Application Index. Admission is granted to students whose index strictly complies with the minimum general index approved by the Administrative Board of the campus to which the students apply. The minimum general application index may vary from campus to campus and from year to year according to program demand, admission space limitations and resources. First year applicants are only considered for admission in the fall semester of each academic year. Consequently, the majority of the applications must be submitted before December 15 of the year prior to admission.

The average GPA (Grade Point Average) of the students admitted is 3.50 or greater. The admission policy provides some exceptions; these are students with special talents. The University of Puerto Rico at Bayamón admits a limited number of students with special talents and abilities. The 2008-2011 Student Catalog states that these students are admitted to programs related to those skills. To be considered, the student must inform his or her abilities and talents in the space provided in the Application for Admission. Selection of students follows a competitive process that takes into consideration the needs of the Institution and the quota of students who will be admitted. The University of Puerto Rico at Bayamón will arrange an interview or audition with the student and will require written evidence that certifies excellence in his or her particular skill or talent. In addition, applicants should meet the following requirements:

- Submit the Application for Admission to the University of Puerto Rico on time.
- Take the "College Board" or SAT test.
- Have a high school diploma or equivalent with a minimum GPA of 2.00.
- Request the UPRB as the first alternative in the Application for Admission.
- Have been denied admission for the three chosen alternatives.

The UPR also recognizes that faculty members are central to the institution's teaching and learning process. The UPR faculty members are qualified professionals by virtue of their education, training, experience and skills. Until June 2006, the minimum education requirement for a tenure track position as a faculty member was a master's degree (See UPR General By-laws, Article 42, Section 42.1). In June 2006, the Board of Trustees of the UPR approved Certification #145-2005-2006 (See Appendix I- 8),

which requires a doctoral degree as the minimum academic qualification for a candidate to be recruited in a tenure track position. This requires any candidate for a tenure track position as a professor or researcher to have a doctoral degree or equivalent in the teaching or research discipline, except in the disciplines with a proven difficulty in recruitment, according to the policies and procedures established by the President of the UPR. In addition, the Academic Senate has approved internal policies and procedures for the recruitment of new faculty members.

The UPR General By-laws (See Appendix I-9) specifies how to conduct recruitment (See Articles 42 and 43). To deploy the recruitment of the faculty, the UPR is organized around academic departments. Thus the director (chair of the department) regularly schedules meetings with Department Personnel Committee members who make suggestions about the human resource needs of the program. Together, the director and committee identify desirable personnel characteristics and skills. The hiring and deployment process is adjusted according to the program's trends and needs. Whenever there is a change in the program trend or a faculty opening occurs, the faculty member hired must conform to those vacancy needs. The department examines the pool of candidates to determine those that qualify to fill the vacancy, the personnel committee invites the qualified candidates to come to an interview, and the one who best matches the vacant position's qualifications at the time of hiring is recommended. All appointments of teaching personnel are made among candidates who respond to the official public announcement. This announcement is made once the Dean's Office of Academic Affairs authorizes the department to appoint a candidate to a tenure track position.

The promotion and tenure system for faculty follows a specific procedure. The Administrative Board, at the request of the Chancellor, prepares the dossier assessment of candidates for tenure and promotion. In each department original assessments and recommendations are made by the Departmental Personnel Committee. The Committee submits recommendations and reports to the Faculty Personnel Committee. The Faculty Personnel Committee in turn submits its recommendations and report to the Board. In the UPRB three kinds of assessments are used to evaluate the teaching staff. These are student evaluations, classroom evaluation by peers and evaluation of administrative tasks inherent in teaching. These evaluations are used both for retention and for promotion in rank. To apply for tenure, the candidate must have completed five years of service with satisfactory evaluations.

The Criteria and the Process of the promotion and tenure system is established in the Faculty Manual and is summarized as follows:

- Promotion - Upon the respective recommendations of the Personnel Committee of the Department, the Department Director, the Personnel Committee of the Faculty and the Dean of the Faculty, action is then taken by the Administrative Board toward the promotion of the candidate.
- Tenure - After a minimum of five years of service, and upon recommendation from the Personnel Committee of the Department, the Department Director, the Personnel Committee of the Faculty, and the Dean of the College, the Administrative Board will extend or deny tenure. Tenure by itself does not convey a salary adjustment.

A mechanism used by the employer to promote non-teaching personnel is the emission of a public announcement of positions (See Appendix I-10: Certification # 93-110, Council of Higher Education). However, if the position is not within the appropriate unit negotiated by the brotherhood union (*La Hermandad de Empleados Exentos no Docentes* known by the Spanish acronym *HEEND*), the members of

the organization that are interested in the position would have priority if the position would mean a promotion in rank to the interested party.

Once there is a need to cover the vacancy or create a new position, the office in question completes a classification questionnaire establishing the duties the person would carry out and the requirements for the position. This questionnaire is sent to the Human Resources Office where, after evaluating the document, the assigned personnel proceed to promote and publish the job offer. Persons interested in the position complete an employment application and along with other required documents submit them to the Human Resources Office for evaluation.

After the evaluation process, the Human Resources Office notifies the interested parties the points obtained and calls them for an interview. The supervisor or director of the office or department as well as the dean of the area (if she or he so wishes) are present for the interview process to evaluate the candidates and submit their selection to the Human Resources Office. Finally, the Human Resources Office sends a communication notifying the employee selected.

How does the Institution review its policies, practices and publications to ensure integrity in all components about its mission, programs and services?

The UPR as an institution has a leadership system that is charged with promoting performance excellence, academic and intellectual freedom, and fostering an environment of continuous improvement. The Declaration of Principles contained in the UPR General By-laws establishes and guarantees the democratic principles that ensure integrity in all components about its mission, programs and services. The UPR governing and administrative bodies are responsible for giving direction and facilitating the effective operation of UPRB through its policies, regulations, certifications and procedures. The administrative bodies include the UPR Board of Trustees, the UPR University Board, the UPRB Administrative Board, and the UPRB Academic Senate.

The Council on Higher Education established the Central Administration of the University of Puerto Rico on December 9, 1966. The following offices belong to this institutional unit: Academic Affairs, Planning and Development, Budget, and Finance and Administration, among others. These offices contribute to the implementation of systemic institutional policies in all campuses.

Each autonomous institutional unit has a chancellor as chief administrator. Chancellors exercise the highest administrative and academic authority in their institutional units according to the provisions of the university laws and regulations. Chancellors also preside over their respective Academic Senate, Administrative Board, and faculty meetings and develop the budget proposal submitted to the President and the University Board after approval by the Administrative Board.

The functions of the Administrative Board are defined by the University of Puerto Rico Law, Section B, Article 8. The Administrative Board examines and approves the general institutional policies established by the University's legislative and administrative organisms in agreement with the University of Puerto Rico General Bylaws and supervises the general progress and coordination of each unit. Among its functions, the board advises the chancellor on his or her duties, budget development and academic procedures regarding tenure, promotions and leaves of absence according to the University of Puerto Rico General Bylaws.

The Bylaws of the Administrative Board (See Appendix I-11) regular meetings (Chapter IX) and the duties (Chapters 4-8) of the members of this body (the Chancellor, Academic, Administrative and Student

Deans, four academic department directors, two elected faculty senators and an elected student representative (Chapter II). The representatives from the Academic Senate, the faculty and students who serve on this body have the responsibility of informing their constituents of the deliberations and decisions of the Administrative Board. In addition, the policies and practices that this body deliberates on are presented in annual reports that are posted on the UPRB web page.

Each autonomous institutional unit of the University of Puerto Rico has its own Academic Senate. This governing body constitutes the official forum of the academic community for the discussion of general problems of the University concerning the development of academic policies and other issues of concern. The following are among its responsibilities:

- Determines the general orientation of teaching and research programs by coordinating initiatives of faculties and departments.
- Establishes the general guidelines for faculty recruitment, tenure, promotions, and leaves of absence.
- Takes part in the consultation process for appointing chancellors and deans.
- Elects representatives to the University and Administrative Boards.
- Submits before the University Board revisions to the Student Regulations.
- Establishes the general requirements for student admissions and academic degrees.

The Academic Senate of the University of Puerto Rico at Bayamón is composed of six *ex-officio* members: the President of the University of Puerto Rico, the Chancellor, the Academic, Administrative and Student Deans and the Director of the Library. The Senate has seventeen faculty members of the academic departments, and four student members (the Student Council President, the representative before the University Board, the Administrative Board representative and an elected Student Senator).

The Academic Senate is charged with establishing and disseminating the norms, policies, certifications and institutional bylaws. Its functions are defined by the University of Puerto Rico Law, Article 11, Section D. The Academic Senate reviews policies and practices through its permanent committees established in its Bylaws (See Appendix I-12: Chapter XI, Articles 29-35): Academic Affairs, Faculty Affairs, Student Affairs, Bylaws and University Law, Course Evaluations, and Agenda. In addition, the Consultation Committee (Chapter XII) is charged with gathering the opinion of the university community on specific issues. In its regular meetings (Chapter XIII), the Academic Senate debates reviews and makes decisions on the policies and practices that are brought to its attention. The decisions are certified and remitted to the Administrative Board. Affected parties have the right to ask for reconsideration by the Senate or appeal to the Administrative Board (Chapter XVII). Annual reports are published on the UPRB web page and contain the specific policies and practices that were reviewed each year by this deliberative and decision making body.

The Institution has mechanisms to update its procedures and policies, while at the same time safeguarding procedures of excellence and ethics that are necessary in an institution such as the University of Puerto Rico. The forums where these possible changes come from have three primary sources: the faculty, student assemblies and suggestions from the administration based upon specific situations that have arisen in the past. All of these suggested changes are developed into proposals that must pass through a rigorous process, be it from the Institutional Academic Senate to Academic Affairs or from the Administrative Board to Administrative Affairs. In both cases the appropriate certifications that evidence the approval of these changes or proposals are generated.

The UPRB publications are periodically revised. The General Catalog is revised every four years, and the General Student Regulations (See Appendix I-13), the Faculty Handbook (See Appendix I-14), as well as the Non-Faculty Regulations (See Appendix M-15) are revised according to the context of the institutional objectives. The institutional web page (www.uprb.edu) is revised by the Information Systems Office according to the petitions of the various offices and departments. The descriptive leaflets/ brochures prepared by the offices that offer student services; such as, Admissions, Financial Aid, Registrar and the Academic Departments are periodically revised according to the needs of each office, in some cases, various times a year.

The General Student Regulations is revised with feedback from students. This manual is approved by the Board of Trustees with the Student Council's endorsement. The manual presently in effect was approved on August 29, 2009, through Certification 13-2009-2010 (See Appendix I-13: The General Catalog and the General Student Regulations).

The UPRB has a culture of evaluation and assessment aligned with the UPR's system-wide policies and procedures. Program evaluations are based on Certification # 43-2006-2007 of the Board of Trustees that establishes a uniform procedure for the evaluation of Academic Programs in the UPR. The UPRB has an Institutional Assessment Committee and a Student Learning Assessment Committee to evaluate the effectiveness of its programs. The Student Learning Assessment Committee has developed a Student Assessment Plan that is being implemented by phases. The committee uses the UPR guidelines for the assessment and evaluation of Academic Programs.

The UPRB Strategic Plan is an essential component of the culture of evaluation and assessment. Goal #2, Academic Cultures of Actualization, Experimentation and Renovation has specific objectives that stimulate and support the systematic revision of academic offerings (Objective 1), put in place agile mechanisms to create, approve and evaluate new programs and curricular revisions (Objective 5), and revise the institutional plan for the assessment of student learning (Objective 10). Goal # 4, Culture of Evaluation and Institutional Assessment, includes the objectives of creating a culture of evaluation of fiscal and human resources (Objective 1) and the accreditation of academic programs (Objectives 5 and 6). Goal # 9, Administrative and Managerial Optimization, includes creating a culture of evaluation of fiscal operations and the re-tooling of administrative personnel (Objectives 8 and 10).

How does the institution consistently carry out its obligations to students and personnel according to written policies and procedures?

As stated earlier, UPRB amply informs students, and personnel of its policies and procedures. As a result, students and personnel are informed of the obligations the institution has undertaken.

A questionnaire was administered to a random sample of faculty and administrative personnel (N= 43) to ascertain if the Institution consistently carries out its obligations to students and personnel according to written policies and procedures (See Appendix I-16 Encuesta 2009). The results indicate that the performance criteria of 3.5 or better was reached in the following areas: Availability of policies and procedures; Disposition of the UPRB to disclose changes to policies and procedures; Promotion of an academic climate that supports the freedom of academic thinking; Promotion of a climate of respect for people of different backgrounds, ideas and perspectives; and Provision of options for filing complaints. The results of the questionnaire indicate that faculty tended to rate these areas higher than non-faculty employees. Employees who have been at the UPRB for less than ten years evaluated all aspects related to the way the UPRB carries out its obligations to students and personnel according to written policies

and procedures more positively than those employed for more than ten years. This might be an indicator of improvement throughout the years as the UPRB institutionalizes and strengthens its policies and procedures.

The questionnaire revealed that employees did not perceive that the Institution adequately addressed the following areas: consistent implementation and revision of policies; fair processes and impartiality in the recruitment and employee assessment; fair processes in the selection of its directors and administrative personnel, and consistent assessment of the implementation of policies established by the UPRB. The data indicate that the faculty evaluated these areas more positively than non-faculty. Student's perception of the UPRB's compliance with its policies and procedures is that all administrative offices, with the exception of the *Oficina de Seguridad y Vigilancia* [Security and Surveillance Office], meet the performance criteria of 3.5 or better. Nonetheless, when asked if they know the procedures for filing a complaint, student's score of 2.90 was lower than the acceptable performance criteria. Another area of concern of the student body had to do with the process of validating course equivalencies. When students transfer from one academic program to another, they are unsure which courses will be validated. The department directors have created a manual that provides guidance to this process. While students do not have this manual, both the departments and the Registrar's Office in charge of the course equivalency process do.

The UPRB complies with the Students Right to Know Act, reporting and showing the graduation rate in the UPRB web site. We also comply with the Jeanne Clery Disclosure Act, reporting the criminal incidents that occur on or off campus. The Security and Surveillance Office maintains a professional relationship with local and state law enforcement agencies and works closely with the Bayamón Police Department. The Quality of Life Office and Campus Security obtain any pertinent information from the local police for the Campus Safety Report. Information is exchanged to ensure that the University is aware of all incidents that occur on or off campus.

Audits performed by the Puerto Rico Government Ethics Office (*Oficina de Etica Gubernamental*) and by the Comptroller's Office (*Oficina del Contralor*) provide evidence that the UPRB carries out its obligations to students and personnel according to written ethics and policies. The reports evaluate different areas and give a score that rates compliance with areas. The UPRB received a score greater than 90% in 2007, 2008 and 2009. Appendix I-17 (MSCHE Fundamental Elements of Integrity and Comptroller's Office criteria of sound ethical practices) indicates the areas examined by the Comptroller's Office and how they relate to the fundamental elements of integrity established in MSCHE Standards for Accreditation.

Recommendations

- The UPRB should develop a greater variety of strategies for the dissemination of the institutional mission and vision to the community.
- A system for the revision of the institutional mission with a representation of all sectors of the university community should be developed.
- All of the UPRB dependencies should systematically and continuously disseminate their respective missions aligned to the UPRB's mission.
- Information related to the fulfillment with the institutional integrity should be disseminated and communicated more effectively to the community.

- UPRB should diligently address the areas identified by faculty and non teaching personnel in which the Institution does not satisfactorily carry out its obligations according to written policies and procedures
- The UPRB should offer more education to the university community on security aspects.
- Inform students about the course equivalency tables and where to access them in the process of transferring from one academic program to another.

PLANNING, RESOURCE ALLOCATION, INSTITUTIONAL RENEWAL AND INSTITUTIONAL RESOURCES

The sub-committee reviewed aspects related to the way the institutional planning processes occur and their relationship to the placement of resources. It analyzed if there exists alignment among planning and the institutional mission and goals. In addition, it analyzed the manner in which the strategic plans and the placement of the resources are evaluated to carry out the necessary changes and improve or maintain institutional quality. Moreover, the sub-committee analyzed how human, financial, and technological resources as well as the physical facilities are utilized effectively and efficiently to fulfill the mission.

Planning, Resource Allocation and Institutional Renewal

The Planning, Resource Allocation and Institutional Renewal Subcommittee met several times to evaluate the work to be done and the ways to comply with the required tasks. The primary job was to review how the institutional planning processes occur and their relationship to resource allocation. Also, the subcommittee analyzed if there existed alignment among planning and the Institutional mission and goals. Therefore, an analysis of the manner in which the strategic plan and resources allocation are implemented must be done to carry out the necessary changes for institutional quality improvement or maintenance. Finally, the subcommittee analyzed how human, financial, and technological resources as well as the physical facilities are utilized effectively and efficiently to fulfill the mission.

Data gathering from the Strategic Plan through a survey (See Appendix P1) were determined to be the most useful tools to obtain information from the teaching and non-teaching personnel about how and in what ways the UPRB administration has handled the planning, resource allocation and renewal of processes and facilities. Various forms and questions were discussed with the elimination of some and the rephrasing of others. The subcommittee received 49 surveys and the findings will be further discussed later in this document.

To what extent does the strategic plan respond to and guide the Institution in the attainment of the established mission, goals, and objectives?

The Strategic Plan of the UPRB is a well-designed plan developed to satisfactorily guide the Institution for the next ten years. The plan was based and aligned with the UPR systemic planning guide, Ten for the Decade, (*Diez para la Década 2006-2016*, Certification 123-2005-2006 of the Board of Trustees – Appendix P-1), which established the goals and scope of institutional actions as well as the institutional mission and vision. Through the alignment exercise the ten goals of the UPRB's Strategic Plan were developed. The following are the goals addressed by this plan:

- Sustained link with students

- Academic cultures of actualization, experimentation and renovation
- Competitive research and creativity
- Leadership in community investment and cultural aspects
- Vocation towards a global world
- Efficiency and beauty of natural spaces and buildings
- Updated technology
- Administrative and management optimization
- Strengthened institutional identity
- Culture of evaluation and institutional assessment

The UPRB Strategic Plan was published for the entire university community through diverse means and received feedback from all sectors of the Institution. The plan is an essential part for the development of the annual working plans of all the UPRB dependencies because these plans have to be aligned and developed based on the Strategic Plan. The original plan, which was designed for ten years (2006-2016), did not foresee the fiscal constraints experienced today. Therefore, the completion of a number of objectives has reduced or partial achievements have occurred.

How involved are the students, faculty, non-teaching personnel, and community in the creation, development and evaluation of the strategic plan?

The strategic plan was created by a committee named by the former chancellor of 2006 and had the participation of the university community. The published plan reflects the participation of all sectors in the development of the UPRB for the next ten years. This committee used the *Diez para la Década* as its base to develop a strategic plan separated by goal and deanship. Once the committee developed a draft of the document, it was presented to the university community for discussion through presentations and informal meetings (conversaciones). However, respondents to the survey utilized to obtain data for this report claim their participation had been reduced since they merely received the information and were just spectators in the development of the plan (Appendix P-2). The Strategic Plan is audited each year by external auditors, the Chancellor and the three institutional Deans (Academic, Administration and Student) to evaluate the Plan's level of compliance (Appendix P-3).

What mechanisms and evidence exist to demonstrate that there is an effective and a continuous assessment of the strategic plan?

Since 2008 on, there has been an internal and external audit of the UPRB Strategic Plan. These audits analyze the goals reached by each deanship as projected in the strategic plan (See audit documents of the Strategic Plan- Appendix P-3).

The Office of Institutional Planning and Research (OIPR [known by its Spanish acronym, *OPEI*]) has numerous documents and reports which provide an excellent account of the efforts made by the former and present administration to keep record of its findings and the corrections performed. However, the development of annual work plans (operational) and the evaluation of their achievements through an annual report became main documents for measuring the effectiveness of the various offices and departments of the Institution. These annual work plans are aligned to the UPRB Strategic Plan and *Diez para la Década* (Appendix P-4: Formats for Work Plans and Annual Reports). On the other hand, administrative directors of the Institution received training in the administration and documentation of Work Plans and Annual Reports so that these could become daily tools in the respective areas and not documents prepared to comply with an order (Appendix P-5 document and Training Lists).

Up to what degree are resources being used effectively to carry out the strategic plan?

The Strategic Plan has been the institutional guide which has let us know where we will be heading in the next few years. All actions carried out in the Institution and projects achieved are reflected in the Strategic Plan. The limitations in the fiscal resources observed during these past years have not allowed the UPRB to address a reasonable quantity of new projects established by the Strategic Plan. This limitation has caused resources to be reassigned to areas of priorities indicated in the institutional mission. This is why some members of the university committee have the idea that a double standard is in effect when they believe an academic area has been given a greater part of the budget instead of the Strategic Plan Committee developing a well-planned rehabilitation of the physical facilities capable of withstanding the strategic plan for the following ten years. Added to the argument is the fact that a very significant part of the budget is used for payroll (over 90%). Thus, neither the academic area nor the physical facilities are well attended as to comply effectively with the strategic plan.

Institutional Resources**What steps have been taken to evaluate how effectively resources are allocated and expended? What specific changes have been implemented and with what results?**

The UPRB obtains funds from diverse sources; however, the general funds given by the state government are the ones that represent the greatest financial contribution the university receives. As a result of the global recession which, according to Puerto Rico Planning Board figures, started affecting the Island's economy since 2006, PR Government Appropriations have steadily declined and currently reflect a reduction of approximately 14% in tax revenues which aggravates the central government's deficit. Consequently, the UPR budget confronts a proportional decline for the current and upcoming fiscal years. Through Certification No. 135 2009-2010 of the Board of Trustees (Appendix P-6), the approved budget of the UPR for the fiscal year 2010-2011 was disclosed. During 2009-10, the budget assigned by the Central Administration to the UPRB was \$40,257,145, and for 2010-11 the budget from the state government general fund was \$36,020,652. The reduction of \$4.2 million in 2010-11 budget compared to 2009-10 was because of the assignment of over four million dollars in non-recurring funds (ARRA-\$4,054,954).

Due to this decrease in state government funds, the UPRB has begun to develop internal mechanisms to improve the administration of fiscal resources and meet the precautionary measures established by the Board of Trustees. On the other hand, the UPR's Certification 135-2009-10 by the Board of Trustees regarding the 2010-11 budget determined the inclusion of a special quota in student's registration as well as the identification of financial allotments where institutional expenses can be cut. Upon the confirmation of the assigned budget for Fiscal Year 2011, the UPRB revised its financial projections through the Fiscal Year 2015 (see Table P1).

Table P1. UPRB Projected General Ledger Distribution by Budget Line

Program	2010-11	2011-2012	2012-2013	2013-2014	2014-2015
I. Instruction	\$19583,920	\$18965,544	\$18798,544	\$18965,544	\$18965,544
II. Research	\$321,032	\$321,032	\$321,032	\$321,032	\$321,032
III. Academic Support	\$2278,374	\$2171,435	\$2198,435	\$2223,847	\$2376,435
IV. Student Services	\$4168,231	\$3848,317	\$3993,317	\$3993,317	\$4063,694
V. Institutional Support	\$5357,019	\$4879,884	\$5252,934	\$5237,034	\$5237,034
VI. Maintenance of Facilities	\$4245,076	\$4003,658	\$4790,201	\$5411,201	\$6010,829
VII. Scholarship and Fellowship	\$67,000	\$60,000	\$67,000	\$67,000	\$67,000
Totals	\$36020,652	\$34249,870	\$35421,463	\$36218,975	\$37041,568

Our Budget Office has had the opportunity, with certain limitations, to reassign or redistribute the recurrent funds approved by the Central Administration over the years. Furthermore, the process of budget distribution within the UPRB has been discussed, evaluated and approved by the Administrative Board.

There has been an agreement and previous conversations to cover fringe benefits as licenses, academic support and promotions, among others, in strict accordance to the availability of funds. However, the course assignment of the tenure-track professors and the hiring of part-time professors have been based on course demand and not on the availability of funds or the economic capacity of the academic departments.

In what areas, and in what way in those areas, is the distribution of resources affecting the Institution’s ability to achieve its mission and goals? How have the programs and supporting services been considered in the Institution’s planning of financial resources?

Our institution has worked for the past, ten fiscal years, under two budgeting schemes that pinpoint the following:

1. The internal planning of the unit is an expression of growth and not necessarily adjusted to the present fiscal and budgetary situation.
2. There is a lack of correlation between the operational and strategic plan.
3. There is a lack of integration between planning, budget and resource allocation.
4. There is a marked emphasis in the resources coming from the General Fund, which are steadily declining.
5. There have been additional budget petitions (for special projects like non-recurrent accreditations).
6. There has been recurrent elimination or use of internal economies.
7. There has been an inability to handle a consolidated budget (General Fund, DECEP-UNEX, proposals, and special projects).
8. There has been a slow development of physical structures.

There are advances in some areas of the strategic plan, based on the non-recurrent assignment of funds by the Central Administration. However, the advances are related to isolated and fragmented actions within the strategic plan.

The strategic plan and the budget are work instruments sanctioned by the UPRB Administrative Board. This governing board has the responsibility of evaluating, approving, reconfiguring and assessing goals and objectives and to follow up on the previous strategic plans and the distribution of the approved budget. The UPRB has a strong need for an operational plan capable of putting into effect the goals and objectives of its strategic plan and needs to work this out for its development, well-being and future growth.

A brief analysis of the UPRB budget reflects a constant change that makes the administrator's task to properly assign and allocate funds in the areas needed difficult. The following is the current track of events pertaining to Certification 93, 2008-2009 of the Board of Trustees concerning the UPRB:

1. The recurrent adjusted budget of July 1, 2009, is \$37,029,754 a recurring decrease of \$3,820,547 regarding the recurrent adjusted 2008-2009 base assignment of \$40,850,301.
2. The recommended budget of July 1, 2009, is \$41,348,321 that includes \$4,318,567 of non recurrent funds (\$4,054,954 ARRA and \$263,613 of technologies fees).
3. The recurrent adjusted budget of July 1, 2009, was modified for the recurrent figure of \$827,563 (Cert. 81-2009-2010, Board of Trustees) to \$36,202,191.
4. The recommended adjusted budget for the fiscal year 2010-2011 is \$37,336,403, which shows an increase of \$1,134,212 compared to the recurrent amended budget (modified) of July 1, 2009, of \$36,202,191.
5. The recommended adjusted budget for the fiscal year 2010-2011 of \$37,336,403 shows a decrease of \$4,011,918 compared to the approved recommended budget of July 1, 2009, of \$41,348,321.
6. The projected expended budget for the fiscal year 2009-2010 of \$41,070,526 in contrast the recommended adjusted budget for the fiscal year 2010-2011 of \$37,336,403 shows insufficient finds in the amount of \$3,734,123.

These scenarios are based on the recommended adjusted budget for the fiscal year 2010-2011 and are just some of the possible budgetary scenarios that the Institution might have to handle. Furthermore, the aforementioned presents the fiscal and budgetary overview of the University of Puerto Rico at Bayamón.

The programs and supporting services have been considered an essential part in the Institution's planning of financial resources. Evidence of this is the goals in the UPRB's Strategic Plan, which develop specific objectives for both areas with their respective assigned budgets.

What are the sources of income for the UPRB, and what additional strategies has the university used to increase its budget?

The sources of income for the UPRB are specific and have increased insignificantly over the years, which is contradictory to the fact that every academic year brings within itself a constant increase in the costs associated with the university as a reciprocating whole.

The general fund receives a recurrent assignment (by law) and some non-recurrent assignment normally executed through the Central Administration (see details of general fund in previous question). Other

sources of income are external like DECEP-UNEX programs with self maintained/sustained academic offerings.

With the goal of improving the fiscal condition, another institutional priority will be to increase student registration. This growth is projected for non-traditional populations (populations that are not from traditional high schools) to be served by the Extended University of the UPRB (UNEX=Spanish acronym). The reason for this rests upon demographic factors that reduce the number of traditional students in Puerto Rico for that of groups between the ages of 17 to 20. On the other hand, through UNEX the UPRB has the physical facilities with evening sessions to serve more students. In addition, these courses are self-sustaining. This means that the registration fees cover the operational expenses and may even produce excess funds, which increases the institutional resources and does not negatively impact the budget that comes from the general state fund.

This is based on the stabilization of the daytime registration and the increase in the evening registration served by the UNEX. Registration is expected to reach a total of 5,315 comprised of 4,800 daytime students and an evening population of 515 students.

The UPRB has also developed a plan to reduce the use of energy and is working with an approved proposal that will allow the integration of prototype solar photocells in the Institution. The project will be finished in January 2011, and implies a \$4,800 annual reduction in energy costs.

The Administration has intensified efforts to increase and diversify sources of additional funding. Federal and state grants and other sources, such as alumni, parents, students, and private donors, provide the institution with resources to supplement revenues coming from state and tuition sources.

It is of great importance for the UPRB administration to continuously search for external funds through projects and research. Because of this the Institution has obtained \$23,453,892 during the period comprised from August 2009 until June 2010. This amount will cause a positive impact, lasting until 2012, on the UPRB's budget through economies made. These external funds compliment the strategies and resources mentioned to allow for an adequate budget for the next three years.

The UPRB is also working towards the development of an intramural practice for the professors. Through this, the faculty members could work on projects, research, and carry out consultant work, among other activities within the Institution. In this way the professors could utilize the institutional resources and contribute to the Institution. It is foreseen that 5% of the funds generated through this action will help support the Institution.

What are the most significant challenges facing the Institution relative to human and technological resources and physical facilities over the next five years?

In terms of human resources, the expectations stated in the strategic plan are congruent with the respondent's answers of the study developed by the sub-committee (Appendix P-2). They concur in that the professional development of personnel, particularly teaching personnel, should upgrade the teaching-learning methods. The respondents understand that recruitment of more personnel is important, but this aspect is not stated in the goals of the strategic plan which focuses mostly on

professional development/improvement. On the other hand, the UPRB personnel will have the same number of human resources presently available to attend to an increase in student enrollment as well as additional tasks.

Regarding technological resources, the responses given in the study are in accordance with the strategic plan and are aligned with the acquisition and better use of equipment. Based on the responses, even though some of the objectives should already be satisfied, the respondent's answers give the impression that they have not yet been completed or achieved. However, there are objectives in the strategic plan which are not reflected in the responses given but have been addressed, such as, the digitalization of documents and processes. In addition, the technological fee collected from students, although limited, allows for the establishment of priorities in the acquisition of technological equipment. There is a great challenge in order to keep the pace with technology changes such as new and more efficient computer laboratories, updated software and academic platforms such as Moodle and WebCt.

The responses of the study foresee a negative vision of the facilities. This is reflected in the answers related to the deterioration of facilities with some responses referring to the subsequent reconstruction of the UPRB. The expectancies of a great number of participants are to have better facilities and the construction of areas because the present ones are too deteriorated. The budget issue is present in all responses alongside the strategic plan. This implies that the UPRB is aware that the budgetary limitations have affected the development of the physical facilities throughout the years. On the other hand, most of the physical facilities of the UPRB were built as temporary facilities over 40 years ago. This has led to a significant amount of the Institution's budget to be used for the maintenance and upkeep of these facilities until they are replaced.

It should be noted that the Capital Improvement Plan, controlled by the Central Administration, is the economical resource for new developments of the physical facilities. At this moment the UPRB is in the process of constructing two new buildings for classrooms and laboratories for the Engineering, Electronics and Natural Sciences programs.

How does the Central Administration determine the annual budget of the Institution? What is the relationship between funds assigned and the institutional needs? To what extent do funds assigned meet the institutional needs relative to the academic programs and enrollment?

The annual budget of the UPR system is determined by a formula based on the collections made by the government every tax year and submitted by individuals, corporations and so forth. . It is important to point out that the funds collected through this formula have been reduced because of the Island's economical situation. Then, a second formula is used to redistribute the system budget among the campuses and administrative offices all over the Island. Over the years the UPRB had asked for an increase in its budget to make changes, mostly in the physical facilities but, as the respondents pinpointed, the relationship between funds assigned and the institutional needs is poor or deficient in that area. The funds assigned to academic programs and enrollment are in a somewhat better position when compared to the physical facilities needs. Maintaining a steady enrollment over the years with little expansion of academic programs has been the way to partially match the UPRB'S budget distribution among the needs. The result is the same; no one area has been well attended with enough resources as to complete all its needs and demands.

Recommendations

- Continue with efforts toward drawing the planning and budget processes closer.

- Strengthen the university community's integration with the development and evaluation of the UPRB Strategic Plan.
- Broaden the dissemination of the strategic plan achievements through email, the web page, leaflets, bulletin boards, and other means to ensure that the entire university community is informed.
- Develop alliances with the private, governmental and community sector through a division for external resources.
- Expand the academic offerings of DECEP-UNEX.
- Revitalize existing physical facilities and construct new ones to enrich the quality of the UPRB's academic and sports offerings.
- Continue the search for new ways of funding and other sources of income that include, but are not limited to, the development of logistical strategies to make agreements with local industries, municipal governments, alumni and federal-local agencies.

LEADERSHIP, GOVERNANCE AND ADMINISTRATION

The Leadership, Governance and Administration Sub-committee presents how the Institution's governmental systems are clearly defined in the development of political roles and decision making. In addition the sub-committee examined how decisions are informed and the members of the internal and external institutional community participate and how the decisions guarantee the financial integrity of the Institution and support the achievement of the institutional mission. Lastly the sub-committee studied up to what degree the administrative leaders and personnel have the necessary skills and knowledge to carry out their duties and facilitate the processes to support the educational steps to be taken.

Leadership and Governance

An efficient administration of a university institution requires leaders directed toward offering effective and agile service to the university community it serves. To achieve effectiveness and harmony, the university community should focus its goals and objectives on coherence with the Institution's mission and vision. In addition, these goals and objectives should be in complete agreement with strategic planning and the laws and regulations established.

In our Institution, management personnel are focused on providing an adequate work environment so that the other components of the administrative structures have the necessary tools that will allow for the achievement of the set goals. The personnel's steps are directed toward offering support to the faculty in the teaching and investigative facets as well as to the non-faculty personnel who collaborate directly with the Institution's teaching-learning process.

To demonstrate the effectiveness and leadership of the UPRB administration, interviews were carried out and different questionnaires were distributed. The data collected have been utilized to respond to the questions in Standards 4 and 5 and are presented in the information that follows.

To what extent do the Board of Trustees, the Chancellor and Deans, the Administrative Board and the Academic Senate consider the characteristics of the internal community for decision making?

The profile of the university community for decision making is studied through different strategies. It is important to consider the points of view of all sectors that make up the university community: faculty, non-faculty personnel and students. Since all decisions affect them, the university community's

participation is fundamental. Various mechanisms have been used to receive feedback and discover the university community's thoughts about the different areas. For example, questionnaires were distributed, and assemblies, conversaciones (informal talks) and meetings were held. Many of these affairs are discussed in faculty meetings, in the Academic Senate and in the Administrative Board. Others are taken care of at meetings and informal talks with non-faculty personnel and students.

In the Academic Senate, the senators disseminate the affairs dealt with to their peers in meetings held in the academic departments and also give feedback of the faculty's reaction. In the Administrative Board the issues are addressed through committees and special assigned tasks. In both bodies, there is student representation. The agreements made are disseminated through diverse means: e-mails, publications on the university web page, bulletins, circular letters, rules, protocols, among others. The deans maintain the personnel under their supervision informed through periodic meetings held in their respective deanships. (See Appendix L-1: *Representación de Comunidad Universitaria en Cuerpos Deliberativos* [Representation of the University Community in Deliberative Bodies]).

Consultations to amend the General Student Regulations, the development of the Institutional Strategic Plan and the consultation process for the appointment of the university President, chancellors and deans are all examples of the university community's participation. Appendix L-2 *Certification No. 60-2007-2008 Nuevo Reglamento General de Estudiantes* [New General Student Regulations] Appendix L-3 *Correos electrónicos invitando a la participación en el desarrollo del Plan Estratégico* [E-mails inviting participation in the development of the Strategic Plan] Appendix L-4 *Proceso de consulta para nominar al Presidente UPR y Rector UPR Bayamón (Estudiantil, Personal Docente y No docente)* [Consultation process for the appointment of the UPR President and the UPRB Chancellor (Students, Faculty and Non-faculty)]

The Office of Institutional Planning and Research (OIPR) carries out various studies utilizing questionnaires and surveys to measure the university community's level of satisfaction as well as to determine its needs. The chancellor, deans, Administrative Board and the Academic Senate use the results of these studies as tools in decision making. Among these studies are the following:

- Alumni Questionnaire (Appendix L-5)
- Questionnaire on the Autonomy (Appendix L-6)
- Safety (Appendix L-7)
- User Satisfaction of the Learning Resource Center (Appendix L-8)
- Vocational Counseling Services (Appendix L-9)
- Student Satisfaction (Appendix L-10)

How do the Chancellor, Deans and Administrative Board assist in generating resources to sustain and guarantee the Institution's financial integrity?

The shrinking economy of Puerto Rico during the past years has made an adverse impact on the assignment of funds to the University of Puerto Rico. This has resulted in a decrease in funds assigned to the UPRB, forcing the Institution to explore new strategies to compensate for the reduction of resources.

In order to make better use and distribution of funds, there exists an institutional policy approved by the Board of Trustees. The guides for the budget distribution have varied from year to year, adapting it to the fiscal reality that affects us. In addition, diverse cautionary measures have been taken directed

toward maximizing the use of resources received and the diminishing costs. (Appendix L-11: *Certification 100-2005-2006 and Cautionary Measures*).

One of the most important responsibilities of the chancellor, deans and Administrative Board of the UPRB is to carry out a needs analysis of the various dependencies of the unit. This analysis is basic to determine the number of resources necessary to operate and maintain stability in the academic offerings and support services required by the teaching-learning process.

Upon the need to stabilize the fiscal situation of the UPRB, the administration has carried out various strategies to maximize the utilization of financial resources; such as,

- establish priorities for the purchase of materials and equipment
- promote the search for external funds
- redistribute personnel
- control the hiring of newly recruited personnel
- increase the number of short-term courses
- continue offering summer sessions that are self-sufficient/ self-financed
- maximize the use of classrooms to save on energy costs
- establish an official policy for the sending of official communications through e-mail and thereby minimizing the use of paper in offices.
- stabilize registration by maintaining the number of active students in proportion to the assigned budget.
- establish other initiatives that allow for the reduction of operational costs

To guarantee and maintain the UPRB's financial integrity, institutional norms and policies have been created to address this important matter. Some of these established institutional policies are as follows:

- Circular Letter 2006-2007-007 – Reduction of costs for food and beverages
- Circular Letter 2007-2008-02 (Corrected) – Policy for the reduction of Institutional Spending
- Circular Letter 2009-2010-005 – Access to Information and Official Documents of the University
- Certification 93-139 del CES¹ – Regulation regarding access to Official Documents of the UPR
- Certification 27-2008-2009 JA² – Time releases and/or additional compensations for academic senators and department directors who serve on the Administrative Board.
- Circular Letter 2009-2010-01 – Policy to address institutional needs that require work, which substitutes or adds to the regular teaching task of the faculty.
- Certification 43-2006-2007 JA – Guides concerning bonuses, time releases and compensations to directors, coordinators and directors' assistants of the academic departments.
- Certification 37-2002-2003 JA – Institutional Policy concerning Additional Compensations to Faculty

¹ CES stands for Puerto Rico's *Consejo de Educación Superior* (Higher Education Council)

² JA stands for *Junta Administrativa* [Administrative Board].

The UPRB has begun various initiatives to generate income through the strengthening of the programs in the Extended University (*Universidad Extendida* known by its Spanish acronym, *UNEX*) and the Division of Continued Education and Professional Studies (Known by its Spanish acronym, *DECEP*). Appendix L-12 (*Tabla de Propuestas Universidad Extendida y Educación Continua* [Table of UNEX and DECEP Proposals]) presents the different proposals directed toward the attainment of external resources.

Audits carried out by the Comptroller's Office in each of the UPR units are essential evaluation elements the UPR system has regarding the use and administration of public funds. These audits present an evaluation of the utilization and administration of public funds for a determined period of time. The audit reports of the UPRB have reflected outstanding ratings (90% or more on a scale of 100 points) in the past five years (See Appendix L-13: *Certificaciones de la Oficina del Contralor* [Certifications of the Comptroller's Office]).

In terms of audits carried out by the United States Federal Government regarding the assignment of financial aid, these have been rated satisfactory.

How well are the mechanisms used to keep the internal and external community informed of all matters concerning the UPRB?

The mechanisms used to maintain the internal and external communities informed of all matters concerning the UPRB are varied. The Board of Trustees, the Office of the President, the Academic Senate and the Administrative Board send via e-mail (cartero.ac) certifications and other communications that are mainly disseminated to the university community. Each student and employee has an e-mail account with the @upr.edu domain to ensure that the information reaches all sectors. Other communication methods include periodic meetings with the deans, informal meetings (conversaciones) and faculty meetings. The affairs discussed in these forums and the determinations reached are also informed by the faculty and student representatives that participate.

The UPRB administration maintains adequate communication channels with all sectors of the university to keep them informed through e-mail, the web page, bulletin boards and bulletins. The UPRB also has an emergency telephone (787) 993-8999. Through these communication channels the population is maintained informed of events and how to proceed to address them. As evidence of how the information flows in the different sectors of the university community, a table with the number of meetings held in the chancellor's office and in the deanships since the academic year 2005-2006 until the present was prepared (See Appendix L-14: *Inventario de Reuniones* [Inventory of Meetings]).

Among the strategies used and the institutional policies established to address this matter are the following:

- Circular Letter 2006-2007-04 establishes the guides for maintaining a uniform style in internal and external institutional communications. This document introduced norms for the utilization of electronic means when communicating with the university community. All members of the university community have access through the domain @upr.edu. This is the official e-mail account to be used for all measures.
- Circular Letter 2007-2008-02 (Corrected) – (*Policy for the Reduction of Institutional Spending*) reaffirms the aforementioned regarding the use of e-mails as a means to reduce expenses.

The web page (www.uprb.edu) is updated. The following is a list of some of the documents that can be found there:

- General Catalog 2008-2011 (English and Spanish versions)
- *El Vaquero* – Informative Bulletin
- *En Sintonía* – Periodical
- Calendar of Institutional Activities
- Academic Calendars
- Mission & Vision
- News and events

The *Institutional Procedures, Policies and Regulations* are published on the UPRB web page. This includes the *Faculty Manual* and the *Institutional Strategic Plan 2006-2016*. Other means used are bulletin boards situated in different areas of the Institution.

In addition, the UPRB has the services of a public relations person who aids in the dissemination of institutional information pertinent to the internal and external communities.

How do the administrators provide the internal community with a well-defined system of governance with written policies outlining governance responsibilities of administration and faculty?

The University of Puerto Rico is organized in the form of a pyramid and is ruled by the Board of Trustees. The Board emits the policies for the entire UPR system. Figure L-1 represents the structure of the institutional government.

Figure L-1. Organizational Pyramid of the UPR System

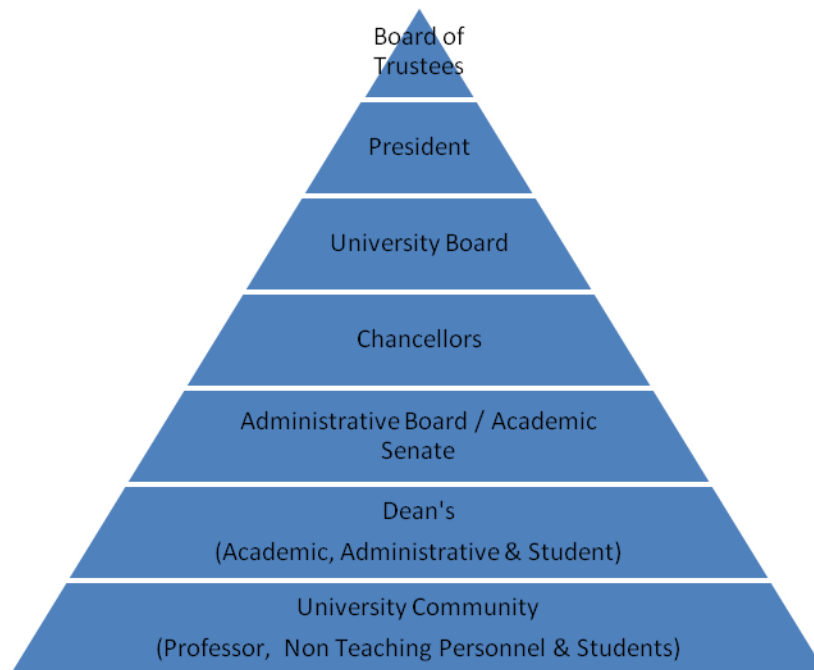


Figure L-1. Organizational Pyramid of the UPR System

The President of the UPR recommends the appointment of the chancellor of the UPRB, who is confirmed by the Board of Trustees. The chancellor is the designated authority of the UPRB and is responsible for administering the unit according to the laws, norms, regulations and institutional policies established. The Academic Senate and the Administrative Board are the deliberative bodies that establish and revise the institutional regulations, which are aligned to the policies approved by the Board of Trustees. Law #1 of 1966, as amended, establishes the roles of each of the different deliberative bodies and officials of the UPR (See Appendix L-15 *Ley Universitaria* [University Law] and L-16 *Organigrama UPRB* [UPRB Organizational Chart]).

The certifications emitted by these bodies are put into effect and are disseminated to the university community through different means (e-mail, the web page, etc.). Each of these regulates diverse aspects of the university in the academic, administrative and student areas. The certifications are periodically evaluated according to the needs of the university community altering them to accommodate the social, economical and educational changes in Puerto Rico. The document, *Índice de Certificaciones* [Certification Index], classifies the policies and institutional regulations by topic to facilitate the search (See Appendix L-17: *Índice de Certificaciones*).

Administration

How does the Institution's governance respond to the open discussion of the mission, planning and resource allocation?

In October 2007, the Academic Senate approved the revision of the institutional mission and vision through Certification 14: 2007-2008. These revised versions are published in the 2008-2011 General Catalog, in the manual handed out to newly admitted students and in the University web page. However, as part of the institutional assessment process, an institutional committee at a faculty meeting was appointed to revise the mission and vision and accommodate it to our reality. The UPRB mission states:

To facilitate significant, continuous and long-lasting learning with the ultimate goal of having students become responsible citizens who will help transform their world with a heightened sense of ethics, esthetics and actions that will contribute to change. To achieve this, the Institution should advocate the establishment of support systems for learning, research and collaboration with the Puerto Rican society.

The University of Puerto Rico Agenda, *Diez para la Década 2006-2016* (Certification 123-2005-2006 of the Board of Trustees) marks the beginning of a structured plan to transform the university's educational offerings and services. This Agenda is composed of ten principle areas with a series of objectives and strategies which have been gradually implemented and will continue developing until 2016. These are as follows:

- I. Sustained link with students
- II. Academic cultures of actualization, experimentation and renovation
- III. Competitive research
- IV. Leadership in community investment and cultural aspects
- V. Vocation towards a global world
- VI. Efficiency and beauty in natural spaces and buildings
- VII. Updated technology
- VIII. Administrative and management optimization
- IX. Strengthened institutional identity
- X. Culture of evaluation and institutional assessment

The institutionalization of the Agenda was submitted to an evaluation process by the different sectors of the university community (Deans, Academic Senate, Administrative Board and the Board of Trustees) (See Appendix L-18 *Carta cronograma para la institucionalización del documento Diez para la Década* [Chronological letter for the institutionalization of the document *Diez para la Década*]). All university actions are influenced by *Diez para la Década*. Therefore, the participation of students, faculty and non-faculty and any person who in some way or another is related to the UPR is important. The establishment of this plan guides planning in the system as well as defines and advances the areas of institutional behavior.

After the approval of this Agenda, the UPRB approved the Institutional Strategic Plan aligned to the *Diez para la Década* and addressing the ten principle areas established by the document. The Strategic Plan is significant and influences the academic, administrative and student deanships. This document is taken into consideration in the preparation of the work plans for the chancellor's office, deanships, academic departments and the administrative and service offices. The administration of the UPRB promotes the development of an assessment culture in the different activities contained in the Strategic Plan (Appendix L-19: *Plan Estratégico Institucional y evaluación del cumplimiento* [Institutional Strategic Plan and the evaluation of its fulfillment]).

The designated authority appointed an institutional committee to work on the design and writing of the Strategic Plan integrated in each of the goals and objectives of *Diez para la Década* (Appendix L-20 *Carta Comité Plan Estratégico* [Committee letter on Strategic Plan]). The committee examined the needs of all sectors of the university community in the various goals (Appendix L-3 *Correos electrónicos invitando a la participación en el desarrollo del Plan Estratégico* [E-mails inviting participation in the development of the Strategic Plan]). These recommendations were evaluated and incorporated in the new Institutional Strategic Plan as a planning tool and for the assignment of resources.

How are non-faculty personnel trained to perform their tasks? Do they provide services in an effective and timely manner? What is the Institution's commitment to achieve the continuing education of non-faculty personnel?

The UPRB administration is committed to the professional improvement of its personnel. Periodically the offices and deanships coordinate different professional enrichment activities for the development of its employees. With the purpose of centralizing and giving the action structure, a coordinator in charge of trainings was appointed to the Human Resources Office.

Later, this designated authority formed the Training Committee for Non-faculty Personnel with the aim of determining the activities to be held, as well as to coordinate the promotion and preparation of the program (Appendix L-21 *Carta Comité de Adiestramientos al Personal No Docente* [Letter Training Committee for Non-faculty Personnel]). To plan the activities, the needs assessment results were used as a guide (Appendix L-22 *Estudio de Necesidades 2008-2009* [2008-2009 Needs Assessment]). Through these efforts various seminars, lectures and workshops were given to different work groups as indicated in the table presenting the trainings given to non-faculty personnel (2005-present) (Appendix L-23: *Tabla Adiestramientos al Personal No Docente* [Table of Trainings to Non-faculty Personnel]).

The Training Committee revised the guide for the Professional Improvement of Non-faculty Personnel (Appendix L-24: *Guía para el Plan de Mejoramiento Profesional del Personal No Docente de UPRB* [Guide for the Professional Improvement Plan of the UPRB Non-faculty Personnel]).

Another of the areas of emphasis in trainings is directed to governmental ethics as instructed by the Puerto Rico Government Office of Ethics (*Oficina de Ética Gubernamental del Gobierno de Puerto Rico*). This regulation requires ten hours of continuing education from each employee every two years. The information is reflected in the table, *Seminars on Governmental Ethics 2005-2010* (Appendix L-25: *Tabla Seminarios de Ética Gubernamental 2005-2010*).

The Institution promotes the professional development of non-faculty personnel. Employees are given the alternative of taking courses toward a university degree during work hours with a maximum of six hours weekly. This was established in a labor agreement with the brotherhood employee union, *Hermanidad de Empleados Exentos No Docentes (HEEND)*. In addition, the university administration provides non-faculty personnel with the benefit of leaves to study with or without pay as established in the UPR Regulation: Article 92: *Licencia sin Sueldo y con Sueldo para Estudios* [Leaves With and Without Pay for Studies].

The Division of Continuing Education and Professional Studies (DECEP) of the UPRB provides employees with a variety of courses in areas, such as, engineering, business administration, languages, and technology, among others. University personnel receive a 66% discount in registration fees.

How do the institutional requirements regarding skills, degree and training of the assistant personnel that support the Chancellor and Deans affect the planning and decision-making process?

The chancellor evaluates and determines which persons are the most suitable for appointments in positions of support. These persons may be from the UPRB's internal or external community. On the other hand, these officials meet all of the Institution's recruitment norms. To meet these norms, the UPR utilizes the document, *Cuestionario de Clasificación* [Classification Questionnaire], which describes the tasks these officials will carry out in regular positions as well as in positions of trust. In addition, there exists an institutional policy which establishes the criteria of academic preparation, such as having a doctorate degree, necessary to occupy some of these positions (Chancellor, Academic Dean and others). (See Appendix L-26: *Certificación 99-2009-2010 de la Junta de Síndicos* [Board of Trustees' Certification #99-2009-2010]).

Presently, the positions of trust, such as, auxiliary deans and special assistants to the chancellor, were occupied by internal and external personnel of the UPRB. The large majority of those appointed have more than 15 years experience at the Institution. Based upon the educational profile and experience these officials have, their contribution is very valuable because it allows for an effective planning process, an evaluation of situations and successful decision making. The curriculum vitae of personnel of trust include the criteria of professional competencies the persons filling these positions have: academic preparation, years of experience in teaching and administrative tasks, professional licensures or membership in professional organizations and previous professional experience (See Appendix L-27: *Curriculum Vitae personal de apoyo* [Support personnel's Curriculum Vitae]).

Faced with dynamic administrative and academic processes, it is indispensable to maintain all personnel trained while at the same time having them offer quality service to the community they serve. Committed to reach this objective, the University of Puerto Rico and the UPRB host diverse activities and promote participation in workshops, lectures, conventions, seminars, and other similar professional events as well as activities on planning, budget, research, external funds and others related to the duties and tasks carried out by personnel.

Faculty activities are coordinated through the Faculty Professional Improvement Committee (Appendix L-29 Academic Senate Certification No. 46 2009-2010: *Guía para el Plan de Mejoramiento Profesional del Personal Docente [Guide for the Faculty Professional Improvement Plan]*). Activities for non-teaching personnel are coordinated through the Training Committee organized for this task (See Appendix L-30).

Upon strengthening the personnel's skills, better quality service and a more effective administration is promoted. In addition, this allows the institutional development and the teaching-learning process to fulfill with the highest standards of quality and excellence that the UPRB hopes to achieve in benefit for the community in general.

Recommendations:

- Continue integrating sectors that comprise the university community: faculty, non-faculty, and students in the university's decision making processes.
- Provide the OIPR with the personnel and finances needed to carry out the aforementioned and other necessary studies on a regular basis more frequently so that the findings may be used in decision making.
- Alter the policy for the revision of budget petitions and adapt it to the institutional reality.
- Request a report on the needs of each area to establish institutional priorities.
- Identify the funds necessary to hire a Webmaster who will be in charge of maintaining the institutional webpage updated.
- Have the UPRB's departments, offices and associations, among others check and revise the information on the UPRB website to maintain it updated periodically.
- Continue fostering that students, faculty and non-faculty utilize the University e-mail accounts and meetings to maintain informed.
- Provide additional means of communication with the university community and ensure that they are informed of the university's affairs.
- Install a closed circuit TV system with monitors in the halls of the buildings to inform activities, programs, initiatives and others.
- Appoint an evaluation committee with representation from the three deanships and the chancellor's office to monitor the establishment of the Strategic Plan in the Institution.
- Strengthen the training plan to offer activities more often that will improve the skills of administrative personnel and support personnel of the higher management hierarchy.

STUDENT ADMISSIONS, RETENTION AND STUDENT SERVICES

This sub-committee reported on how the students admitted possesses the goals, interests and abilities in accordance with the institutional mission and academic program, and how the Institution, through its services, facilitates student retention and the achievement of students' educational goals.

Student Admissions and Retention

During the past four years the University of Puerto Rico at Bayamon has maintained an enrollment of approximately 4,500 to 5,000 students. This makes the UPRB the unit of the University of Puerto Rico system with the third largest in enrollment (See Appendix S-1). Its admission process has also maintained an annual admission of 1,040 to 1,307 of new incoming students during the past five years.

The profile of students admitted to the UPRB has been similar throughout admissions. Presently, the UPRB offers 12 bachelor's degree programs and 4 associate degree programs. In addition, it admits

students in 33 bachelor's, 2 associate degrees in articulated transfers to other units of the UPR system. The University is especially identified with five academic programs that are unique at the UPRB. These are bachelor's degrees in Materials Management, Human Biology, Special and Elementary Physical Education, and Preschool and Elementary Education as well as an associate degree in Instrumentation Technology from the Electronics Department (See Appendix S-2).

Presently, the bachelor's degree programs with the greatest demand are Electronics Engineering Technology, Computer Sciences, Accounting, Human Biology, General Biology, and Special and Elementary Physical Education as demonstrated in the admission reports of applications during the last five years. The articulated transfer programs with the UPR at Mayagüez are the ones with the greatest demand in these past years.

In order to work with all of the admission processes, the UPRB has a group of professionals and specialists in the different areas that have the task and responsibility of offering information and reliable and quality service to students. These processes are carried out in an ethical manner ensuring that all regulations, norms and established and required procedures by the federal or state government and the Institution are met.

The criteria, norms and procedures, general requirements, calendar and admission process of the UPRB are established by the Central Administration of the University of Puerto Rico and applied to all units of the UPR system (See Appendix S-3 & S-4). An example of this uniformity is the application for admission, known as the "solicitud única de admisión" [unique admission application], since it is the same for all of the UPR units. This application is attached to the *UPR Manual of Offerings and Admissions* (See Appendix S-4). Once the information of the application is registered in the mechanized system for each student, the information is shared and accessible to all officials and directors of the admissions offices of the UPR system. These are in charge of carrying out the same evaluation process for all the applications to all units. What is especially beneficial is that applicants may select up to three programs of study they are interested in being admitted to and these may be in the same campus or in different units of the UPR. This uniformity allows the admission process to be agile and functional for all applicants to the system by giving them options when applying.

The Department of Education of Puerto Rico (DE) divides its schools by educational regions. The University of Puerto Rico, in turn, has 11 campuses throughout the Island and each unit attends one of these educational regions. The UPRB primarily takes care of all the public and private schools of Bayamon and an additional nine nearby towns: Cataño, Comerío, Corozal, Dorado, Guaynabo, Naranjito, Toa Alta, Toa Baja and Vega Alta. The Admissions Office coordinates visits with the school counselors to give orientation to eleventh graders. During the orientations, an overview of the UPR system is given and then the UPRB is presented with the academic programs it offers. The orientations mainly emphasize the requirements and admission process, the application, and the deadlines. It also responds to doubts or questions the attendees might have. The academic offerings are included in the documents and information that is handed out to the students through brochures, Admissions Manual and Internet web page they may access (www.upr.edu).

Since its beginnings the UPRB has been distinguished as being highly technological; therefore, the admissions process has been technological since it began. Presently, a large part of the process is carried out electronically: the application, its payment, register of academic GPAs, register of the results on the university admission exams; the admission process, the process to reserve space, reconsiderations and others. On the other hand, all information and liaisons related to the Admissions

Office and the admission process are included on the UPRB's web page at www.uprb.edu/admisiones, which is periodically updated. In addition, throughout the entire process, the personnel assigned to the Admissions Office make use of different mechanized and electronic systems to carry out their tasks: Oracle, SIS, UPRARA, AXS-One, and the GAE platform for e-mails used throughout the UPR systems. In addition to the admission of new incoming students, there are other ways that applicants may enter the UPRB. This may be through readmission, transfer from an institution that is not part of the UPR, special permission or transfer from an institution within the UPR system, whichever the case may be. For each of these types of admissions there exist norms and procedures approved by the Academic Senate of the Institution and general and specific requirements revised annually by the academic departments and approved by the Dean's Office of Academic Affairs (See Appendix S-5).

How do the admissions policies as developed and implemented support the mission and vision of the institution?

The admission policies of the UPRB are established by the Central Administration of the UPR uniformly for all 11 campuses. These policies are developed within a framework of integrity and aligned with each of the missions and visions of the institutions that make up the UPR system. This is evidenced by the *Manual de Ofrecimientos y Admisiones de la Universidad de Puerto Rico* [UPR Manual of Offerings and Admissions] (See Appendix S-4).

The Board of Admissions Directors, which is composed of the admissions directors in all the units of the UPR system, and the director of the Central Admissions Office participate annually in the revision of this manual once each admission process is completed. In it all the academic offerings of the 11 units are published. Those programs that are unique and distinguish a particular institution of the system are emphasized. In addition, the manual includes the general admission requirements, the admission application, the admission calendar with the deadlines for each part of the process and the instructions necessary to successfully complete the application.

The University of Puerto Rico utilizes as admission criteria the applicant's high school GPA and the scores obtained in Verbal and Mathematical Academic Aptitude Test given by the College Entrance Examination Board. These values are combined with a mathematical formula where each factor has a weight of 50% generating the student's General Applicant Index (*IGS-Índice General del Solicitante*) See Appendix S-6.

On the other hand, the academic deanship of the Institution in conjunction with the academic departments has the responsibility of evaluating and establishing the minimum admission index (*IMI-Índice Mínimo de Ingreso*) for admission to each of the academic programs. This IMI may vary from year to year depending upon the offerings and the demand, in other words, the number of students that apply to the programs, their IGS and the number of available spaces in the department (See Appendixes S-7, S-8 & S-9).

All students should fulfill the uniform admission's requirements to the UPR to be considered in this process. These are completed application form for admission, application fee, high school diploma (Certification of Admission/Graduation if admitted), university admission tests from the College Board of Puerto Rico or the SAT and an official high school transcript.

How does the institution ensure that students meet qualifications to achieve expected goals and higher education outcomes?

The Admissions Office of the UPRB has experienced professional personnel that through the revision of documents submitted by the students, their school and the College Entrance Examination Board complete the admission's file and certify that the student has met all the requirements. On the other hand, prior to each admission cycle, the Dean's Office of Academic Affairs in conjunction with the academic departments, annually evaluate the IMI's of each program and establish them making sure that the students that are admitted to the programs have the capacity to take courses and successfully complete their studies.

The UPRB is very selective in the recruitment of new students and this is demonstrated by each program's fulfillment of the IMI requirement for admitting students. Therefore all students admitted to the Institution meet the requirements established by the academic departments in addition to the general requisites for admission to the UPR. For students to obtain the IMI of the program they wish to apply and be admitted, it is indispensable that they have excellent academic performance during their high school years and high scores on the areas of the university admissions test (Verbal and Mathematical Academic Aptitude) of the College Board that are used in the admission's formula.

During the past three years, the data obtained through admission reports and the profile of new incoming students to the UPRB indicates that more than 90% have a high school GPA of 3.5. In addition, these students have obtained excellent scores on the College Board Aptitud Exams (See Appendix S-10).

How do we combine the alumni profile of the academic programs with the interests and needs of the students to determine a course of action to maintain a stable enrollment?

The academic departments annually receive a report on the alumni profile of the academic background that collects data of newly admitted students. Detailed socio-demographic and academic information of these students is presented. The report is discussed by the faculty of each department, which helps them to begin academic and social integration in conjunction with student's needs and interests.

In this way, the faculty can identify how they may help their students in each of the courses and if support to the student's academic tasks is necessary. This can be channeled to the various designated areas to strengthen the academic aspect. Examples of these are the following:

- **Special Educational Services** – Gives tutoring services, orientation and cultural activities in the basic courses to first and second year students that have been admitted to the program.
- **Disabled Student Services** – Students with disabilities are aided with reasonable accommodations, tutoring, mentors, equipment and materials that will help them in their academic performance.
- **Counseling and Guidance Department** – Services given are directed toward strengthening students' academic, social and emotional aspects, so they may adequately integrate in society.
- **Academic Counseling**– Before each registration process, students receive individualized counseling that will aid them in the selection of courses following the established sequence and thereby guaranteeing a satisfactory academic route.
- **Tutoring to Athletes**- Athletic Department offers tutoring services to athletes students in there tutoring center.
- **Learning Resources Center** (Assigned to the Dean's Office of Academic Affairs) – This Center offers services and resources that contribute to the development of the academic programs, satisfies the university community's need of information and facilitates continuous learning. The Center provides students with the skills necessary to locate, evaluate and utilize information relevant to their needs in diverse formats and in tune to the continuous changes in the various technologies.

How expensive is the cost of study and how does it compare with other institutions of the Bayamón area?

The Financial Aid Office of the UPR Central Administration establishes the registration fees for the UPRB. These are classified into categories according to the students’ town of residency: Those that live in Bayamón and nearby towns and those that live in the remaining towns and cities (See Appendix S-11: *Tabla de Estimado de Gastos Anual de la Oficina de Asistencia Económica* [Table S-1 of Estimated Annual Fees from the Financial Aid Office]). Every academic year the *Estimated Annual Study Fees*, which is used as a base for granting economic aid from federal, state and private funds, is revised and updated.

These estimated fees will vary depending upon the level of the academic program the students register in, if they are a resident or non-resident of Puerto Rico, the costs per credit during the year of study students began (all students registered from 2006-2007 on), if they live in Bayamón or nearby towns or if they live in the other towns on the Island, if they sign up for the university medical plan, their academic load, and if they are regular day students or from the evening session known as UNEX.

The following table identifies the registration fees established by Certification 60-2006-2007 from the Board of Trustees (See Appendix S-12).

Table S-1. Registration Fees for Students Admitted from 2007-2008 on

Undergraduate Studies: Includes Four and Five-Year Programs and Two-Year Technical or Service Programs		
Academic Year beginning in August	Guarantee Period for Registration Fees	Fees per Credit during the Period
2007	2007 – 2012	\$45
2008	2008 – 2013	\$47
2009	2009 – 2014	\$49
2010	2010 – 2015	\$51
2011	2011 – 2016	\$53
2012	2012 – 2017	\$55

Note. Data obtained from the UPR Central Administration’s Financial Aid Office

The estimated study costs are detailed in the following manner: registration (fees per credit, laboratories, maintenance costs, technology quotas and equipment purchases), medical insurance, books and study materials, transportation, child care, room and board, miscellaneous expenses, and loan transmittal costs (FFELP).

To determine the estimated expenses it is important to know the costs established for each of the aforementioned (See Appendix S-13 Registration Fees for Students Admitted). The following table presents the registration fees and special quotas that the UPRB has at present:

Table S-2. Registration Fees and Special Quotas of the UPRB

Area/Purpose	Fees
Day Students	\$51 per credit
Evening University	\$51 per credit
UNEX Quota	\$30
Maintenance Fee	\$47
Technology Quota	\$25
Laboratory	\$33
Identification Card	\$5
Late Registration & Payment Extension	\$13
Non-resident Foreign Students	\$1,942 (per semester) \$3,884 (per academic year)

The costs to study at the UPRB are the lowest compared to all the private universities in Puerto Rico (See Table S-3) as well as to comparable universities in the United States (See Appendix S-14 Registration Fees and Special Quotas of the UPRB).

Table S-3. Comparison of Registration Fees Among the UPRB and Institutions from the Private and Public Sector in Puerto Rico

-Puerto Rico-			
Cost per Credit, Registration & Quotas			
Public & Private Institutions of Higher Education			
Academic Period 2008-2009			
Institutions	Cost per Credit	Undergraduate Average Registration Fee (Full time)	Other Quotas
Public Sector			
Colegio Universitario de San Juan	85	2,500	450
Universidad de Puerto Rico- Bayamón	47	1,598	342
Private Sector			
American University- Bayamón	150	3,600	810
Caribbean University- Bayamón	150	3,480	620
Carlos Albizu University	160	6,975	979
Centro de Estudios Multidisciplinarios- Bayamón	125	4,700	750
National College- Bayamón	145	5,220	435
Universidad Central de Bayamón	145	3,840	500

-Puerto Rico-

**Cost per Credit, Registration & Quotas
Public & Private Institutions of Higher Education
Academic Period 2008-2009**

Institutions	Cost per Credit	Undergraduate	
		Average Registration Fee (Full time)	Other Quotas
Universidad Central del Caribe	125	5,250	2,370
Universidad Interamericana de PR- Bayamón	154	3,696	516

Source: Council of Higher Education, Research and Documentation Division (www.tendenciaspr.com)

Which are the processes that we follow for the assessment of student's success, including the student retention and graduation rate? How do we evaluate the correlation between the profile of student candidates and their success as students in the institution? What changes have been generated by the evaluations?

The University of Puerto Rico at Bayamon has designed its Institutional Plan for the Assessment of Student Learning (See Appendix S-15). This facilitates the identification of the Institution’s strengths and areas that need improvement to help students reach the maximum goals. These include the Institutional Education Goals and the Departmental Education Goals.

Presently, the Assessment of the Student Learning Process is in the initial stage with newly admitted students (2010-2011). It is expected that by the end of the first Academic Semester 2010-2011 the department directors will begin to receive the initial results. These will be analyzed by the faculty for decision making with the vision of strengthening those teaching and academic support elements for its students.

By adopting the stages in the process for the Assessment of Student Learning, the UPRB seeks to reach students from the moment these are admitted to the Institution and continue with their educational development until they are taken to the final goal, which is the attainment of their desired degree. In addition, these stages will focus students in continuing toward a satisfactory academic progress with great expectations and experiences upon being selected or recruited as professionals in the working world.

The process for the Assessment of Student Learning is supplemented by various elements that are presently utilized to watch for the retention of the UPRB students. The Four-Year Plan for Student Retention is one of these. This establishes the goal of increasing by 4% the retention index in the academic programs in three years beginning in 2008-2009. This plan has the backing of all the student service and support offices (Ex. Educational Services, Counseling and Orientation and the student service offices). See Appendix S-16.

Student Support Services

How does the institution provide student support services appropriate to students’ strengths and needs?

The University of Puerto Rico at Bayamón has a Student Center where the majority of the offices that offer student support and services are strategically situated. The questionnaires evaluating the level of

satisfaction demonstrate that 90.2% of respondents were satisfied with the services offered in the Dean's Office of Student Affairs (See Appendix S-17). The Student Center has the following offices:

Service Offices

Dean's Office of Student Affairs: This deanship works with all aspects of the university that support and represent the students. The services offered include but are not limited to orienting, assisting and providing advice on student needs. It pays attention to maintaining adequate discipline on campus and coordinates with other offices to attend any emergency situation that may arise. This deanship collaborates with the Dean's Office of Academic Affairs and its departments regarding student retention. In addition, the Dean's Office of Student Affairs provides the following services to students:

- Evaluates petitions for tuition exemptions and deferrals
- Evaluates petitions on academic progress
- Addresses and evaluates student situations
- Informs regulations, policies and institutional activities
- Certifies the Student Dean's recommendation for students requesting transfer to other universities
- Emits the General Student Council certification
- Coordinates the graduation ceremony

Admissions –The Admissions Office offers service to new incoming students that come from public or private high schools; to students that request transfer from other private university institutions in Puerto Rico and other countries; and the public in general that require service. This office is the first contact students have with the University. The Admissions Office offers all information needed for the admission process to the University of Puerto Rico and on programs offered by the Institution

Health Services – The Health Services Office's priority is to provide preventive medicine practices through medical consultations, first aide, pharmaceutical treatments, printed materials, clinics (hypertension, HIV, nutrition, vaccinations and others), mental therapy, hypnotherapy and emergency interventions. All these services are free. In addition, ambulance, emergency and an area for breastfeeding are provided for the student population, employees and visitors to the Institution. Students requesting services should present an active class program. The office has an ambulance to move patients in emergency situations to locations in the vicinity.

Financial Aid – This office is responsible for administering financial aid programs, whose funding sources come from federal, state, corporate and individual awards or donations with the goal of providing students with economical aid based upon their needs.

Registrar's Office (Assigned to the Dean's Office of Academic Affairs) - The Registrar's Office has the following responsibilities: custodian of the academic records of all active and inactive students, guarantee the accurate fulfillment of the academic norms and offer academic related services to the student community. This office also collaborates in student progress by facilitating the Institution with quality services to students, faculty, administrative offices, academic departments and the community in general.

Honor's Program (Assigned to the Dean's Office of Academic Affairs and located in Academic Building I) This program offers courses to talented students that want to enrich their university education within an interdisciplinary framework. The program fosters the development of a view of analysis, which supports research and independent work and leadership skills among students.

Student Support Services Program (Assigned to the Dean's Office of Academic Affairs and located in the 600 building) This federally funded program offers its participants individual help and tutoring services in the basic courses of Spanish, English, mathematics and natural sciences (biology and chemistry). The program also offers individual and group counseling services and exposes its participants to cultural activities.

Support Offices

Counseling and Guidance Department – This department offers counseling and psychological services to all students of the UPRB. With the intervention of our licensed mental health professionals (professional counselors with master's or doctorates and a psychologist with a doctorate), the integral development of students is fostered emphasizing the acquisition of better self-knowledge and decision making skills to solve problems. In this way students may be capable of improving their academic achievement as well as integrating and contributing positively to the society they belong to. The department collaborates with the Institutional efforts toward retention and academic progress. The Counseling and Guidance Department works as a team with the faculty and administration to strengthen a university environment of prevention developing effective psycho-environments, which benefit the students' academic, social and mental development.

Disabled Student Services – OSEUI (Spanish acronym for *Oficina de Servicios para Estudiantes Universitarios con Impedimentos*) offers services to university students with disabilities. Its objective is to guarantee the optimum rendering of services that facilitate equal participation and integration of all students with disabilities in the different activities and services offered at the UPRB. This office must also educate and maintain these students informed of legislation that protects them. The main interest is to offer direct services that address the real needs of the active student population with disabilities of the UPRB. This is protected by the criteria presented in the Institutional policy towards persons with disabilities in the UPR, including the dispositions of Section 50 of the Vocational Rehabilitation Law of 1973; ADA (American With Disabilities Act), Law of 1990; Law 51 (Law of Integral Educational Services for People with Disabilities) of 1996; and Law 238 (Bill of Rights for Persons with Disabilities) of August 31, 2004.

Career Development and Placement Center – The purpose of this center is to prepare students in developing the necessary skills and attitudes for the exploration, planning and development of their professional lives and also be the liaison among students, industries, faculty and the administration for the creation, dissemination and development of new occupational opportunities. The center also supports the entrepreneurial community facilitating its presence in the Institution to address the needs of qualified personnel. These services are directed to graduation candidates, recently graduated students, students looking for part-time employment or work during the summer or Christmas season, alumni who have graduated up to a year or less, family members of the UPRB employees, companies, agencies and faculty members, among others.

Learning Resource Center (Assigned to the Dean's Office of Academic Affairs) – This center has a fundamental role in the teaching-learning process of the UPRB students. Its services include: references, periodical publications, book circulation, bibliographical resources on reserve, cultural activities with exhibits and lectures, Puerto Rican collection, collection of books for children and young adults, library of patents and registered brands, library instruction, computer searches (including Internet), photocopiers and interlibrary loans. In addition to these services, the center has an Audiovisual

Department which has an ample collection of recordings, videos, slides and movies. This department offers services in the production of serigraphy, recordings and tapings (audio-tapes, music, videos), and others.

Student Support Programs

These student support programs are geared toward the development and strengthening of the skills and abilities possessed by many of the students. Most of these offices are assigned to the Dean's Office of Student Affairs and are duly structured with capable and specialized professionals in each area. The offices work in coordination with the articulated academic calendar, thereby guaranteeing organized and efficient support to the university community.

Student Organizations – The Office of Student Organizations serves as a liaison between the student and the Institution by promoting the formation of student associations. The office orients students that wish to become part of a student organization and those who are interested in creating others. It promotes the development of leadership skills, teamwork and respect towards diverse ways of thinking through lectures and activities that are vital for students to carry on in life. These organizations are important in the University because they foster the feeling of belonging, allow for the completion of the academic tasks and offer experiences that last a lifetime. The Office of Student Organizations addresses academic, social, cultural, athletic and religious needs.

Social and Cultural Activities Office – This office educates and supports the university community by offering varied programs which include diverse disciplines and types of cultural artistic activities without losing the perspective of students' preferences, interests and needs. The Social and Cultural Activities Office offers services to the entire university community. It gives active participation to students during the process of selecting events and programming activities since university students are the focus of attention. This office also manages the Game Room, a place often visited by students for their enjoyment of various entertainments. The theater is another place used for the majority of the activities and cultural presentations.

Athletic Department – This department reaffirms the educational validity of competitive sports as an excellent resource for fostering the student's personality. It understands that interuniversity recreational and sports competitions are governed by ethical norms. Competitive sports aspire to promote physical and mental health, self-discipline, honesty and loyalty, self-esteem, humbleness in victory and dignity in defeat, comradeship, leadership and institutional loyalty (school spirit). The department affirms that competition is directed towards the strengthening of the educational values essential to university life. It states that sports complete the educational purpose, which is the reason for being part of the university life. Through university sports, this department provides for the maximum development of exemplary citizens in society.

Exchange Program – The UPRB Exchange Program has as its mission to actively contribute to the internationalization of education by fostering and promoting the meeting of cultures with the goal of giving students an integral and cosmopolitan view of the world and elements of judgment to act within students' own reality. Through collaboration made by the General Partnership Agreement: Academics, Scientific, and Cultural, the student may take courses in different universities of the United States, Europe and Latin America.

Student Ombudsperson – Through mediation the ombudsperson’s purpose is to promote a quick and informal solution to problems that could generate serious problems. S/He offers orientation and advice to members of the university community regarding their rights and responsibilities related to students. It also motivates and supports the improvement and effectiveness of the services the Institution gives students and ensures that the institutional policy and student rights are honored.

All offices and programs mentioned are directed toward serving and giving support to the UPRB students. These offices collaborated with the Office of Quality of Life Program. In this office projects are developed and established to promote healthy life styles and proactive education regarding behaviors of risk in the university community and in the fulfillment of established regulations (See Appendix S-18).

How are assessment practices used to improve student support services? How is the information or findings regarding support services analyzed and managed? How available are the results?

The UPRB has significantly evolved regarding the assessment of services of student support. The Institution developed its Institutional Assessment Plan (*Plan de Avalúo Institucional*) creating a uniform assessment process (See Appendix S-19). This process is practiced by the offices assigned to the Chancellor and the Student, Administrative and Academic deanships.

According to the Institutional Assessment Plan, the process is supported by three principal elements. These are the following:

1. **Information regarding the effectiveness of the offices** – Elaboration or revision of the office mission and vision aligned to the UPRB mission and vision; the development and definition of the processes and instruments used to obtain data; the information gathered and the changes made will be compiled in the annual report of each office; the annual reports are handed in to the deanships and later pass on to OIPR (Institutional Office of Institutional Planning and Research, known by its Spanish acronym OPEI).
2. **Institutional Indicators** – The OIPR will be in charge of annually generating and collecting all indicators and facilitating these to the university community for their discussion through diverse means (web, reports, presentations, etc.) to support the institutional decision making, the generating of conclusions and the application of changes.
3. **Integration of all data measurement of institutional effectiveness** – Analysis of all institutional annual reports and indicators. However, the information for analysis of effectiveness of each department, office, and deanship level is also considered. From the analysis necessary changes are made and documented. The entities or individuals responsible for this task are the Chancellor’s Office, the deans and the department directors. The Chancellor’s Office evaluates the Institutional Strategic Plan regarding the tasks achieved, in addition to having an institutional and external audit of the aforementioned. The results will provide information for the planning process and the assignment of institutional resources.

The completion of the institutional assessment process established could guarantee a reliable and effective evaluation of the services given to the student as well as to the university community. This collects each office’s annual course of identifying its strengths and weaknesses and the disadvantages these offices may have. In this way the results found are analyzed and strengthened as far as possible.

(See the annual reports, Table 4 *Effectiveness of the Offices Assigned to the Dean's Office of Student Affairs*) The format of the offices and Dean's Office of Academic Affairs may vary (See Appendix S-20).

How safe and secure are policies and procedures for the maintenance of student's records? How are policies to release student's information used for assessment results and improvement?

The University of Puerto Rico at Bayamon fulfills all laws and norms established by the state and federal government related to privacy and the dissemination of information in files regarding student's academic performance, medical records and actions carried out. The Institution operates under the laws that regulate the confidentiality of records:

- **Family Educational Rights and Privacy Act (Buckley Amendment), better known as FERPA** – The Buckley Amendment guarantees students certain rights with regard to educational records. All primary and secondary institutions, public or private that receive federal funds are subject to this law. The law gives parents and adult students the rights for protecting their personal records. FERPA considers “adults” all students over 18 or that are in secondary schools, no matter their age. Information and details of this law can be found at www.ed.gov/policy/gen/guid/fpco/index.html. (See Appendix S-21) This law is informed to all students from the moment they are admitted to the Institution as evidenced in the *Student Information Manual* and *Student Catalog*, among others.
- **HIPAA Law-** (See Appendix S-22) - In the area of medical records, the Institution strictly complies with the Health Insurance Portability and Accountability Act (HIPAA). The Federal Law 1996 is known as the Portability and Medical Insurance Responsibility Law. The fundamental goal of this law was to aid people in maintaining medical insurance, protect their confidentiality and secure their information regarding their health care, and help the health care industry control administrative costs.
- This law is disseminated to all students from the moment they are admitted to the UPRB by personnel in the Medical Services Office. The medical record that is created holds written evidence that the student received the HIPPA law in writing.
- In the same way as the aforementioned, the administrative personnel that works in offices that create and collect confidential information on students, such as, Registrar's, Financial Aid, Disabled Student Services, Counseling and Orientation, Educational Services and others are regulated by the above mentioned laws.
- In addition, these laws obligate the Institution in having each of these records protected and safe. Therefore, each one of these offices has a protected and secure area for filing records. Access to these is made by personnel assigned to these areas.
- Law ADA – See Appendix S-23
- Law 151 - See Appendix S-24
- Law 238 - See Appendix S-25
- ACA Code of Ethics - See Appendix S-26
- ACA of Ethics 2005 Highlights and Updates - See Appendix S-26
- Professional Code of Ethics for Counseling and Rehabilitation, Psychology and Professional Counselors (*Código de Ética Profesional de la Consejería y Rehabilitación, Psicólogo y Consejeros Profesionales*) See Appendix S-26.

The data related to students are use for institutional research purpose and administration decision making. The data is handled of way added and confidential in its majority and fulfilling the established regulation. Example of this is the withdrawal, alumni and new incoming student studies.

How qualified are the professionals who supervise the student services programs?

The UPRB has a group of professionals and specialists that direct the offices, support and service programs that serve students. The directors of the offices are academically qualified and have vast experience that make them experts and capable in each one of their areas. This is observed in the Employee Profile prepared in the Dean's Office of Student Affairs (See Appendix S-27). It details the academic preparation and years of service of the directors and personnel that comprise each office. This demonstrates and evidences how prepared the UPRB's working team is, who has as its priority providing support and quality service to students.

Personnel that work in the offices of programs that offer support and service need to continuously receive training and orientation. Therefore, personnel in some of these offices are members of different associations that offer opportunities for orientation and trainings on innovations in their field. Examples of these follow:

- **PRACRAO** (Puerto Rican Association of Registrars and Admissions Officers - *Asociación de Registradores y Oficiales de Admisión de Instituciones Universitarias y Post-Secundarias de Puerto Rico*) – This is a chapter of the American Association of Collegiate Registrars and Admission Officers. It promotes the development and professionalism of the human resources in the Registrar and Admissions Offices of the university institutions of Puerto Rico.
- **PRASFAA** (Puerto Rican Association of Student Financial Aid Administrators - *Asociación de Administradores de Asistencia Económica Estudiantil de Puerto Rico*) fosters the professional preparation and effective action among administrators, guidance counselors, counselors and other personnel related to or interested in programs of student financial aid. The personnel of the Financial Aid Office and the Fiscal Officer of the Finance Office are members of this association.

Mental health professionals assigned to the Counseling and Orientation Department, the Career Development and Placement Center, Disabled Student Services Office and the Educational Services Program belong to diverse associations and colleges related to their profession. Among these are the following:

- **ACA** (American Counseling Association) – This association has more than 50 years dedicated to the professional improvement and development of counselors and service to those these professionals serve.
- **APCP** (*Asociación Puertorriqueña de Consejería Profesional* - Puerto Rican Association of Professional Counselors) – This association promotes the professional and personal development of its members so these may offer counseling services of the highest quality to diverse populations, thereby lauding the profession. The UPRB would like to proudly mention Professor Nelson Vazquez-Espejo, who was elected president of the APCP from 2007-2009.
- **APPR** (La Asociación de Psicología de Puerto Rico – Psychology Association of Puerto Rico) - The APPR contributes to the development of psychology as a science and profession. It promotes the scientific study of humans.
- **CPCR** (Colegio de Consejeros en Rehabilitación de Puerto Rico –College of Rehabilitation Counselors of Puerto Rico) – This association is required for all rehabilitation counselors who occupy positions or carry out tasks which require being a rehabilitation counselor, even if these are not within this classification.
- **ACPT** (*Asociación Caribeña Programa TRIO de Puerto Rico* – Caribbean Association of the TRIO Program of Puerto Rico)- This is a non-profit educational corporation. It joins professionals interested in the education of people and students with limited economical resources whose parents do not have a bachelor's degree or have some type of physical or mental incapacity.

- **AHEAD** (Association on Higher Education and Disability) is a professional membership organization for individuals involved in the development of policies and in the provision of quality services to meet the needs of persons with disabilities involved in all areas of higher education.

What are the policies and procedures that govern athletics and what role should the student support services play in setting and reinforcing these policies?

The Athletic Department has administrative personnel and trainers who are highly qualified. The trainers have many years of experience in their discipline and most belong to and collaborate with the federations of their specialty (See Appendixes S-27 & S-28).

The Athletic Department of the UPRB is governed by the same policies and procedures followed by the UPR, in addition to those established by the sports organizations that the Institution belongs: Inter-university Athletic League [*Liga Atlética Interuniversitaria* –LAI] and the *National Collegiate Athletic Association* (NCAA-Division II). Both organisms require the fulfillment of established norms and regulations for eligibility of its programs, which seek to strengthen the sport and healthy competition combined with a competitive academic education (See Appendix S-29).

The LAI is a voluntary association that groups academic institutions of higher education. It was organized in 1929 with the aim of promoting and regulating sports among its members. The NCAA is an association which fosters intercollegiate sports with the educational and athletic programs as an integral part of the student body.

As members of the LAI and NCAA, the Institution is committed to carrying out the purposes in the *Declaration of Principles*, which constitute the common objectives, whose fulfillment corresponds to all, individual as well as collectively. The Declaration of Principles reaffirms the educational validity of competitive sports as an excellent resource for shaping the student's personality. Sports compliment the educational purpose which is the reason for university life's existence. Student athletes are submitted to the same admission requirements and academic progress as the rest of the students. Only regular students that have satisfactorily passed a minimum of 24 credits may participate. Eligibility in inter-university sports will be maintained for four consecutive years starting from the moment the student is eligible. Participation in competitive inter-university sports will be circumscribed to those students that meet the institutional norms for academic progress (See Appendix S-30).

The incentives for student athletes are granted exclusively because of economical necessity and academic achievement. Monetary compensation in excess of the regular scholarship as a way of attracting and maintaining athletes is strictly prohibited. The UPRB has met with all the established requisites of these two recognized organizations (LAI and NCAA) demonstrated by the internal and external audits that have been made in the past years.

The positive results obtained of those audits gives the Institution the opportunity to present proposals to the NCAA in benefit of the student athletes. The Athletic Department has submitted various proposals and as a result has been able to create a space in the department designated as a tutoring and study area. This is equipped with computers and materials which facilitate the dynamics of students' studies, in addition to all the support services which the University already provides to its students. Refer to Standard 9, the Student Support Services section in this report"

Academic Assistance

Tutoring Services- the student-athlete (if he or she is having difficulty in a course or courses) should always attempt to seek help first from the instructor or the professor but should also feel free to contact Learning Services to request academic assistance. Tutoring is offered to supplement regular class instruction and to enrich the quality of study sessions in an effort to increase comprehension and learning on the part of the student athlete.

Referral Resources - The Academic Advisors and Class Instructors can refer students to the campus Counseling and Orientation Department, the Career Development and Placement Center, and several other locations on the campus depending on students' needs.

Recommendations

- Increase the resources available for the promotion of the Institution to new students and to non-traditional populations (evening session).
- Search for additional alternatives to support students in their academic endeavor and improve retention and academic rates.
- Continue training and supporting the development of effective measures related to student services in each dependency of the UPRB.
- Carry out additional actions that contribute to continuous and effective communication among the offices and departments that offer service and students.

FACULTY

The Faculty Sub-committee reviewed the aspects related to the hiring and retention of highly qualified faculty for the academic aspects of teaching-learning, research and service; how this is monitored through the assessment processes; and how the institutional policies and decisions affect the aforementioned.

The faculty of the UPRB is comprised of tenured and contract personnel that carry out administrative, academic and investigative tasks. There are approximately 300 faculty members divided among the areas of business administration, technology, science, socio-humanistic and education (Appendix F-1-faculty profile).

How are faculty involved in academic program development, assessment and improvement?

The Vice Presidency of Academic Affairs of the UPR coordinates the curriculum and educational process review. The design of all our programs and offerings follow specific procedures established by the Board of Trustees. It amended the procedures for the creation and evaluation of academic programs through Certification 80 2005-2006 (appendix F-2) and Certification 43 2006-2007(appendix F-3), respectively. Certification 27 2003-2004(appendix F-4) established the policy and procedure for the creation of curricular sequences in the UPR.

The Dean of Academic Affairs of the institutional unit establishes the action plan to deal with these areas. The faculty or teaching personnel participates at different levels in the institutional structures in the unit such as the:

- Academic Senate

Committee for Course Evaluation
Curriculum Development Sub-committee (Academic Affairs Committee)
Certification 58 2005-2006 (appendix F-5)

- Academic Department
Curricular Revision Committee
Assessment Committee

The UPRB has an institutional assessment committee and developed a student learning outcomes assessment plan. Each department appointed an assessment coordinator and formed an assessment committee. Together they developed the student learning outcomes assessment plan aligned to the Institutional Plan. It was approved at departmental meetings by the faculty. The assessment coordinator and the assessment committee have been responsible for the development and implementation of this plan. The committee must submit a final report at the end of the academic year to the Department Chair, and Dean of Academic Affairs after having been discussed at departmental meetings with teaching personnel. The assessment plan includes assessment seminars and workshops to teaching personnel at the institutional and departmental levels to foster an assessment culture in the classroom.

The process of assessing student learning is the same at all levels; it follows a systematic, ample and sustainable process that intends to evidence the effectiveness of the programs. This process includes the collection and analysis of data or information on student learning at different levels, contexts and periods in time. The process promotes the use of the results to make informed judgments and appropriate decisions directed toward improving and maintaining the quality of student learning. An example of faculty participation in the assessment process is the pilot project for the integration of information and research skills and the assessment of student learning in the business administration courses. The project is focused on one academic department but extrapolates the experience to other departments. The pilot began in 2005 and utilizes a variety of strategies to reach all users emphasizing the use of the computer laboratory, Infonex, the use of instructional modules and other documents in the distance education platform and the teaching of electronic information resources.

The faculty is involved in the improvement of the academic program through a uniform procedure for the evaluation of academic programs, faculty evaluations by peers and students, and academic program evaluation by stakeholders. The faculty participates in the Departmental Personnel Committee which coordinates and conducts the evaluation of teaching personnel by peers and by the students, and follows up with a discussion of the evaluation, focusing on areas for improvement, with each faculty member.

To improve and evaluate programs and offerings, each department uses different types of indicators; such as, programs needs, student performance, learning resources, physical facilities, stakeholder activities such as questionnaires, forums with industry representatives and alumni; professional accreditation standards established by ACBSP, ABET, NCATE, among others.

The Biology, Computer Sciences, Social Science, Electronics, Engineering, Pedagogy, Office Systems and Mathematics Departments evidence curriculum changes through the previously mentioned different types of indicators. These curricular modifications have been developed mostly in new courses and in the curricular content of already existing courses.

Are faculty development opportunities equitable distributed? Has the level of institutional support increased, decreased or remained stable over time? What has been the impact?

It is of interest to determine whether the opportunities for faculty development that have been provided by the University in the last five years have been equitably distributed among the academic departments. In order to determine to what extent this has been the case, it has been necessary to study not only the available statistical data, but also the guidelines which establish the manner in which the beneficiaries of these opportunities are selected.

Faculty development opportunities have been provided through several available vehicles, such as, leaves, professional improvement assistance and research work assistance. The university provides several types of leaves: (1) sabbatical, (2) extraordinary leaves with pay, (3) extraordinary leaves without pay but with financial aid, (4) special financial aid, and (5) extraordinary leave without pay or financial aid. All of these programs are administered by the Administrative Board, which evaluated the applications and established a ranking by merit, priorities and funds available. Due to the current goals of the system and the ongoing economic situation, the award of these leaves has been focused on the development of new doctorate degrees in the academic departments which are currently working towards accreditation by specialty accreditation boards (Certification #80-2006-2007, *Junta Administrativa* [Administrative Board]). The selection process depends entirely on the initiative of the interested party to request such a leave. No attempt has been aimed at providing opportunities equitably distributed among the different departments.

Table F-1 shows the number of sabbaticals awarded per year and the corresponding amounts assigned. Of the ten sabbaticals awarded, three were aimed towards obtaining a doctorate degree. The others were centered on the sponsoring of work leading to the writing of a book. With regards to the department distribution of the awardees, Humanities had three, Mathematics had two, and Spanish, Pedagogy, Business Administration, Biology, and Engineering, each had one. Over the five-year period the yearly amounts assigned fluctuated significantly, depending on the amount and rank of the awardees. A total of \$139,108 was awarded over the five-year period.

Table F-2 shows the number of extraordinary leaves with pay awarded per year and the corresponding amounts assigned. Of the 12 leaves awarded, all were aimed towards obtaining a doctorate degree. With regards to the department distribution of the awardees, Electronics had four, Business Administration had three, Spanish and Mathematics had two each, and Social Sciences, one. Over the five-year period the yearly amounts assigned fluctuated significantly, depending on the amount and rank of the awardees. A total of \$263,068 was awarded over the five-year period.

Table F-3 shows the number of extraordinary leaves without pay but with financial aid awarded per year and the corresponding amounts assigned. These leaves were awarded for only three years, i.e., for the academic years from 2005-06 to 2007-08. Of the seven leaves awarded, all were aimed towards obtaining a doctorate degree. Over the three-year period the yearly amounts assigned fluctuated depending on the amount and rank of the awardees. With regards to the department distribution of the awardees, Mathematics had three, and Biology and Physical Education had two each. A total of \$88,000 was awarded over the three-year period.

Table F-4 shows the number of special financial aids awarded per year and the corresponding amounts assigned. Of the nine leaves awarded, all were aimed towards obtaining a doctorate degree. With regards to the department distribution of the awardees, Computer Science had four, and Pedagogy had

four. Over the five-year period the yearly amounts assigned fluctuated depending on the amount of awardees only, except in 2009-10, where significantly higher amounts were awarded to each of the three recipients. A total of \$72,413 was awarded over the five-year period.

In the five-year period only one leave without pay or financial aid was awarded. It was awarded in 2005-06 and the awardees belonged to the Pedagogy Department. The leave was aimed at continuing to work towards obtaining a doctorate degree.

The professional improvement program provides assistance to faculty members participating in symposiums, conferences, seminars and the like. This program is administered by the Office of the Dean of Academic Affairs. In the recent past the economic assistance has been dependent on whether the faculty member is an active participant or an attendee in the activity and whether the activity is local or outside of the Island. For activities outside of the Island, support is provided for travel and registration fee, with active participants receiving a higher portion of these costs as compared to attendees. For local activities only a portion of the registration fee is provided, independent of whether the participant is actively participating or only attending. The selection process depends entirely on the initiative of the interested party to request such assistance. No attempt has been aimed at providing opportunities equitably distributed among the different academic departments.

Table F-5 gives the amounts assigned per year to this program for the period of interest. No data was available for academic year 2005-06. For the other years the amount assigned per year has not been constant, but there has been a slight downward tendency.

Another important form of faculty development is in the form of research work grants. At the UPRB this program is administered by the Office of the Dean of Academic Affairs. The interested faculty members submit proposals to the Dean's office. The proposals are evaluated by a committee selected by the Dean and representative of the faculty. The committee recommends to the Dean the proposals which they consider as most meritorious. The process of awardees selection and grant provided is guided by draft guidelines developed by the Dean and the Committee. No attempt has been aimed at providing opportunities equitably distributed among the different departments.

Table F-6 shows the number of Research Grants awarded per year and the corresponding amounts assigned. A total of 27 researchers have been selected in the five-year period. As may be observed, the yearly assignments to these programs was steadily on the rise for the first four years but suffered a reduction in the last year. With regards to the department distribution of the awardees, Biology had nine, Physics had eight, Electronics had four, Spanish had three, and Computer Science and Social Sciences had one each. A total of \$323,513 was awarded over the five-year period.

A point to be considered is that there has been a significant increase in the number of proposals submitted each year. In addition, some of the researchers have requested and obtained federal grants for the continuation of their projects.

Table F1 Sabbatical Leave		
Year	Leaves Conferred	Assigned Quantity
2005-2006	1	\$15,744
2006-2007	4	\$59,860
2007-2008	2	\$22,448
2008-2009	2	\$24,676
2009-2010	1	\$16,380
Total	10	\$139,108

Table F4 Special Economic Help		
Year	Leaves Conferred	Assigned Quantity
2005-2006	1	\$4,000
2006-2007	2	\$8,000
2007-2008	2	\$8,000
2008-2009	1	\$4,000
2009-2010	3	\$48,413
Total	9	\$72,413

Table F2 Extraordinary Leaves with Salary Payment		
Year	Leaves Conferred	Assigned Quantity
2005-2006	1	\$29,860
2006-2007	1	\$35,470
2007-2008	4	\$82,235
2008-2009	4	\$82,743
2009-2010	2	\$32,760
Total	12	\$263,068

Table F5 Professional Improvement	
Year	Assigned Quantity
2005-2006	NA
2006-2007	\$34,512
2007-2008	\$30,000
2008-2009	\$30,000
2009-2010	\$22,260
Total	\$116,772

Table F3 Extraordinary Leaves without Salary Payment but Economic Help		
Year	Leaves Conferred	Assigned Quantity
2005-2006	3	\$34,000
2006-2007	3	\$36,000
2007-2008	1	\$18,000
2008-2009	0	\$0
2009-2010	0	\$0
Total	7	\$88,000

Table F6 Research Work Grants		
Year	Grants Conferred	Assigned Quantity
2005-2006	3	\$15,853
2006-2007	4	\$64,684
2007-2008	6	\$70,054
2008-2009	7	\$98,991
2009-2010	7	\$73,931
Total	27	\$323,513

How does the Institution know that its policies and practices actually enable it to recruit, develop and retain faculty who support the teacher/scholar model?

The UPR recognizes that the faculty members are central to the Institution's teaching and learning process. The UPR faculty members are qualified professionals by virtue of their education, training, experience and skills. Until June 2006, the minimum education requirement for a tenure track position as a faculty member was a master's degree (See appendix F-6-UPR General Bylaws, Article 42; Section 42.1). In June 2006, the Board of Trustees of the UPR approved Certification 145 2005-2006 (appendix F-7) which requires a doctoral degree as the minimum academic qualification to be recruited in a tenure-track position. Therefore, any candidate for a tenure-track position as a professor or researcher must have a doctoral degree or equivalent in the teaching or research discipline (with the exception of those disciplines with a proven difficulty in recruitment) according to the policies and procedures established by the President of the UPR. In addition, the Academic Senate has approved internal policies and procedures for the recruitment of new faculty members. There has been an increase in the number of faculty members with PhDs, D BAs or Ed Ds, and there are plans to hire more.

The UPR General Bylaws specifies how to conduct recruitment (See Articles 42 and 43). On the whole, to carry out the human resources plan the UPR is organized around academic departments. Thus, the department directors (chairpersons) regularly schedule meetings with the Department Personnel Committee members who make suggestions about the human resources needs of the program. Together, the director and committee identify desirable characteristics and skills of personnel. The hiring and assignment process is adjusted according to the trends in the programs. Whenever there is a change in the program trend, a faculty opening occurs, and the faculty member hired must conform to those needs. When a vacancy occurs, the Department looks into the pool of candidates that qualifies to fill the vacancy. The Personnel Committee invites the qualified candidates to come to an interview. The one who best matches the vacancy requirements at the time of hiring is selected. The faculty is hired and assigned according to the Program needs (See Appendix S-31: Faculty Recruitment Process). All faculty appointments are made among the candidates who respond to the public announcement/ call to a position. This announcement is made once the Dean's Office of Academic Affairs authorizes the department to appoint someone to a tenure-track position.

In accordance with Article 46 of the UPR Regulations, the criteria for the selection of personnel are (1) the quality of the academic record and university where studies were made; (2) mastery of the subject to be taught and capacity to integrate it in related areas; (3) teaching experience and the application of knowledge in a particular area; (4) publications and presentations made; (5) identification with the University Law's philosophy and objectives; and (6) the capacity for scientific research or creative work.

A candidate for any faculty position must submit his or her academic credentials, a curriculum vitae and a letter of intention to the Department Director. The Department Personnel Committee members perform the peer evaluation of the candidate taking into consideration the recruitment plan, the strategic plan, the academic and professional qualifications of the candidate and the results of the

personal interview. When confronted with the decision of filling a position, the Program takes into account some influential or crucial criteria, for example, teaching or other related experience of the candidate, professional certifications, service projects or research. The main criterion for recruitment in the UPR is the academic preparation. However, the Department Personnel Committee considers professional experience and certifications.

The UPRB recognizes the importance of continual professional development in its faculty to reach the institutional goals and promote excellence in student learning. The professional improvement of teaching personnel is offered at institutional and departmental levels. At the institutional level, the Dean's Office of Academic Affairs is responsible for the professional development and improvement of faculty. Certification 15-06-2007 (appendix F-8), approved by the Academic Senate, established the guidelines for the Professional Improvement Plan of the UPRB faculty members. In February 2009 the Academic Senate amended Certification 15 with Certification 18-2008-2009 (appendix F-9) and called the document *Guías para el Plan de Mejoramiento profesional del Personal Docente de la Universidad de Puerto Rico en Bayamon [Guide for the Professional Improvement Plan of the UPRB Faculty]*. The steps established by the Professional Improvement Plan are the following: carry out a needs assessment among faculty, determine the strategies for the development of the plan and evaluate the activities, assess the activities and certify that the 10 semester hours, as indicated in Certification 18, have been fulfilled. The strategies to address the faculty's professional improvement will be attended by the Dean's Office of Academic Affairs, the Professional Improvement Committee and the academic departments. The strategies to address the faculty's professional improvement at institutional level are (1) Establish a required semester cycle of professional improvement (*Jornada Docente*) of seven or more hours that may include workshops, seminars or lectures on educational strategies and techniques in the specialized disciplines corresponding to the departments, on the research process and on the presentation of research carried out; (2) Establish a Faculty Professional Improvement Committee that will be in charge of coordinating the semester cycle of professional improvement (*Jornada Docente*) and develop a plan to foster the completion of doctorate degrees in faculty contracted before the Board of Trustees' Certification 145-2005-2006 (3) Promote in each department a plan for professional improvement activities that address the particular needs of its teaching personnel; (4) Provide institutional orientation to newly hired faculty at the beginning of each semester and require that they participate in it and the *Jornada Docente*; (5) Offer support for the development of research through the Dean's Office of Academic Affairs and the Academic Research Committee; (6) Sponsor faculty attendance to professional conventions and congresses in and outside of Puerto Rico; and (7) Promote academic exchange among faculty to other universities in and outside of Puerto Rico. By having faculty participate in the annual professional improvement activity, *Jornada Docente*, they are also complying with the Comptroller Office's requirements of annually meeting with six hours of professional training in their field during the fiscal year.

The faculty has the opportunity to carry out graduate studies, research, cultural trips, artistic creations, and publications. This can be done through leaves with pay, special financial aid and sabbaticals. The Dean's Office of Academic Affairs has funds available for the aforementioned. Leaves for research, studies and sabbaticals are taken care of through institutional funds under the Chancellor's office. The Dean's Office of Academic Affairs manages seed funds for research and professional development. Professors present their application to the Departmental Personnel Committee and chairperson. They, in turn, evaluate the application and submit it to the Institutional Personnel Committee, who then prioritizes each application according to its purpose and the department's recommendation. The committee makes its recommendations to the Dean's Office of Academic Affairs who make their recommendations to the Administrative Board. The Board then evaluates each application and assigns a

set budget to be distributed according to the established priorities. The number of applications that are finally accepted will depend upon the funds available and the position on the list of priorities. There was also a federal grant program (known as the Title V Program) for student and faculty enhancement and development. This grant was available during the 2007-2008 academic year and included training in software and assessment. At system-wide level there are Presidential Scholarships available for doctorate or post-doctorate studies. In addition to the aforementioned, full-time UPR faculty who wish to take courses or have been admitted to begin or complete a degree at any of the UPR campuses may do so and are tuition exempt.

The academic departments, as well as the UPRB, recognize the importance of the faculty's professional development in order to reach the goals and promote excellence in student learning. Both the departments and the UPRB have professional improvement committees that work with the design, planning and carrying out of a Professional Improvement Plan of the program per semester. They contact resources, establish dates and promote each activity. Attendance is taken and each activity is evaluated to determine how to improve future presentations.

Therefore, through the aforementioned, faculty is maintained updated on technical aspects in their teaching area through participation in workshops, lectures, seminars, and congresses, among others. To maintain updated in the practice of their discipline, professors also have the opportunity to offer consultant services, work in industry, and offer workshops and lectures in business and industry. There are professors who are in charge of coordinating internships, which allows them to be in contact with industry. By having professors specialized in different areas, students are exposed to different facets of knowledge thereby providing them with a broader academic preparation. Our faculty has liaisons and contacts with the public and private sector, and some faculty are members of professional organizations in their field. In several cases, a number of contact hours in continued education are required which translates into a better prepared and updated faculty. The academic preparation of our faculty allows them to face the continuous challenges of our society. Our faculty responds to these needs through the diversification of its academic preparation. In addition, the majority of the part-time faculty members come from industry and bring with them professional and practical knowledge. Therefore, there is a blend between theory and practice that enhances the teaching-learning process.

The general principles for regulating the faculty promotion process are described in the UPR General Bylaws (See Article 47 appendix F-6) and in some certifications of the Administrative Board³, Chancellor's Office⁴ and Academic Senate⁵. The faculty promotion process has three evaluation phases. The first stage is conducted by the Department Personnel Committee; the second one is performed by the Institutional Faculty Committee; and the last step is made by the Administrative Board. The evaluations and the original recommendations concerning promotions are made by the Department Personnel Committee, who presents its reports through the corresponding channels. The recommendations of the departmental committee are sent to the Dean's Office of Academic Affairs via

³ Certification No. 38-2004-2005, Certification No. 44-2004-2005, Certification No. 147-2002-2003, Certification No. 2000-2001-107, Certification No. 30-2002-2003, Certification No. 32-2002-2003, Certification No. 026-2001-2002

² Certification No. 1-2003-2004.

³ Certification No 22-2007-2008, Certification No.15-2006-2007, Certification No. 14-2004-2005 (amendment of 34-2003-2004).

the department chairperson. The reports should include the foundations and conclusions upon which they are based, as well as the list of recommended candidates in order of priority. The Institutional Personnel Committee evaluates each of the candidate's files and recommends promotions to the academic dean. The dean presents the promotions proposed to the chancellor with the recommendations made by the dean's office, the Institutional Personnel Committee, and the department chairperson. When the petitions for promotions are presented to the chancellor, copies are also sent to the Administrative Board. Each academic year, the Administrative Board establishes the date for the ratification of the evaluation reports of the faculty for possible promotions. The Administrative Board, as proposed by the chancellor, evaluates the cases for the possible promotions of faculty and either approves or denies the promotion. As established by Certification No. 32-2002-2003, the Administrative Board (appendix F-10) agreed that promotions be given in descending order of points with one promotion for each rank beginning with full professor until the available funds are depleted. Faculty may be promoted to Auxiliary Professor, Associate Professor or Full Professor. The specific guides and procedures for faculty's application for promotion are described in the process handbook *Instruction Guide on the Summary of Points for Promotions of the UPRB Faculty* revised in November 2007.

How does its success in doing that compare to peer institutions?

The Puerto Rico Council of Higher Education recommends the development of regulations and processes for faculty recruitment and promotion. It is because of this recommendation that these processes are carried out in all of the UPR units and institutions of higher education on the Island. However, upon comparing these processes with that of other institutions, we can state that the UPRB's process is somewhat longer because of the rigor with which it is carried out and the evidence needed to complete the process.

Are there differences across departments in the criteria for faculty appointment, tenure, and promotion? Identify and evaluate the basis for such differences.

The faculty recruitment, tenure and promotion processes are regulated by the General Regulations of the University of Puerto Rico and the Faculty Manual (appendix F-11). These documents establish the norms and procedures to follow for appointing faculty and granting promotions and tenure.

Each academic department has the statutory responsibility, through its director, of naming a Personnel Committee. This committee, elected among the department members, is comprised of no less than three and no more than seven professors. These professors should be tenured with a minimum academic rank of associate professor (with exceptions if there is no faculty member with the required rank). The committee will elect a president among its members and will advise the department director on appointments, promotions, leaves, tenure, transfers, bonuses, and other actions related to personnel.

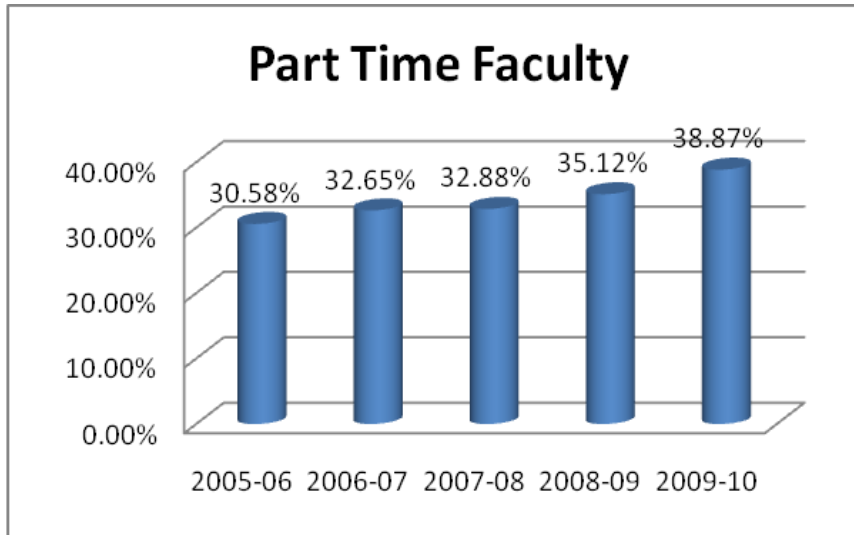
With the goal of measuring if the procedures for naming the Personnel Committee and if the actions taken by it are similar among the UPRB's Academic Departments, an instrument was developed that asked the department directors if the articles in the regulations were met as established.(see appendix F-12)

The results of this instrument indicate that the academic departments of the UPRB equally fulfill the regulations for the appointment and election of the committee, selection of the committee president, application of a protocol for the evaluation of faculty dossiers according to the actions to be taken and the application of instructions concerning needs in areas of difficult recruitment. The only place where there might be some differences is in the protocol content and criteria and in the exceptions of difficult recruitment. However, these differences could exist because of the different requirements that the various academic disciplines have in the Institution.

How has the utilization of part-time and adjunct faculty changed over the past 5 years? What has been the impact on student learning and success?

The University of Puerto Rico at Bayamón considers part-time or adjunct all faculty members with full-time, part-time or temporary contracts. The number of faculty under this concept at the UPRB during the past five years has shown a tendency to increase in 8.3% as observed in FigureF1. Nevertheless, this increase has been greater in the last two years (2008-09 & 2009-10) that were considered for this report reaching 6.0%.

Figure F-1. Total Percent of Part Time and Adjunct Faculty



The proportion of part-time or adjunct faculty in comparison with the regular professors reached almost 40% during the last year considered. However, in the analysis of each academic department, there were departments with part-time or adjunct faculty of 50% or more. These departments were English (59.3%), Social Sciences (57.5%), Physical Education (54.6%), Pedagogy (54.2%) and Humanities (52.4%) (See Table F-7)

Table F-7. Percentage of Part Time and Adjunct Faculty by Academic Department

Department	2005-06	2006-07	2007-08	2008-09	2009-10
Business Administration	44.4%	31.4%	38.5%	39.5%	45.0%
Biology	31.3%	21.4%	33.3%	38.9%	38.9%
Computer Sciences	37.5%	23.1%	23.1%	28.6%	31.3%
Social Sciences	50.0%	45.5%	43.5%	48.0%	57.7%
Physical Education	28.6%	69.2%	46.2%	27.3%	54.5%
Electronics	14.3%	14.3%	14.3%	0.0%	7.1%
Spanish	22.2%	33.3%	27.8%	35.0%	18.8%
Physics	25.0%	33.3%	40.0%	22.2%	12.5%
Humanities	35.3%	42.1%	42.1%	47.8%	52.4%
Engineering	28.6%	23.1%	23.1%	33.3%	31.3%
Mathematics	23.8%	25.0%	25.0%	31.6%	31.6%
English	25.0%	28.6%	38.1%	45.5%	59.3%
Pedagogy	51.7%	55.9%	48.3%	50.0%	54.2%
Office Systems	7.1%	7.7%	0.0%	16.7%	18.2%
Chemistry	9.1%	35.7%	35.7%	43.8%	43.8%
Learning Resources Center	11.1%	11.1%	33.3%	22.2%	12.5%
Counseling and Orientation	0.0%	0.0%	0.0%	0.0%	0.0%
Total	30.6%	32.6%	32.9%	35.1%	38.9%

When comparing the percentage of adjunct professors in the UPRB with the tendencies of all the institutions of the United States, in 2008 it was observed that 50.4% of their faculty members were adjunct professors. However, in comparison to public four-year institutions, this increased to 51.3%. This last percent exceeds by 12.4% the total percent of adjunct faculty hired by the UPRB in 2009-10. Nonetheless, we are aware that the percentage of four-year public institutions in the United States is surpassed by the UPRB's five academic programs with more than 50% of adjunct faculty.

The reasons for these tendencies on a total level and by academic program are varied and interrelated. These reasons stem from the UPR systemic policies to institutional situations. Among these last two, fiscal situations, retirements by faculty and modalities that facilitate the academic offerings stand out freezing of vacant positions. On the other hand, there exists the requirement of a doctorate degree for the initial consideration of a candidate to occupy a regular position that is justified. Added to these reasons is the precarious systemic fiscal situation, which makes it impossible to count with the necessary economical resources to recruit regular faculty.

The analysis of how the observed tendency in the hiring of part time and adjunct faculty impacts the UPRB should be carried out at two levels: impact on the institutional processes and impact on the teaching-learning process. When speaking about impact on the institutional processes, what stands out in the hiring of adjunct faculty is the economy it is for the Institution as well as making it possible to hire accomplished resources for the teaching-learning process. The adjunct faculty hired on the whole brings practical experiences in the field to apply to the concepts developed in the various courses. On the other hand, the participation of this professor in the various institutional processes, such as, accreditations, program evaluations, and institutional committees, among others is viewed as a disadvantage.

The UPRB has a standard processed for the hiring of adjunct faculty. This is regulated by the *Manual of Norms and Procedures for the Hiring and Appointment of Teaching Personnel* [appendix F-11 *Manual de Normas y Procedimientos para la Contratación y Nombramiento de Personal Docente Dedicado a la Enseñanza*], which the UPRB's Human Resources Office follows. This establishes that adjunct faculty must meet the same requirements that any other faculty member hired for a regular position. The following documents are required:

- Resume,
- Diploma and official transcript of the master's or doctorate degree conferred by a recognized institution of higher learning.
- Qualification from personnel indicating the individual may work in the area s/he has applied for.
- Government certifications

One of the factors that leads to an increase in the number of part time and adjunct faculty hired in the UPRB is the retirement of the initial generation of regular faculty members that began in the Institution during the 70s. These positions have not been filled because of the fiscal limitations that the Institution is facing. Moreover, those academic departments that offer evening programs (UNEX) tend to hire part time and adjunct professors during the scheduled evening courses.

In regard to the second level of impact, defined as the teaching-learning process, the part time and adjunct professor is evaluated by students in each academic period that s/he offers, thereby guaranteeing whether there is student satisfaction with the professor's performance. This evaluation has 25 criteria that deal with elements regarding the fulfillment of institutional norms and regulations,

teaching strategies, responsibilities and treatment by the professor, mastery of the material given, and strategies used to measure learning. The part time and adjunct professor also pass through a peer evaluation that deals with elements regarding the professor's performance. These evaluations are considered when rehiring the professor (See Appendix F-13: Classroom Evaluation by Students and Peers).

Part time and Adjunct faculty participates in an orientation process during the first week of classes every academic period. This orientation includes information on institutional policies and procedures that professors must meet. It also includes content regarding general information about the Institution (academic programs, the UPRB's organizational chart, strategic plan); processes to follow to access and manage computerized information; educational objectives and the institutional assessment process; and support and services offered by departments or divisions, such as, library, audiovisual, counseling and orientation, students with disabilities and jobs. This process seeks to guarantee a basic knowledge in the faculty of its responsibilities and support services that will effectively facilitate the teaching-learning process.

In regard to the assessment processes, adjunct professors are oriented upon the beginning of their contract with the Institution. The departments that the professors are assigned to are in charge of giving follow-up on how to obtain information to evidence learning in the courses to be offered. However, only information from the courses included in the department or institution's assessment plan are compiled. This information is presented in the Annual Report on Student Learning, since it focuses on the strengthening of the institution's educational goals and professional competencies of the academic program.

The information that made an impact, in general terms, on the teaching-learning process and was made available by the part time and adjunct faculty that was interviewed (see Appendix F-14) is as follows:

- They do not have an office nor a schedule to take care of students
- They have not been offered a position even though they have been teaching for years
- They do not have the marginal benefits that regular faculty have.
- The salary is not the same even though they carry out the same work and have the same preparation of the regular faculty
- They lack materials to support teaching
- They lack participation and are not integrated in the departmental processes.
- They need more training on the processes related to the assessment of student learning.
- They have the worst class schedules.

How do faculty- issues affect student learning?

Based upon the premise, a professor that does not have the best climate for teaching cannot bring his students to the maximum possible level of learning; we can state this as an issue which affects student learning. For the UPRB faculty there exist core issues that need to be addressed for the teaching-learning process to carry on in the best institutional climate possible. However, the university administration did not have information that would allow it conclude what those issues were for the professors. Therefore, a questionnaire was developed where professors were asked about 17 factors that occur in the faculty and affect the teaching-learning process (see Appendix F-15). Later, as a process to validate these factors, professors were asked to indicate the most important factor (#1) that affected the teaching-learning process. All 17 factors were then rated with a ten-point scale, where ten equaled having the greatest impact and one, the least.

The responses on the questionnaires were sent to a data base and statistical process in a descriptive manner, in other words, frequency distributions, percentages, measures of central tendency (arithmetic mean) and dispersion measures (standard deviation). Derived from the results of the aforementioned, participating professors indicated the following factors as those which most affect the teaching-learning process.

- The professor's commitment towards the student (9.33)
- The faculty's educational support resources (9.04)
- The evaluation and improvement of the academic programs (8.83)
- The resources assigned for research (8.83)
- The cleanliness of the areas (8.79)

On the other hand, the factors that least affected the teaching-learning process were identified as:

- The faculty's promotion process (5.71)
- Departmental committee work (6.58)
- Institutional committee work (6.67)
- The academic department's director (6.70)
- Strikes and work-stoppages (6.92)

It is important to point out that the 17 factors included presented average scores of more than five points. This indicates that all the factors included bear some importance to the student's teaching-learning processes. Moreover, the premise regarding the faculty's educational and support resources was the factor with the least dispersion in the professors' responses (.91) and the strike and work stoppage factor was where the greatest dispersion was registered in the professors' responses (3.08). This means that professors responded very similar in the faculty's educational and support resources and less similar in the factor regarding strikes and work stoppages.

Upon analysis of the average scores with the question on what was the most important factor that affected the teaching-learning process, this coincided with the professor's commitment with the student. For faculty that is the most important factor.

In the total analysis of the results obtained, we can state that the UPRB faculty is one who is highly committed with students and teaching. We can also conclude that for the institutional educational mission to be met, faculty support resources, research and academic program improvement are fundamental elements.

Recommendations

- Increase the number of leaves granted to pursue studies by faculty members as allowed by the Institution's budget limitations.
- Promote greater research and publications by faculty members.
- Grant tenure in areas of need to teaching personnel hired as soon as the fiscal situation allows it.
- Continue fostering faculty participation in professional development activities.
- Continue faculty development in areas of interest.
- Continue motivating and supporting faculty in periodical curriculum revisions (every five years).

EDUCATIONAL OFFERINGS

This sub-committee reviewed aspects related to the institution's academic offerings and how this ensures alignment of the academic content, rigor, and coherence with the academic programs and institutional mission. On the other hand, it checked that all of the UPRB's academic programs had their own goals and objectives as well as profiles of alumni's knowledge and skills.

The UPRB offers its undergraduates academic programs in the content areas of technology, business, science and education. These are the following:

- Technology:
 - *BS Computer Science*
 - *BS Electronic Engineering Technology*
 - *BA Materials Management*
 - *AD Civil Engineering Technology, Land Surveying and Highway Construction*
 - *AD Civil Engineering Technology in Construction*
 - *AD in Industrial Engineering Technology*
 - *AD Instrumentation Technology*
 - *AD Electronics [in moratorium]*
- Business
 - *BBA Accounting*
 - *BBA Marketing*
 - *BBA Management*
 - *BBA Finance*
 - *BA Office Systems*
- Science
 - *BS Human Biology*
 - *BS General Biology*
- Education
 - *BA in Special and Elementary Physical Education*
 - *BA in Preschool and Elementary Education*

How does the institution demonstrate that the educational offerings have academic content and rigor appropriate to the degree level(s)?

The University of Puerto Rico at Bayamón is fully committed to offer education of excellence for all of its students. In doing so the institution follows strictly the rules established by the different organisms in and out of it that have the responsibility to take care of the academic rigor commitment. In having appropriate contents and rigor for this level the UPRB demands for any process of development or update of programs that the appropriate guidelines must be followed, the adequate mapping with institutional mission and students profile must be done and the recommendations established by general and professional accreditation organizations must be considered as appropriate.

Every proposed program should demonstrate it is capable of meeting the most rigorous parameters of quality, which can be evidenced in the planning and evaluation processes. In keeping with this The *Guía Para La Redacción de Propuestas Para el Establecimiento de Programas Académicos Nuevos* [Guide for the Writing of Proposals for the Establishment of New Academic Programs] (Board of Trustees Certification 80 2005-2006 – see Appendix E-1), which replaced Certification 93-113 of the Consejo de Educación Superior [Council of Higher Education], presents the aspects that need to be considered in

the development of academic programs. For program updates the Board of Trustees approved the Certification 43-2006-2007 (*Reglamento para la evaluación periódica de programas académicos en la Universidad de Puerto Rico* - see Appendix E-2), which presents the guidelines to follow for the periodic evaluation of academic programs. These certifications establish regulations with the purpose of advancing, among other objectives, the response to the UPRB's mission of guaranteeing and expressing its commitment with educational offerings of the highest quality. Certification 43-2006-2007 specifically establishes the internal evaluation of all programs, both undergraduate and graduate, every five years (Article 6).

In keeping with this, the UPRB requests its academic programs to complete a form (See Appendix E-3: *Estatus de Acreditación o Evaluación*) on the status of the program's evaluation or accreditation. From this report the Dean's Office of Academic Affairs prepares a report on the Itinerary for the Five-Year Evaluation of its programs (See Appendix E-4: *Itinerario de Informes de Evaluación Quinquenales*), which is submitted to the UPR's Central Office of the Vice-presidency of Academic Affairs. The report is periodically updated to learn the status and progress of the program evaluations.

In addition to the aforementioned certifications that regulate the creation and evaluation of academic programs, the UPR system has generated a culture of evaluation and accreditation. The Board of Trustees Certification 138-2003-2004 (*Política Institucional sobre las Acreditaciones de los Programas Académicos y de Servicios que rinde la Universidad de Puerto Rico* – see Appendix E-5) establishes the institutional policy for the continuation of program accreditation and promotion of the accreditation of those programs to which this applies. Moreover, in *Una cultura de evaluación: Acreditación de Programas* (A culture of evaluation: Program accreditation – see Appendix E-6) (Garcia-Padilla, 27 March 2006) the past president of the UPR reiterated the prestige accreditation brings to a program and to the institution and once again called on all academic programs to become accredited by their respective specialized agencies.

Presently the UPRB has obtained accreditation for BBA Accounting, BBA Marketing, BBA Management, and BBA Finance from the Accreditation Council for Business Schools and Programs [ACBSP] and the BA in Preschool and Elementary Education from the National Council for the Accreditation of Teacher Education [NCATE]. The BA in Preschool and Elementary Education has also received certification from the Association for Childhood Education International (ACEI) and the National Association for the Education of Young Children [NAEYC]. The bachelor's degree program in Special and Elementary Physical Education has obtained accreditation with conditions from NCATE and conditioned certification from the National Association for Sport and Physical Education [NASPE]. The Special and Elementary Physical Education Department is in the process of submitting documentation to obtain full accreditation and certification for its program. While there is no program in library sciences, the Library Resource Center, which serves the academic programs, sought and obtained certification in 2008 from the Association of Colleges and Research Libraries (ACRL), which is a division of the American Library Association (ALA).

The Electronics Department presented documentation for the accreditation of the BS in Electronic Engineering Technology and the AD in Instrumentation Technology. The Engineering Department have presented documentation for the accreditation of the AD in Industrial Engineering Technology, the AD in Civil Engineering Technology, Land Surveying and Highway Construction and the AD in Civil Engineering Technology in Construction. All of these accreditations are with the Accreditation Board for Engineering and Technology (ABET). ABET already visited the campus in November 2010 and the answering report is expected to be receive during the summer of 2011. The expectations for accreditation of these five programs are very high according to the preliminary results presented in the exit interview.

In addition the following are in the process of developing the appropriate documentation for accreditation:

- The Business Administration Department is in the process of submitting accreditation documents for all its programs to the Association to Advance Collegiate Schools of Business (AACSB).
- The Office Systems Department is submitting the final report for accreditation of its BA in Office Systems to ACBSP.
- The Computer Sciences Department is preparing the documentation to submit for the accreditation of its program with ABET.
- The Biology Department is preparing its documentation for the accreditation of its BS in Human Biology and BS in General Biology with the Puerto Rico Council of Higher Education (PRCHE).

It is important for any proposed program to demonstrate that it has adequate, qualified and sufficient faculty to support the curricular, co-curricular and extracurricular activities contemplated together with the demands of the field of study, the applicable accreditation standards and the needs arising from the analysis of the existing and projected faculty's profile. The UPRB faculty is highly qualified to meet this requirement which can be verified in faculty files in the departments and Human Resources Office (See Faculty Section of this report for information regarding faculty preparation). In addition, the program must evidence that it provides for continuous faculty development. The Institution and its departments have Professional Improvement Committees that provide activities for this purpose (See Faculty Section of this report for information regarding professional improvement of faculty).

Additionally to this, the University of Puerto Rico at Bayamon (UPRB) demonstrates that its educational offerings have the corresponding and appropriate content and rigor in the levels the degrees are given by taking the following actions:

1. Reaffirms its attachment to the criteria of excellence which distinguishes prestigious institutions of higher education and its goal of maintaining an updated curriculum based upon the assessment of programmatic effectiveness, the investigative findings and the internal and external evaluation.
2. Corresponds to the institutional mission by guaranteeing the educational offerings are of the highest quality through continuous evaluations of the academic programs.
3. Requires that all evaluation processes of the academic programs, as well as their resulting reports, be in accordance with the *Regulation for the Periodic Evaluation of Academic Programs of the UPR* and with the guides for the evaluation of academic programs of the UPR.
4. Establishes five-year evaluation processes in all academic programs of the UPRB (following the Board of Trustees Certification 43-2006-2007) to empower them in an efficient and effective manner and make viable the processes related to the presentation, consideration and transmittal of the evaluation reports. In addition, these five-year cycles will help the academic programs to reaffirm their excellence and pertinence, determine their effectiveness, and justify their continuance or revision, if necessary. This requirement should independently satisfy the financing methods (institutional funds, self-finance, external funds or others), departments, the Division of Continuing Education and Professional Studies (Known by Spanish acronym, DECEP), the educational means and any other dimension not contemplated or mentioned before. Article 7 of the Board of Trustees Certification 43-2006-2007 presents the information to be considered in the evaluation of present programs: their future plans and development plan, the demand for the programs, the

academic, fiscal and physical resources, faculty, research and creative work, accreditation and student evaluation. Among the categories listed by Article 7 to examine when evaluating a program are evidence of program pertinence, curriculum, alumni profile, assessment results, faculty profile, program operation and effectiveness, and fiscal aspects among others (See Certification 43-2006-2007 Article 7 for complete list- Appendix E-2).

5. Evidences and improves teaching quality, research and service through the periodic revision of the results reached by the programs (whether they are strengths or areas needing improvement), determines how to address these areas and establishes priorities for short, average or long-term action. These action plans should identify important directions of the disciplines and professions that need to be addressed, as well as evaluate the relationship and the contribution among programs and the relationship with the mission.
6. Ensures the contents and processes related to the creation of new programs conform to the standard changes, law requirements, content, focus, curriculum structures and contemporary teaching-learning modalities.

How are students meeting the Institution’s goals for information literacy, and what actions have been taken in response?

Goals 4 and 6 of the Institutional Educational Goals of the UPRB apply to information literacy competency. These state the following:

Goal 4: Technological competency (interdisciplinary): Students will demonstrate technological knowledge and skills necessary for effective performance in the student environment.

Goal 6: Information literacy competency (interdisciplinary) Students will demonstrate skills in the identification, handling and adequate use of information to learn and integrate knowledge.

The Institution has made systematic, institutional and departmental efforts toward the development of the information literacy⁶ competency. The following describes these efforts. The committees of General Education and the Assessment of Student Learning and the technological equipment of the UPRB have joined forces to aid in the development of information literacy. In the area of departmental efforts, there are courses which officially integrate the competencies of information literacy through a team teaching project between librarians and professors, in courses where these competencies are integrated in information literacy and/or research and are present in the syllabus or in other documents, and lastly, in courses where the academic departments indicate that although the information competencies are not reflected, these are underlying. Finally, other efforts by the Learning Resource Center in the teaching of information literacy are carried out.

Institutional Efforts

Part of the UPRB vision establishes as its goal the formation of *“individuals who will develop in an integral manner and function as informed, responsible, and critical citizens capable of actively participating in a dynamic world that demands competent persons.”* On the other hand, part of the UPRB mission states as its goal, *“To facilitate significant, continuous and long-lasting learning with the*

⁶ Information literacy, which also refers to computer literacy, is the term used by the librarians in the Learning Resource Center.

ultimate goal of having students become responsible citizens.” The development of these competencies in information literacy fosters the achievement of the following characteristics of the UPRB students as established by the graduate profile: function as an informed and critical citizen, capable of actively participating in a dynamic world, able to pass judgments and make decisions, and who has developed the skills necessary for solving problems. Information literacy also contributes to the achievement of minimal competencies in graduates; such as, attitude, critical thinking and the handling of technology. The General Education Committee (GEC) of the UPRB was named with the purpose of defining the general education component of the bachelor’s and associate degrees of the Institution. This component is the base acquired by students in courses of general education or competencies (knowledge, skills and attitudes) used in their academic and professional performance and in all ambits of their lives. Guided by the mission and vision, the GEC submitted a proposal for the general education component in bachelor’s and associate degree programs of the UPRB (*Propuesta para el componente de educación general en los bachilleratos y grados asociados de la Universidad de Puerto Rico en Bayamón*) to the Academic Senate for consideration. In the elaboration of this proposal, the achievement of the goal, Information Literacy was included.

During 2008-2010, the Institutional Committee for the Assessment of Interdisciplinary Educational Goals dedicated itself to planning the assessment of the three interdisciplinary goals: critical thinking, technological competencies, and information literacy. For this the committee was divided into three groups or sub-committees. Each one was assigned of one of the aforementioned goals.

The sub-committee in charge of Goal 6: *Competencias en información* [Competency in Information Literacy] revised the description of the goal and created the competencies and achievement criteria considered at the UPRB. For this task, the outline of the *Association of College & Research Libraries* (Entity that certified the Learning Resource Center after a self-study and corresponding visit from the evaluators in February 2008) was considered.

The Goals and Competency Sub-committee began the task of writing an instrument to measure the achievements of Goal 6. Therefore, they commenced selecting, compiling and developing items and aligning them to the competencies forming a bank of items to measure the competency goal of information literacy. These items were included in an exam type instrument during the first semester 2009-2010. The instrument was administered as a pilot to a sample of students who volunteered. At the end of the first semester 2009-2010, upon the collection of the responses to the pilot, a statistical analysis was done consisting of indexes of difficulty, discrimination and reliability of items. As a result of this analysis, the instrument was revised and the institutional test of the competency goal in information literacy was prepared as one of the ways to measure the UPRB students’ learning of this goal (See Appendix E-7: Institutional Test of the Competency Goal in Information Literacy).

The Institutional Test of the Competency Goal in Information Literacy was administered in April 2010, to a sample of students from the 2009-2010 cohort and as a pre-test for the 2010-2011 student cohort in August 2010. For further details see the report entitled *Trasfondo histórico del Comité Institucional de Avalúo de Metas Educativas Interdisciplinarias (CIMEI)* [Historical Background of the Institutional Assessment Committee of Interdisciplinary Educational Goals] and Appendixes 1 & 3 of the *IPASL [Plan Institucional de Avalúo del Aprendizaje Estudiantil (PIAAE)]* available in the Office for the Assessment of Student Learning (OASL) (See Appendix E-8).

Another institutional effort that results in the development of information literacy competency is the inclusion of technological equipment in the classrooms (projector, computer for the lecturer and Electronic board) and computer laboratories. This is evidenced in the reports on the utilization of the

technological quota available on the institutional web page and number of classrooms equipped with the aforementioned (See Appendix E-9 Inventory Reports in departments of classrooms equipped and for Reports of Technology Fee).

Departmental Efforts

Departmental efforts can be observed in courses that officially integrate the information literacy competencies through the team teaching project between librarians and professors; courses that in some way include competencies in information literacy or research; courses where the academic departments indicate that although the information competencies are not reflected, these are underlying; and finally, through other efforts channeled through the Learning Resource Center (LRC).

Courses that integrate information literacy competencies through a team teaching project between librarians and professors

Through a joint effort between ADEM (Spanish acronym for the Business Administration Department) and the LRC, the integration of information literacy was addressed through the project entitled *Proyecto para la Integración de las competencias en información e investigación y el avalúo del aprendizaje estudiantil en los cursos de Gerencia* [Project for the integration of the competencies in information literacy and research and the assessment of student learning in the business administration courses]. Through this project competencies in information literacy were integrated into the following syllabi: REHU 4409, Human Relations; REHU 4405, Administration of Human Relations; REHU 4407, Compensation Systems; and REHU 4419, Labor Law Jurisprudence (See evidence of the before and after versions of these course syllabi regarding the integration of information literacy and research: *Competencias de aprendizaje y criterios (metas): Cursos medulares programa bachillerato ADEM-UPRB* [Learning competencies and criteria (goals); Core courses in the ADEM-UPRB Bachelor's Program], *Competencias en información e investigación en cursos de concentración programa bachillerato ADEM-UPRB* [Information literacy and research competencies in courses of the majors in the UPRB's business administration bachelor's degree program] and the Project's portfolio (this last document is available in Infonex, the laboratory that serves the program). The objective of the project is for students to develop and apply information literacy and research skills to detect, analyze and solve situations or problems related to course topics through a teamwork project.

The courses in this project are given using the team teaching strategy between professors and librarians. Lectures or workshops are given during the courses, so students may refine their information literacy skills. Beginning in the second semester 2006-2007, information was compiled that could serve as data for an assessment process that would eventually allow the refinement of the effectiveness of this project and transport this experience to other courses. Various assessment instruments are being used which include: Workshop and lecture evaluation forms, monograph pre and post-test, APA style pre and post-test, data base pre and post-test, and monograph on focused list (brainstorming technique). To complete the project's assessment process, the aforementioned instruments were tabulated and the results provided more exact knowledge of the learning level reached by the students during the workshops and lectures. For more details see the annual reports of the *Learning Skills Program* [Programa de Destrezas de Aprendizaje] and *Pilot Project for the Integration of Information Literacy Skills in ADEM Courses* [*Informe sobre el Proyecto Piloto para la integración de las destrezas de información en los cursos de ADEM*] and *Pilot Project for the integration of information literacy, research and student learning assessment in the ADEM courses: Second Semester 2006-2007* [*Informe sobre el Proyecto Piloto para la integración de las destrezas de información e investigación y el avalúo del aprendizaje estudiantil en los cursos de ADEM: Segundo semestre 2006-2007*].

Courses which integrate the competencies of information literacy and research

Various courses foster information literacy competencies. The research competencies are closely connected to information literacy competencies; therefore, all courses which promote research in written or electronic resources are mentioned. It was not possible to recuperate information that would distinguish which courses on the teaching of information literacy and research skills were given by the librarians and which were given by the professors. In addition, some courses show evidence in their syllabi of the integration of information literacy and research, either in the objectives or in some other way. In other courses, evidence is not found in the syllabi or in other documents, but evidence is given sustaining the integration of information literacy. The courses by department are identified in the Appendix E-10 named: *Courses which integrate the competencies of information literacy and research*.

Courses that promote competencies in information literacy or research

Lastly, the Computer Sciences Department offers diverse courses where information literacy competencies are underlying. These courses are COTI 3101, Algorithms and Program Development I; COTI 3102, Algorithms and Program Development II; SICI 1008, Introduction to Computers; SICI 3017 Introduction to Electronic Data Processing; SICI 3028, Application Software; SICI 3038, Applied Computers Programming; SICI 4008, Principles of Electronic Data Processing in Business; and SICI 4066, Computer Applications in Education.

Other efforts by the LRC

The LRC has among its goals to “promote the teaching of information literacy skills to the university community, so its constituents may carry out an efficient study and investigation.” This is evidenced in the LRC’s Strategic Planning Plan. In addition to the aforementioned efforts, the LRC fosters the teaching of information literacy competencies through formal and informal opportunities. The following describes these efforts:

Learning Skills Program

The LRC has a Learning Skills Program coordinated by a faculty librarian. Other members of the LRC faculty collaborate in the activities carried out in this Program. The Program channels the development needs of students in the area of information literacy competencies. The professor who offers a particular course identifies a need in the assigned task or notes the absence of the competency. Through interviews with the librarian that coordinates the Program, the specific skills needed are determined and classes or workshops on these skills are given. Various workshops or lectures covering diverse topics are given in the Program. Some of the topics covered are the following: The use of style manuals, how to prepare an *annotated monograph* [after selecting a topic, the student analyzes and writes a critique on the bibliography available on the topic], how to prepare an investigation, how to prepare an essay, services and resources available in the LRC, search and evaluation of information on the Internet, CENSOS [CENSUS] resources, and how to use the online catalog, among others. For statistical details on the aforementioned, see the annual reports of the Program and of the LRC. Although these workshops and lectures address the needs found in the courses taught, these activities are not necessarily integrated into syllabi.

Informal instruction in the LRC

Informal instruction is offered in diverse areas of the LRC:

- Reference Section – Data for this area has been included in the annual reports since November 2004. For details of the statistical details see the LRC's monthly reports.

- Periodical Section – Individualized instruction is given on the use of indexes (non-electronic copies) and online data bases. For statistical details see the LRC’s annual reports.
- Patents and Registered Labels/ Trademark Room– Individualized instruction given in this area consists of an explication of how to access electronic information on patents and registered labels/ trademarks. For statistical details see the LRC’s annual reports.
- The Isabel Gutiérrez del Arroyo Room, Puerto Rican Collection – Individualized instruction is given in the online search for topics related to Puerto Rico and data from CENSO. For statistical details see the LRC’s annual reports.
- The Learning Skills Program also offers individualized instruction to interested individuals who apply during the periods when classes are not held. For statistical details see the Program’s annual reports. In addition, there are tutorials available on varied topics which are available on the UPRB web page, in the Reserve section, and in the Infonex laboratory Room (this laboratory serves the Program).

How relevant are the existent programs to the students and external community? How should we select and access future educational offerings?

An educational program includes all the elements that contribute to the integral development of the student. Therefore, in addition to the study plans, the use of other learning resources, such as, laboratories, library services and support services (counseling, student activities, sports, exhibits, among others) are also considered in an educational program. This is why, during the past years, various academic departments of the UPRB have begun or completed accreditation processes or self-studies for professional organizations thereby providing students with improved educational experiences which will better prepare them as future professionals. The aim of the UPR is to provide programs that will prepare highly qualified professionals through the university experience, develop students in an integral manner so they may function as informed, responsible, and critical citizens capable of participating actively and competently. This is why the UPRB and its academic departments go to great lengths to offer a variety of majors providing for diverse students, interests, abilities and individual goals that at the end have the effect of serving the community in general.

As part of the self-studies in the different departments, some data related to alumni, supervisors and employee satisfaction of these programs have been compiled. For example, the Teacher Preparation Unit, composed by the Pedagogy and Special and Elementary Physical Education went through an accreditation process with NCATE (National Council for Accreditation of Teacher Education). As part of the process, data was collected from three different groups: cooperating teachers, principals and alumni of the Teaching Program with the aim of measuring their level of satisfaction with the instruction given in the programs. The data from the cooperating teachers were obtained through two instruments: a questionnaire for cooperating teachers and the summative and formative evaluation on the teacher candidate’s performance. According to the data compiled from the questionnaire administered to cooperating teachers from 2006-2007 until the first semester of 2007-2008 and a second cohort during the second semester 2007-2008, 98.5% to 100% of the respondents were totally satisfied with the pedagogical knowledge and competencies demonstrated by the UPRB students during their practicum.

These results indicate that the cooperating teachers and graduates of the Pedagogy and Adapted and Elementary Physical Education Programs were satisfied with the quality of the education received regarding the program content. Moreover, this demonstrates that the quality of instruction and programs of the UPRB are relevant for the students and for the community (see University of Puerto

Rico at Bayamón Institutional Report. National Council for Accreditation of Teacher Education (NCATE). Submitted October 1, 2009-Appendix E-11).

The Computer Sciences Department also carried out a questionnaire with the aim of evaluating the level of satisfaction graduates had with the program regarding the knowledge, skills and abilities acquired and necessary for the working world. A total of 55 alumni from different dates of graduation (1996-2007) participated in the study. The information obtained was utilized to accommodate the program’s curriculum to the present needs of the industry. The questionnaire was divided into two areas. The first succeeded in getting general data related to the alumni profile and the second obtained data related to the bachelor’s degree in Computer Sciences. The results indicate that 71% of the respondents were working in the area of their degree. Moreover, 76% understood that the knowledge they had acquired has helped them in their professional performance. A total of 83% indicated that the administrative services received at the UPRB met their expectations. These results once again reveal that the UPRB alumni are satisfied with the knowledge acquired and treatment received (see Narrative of Questionnaire for Computer Sciences Alumni, 2007 – see Appendix E-12).

It is important to point out that the achievement of the mission of a teaching institution arises from the competencies and attitudes demonstrated by the students that completed their university degree there. This is why it is important for the institution of higher education to learn how its graduates’ personal and professional experiences have been throughout their academic preparation. Faced with this challenge, the UPRB collected information about the student experience from the 2007-2008 graduates. In 2007-2008, a total of 524 students graduated from the UPRB, 451 from the bachelor’s degree programs and 73 from the associate degree. Alumni satisfaction was measured in 11 general competencies of their academic preparation on an ordinal four-point scale. The following table presents the three areas with the highest percentages under “Very Satisfied” for the bachelor’s degree programs. (Note: All three tables that follow were taken from the report *Estudio de la Clase Graduanda*.)

Table E-1: Highest Percentages under “Very Satisfied” with the General Competencies of the Bachelor’s Degree Programs

Competency	Percentages under “ <i>Very Satisfied</i> ”
Knowledge of ethical behavior in life and in the profession	83.0%
Analysis and problem solving	82.6%
Critical Thinking	78.8%

The analysis by department presents diversity among the percentages observed under “Very Satisfied.” The following tables present the departmental distribution of responses from highest to lowest percentages of “Very Satisfied” for the bachelor’s degrees.

Table E-2: Highest Percentages under “Very Satisfied” with the General Competencies of the Bachelor’s Degree Programs by Department

Competency	Department	Percentages under “Very Satisfied”
Knowledge of the professional field	Office Systems (SOFI)	94.7
Teamwork	Pre-school	88.5
Knowledge of ethical behavior in life and in the profession	SOFI	94.7
Oral communication in English	Biology	64.5
Writing in English	Biology	67.7
Writing in Spanish	Engineering	87.5
Critical Thinking	Pre-school	95.0
Analysis and problem solving	Engineering	100.0
Presentations before an audience	SOFI	84.2
Use of technology	Electronics	92.6
Leadership	SOFI	94.7

Table E-3: Lowest Percentages under “Very Satisfied” with the General Competencies of the Bachelor’s Degree Programs by Department

Competency	Department	Percentages under “Very Satisfied”
Knowledge of the professional field	Computer Sciences	48.0
Teamwork	Biology	58.1
Knowledge of ethical behavior in life and in the profession	Computer Sciences	68.0
Oral communication in English	Preschool	21.3
Writing in English	Preschool	18.3
Writing in Spanish	Computes Science	44.4
Critical Thinking	Biology	71.0
Analysis and problem solving	Electronics	74.1
Presentations before an audience	Computer Sciences	56.0
Use of technology	Computer Sciences	52.0
Leadership	Computer Sciences	40.0

From the previous tables mentioned data show us that graduates from SOFI and Preschool programs have the highest percentages of satisfaction on the considered general competencies. SOFI graduates SOFI obtained highest percentages of “very satisfied” on the competencies of knowing of the profession field, leadership and knowledge of ethical behavior in life with 94.7%. In addition SOFI obtained an 84.2% in presentation before audience. Further, Preschool program showed the second highest percentages of satisfaction on the general competencies with 88.5 in teamwork and 95.5 on critical thinking. In other hand, Computer Science program had the tendency to show the lowest percentages of “very satisfied”. However, there is no percentage of insatisfaction that overpass the 25 percentage (See Appendix E-13 UPRB Study of 2007-2008 Graduates). It is recommended to further investigate what changes can be made to either maintain high levels of satisfaction or increase low levels of satisfaction on every program related to this identified general competencies.

In general, the alumni indicated a high level of satisfaction with the competencies evaluated regarding their academic preparation.

In 2004, the Office of Planning and Institutional Research (OPIR) developed and administered an alumni questionnaire. The data acquired allowed the Institution to learn if the alumni who had completed their

degrees were working in their field of studies, if they were satisfied with the preparation received, and what alternatives would help them continue being competent in the working world, among others (see Alumni Studies Report 2004 OPIR – Appendix E-14). The responses given by these graduates could help in making adjustments to the academic programs according to the present reality. This would aid the UPRB in satisfying the needs of its present and future student population. A total of 2,483 graduates of the following academic years participated: 1998-1999, 1999-2000, 2001-2002, 2002-2003 y 2003-2004. In addition, data obtained from the REC STD127 Report (List of Graduates of the Last Six Years - see Appendix E-15) prepared by the Information Systems Office of the Institution was used.

The results obtained from the alumni study demonstrate that they are satisfied with the preparation received at the UPRB. This has given them the opportunity to work in an extremely competitive labor market since it demands professionals who are competent in the performance of tasks. Moreover, the market demands that these professionals have skills in leadership, teamwork, time management, stress management, job organization, and the ability to work with minimum supervision, among others.

How should we select and access future educational offerings?

The academic departments that have programs work normally in the identification of the needs of industry both in Puerto Rico and in EEUU, according to the specific areas. Some departments submit periodically questionnaires to industries and alumni in order to analyze the tendencies occurring for the area. These processes are common as part of the accreditation processes worked in different departments and they are performed continuously, as part of the requirements of the accreditation agencies. As part of such processes too, other departments had defined consulting committees with prominent representatives from the industry and alumni. These committees are cited as needed in order to be consulted about possible changes in the programs and suggestions they can provide. One of the efforts done by a department is described in the following:

The data collected for two years from the Pedagogy and Special and Elementary Teacher preparation programs alumni questionnaire indicated that 90% to 100% were very satisfied or satisfied with the preparation of the content in the subject matter studied (See UPRB NCATE Institutional Report-Appendix E-11). These results indicate that graduates of the Pedagogy and Special and Elementary Physical Education Programs were satisfied with the quality of the education received regarding the program content. Moreover, this demonstrates that the quality of instruction and programs of the UPRB are relevant for the students and for the community.

In addition, data compiled from employers (school directors) in the NCATE Institutional Report indicated that 100% were in total agreement or in agreement of the mastery of the pedagogical content and competencies demonstrated by the UPRB graduates that work or worked at the school the respondent directed. These results indicate that employers (school directors) were satisfied with the education our graduates received. This tells us that these programs need to maintain the high quality education and that the Institution should consider providing more resources to faculty and continue supporting these programs because they are relevant to the community. The results of the aforementioned data demonstrate the high level of satisfaction with the existing programs for the students and external community.

Results, such as the aforementioned, help the departments and Institution to determine not just the effectiveness of its programs but where changes need to be made. It is important that the labor market as well as the needs of society be kept in mind when selecting future educational offerings. Therefore, the Institution needs to be in constant communication with business, industry and alumni to ensure that

its existing programs are meeting their demand and if and where changes need to be made. One of the ways this is being done is through the Career Development and Placement Center's office, which hosts a yearly Job Fair with representatives from business and industry (See Student Section of this report). Many times representatives sent have been UPRB alumni. Moreover, communication with professional associations and accrediting and certification agencies is necessary since these are in constant contact with professionals in the field and provide valuable input as to what is needed to satisfy the labor market. In addition, the Institution, through student needs assessments, must have a clear picture of the skills students have and which need to be developed to satisfy the expectations sought in the program's alumni profile. Also, as previously indicated, the Board of Trustees' Certification 43-2006-2007 states that program curriculums are to be evaluated every five years. Through this process, as well as feedback from all related sectors, the University is able to determine future educational offerings.

Are the programs structured so as to provide for early practices, internships, job experiences and research?

The UPRB offers 12 bachelor's degrees and 4 associates. The following indicates the programs that provide for early practices, internships, research and job experiences.

Practicums/Internships/Job Experiences

Three of the UPR bachelor's degrees include professional practicum as part of the requirements. These are Offices Systems (SOFI 4985: Work Internship and Seminar - 5 credits), Pre-school and Elementary School (EDPE 3345: Practicum in Pre-school and Elementary School - 6 credits) and Special and Elementary Physical Education (EDFI 4199: Teaching Practicum in Special Physical Education - 6 credits). Additionally, the latter two have early practices experiences in which students go to schools and make class observations. These courses are EDPE 3308: Education of Preschool Children, EDPE 3335: Early Childhood Methodology Seminar-Laboratory, EDPE 4335: Curriculum and Teaching in Elementary School Seminar and EDFI 3099: Seminar of Student Teaching.

Regarding the Business Administration Department, internship experience is given through three elective courses: CONT 4026: Accounting Internship (4 credits), MERC 4235: Marketing Internship (3credits) and REHU 4450: Human Resources Management Internship (3 credits). The Computer Sciences Department has the elective course: SICI 4065: Programming Practice (3 credits), which gives students the opportunity to apply their knowledge to solve real problems.

So far the programs mentioned have been those with required or elective courses, which have as their objective to allow students to apply their skills in their field in real situations. Students from other programs may opt for utilizing part of their free electives to take a course commonly called COOP Internship (INTD 4995) and obtain three to nine credits depending on the hours dedicated to the activity. For example, students in the Materials Management bachelor's degree program and some students in the associate degrees of the Engineering Department take INTD 4995 with practicum activities in the industrial sector.

Some of these courses take advantage of the opportunities that arise in the state and federal government and private industry. In these last two mentioned, the experience may take students outside of Puerto Rico. An example of a recent agreement is the one signed in April 2009, with the Federal Aviation Administration (FAA). This agreement gives students in the Electronics Engineering Program opportunities to carry out internships in this agency.

Practicums are carried out during the last year of the bachelor's degree since students need to acquire the pre-requisite courses to the practicum, which are taken during the second and third year of studies. Research, internships and work opportunities require the approval of a certain number of credits in their field and in general studies. For example, the INTD 4995 and CONT 4026 courses both require the approval of 70 credits prior to registering for them. This last course also requires that the student have successfully passed 24 credits in accounting. These requirements are based upon the notion that students should have the skills to allow them to contribute as well as learn. Some internship programs only require 30 credits, as does HACU (Hispanic Association of Colleges and Universities). This is one way in which students may have earlier access to these experiences during their university life. Another way of obtaining the aforementioned is through the participation of first and second year students in the practicum courses. The Physical Education Program has a laboratory where service is offered to the community. Students enrolled in introductory courses are taken to this laboratory to familiarize them with the dynamics through observation of physical education activities.

The actions related to these experiences are partially coordinated and supported by two offices: the Internship, Practicum and Research Office and the Career Development and Placement Center. The Circular Letter from the Dean's Office of Academic Affairs, *Policy for Internships, Practicum, and Research*, created an office (Internship, Practicum and Research Office) and formally inaugurated it during the first semester of the 2009-2010 academic year. The office is assigned to the Dean's Office of Academic Affairs. Due to the nature of the tasks to be carried out, there is close collaboration with the Career Development and Placement Center assigned to the Dean's Office of Student Affairs. Before the formal creation of the Internships, Practicum and Research Office, its director had been in charge of the tasks related to this office, which included the accounting internship, for close to 20 years. The goal of this office is to offer students these types of experiences, so they may "enrich their academic and professional growth and develop a sense of social responsibility through community service." The office will organize and maintain data related to the aforementioned activities. It is important to point out that this office addresses one of the recommendations made in the 2001 MSCHE Self-study. Before the development of the Internships, Practicum and Research Office, the Career Development and Placement Center was in charge of coordinating some internship and practicum opportunities, which did not necessarily adjust to the departmental courses. Both offices serve as a liaison between employers and students. Information regarding the availability of "positions" is communicated to the department directors, professors and students. In addition, when students obtain an opportunity, they may go to these offices to receive support towards facilitating necessary transactions.

Table E-4 demonstrates the types of experiences (early practices, internships, job experiences or research) and course enrollment during the last five years.

Table E-4. Enrollment in Courses Offering Practicum, Research or Internship Activities

Type of Experience	Course	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Professional Practicum	SOFI 4985	45	39	25	28	31
	EDPE 3345	87	93	84	67	61
	EDFI 4199	49	53	52	50	53
Research Courses	BIOL 3108	23	21	21	19	13
	BIOL 4990	-	-	5*	16	22
	SICI 4038	74	55	53	44	62
Courses with a research component	EDFI 3034	77	74	112	84	92
	REHU 4407	62	36	59	53	42
	REHU 4419	53	57	55	59	61
	MERC 4007	79	44	46	50	66
	REHU 4409	243	294	290	303	408
	ADMI 4019	189	166	168	236	220
	CONT 4026	13	10	17	14	19
Internships / Job Experiences	MERC 4235	8	9	15	10	13
	REHU 4450	9	6	9	7	8
	SICI 4065	1	2	2	5	3
	INTD 4995	9	13	10	14	4
	EDPE 3308	109	67	93	74	78
Early Practices	EDPE 3335	98	73	72	80	62
	EDPE 4335	-	-	-	14**	49
	EDFI 3099	54	58	51	62	74

* This is the first year BIOL 4990 was offered.

** This is the first year EDPE 4335 4990 was offered.

Research

For the area regarding research, the bachelor’s degree program in General Biology has a research course that is required: BIOL 3108: Undergraduate Research (2 credits). This same department offers an elective course, BIOL 4990: Introduction to Investigation in Biology (2 credits), which can be substituted and is accepted for BIOL 3108. The Computer Sciences Program has a required research course entitled SICI 4038: Research Workshop (4 credits). Other departments have courses that develop research skills, such as, the Physical Education course EDFI 3034: Measurement and Evaluation in Regular and Adapted Physical Education (3 credits), the Business Administration Department has REHU 4407: Compensation Systems (3 credits), REHU 4419: Labor Law Jurisprudence (3 credits), and ADMI 4019: Social Responsibilities in Companies (3 credits).

Honor Studies Program

The UPRB Honor Studies Program is another tool that fosters the development of research skills in students (See Table E-5).

Table E-5. Enrollment of UPRB Students in the Honor Studies Program

Academic Year	Number of Students
2006-2007	87
2007-2008	53
2008-2009	32
2009-2010	34
2010-2011	56

As demonstrated in Table E-5, during the last five years an average of 52 students have participated in this program.

The following table lists some of the research projects carried out by the students in the Honors Studies Program.

Table E-6. Research Projects Presented Students in the Honor Studies Program

Academic Year	Title	Student Researcher(s)	Mentor	UPRB Department
2006-2007	<i>“Responsabilidad social y la industria Tabacalera”</i>	Yavrénim Cruz Morales	Prof. Ángela Ramos	Bus. Admin. Dept.
	<i>“Conocimiento del VIH en jóvenes universitarios de la UPRB de Bachillerato en Educación Pre-escolar y elemental y en Educación física especial y elemental en el programa diurno”</i>	Sarimar Agosto Salgado	Dr. Orlando González	Biology Dept.
	<i>“Efecto de la leche materna en la salud”</i>	Tatiana Grajales Torruella	Prof. Nora Medina	Biology Dept.
	<i>“Benchmarking comparison of the Java and C# languages”</i>	Wisgary Torres Marrero	Prof. Nelliud D. Torres	Computer Sciences Dept.
	<i>“System Proposal: HVAC Data System”</i>	Jamie Irizarry Gutarra	Prof. Nelliud D. Torres	Computer Sciences Dept.
2007-2008	<i>La inclusión de los niños con condición de autismo al ambiente preescolar de la Universidad de Puerto Rico en Bayamón”</i>	Isaris Quiñones Pérez	Prof. Linna Irizarry Mayoral	Pedagogy Dept.
	<i>“Beneficios contributivos a patronos que emplean personas con impedimentos”</i>	Dolmarie Cana Álvarez	Prof. José Irizarry-Jordán	Bus. Admin. Dept.
	<i>“El mercado inmobiliario residencial en Isabela, Puerto Rico”</i>	Teodoro Cintrón Pérez	Prof. Evaristo Medina	Bus. Admin. Dept.
	<i>“Mercadeo del siglo XXI: nuevas tendencias, “Green Marketing”</i>	Evelyn Serrano Quiñones	Prof. Luz Teresa Martínez	Bus. Admin. Dept.
2008-2009	<i>“Estudio preliminar sobre el conocimiento y consumo ideal de frutas, vegetales y carbohidratos para la prevención de las enfermedades cardiovasculares en mujeres jóvenes en el Departamento de Pedagogía de la UPRB”</i>	Joan Ballista, Beverly Igartúa & Elizabeth Ramírez	Prof. Nora Medina Rivera	Biology Dept.
	<i>“Propuesta para realizar la tesina en la aplicación de factor de Potencia en la Universidad de Puerto Rico en Bayamón”</i>	Andrés Rosa Rivera	Prof. Samuel E. Lugo Vélez	Electronics Dept.
2009-2010	<i>“PageRank vs ExpertRank: Analysis of their link analysis algorithms for ranking search results”</i>	Giselle Zeno Torres	Prof. Lillian Bras	Computer Sciences Dept.

Table E-7. Investigative Projects Carried out in the Departments by Faculty Researchers

Academic Year	Department	Faculty Researchers	Title
2004-2005	Biology	Dr. Steven Sloan	<i>Periodicity in Plumeria alba and the ultimate reason for dry season leaf production (6 students from research class)</i>
2005-2006			<i>Diet breadth and Geographic distribution of the elusive bark beetle Microborus lautus (3 students from LSAMP)</i>
2007-2008			<i>The effect of introduced primates on plant populations in the southwest of Puerto Rico: seed dispersal and germination (4 students from LSAMP; 7 students from research class)</i>
2008-2009			<i>A comparison of the effect of introduced primates on seed dispersal and germination at two locations in Puerto Rico (2 Students from LSAMP)</i>
2009-2010			<i>Spatial and Temporal Dynamics in a Population of Plumeria alba: a 12 year assessment (4 volunteer students)</i>
2010-2011	Physics Department	PI: Dr. Javier Avalos, two Biology students, Funding: UPRB - NASA SGC.	<i>Un Estudio del Comportamiento Antibacterial de los Nanotubos de Carbono</i>
		PI: Dr. Marc Legault & Dr. Carmelo Miranda, one Computer Sciences student, Funding: UPRB - NASA SGC.	<i>Calibration of the Puerto Rico Lightning Detection Network</i>
		PI: Dr. Alfredo Torruella, Funding: UPRB	<i>Coastal Hydrodynamics for San Juan, Puerto Rico</i>
		Co-PI: Dr. Antonio Algaze, Funding: NIH - National Institute of Mental Health.	<i>Procesamiento de contenido emocional y activación cerebral en adolescentes en terapia cognitiva conductual o terapia de fluoxetina para tratar la depresión mayor.</i>
		PI: Marc Legault & Dr. Carmelo Miranda, one Computer	<i>Detection and Modeling of Lightning Activity in Tropical Cyclone</i>

Academic Year	Department	Faculty Researchers	Title
		Sciences student, Funding: NASA- IDEAS.	
2006-2007	Electronics Department	Ismael Sánchez Ríos & Luisa D. Sosa Sánchez	<i>Utilización del Protocolo TCP/IP en un ambiente de multitareas en la programación de un sistema controlado por un microprocesador</i>
2007-2008		Ismael Sanchez Ríos & Jorge A. Ramón Vega	<i>Uso de matrices de Rotación y Traslación en Implementación de un Algoritmo de Control de un Robot</i>
2009-2010		Ismael Jiménez & Samuel Lugo	<i>Estudio de Estabilidad en Sistemas de Potencia Distribuidos en base a fuentes de generación alternativos</i>
		Ismael Sánchez Ríos & Antonio Huertas	<i>Desarrollo de un Sistema de Acopio de Información para la medición de variables físicas utilizando el estándar Universal Serial Bus (USB)</i>
		Ismael Jiménez & Samuel Lugo	<i>Estudio de Estabilidad en Sistemas de Potencia Distribuidos en base a fuentes de generación alternativos II</i>
2010-2011		Ismael Sánchez Ríos & Elio Lozano (Computer Sciences)	<i>Cómo se logra implementar un edificio inteligente</i>

Note: PI = Principal Investigator

The area of research is mainly guided by the UPRB Policy for Investigation and Research existing since 1990 and revised in 2002 and 2009. The certification presently in force is Certification 25-2008-2009 of the Academic Senate (See Appendix E-16). This policy supports the development and strengthening of research and creative activities in general as well as serving as a guide for the distribution of institutional funds designated for these purposes. While this policy is directed towards faculty researchers and artists, it is important to point out that this certification establishes that the academic departments should integrate experiences in research and creativity in curricular activities for students. An example of this is the requirement established by the Computer Sciences Department to the most recent faculty recruited in which they are required to work on research projects that integrate the participation of students. In addition, under Departmental Efforts in Question 11.2 of this section of the report on information literacy, which is closely linked to research, courses by department that incorporate the literacy and research components are listed.

It is recommended for students to enroll in the courses that integrate experiences in research, so this information can be included in students' academic records and for the purpose of gathering institutional data. However, there are occasions that students participated in these experiences without enrolling in the aforementioned courses. Although in most cases students are paid or given a stipend, this is a factor that has not been established as a requirement. Table E-7 presents research projects by professors in various departments of the UPRB.

How well are the adult's needs met by the Extended University (UNEX)?

The Extended University (*Universidad Extendida* known by the Spanish acronym, UNEX) has the main task of administering educational offerings in an extended schedule directed primarily to address the needs of non-traditional students. This process is made in close coordination with the academic departments that offer courses during this extended schedule. An extended schedule is defined as a period that begins at 5:30 pm or later from Monday to Thursday and at any time on Saturdays.

The fundamental goal of the UNEX is the following:

- Achieve the integral formation of the non-traditional student through academic programs in tune with the present tendencies of the job market and with the social, economic and cultural reality of the contemporary world. The UNEX main commitment is to act as a facilitator in the teaching-learning process to achieve excellent teaching experiences to promote professional development.

The UNEX was initiated during the first semester of 1992-1993, but was made official through the UPRB Academic Senate's Certification #32-2002-03 in December 2002 (appendix E-17). Although the UNEX actions are essentially administrative in nature, it seeks to give non-traditional students support with the services necessary for fulfilling the academic requirements of the program. Presently, non-traditional students have the following alternatives for studies under the UNEX:

- Bachelor's degrees in:
 - Business Administration majoring in:
 - Accounting
 - Finance
 - Management
 - Marketing
 - Computer Sciences
 - Pre-school and Elementary Education
- Professional Improvement Program
- Special Permissions (Provide opportunities to students from other campuses in the system to take courses with a one semester admission)

The programs assigned to the UNEX follow the same rules, quality and rigor as the regular day programs. Both the programs and faculty are the same for the evening and day schedules. The academic department is the one that admit students to the program they apply for or where they plan to take courses for professional improvement. Non-traditional students admitted are those that generally have the following characteristics:

- Readmissions – Students that had to withdrawal from studies and have returned to continue but prefer to study in the UNEX.
- Reclassifications – Students who are part of the Institution but prefer to study under UNEX and are from:
 - Other departments
 - The same department but during the regular day program

- Transfers – Students from other units of the UPR system who prefer to study under the UNEX⁷ (Known in Spanish as “traslados”) - Students who come from a private institution and prefer to study under the UNEX (Known in Spanish as “transferencias”)
- Admissions – New incoming students that prefer to study under the UNEX (minimum number of cases)

To address the particular needs of non-traditional students which can include adults over 25, the UNEX constantly offers activities, lectures and workshops that serve to train faculty who give courses under the UNEX. To achieve this, the UNEX has a Professional Improvement Committee which is continually working on coordinating and carrying out activities. Among the activities held are the *Jornada Docente* given every year as a required professional improvement forum for all faculty members and the orientation to newly recruited faculty, which is directed towards orienting and training professors that are teaching in the UNEX for the first time. The UNEX has also benefited throughout the years with the active participation of its faculty in the *Faculty Resource Network*, an entity through which faculty members may annually participate in important activities at national level.

Regarding the services which are directly offered to students, the UNEX constantly administers the maintenance of essential services for the academic community during an extended schedule. The schedule of services is the following:

- Monday to Thursday from 5:00 pm to 8:00 pm
- Saturdays from 8:00 am to 12:00 n and 12:30 pm to 4:00 pm

The dependencies that offer services during the aforementioned hours are the following:

- Counseling and Orientation
- Registrar
- Bursar’s Office
- Medical Services (until 9:00 pm)
- Learning Resource Center (until 10:00 pm)
- Others

The evening schedule of services is available in Appendix E-18 with the names and specific details of each of the dependencies that give service during the extended schedule.

In recent years the UNEX has worked on special projects of significance described in the following:

- **Distance Education** – Special resources have been designated to allow for the development of a group of courses offered entirely online. This project began promoting the design and creation of courses that would be given in this modality. Eventually, the creation of more than a dozen courses was achieved. They are offered every semester according to the need and demand. The project is still being supported and developed with the aim of expanding its educational offerings. Appendix E-19 includes the most recent reports related to this project, which is presently under revision. These reports are in Appendix E-20 *Informe del Proyecto de Educación a Distancia para el Año 2009 – 2010* [Report on the Distance Education Project 2009-2010] and *Informe sobre Educación a Distancia 2006 – 2010* [Report on Distance Education 2006-2010] prepared for the Institution’s Academic Senate. The reports include details about the online offerings, which are part of the

⁷ The term used for this population is the Spanish term “traslados” to distinguish these from those students who transfer from a private university and known as “transferencias.”

UNEX, the faculty offering these courses and the background of what had happened in the project since it began in 2006.

- **Pilot Project** – This project offered non-traditional students who did not qualify for admission according to the established parameters existing in the UPR an alternate method for admission. The project was on trial for a four-year period and allowed the use of other criteria for admission to programs. Students had to meet certain requirements and go through a rigorous screening process before being admitted to the program they applied for. Once admitted, students had to take pre-determined courses and pass them favorably during one year before officially becoming regular students in the program. Presently the project is inactive (2009-2010) and under evaluation prior to a possible final implementation. Please refer to the details on the project in the Pilot Project Report (See Appendix E-21: *Informe sobre el Proyecto Piloto*).

In addition to the UNEX, the UPRB also offers services to adults through the Division of Continuing Education and Professional Studies (known by his Spanish acronym, DECEP) in short courses and other existing mechanisms. The DECEP is completely separate from the UNEX even though they share the same services, with the exception of administrative ones, in the offices with the extended schedules.

Lastly, the DECEP and the UNEX work constantly on the development and implementation of proposals that have served many people and have also provided the Institution an additional source of funds. Recently a series of proposals have been approved which have mainly benefited the public school teachers of the Department of Education of Puerto Rico. Other proposals have been directed toward benefiting other sectors. The funds from these proposals have given the Institution an additional support to the educational offerings under UNEX, which prior to this had to be eliminated because they were not self-sustainable. For the first time in years, the Institution has been able to maintain most of the courses planned, even those with low enrollment. This prevents the closing of sections that could affect students, situations that traditionally have caused uneasiness and the constant loss of students. It is hoped that this action, in conjunction with others worked upon, help to minimize the exodus of students and allows for the increase of participants. Details related to these actions can be found in Appendix E-22 and in the *Monitoring Report to the Middle States Commission on Higher Education* included in Appendix E-23.

How adequate are the learning resources, their facilities, equipment, and library services to support the academic programs curriculum? How well is the collaboration between learning faculty and library personnel?

The Learning Resource Center (LRC) is fundamental in the handling of information and serves as a liaison with the different programs and academic departments as a meeting point among the multiple disciplines that make up the universe of the Institution's educational offerings. The LRC's mission is to provide services and resources which contribute to the development of the academic programs, satisfy the need of information by the academic community and facilitate users' life-long learning.

The LRC offers services regarding information to the university community, in other words, professors, students, non-teaching personnel, and residents of Bayamon and nearby towns. To fulfill its tasks, the LRC has organized itself into four main areas: Audiovisual Department, Learning Skills Program, Technical Processes Department and Department for Services to the Public.

Audiovisual

The Audiovisual Department's goal is to produce and offer technological resources in telecommunications and graphics that satisfy, compliment and support the academic community's teaching-learning process. To achieve this, the Audiovisual Department gives the university community use and production resources to satisfy classroom needs directed toward the improvement of the educational quality.

Learning Skills Program

The main goal of this program is to develop information literacy competencies through efficient literacy activities integrated to the university curriculum, they will result in a user who is critical, independent and a life-long learner. This program develops in its users competencies in the access and use of information, research methodology, critical thinking and online information literacy. The program has a laboratory classroom, Infonex, completely dedicated to the program's objectives.

The main service offered by the program consists of the classes on diverse topics: Resources and services available in the LRC, search and evaluation of online information, use of the online catalog and data base, use of writing style manuals, and preparation of essays, monographs and research, among others. The program also offers informal teaching services, such as, individualized teaching requested by an interested individual during times when classes are not in session in the **Infonex** laboratory, instructional materials prepared on various topics available in the Infonex laboratory or the Reserve Room, and tutorials published on the LRC webpage.

Technical Processes

The Department of Technical Processes carries out the selection, acquisition, cataloging, classification and physical preparation of the information resources. This task is done so the academic community has access to information resources in multiple formats facilitating the acquisition of knowledge and the development of the skills necessary for studying, investigation, and intellectual and professional growth.

In the LRC the selection of informative resources to be acquired is done by the professors, teaching librarians and some assistant librarians with vast experience. The faculty members participate in this selection process and recommend those informative resources in their area of specialty that back the course needs. Both the faculty and the librarian personnel recommend informative resources that are in the most recent catalogs of editorials/ publishers or through reviews in the newspapers, among others.

Services for the Public

The Department of Services for the Public, area commonly known as the library, seeks to develop information services of excellence that satisfies the needs of the academic community's users. The objectives that stand out are the following:

- Promote library services to the university community
- Regularly evaluate services to guarantee that the goals reflect the needs and interests of the community it serves
- Plan professional improvement activities directed toward training personnel who offer services to the public in general

The LRC includes the following divisions: Reference, Periodical Section, the Isabel Gutiérrez del Arroyo Room (Puerto Rican Collection), Patents & Trademarks Section, the Isabel Freire de Matos Room (Children and Young Adults Collection), Reserve Section and Circulation.

The LRC has 70,335 volumes of books, 88,139 periodicals, 268,062 microfiches, 3,292 microfilms, 4,655 audiovisual materials and other informative resources. The library is a depository of publications for the Patents and Trademarks Office of the United States and the Census Data Program of Puerto Rico under the direction of the Planning Board of Puerto Rico.

Other library services include book, magazine and document loans, interlibrary loans, access to summaries and complete articles available in the online data bases, electronic web page (<http://www.uprb.edu/cra>), public online catalog (link available on the LRC webpage), formal and informal instruction on information literacy competencies and loans of audiovisual resources and equipment. Even though the library services are automated, the library personnel are available to help students and faculty in their investigative work.

Students with special needs have a special study room, which provides technological equipment with programs that will help them overcome their challenges. In the same way, the Computer area has machines to address these students' needs. The LRC's physical space has an access ramp for wheelchairs and the main entrance doors have a button for easy access.

The LRC has established and promoted the necessary services to meet the demands of the academic curriculums and support research according to the University mission. The services offered adjust to the changes of the academic programs and the technological advances and are refocused on the users' needs. The LRC informs the university community of services through various means: Booklets, informative manual, web page, Facebook and Twitter, lectures or workshops, orientations to new professors and new incoming students, electronic messages and circular letters. In addition, the LRC communicates with the professors of the different departments to inform them of new available data bases, request recommendations for the purchase of newly printed periodicals and announce when these acquisitions are available.

The references, circulation, periodicals, reserve and special collection services are designed so users may get the most out of the available resources. The LRC maintains a schedule in accordance with the reasonable demands of the users since it is opened: Monday to Thursday from 7:00 am to 10:00 pm; Friday, 7:00 am to 4:30 pm; Saturday, 8:00 am to 4:00 pm; and Sunday from 12:00 n to 4:00 pm. In addition, during the final exam period the areas that serve the public in the library remain open in an extended schedule. During the hours that the LRC is closed, the users have remote contact to data bases through which they may access complete articles through the Internet; articles in online periodicals (magazines, journals, newspapers); reference and critical literary collections; science manuals, encyclopedias and dictionaries.

Reference

The Reference Section gives the following services: referrals, exhibits, information searches in printed resources and online resources through computers found there. The user is taught individually on the use of the online catalog. Telephone calls are attended to confirm the availability of the resources or services and messages received are answered via e-mail. The LRC web page has a section called, "Ask the librarian" where any user of the university community or community in general may request information which the librarians respond to during their working schedule. Students have the opportunity to do work using the available computers and printers in minimum one-hour turns.

Periodicals

This section has printed or online resources as well as periodicals on microfilms and microfilm readers, which read and photocopy articles. Users are provided with individualized instruction. Library personnel make a list of the news reports in the local newspapers. These are placed on cards and filed in drawers and are available to the public to make searches by topic. An interlibrary loan is processed for periodical articles through the Ariel system, fax machine, messenger or regular post office service to the entire academic community.

Reserve

In the Reserve Section, service in general is given to the university community by making books and pamphlets available for students as part of their course references. In this area interlibrary loans of books are also made. Library personnel check which UPR unit has the resource available and proceed to complete the interlibrary loan form. The form is faxed or sent through the Institution's Ariel system to the institution facilitating the process.

Special Collections

The specialized rooms Isabel Gutiérrez del Arroyo, known as the Puerto Rican collection; Patents and Trademarks; and Isabel Freire de Matos (Children and Young Adults Section) offer services to the university community and the external community as well. The first consists of a collection of resources written by Puerto Rican authors or Puerto Rican topics. The Isabel Freire de Matos Room has a collection of resources used as reference in the courses of the Preschool and Elementary School Program offered by the University.

Circulation

The Circulation area services include book loans, use of Study Rooms, search and instruction on the use of the online catalog, exhibits and referrals.

Other services

Other services offered include computer and telecommunications, photocopiers and printers. The computer and telecommunication services are given by the computer specialists and include the following: installation and configuration of equipment and programs, monitoring and maintenance of the equipment on the communications network, coordination of the administration of the Horizon data base with the Information Systems Office of the Central Administration and the coordination of video conference activities with the Central Administration and the Institution's Information Systems Office. This last service is important since during the first semester 2007-2008, the UPRB began offering nine distance learning courses on the Internet through the Distance Education Project. Therefore, in order to give this support, the LRC offers videoconference services.

The photocopiers and black and white, and color printer are provided in various locations in the LRC. The use of these is promoted through bulletins placed near the machines and on the LRC web page. These machines receive continuous maintenance so they remain in optimum conditions for the users.

Audiovisual

In a questionnaire administered in 2007 (see Appendix E-24), a question regarding the Audiovisual Department's collection was posed to students. A total of 36.5% indicated they were very satisfied and 32.3% responded that they were satisfied with the collection, which when added produces 68.8% level of satisfaction. A total of 23.4% preferred not to respond, 1.8% indicated they were unsatisfied, 1.8% responded completely unsatisfied with the audiovisual collection and 4.2% did not respond to the

question. In a similar questionnaire administered to the faculty members, 67.4% of these responded that they were satisfied with the services and audiovisual collection.

Learning Skills Program

In the 2007 questionnaire, student satisfaction with the workshops and/or lectures given by the program revealed the following: 56% rated were very satisfied or satisfied, 29.9% did not give their opinion, 4.2% did not respond, 6% were unsatisfied and 3.6% were very unsatisfied. The same question posed to the professors revealed that 70.6% were satisfied, 11.8% were neutral, 11.8% did not respond, and 5.9% were unsatisfied. In addition, 47% of the faculty stated that on occasions they had requested collaboration of the librarians to integrate information literacy in courses. A total of 100% of the professors and investigators who responded to the questionnaire indicated that they would like greater integration of the librarians in courses.

Technical Processes

In the faculty questionnaire, professors were asked how often they participated in the recommendations for the purchase of LRC resources. A total of 76.5% stated they participated frequently, and 23.5% stated they had not participated in this process. Another question asked how frequently the faculty participated in offering recommendations for bibliographic resources. A total of 64.7% made recommendations frequently or on occasions. Regarding the participation of the professors in the evaluation of the LRC's bibliographic collections, 52.9% indicated they participated frequently (17.6%) or on occasions (35.3%). A total of 47.8% did not respond to the question, and 41.2% indicated that they had never participated in this activity. Professors were also asked if they had participated in a committee in the LRC and 100% responded in the affirmative. From this response it can be inferred that the faculty members who responded see an important link with their work and that of the LRC.

Reference

According to the evidence collected from the questionnaire, which measures the level of student satisfaction in relation to the resources and services offered in the Reference Section, the responses were as follows: 43.7% and 36.5% responded very satisfied and satisfied, respectfully for a total of 80.2%; a total of 12.6% and 3.6% were neutral or did not respond to the question, respectfully, for a total of 16.2%; and 3.6% were unsatisfied or very unsatisfied with the service. The professors also took part in the questionnaire on their satisfaction with the LRC services. The responses were very satisfied: 52.9% and satisfied: 23.5%. Added together these equaled 76.4%, while 17.6% preferred to not give their opinion or maintain neutral and 5.9% did not respond.

Periodicals

Resuming with the questionnaire administered by the LRC, students responded the following regarding their level of satisfaction with the resources and services offered in the Periodical Section: 39.5% were very satisfied, 31.7%, satisfied. The faculty indicated 64.7% level of satisfaction with the services offered divided in two subgroups: 23.5% very satisfied and 41.2%, satisfied. A total of 5.9% of the respondents stated dissatisfaction; 29.4% were neutral or did not respond to the question, divided into 17.6% and 11.8%, respectfully. Student responses were the following regarding the interlibrary loan process: 29.3%, very satisfied; 30.5%, satisfied; 29.3% gave no opinion; 4.8% did not respond to the question; 3%, unsatisfied; and 3% very unsatisfied.

Reserve

Students' responses in relation to service in the availability of books and pamphlets for students as course references in the reserve area were the following: 49.7%, very satisfied and 35.3%, satisfied adding up to 85% level of satisfaction; 9% gave no opinion; 3.6% did not respond to the question; and 2% were unsatisfied.

In regard to the interlibrary loans of books, students responded: 32.3%, very satisfied and 31.1%, satisfied, totaling 63.4%. The faculty also responded to this service of interlibrary loans in Puerto Rico. A total of 52.9% were very satisfied or satisfied (23.5% and 29.4% respectfully); 47% did not respond to the question or were neutral (23.5% each).

Special Collections

In the student questionnaire related to these special collections, the responses were the following: 40.1%, very satisfied; 37.1, satisfied; 16.8%, gave no opinion; 1.8%, unsatisfied; 0.6%, very unsatisfied; and 0.6%, did not respond. Professors responses regarding this service were the following: 70.6% were very satisfied or satisfied (20.4% and 41.2%, respectfully).

Circulation

In relation to circulation service students receive in this area in general: 41.9%, very satisfied; 32.3%, satisfied (74% total); 3% unsatisfied; 18.6%, had no opinion; 4.2%, did not respond. The professors responded: 70.6% were very satisfied and satisfied (35.3% each); 29.4% were neutral or did not respond.

In regard to the specific service of Group Study Rooms, students responded the following on the questionnaire, 32.3% were satisfied and 12.6% gave no opinion. A total of 2.4% were unsatisfied, 2.4% were very unsatisfied and 3.6% did not respond to this question. Professors responded the following: 58.8% were very satisfied or satisfied, and 41.1% did not respond to the question or were neutral.

General Satisfaction Related to Services offered by the LRC

In regard to the level of satisfaction related to general consultations on the LRC services, students responded: 77.2% very satisfied and satisfied (32.3% and 44.9%, respectfully); 14.4% gave no opinion; 3% unsatisfied and 2.4% very unsatisfied. The faculty responses were 70.6% very satisfied or satisfied (29.4% and 14.2%, respectfully); 23.5% did not respond and 5.9% were neutral.

Other data obtained from the questionnaire administered to the faculty indicated that 53% (24%, very satisfied and 29%, satisfied) were satisfied with the service related to access to the information resources provided by the LRC. Other areas they rated were Updated Information resources in specialized areas: 41%, satisfied; regular schedule of operations: 41%, satisfied; and summer schedule, 35%, satisfied. In regard to general satisfaction with the services, 41% of the professors indicated that they were satisfied. From the 18 questions in this section of the questionnaire, the respondents demonstrated satisfaction in 15 (83%) of these. In the remaining questions, respondents stated that they were very satisfied. It is concluded that the services offered in the LRC satisfy the expectations of the community of professors and researchers of the Institution.

Librarians: In the questionnaire, students stated that they were very satisfied with the service offered by the librarians. The results indicated the following ratings of satisfaction: Disposition to offer service, 46%; behavior towards students when serving, 51%; knowledge of resources, 48%; and general satisfaction, 46%. On the other hand, the faculty indicated the following: Disposition to offer service, 53% were very satisfied; behavior towards the faculty when serving, 65%, very satisfied; promptness of service, 53%, very satisfied; knowledge of resources, 53%, very satisfied; orientation on the use of the

LRC resources, 53%, satisfied; and general satisfaction, 59% were very satisfied with the services and quality of these given by the librarians. This section was constituted by five questions related to the quality of the service given by the librarians and 100% of the respondents indicated that they were very satisfied with the aforementioned.

Participation: A total of 41% of the professors that responded to the questionnaire indicated that they had participated on occasions in updating the informative resources. In addition, 53% had not made donations to the bibliographic resources. On the other hand, 100% stated the librarians' participation in curriculum committees of the departments was advantageous since this facilitated the integration of the informative resources in the curricular transformations. A total of 77% of the respondents stated that they frequently promoted the use of the services and information resources of the LRC in courses, while 65% were satisfied with the communication between the LRC and professors. When asked if the professors and students were involved in the decision making process, 48% (professors) and 56% (students) stated that they were not involved in this process.

Installations: Satisfaction ratings for the following revealed: Labeling, 50%, very satisfied; study areas 47%, very satisfied; comfort of the installations, 94%, very satisfied; work and study environment, 41%, very satisfied; regular operating hours, 56%, very satisfied; final exam period schedule, 47%, very satisfied; summer session schedule, 36%, satisfied; lighting, 56%, very satisfied; access to the LRC by persons with disabilities, 56%, very satisfied; very satisfied with temperature level, 31%; neutral, 17%; unsatisfied, 13%; and very unsatisfied, 12%. These last ratings indicated that a total of 42% were dissatisfied with the temperature level. In regard to the noise level in the installations, only 26% indicated they were very satisfied. When we add the neutral (20%), dissatisfied (16%) and very dissatisfied (13%) ratings, 48% regarding the noise level in the installations was obtained.

Equipment: A total of 65% of the students indicated they were satisfied with the computers and photocopiers. In addition, 41% were very satisfied with the wireless access and computer connections supplied.

Access: Students stated that they were somewhat satisfied with access to the LRC web page (35%), audiovisual resources (38%) and electronic periodicals (35%). As a result, in 2009 the LRC web page was modified and made interactive. In addition electronic tutorials and emergent technological elements were integrated. A total of 32% responded they were satisfied with the public catalog, 33% were very satisfied with the data base and 42% were very satisfied with Internet access. The students (34%) indicated neutrality regarding access to the microforms. This may be because of their lack of knowledge regarding these. A total of 41% of the respondents indicated their satisfaction with the access to information given by the LRC.

Services: The students indicated that they were very satisfied with the service received in the following areas: Circulation (42%), Audiovisual Collection (37%), Periodical Section (40%), Special Collections (40%), and Loan Service (32%). They also stated satisfaction with the interlibrary loans (31%) and with general consultations regarding information (37%). Moreover, 47% of the students indicated they were very satisfied with the study rooms provided to groups. Regarding the orientation received on the use of the LRC, 33% were very satisfied. In the Learning Skills Program, 56% indicated they were satisfied with these classes. The general satisfaction with the services offered by the LRC by students was 45% and by professors was 82%.

Collaboration between learning faculty and library personnel

The table in Appendix E-24 illustrates the results of the survey made to professors and students regarding the level of satisfaction with the services provided by The Learning Resource Center (LRC). The results show that students are satisfied and very satisfied with the equipment and resources available to them at The Learning Resource Center (LRC). They are specifically satisfied with the photocopier machine, the platform that allows them to view newspapers and wireless internet, among other services.

The results also show that they are satisfied and very satisfied with the service and orientations offered by librarians. Professors are as well satisfied and very satisfied with the resources and services available at the library, which they often incorporate into their classes.

However, the results show that some aspects must be improved. Students and the faculty should become more involved with the decisions taken by the library personnel so together they can attain an academic vision that allows them to identify and strengthen the academic necessities of every sector of the student body. These changes must be promptly undertaken so the resources available can be more attuned to the academic necessities of the students.

Recommendations:

- Revise the curriculum to include activities that foster early practicum and establish this type of experience as a requisite in a greater number of programs.
- Promote among students, the use of free electives to take courses providing these types of experiences (practicums, internships, investigations and work).
- Broaden and reinforce the relationship between the University and possible employers.
- Continue with the professional accreditation processes in those programs where the accreditation agencies exist and with the evaluation of the remaining programs.
- Continue supporting those educational resources that facilitate the LRC's teaching-learning process.
- Develop mechanisms to maintain the majority of the nights courses open and to promote the enrollment of more students in nights.
- Improve the services in nights including the availability of enough personnel to maintain communications open at late hours.
- Explore the development or expansion of academic programs through distance education and evening session (UNEX).
- Strengthen the services and considerations in courses intended for Adult non-traditional learners according to the new educational tendencies.
- Continue promoting and strengthening the development of proposals regarding programs, individual courses and professional development for both the UNEX and DECEP.
- Promote the inclusion of practicums and internships as requisites in all programs.
- Reinforce and expand research experiences for students through programs, special projects, and other means.
- Increase faculty collaboration with the LRC services and material collection.
- Strengthen oral and written communication skills in English.

GENERAL EDUCATION AND RELATED EDUCATIONAL ACTIVITIES

This sub-committee reviewed how the UPRB alumni, through the General Education component, meet with the development of essential skills in oral and written communication, quantitative and scientific reasoning, critical thinking, technological competencies, and information management. Lastly, it examines how the programs and/or related educational activities support the teaching-learning process and if the resources assigned to these programs are adequate for obtaining positive results.

General Education

How are the Institution's graduates meeting the expected, acceptable levels of competency in oral and written communication, scientific and quantitative reasoning, technological capability, information literacy, and critical analysis and reasoning?

The fulfillment of the UPRB mission emerges largely to the competencies of graduates who complete their university degree. Graduates are expected to meet acceptable levels of proficiencies from an integral perspective where the courses in the major and elective courses contribute to the holistic development of the student. The General Education component is instrumental in fulfilling university student's holistic and integral development. The assessment of student learning is a process that seeks to evidence the institutional effectiveness regarding the achievement of the IEG (Institutional Educational Goals) and the educational goals of the Academic Programs. The data on student learning come from the General Education areas as for example the competencies included in the IEG. The process focuses on the collection of multiple data of student learning at the departmental and the institutional level. The data collected is shared with the OASL (Office for the Assessment of Student Learning) to form part of the data base. At the departmental level, the Electronics, Teacher Preparation Program (TPP), Computer Sciences, Biology, Industrial Engineering, Business Administration, and the Office Systems programs have administered evaluation instruments to determine students expected and acceptable levels of IEG competency.

The Electronics Department assessment committee analyzed the pre/post-test results administered to 14 students in the BA program, which show that students' scientific and quantitative reasoning have greatly improved when compared with the pre-test. Similar results are shown in the Associate Degree program. The post test results (n=11) demonstrate that students' quantitative reasoning presents improvement in all of the comparative criteria with the pre-test. However, the committee understands these criteria can improve since the scores demonstrated poor performance at 27%. Secondly, the scientific reasoning competency also reveals improvement in comparison with the pre-test. (See Appendix G-1: ABET Self Study Report, 2010; Pre/Post Test Results, August, 2010).

Pedagogy and Special and Elementary Physical Education Departments TPP evaluation measures used to determine if graduates are meeting the expected levels of competency of the IEG rely on data gathered in the Puerto Rico Teacher Certification Test (PCMAS), specifically the Fundamental Knowledge and Communication Competencies Tests. Table 1.A presents the results for the humanities/social sciences, sciences/mathematics, Spanish, English, and composition and demonstrates that the UPRB students met and exceeded the mean scores (Appendix G-2 - (NCATE Report, 2009: PIAAE- Document H Appendix 1A). In addition, students' performance on the Writing Skills and Dispositions Test (2008-2009) also shows that students met and exceeded the mean scores: Preschool elementary education program (n=40) obtained a 62 mean score and the Physical Education program (n=57) obtained a 49 mean score. It is important to highlight that the UPRB candidates' pass rate have been in the first quartile since the PCMAS test administration began in Puerto Rico and have surpassed the island-wide passing rate.

In 2007, the Computer Sciences Department polled companies (n = 25) that hired UPRB graduates of their Computer Sciences Program to learn how effective and pertinent the Program was in the preparation of professionals in the industry. The results demonstrated that the private industry (40%) is the one that hires the most alumni of the UPRB. Companies require its employees to have a lot of knowledge in oral and written communication in both English and Spanish (90%); ability to carry out analysis and present solutions to problems posed (70%); ability to install, configure and administer networks (43%); skills in research, analysis and system designs (53%); and the ability to manage good interpersonal relations (63%). In the results of the poll, 87% of the companies stated that the UPRB alumni have the necessary knowledge to meet the company's expectations in the aforementioned areas. In addition, 100% of the companies indicated that they would recommend the hiring of our alumni to other companies as well (See Appendix G-16)

The Biology Program administered an exit study to the graduating class of 2009 (n=14). The first part of the study evaluated topics related to the biology courses and the second part consisted of open ended questions. The objective of the open ended questions was to gather and analyze information on the following criteria: use of the language, coherence, scientific knowledge, analysis skills and reasoning. The results evidence that few students reached the score of Excellent (4 points) or Acceptable (3 points), thereby presenting deficiencies in writing and reasoning. The skills of writing and reasoning should be stressed in the academic programs. It is also necessary to build an effective network of communication with the English and Spanish departments to emphasize the competency of communication. (Appendix G-3 Exit Study: BHUM, 2009)

The Industrial Engineering Technology Program also used the results of opinions polls and determined that for each of the competencies, the expectations were that at least 66% of the students will average at least 66% on the corresponding assessment tools (see Appendix G-4). The results show the following:

- *Oral and written communication*: 92.86% in the course Methods Design Project (TIIN 2020) of the 2009-2010 cohort was assessed, which represents the only section of TIIN 2020 in the first semester of the capstone experience.
- *Scientific and quantitative reasoning*: 52.94% of TIIN 2015 (Production Control) and 85.71% of TIIN 2021 (Work Measurement Project) were assessed in the 2008-2009 and 2009-2010 cohorts, which represent the two sections of TIIN 2015 and the only section of TIIN 2021. Both were in second semester.
- *Technological capacity*: 92.86% of TIIN 2020 and 78.57% of TIIN 2028 (Plant Layout Project) of the 2009-2010 cohort were assessed, which represents the only sections of TIIN 2020 and TIIN 2028 in the first semester and the second semester of the capstone experience.
- *Computer Literacy*: 92.86% of TIIN 2020 of the 2009-2010 cohort was assessed which represents the only section of TIIN 2020 in the first semester of the capstone experience.
- *Clinical Analysis*: 56.25% of first year and 78.57% of TIIN 2028 of the 2009-2010 cohort were assessed: TIIN 2028 is the only section.
- *Reasoning*: 92.86% of TIIN 2020 of the 2009-2010 cohort was assessed, which represents the only section of TIIN 2020 in the first semester of the capstone experience.

For the first time in June 2008, the Business Administration's BA program administers to a sample of graduating students a standardized test - Major Field Test in Business (MFT) – of the Educational Testing Service. The questions are designed to measure a student's knowledge and ability to apply significant facts, concepts, theories, and analytical methods. The questions represent a wide range of difficulty and

the test attempts to cover both depth and breadth in assessing students' levels of achievement. Accounting, Economics, Management, Quantitative Business Analysis, Finance, Marketing, Legal and Social Environment, and International Issues are the assessment indicators included in this test. General education is embedded in these assessment indicators and an integral part of the students' academic experience. The MFT was offered to the Graduating class of May and December. Figure 4.11 (G-5. BAP Self-study) shows that for the mean total score of the BAP, graduating students to be within one standard deviation of the Institutional Mean Total Score; it must be within the range of 144.6 and 158.6. These performance criteria were met by the graduating population that took the MFT in December 2008. One of the limitations of this assessment experience is that English is not the test takers first language.

The BAP also offered Pre & Post-tests on the APA style and on data bases and articles every semester since 2006-2007. Regarding APA, the 2006-2007 results show that on average, the difference between the percent of correct responses on the pre and post-tests was 27.48%. The results for 2007-2008 show that on average, the difference between the percent of correct responses on the pre and post-tests was 23.6%. On the other hand, the results for online data bases and articles in publications show that for years 2006-2007 on average, the difference between the percent of correct responses on the pre and post-tests was 26.2%. Then, for years 2007-2008 On average, the difference between the percent of correct responses on the pre and post-tests was 7.1%. These results generated changes in the courses during the 2006-2007 & 2007-2008 academic years and documented in Appendix 34 of the BAP self-study.

The Office Systems Program analyzed the Pre-Post test scores, particularly those related to Critical Thinking Skills, Information Systems (information literacy and technological capability) Accounting (quantitative reasoning), and Communication and found that the majority of the students' overall performance score for the academic year 2009-10 meet the performance criteria of 70% or more. The aforementioned competencies were assessed through indirect strategies and revealed the following:

- The 2006-2007 Alumni Survey showed that a 97% of the alumni rated the competencies between Very Satisfied and Satisfied.
- The 2007 Employer Satisfaction Questionnaire showed that a 93% considered that the Program prepared highly competitive professionals (G-6. Office Systems Self-study: Standard 4–Measurement and Analysis of Student Learning and Performance)

In addition, the Office Systems Self-study Report: Standard 6–Educational and Business Process Management: Student Satisfaction Questionnaire administered in December 2009 and again in May 2010 revealed that one of the areas identified by the student that needs to be addressed is the possibility of adding more courses related to written communication in English.

At the institutional level, the Career Development and Placement Center and the Office of Institutional Planning and Research gathered data from the 2007-2008 alumni regarding their level of satisfaction with the general academic competencies. The areas indicating “having had the most satisfaction” were sense of ethics (83.0%), oral communication (38.7%), written communication in English (39.0%), written communication in Spanish (63.2%), critical analysis (78.8%); and analysis and problem solving (82.6%). (Appendix G-7 Cuestionario de graduados, 2007-2008)

Another source of information regarding graduates expected and acceptable levels of competency of the IEG is gathered from diverse offices at UPRB, such as OPEI (Spanish acronym for the Office of Institutional Planning and Research), the ICASL (Institutional Committee for the Assessment of Student

Learning), and various other offices. In 2004 OPEI prepared the *Cuestionario para Egresados/as 2004* and gathered data from the following academic years: 1998-1999, 1999-2000, 2001-2002, 2002-2003 and 2003-2004. The total numbers of graduates for these years that responded to and returned the questionnaire were 545, representing 22% of the total number of questionnaires (2,483) sent to alumni. One of the purposes was to determine the degree of satisfaction of the alumni with the academic preparation received to compete in the working market. Particularly, the study explored the relationship between the grade obtained and the ability to apply scientific and technological knowledge in the areas of mathematics, statistics, computerized systems, and other types of technology. Table G-1 illustrates the areas students applied scientific technological knowledge. These results revealed that the alumni had obtained vital knowledge, specifically in computer systems, which helped them greatly in applying scientific technological knowledge to compete in the working market.

Table G-1: Areas Students Apply Scientific Technological Knowledge

Areas	Greatly	More or less	Not much	None
Mathematics	219	186	91	34
Statistics	148	169	109	93
Computerized systems	367	117	37	12
Electronics systems	207	146	77	84
Other types of technology	141	145	44	98

In this same 2004 study, further results revealed that a 60.2% de los/as que contestaron el cuestionario evalúan la preparación académica recibida en la UPR en Bayamón en relación con su trabajo como **excelente**, el 32.5% como **buena**, el 3.9% como **regular** y un 1.1% como **pobre**. Un 2.4% (13 personas) no contestó. In sum, the study revealed that the skills of mathematics, statistics, computer systems, and electronics permiten al/a la egresado/a de la UPR en Bayamón poder alcanzar el éxito en su campo laboral. (Appendix G-8 Cuestionario para Egresados/as 2004)

How is the “General Education” of students shared across the faculty instead of being the special responsibility of the arts and sciences faculty?

The general education of students is shared across the faculty with the knowledge acquired in the academic programs is an integral part in the formation of the student and the development of skills. For example, the Academic Programs’ curriculum integrates in the educational goals, specifically in its core courses, problem-solving, decision-making skills, information and research skills. Students will solve problems, make decisions, and apply information skills and investigation methods to detect, analyze and solve problems. In this context, students immerse in tasks and projects applying analytical methods based on quantitative and qualitative techniques; making judgments based upon careful consideration of valid information; demonstrating creativity by producing original and useful responses to a problem within various business, personal and educational contexts, and communicating effectively with the aim of demonstrating mastery of the program’s goals. For example, the Office Systems Program Curricular Revision Committee and the Assessment Committee supervise the process to incorporate the necessary changes to courses through different instruments; such as, diagnostic test; internships in office systems; and learning experiences through service activities in the community. The Office Systems Program includes specific courses that make up the problem solving, decision making skills, and information and research skills. As part of the requirements of these courses the students have the opportunity to

discuss and analyze case studies, prepare research projects, participate in real events to revive their interest in making a careful study of a topic, discuss assigned supplementary readings, and engage in situational critical analysis. (Office Systems Self-study: Standard 6—Educational and Business Process Management; Standard 4—Measurement and Analysis of Student Learning and Performance).

In addition, The TPP assessment data are shared with students, faculty, department chairpersons, the coordinator of institutional assessment of student learning, and faculty from the services departments. For example, meetings have been held with the chairpersons of the Spanish and Mathematics departments to make changes in the content of courses taken by the candidates. The Business Administration program is another example of how the general education of students is shared across the faculty. The BAP provides educational experiences that allow for the attainment of educational goals such as analysis, comprehension, communication, and effective research. This program aligned the learning goal, learning objectives, course experience, level of knowledge, and the application of learning of the aforementioned competencies showing how all students are exposed to the educational experiences. (G-5.BAP Self-study: Figure 4.4)

The Humanities, Spanish, English, Chemistry, Physics, Mathematics, and Social Sciences Departments provide a base for students to further develop general education. These departments are commonly known as the Services Departments. Shared responsibility for the general education of students is given to the Academic Programs as they integrate in their program educational goals the general education skills. The requirements in the Academic Programs have similar characteristics; therefore, some of the courses in General Education are common in the curriculums. Other courses in General Education are not similar in all the curriculums since this would depend upon the specific characteristics and objectives of the programs. Therefore, undergraduates are provided the opportunity to obtain the skills appropriate to their major and at the same time those competencies that have to do with general knowledge.

As disclosed in the UPRB Catalog, the services departments provide a common set of minimum requirements to all Academic Programs. The number of required credits in Spanish, English, mathematics, and humanities, especially History of Puerto Rico are requirements for all students. All these courses are at the introductory level, since these courses are intended to be completed within students' first two years. For social sciences, Chemistry and Physics there are some variations. Thus, the total number of required general education credits differs by program and provides, between 75 and 42 in the Bachelor's degree programs. In the associate degree programs, the number of required general education credits also differs by program, between 23 and 28 credits. (Appendix G-9 General Education Component in the Associate and the Bachelor Degree Programs)

The services departments also offer courses that are directed toward specific Academic Program objectives. This coherence of objectives provides students the opportunity to acquire General Education knowledge and then apply this knowledge in the concentration courses and eventually in the workplace. (G-10 General Education Courses Directed toward Specific Program Objectives)

In addition, the syllabi for the general education courses include learning objectives that fulfill both the General Education objectives and the learning objectives of the Academic Programs. In addition, these syllabi also evidence the variety of curricular offerings that enable students to acquire and develop their general education. Syllabi curricular revision is carried out by the Departments to assure that all courses have clearly stated objectives that respond to specific program goals and are aligned with the institutional educational goals.

Up to date information regarding the general education course requirements and descriptions is maintained in both Spanish and English and accessible through the Web page www.uprb.edu. The Departments and Program offices, the Extended University and the Registrar's office also maintain the general education requirements for all Academic Programs.

In what ways and for what reasons has the General Education Program been changed over the past five years?

Since the university opened its doors in 1971 the services departments offer the General education courses that are common to all programs and also courses that specifically address the skills required by the undergraduates in the respective Academic Programs. The academic programs assign the general education credits they deem sufficient; therefore, the total number of required general education credits differs by program. These courses are one (1) semester, and most are three (3) credits, three (3) contact hours per week courses. In addition, Certification 51-1995-96 establishes a requirement of 6 credits in History of Puerto Rico for all new Bachelor Degree Programs beginning August 1996. (Appendix G-9: Course Syllabi and General Catalog) During the academic year 2006-2007 the Institutional Assessment Committee of Student Learning (ICASL) and the Institutional Committee of General Education aligned the UPRB institutional educational goals (IEG) and the UPRB alumni profile. As a result, the Academic Programs have aligned the general education component to the program goals and assessment instruments have been designed and administered.

In March 2009, the General Education Committee submitted to the Academic Senate the proposal *Propuesta de Educación General* [General Education Proposal] (see Appendix G-11) to define the General Education Component and its alignment with the competencies. General education contributes to the intellectual and cultural enrichment of alumni and is the base upon which specialized knowledge in each of the disciplines is built. This foundation acquired by students in their general education courses will be the knowledge, skills and attitudes that all individuals use in their daily lives as responsible citizens. The academic programs should have an appropriate balance between the studies in the major and a general education that strengthen the aforementioned skills.

The General Education proposal establishes a minimum number of credits in the different areas of General Education so that alumni reach the Institution's goals. These goals are defined in terms of what is expected students achieve upon completing their university degree and Standard 12 of the MSCHE. Bachelor's programs should have a minimum of 45 credits. When the number of credits is specifically stated in a particular area of General Education, such as, humanities, Spanish, English, natural sciences, mathematics and social sciences, these must be courses from these specific departments. General Education courses, such as, computer technology and quantitative and analytical reasoning may be offered by the Mathematics, Office Systems, Computer Sciences, Engineering, Electronic Technology, or Business Administration Programs or any other programs that design new courses that satisfy the needs of a specific area in General Education. This decision should be made by the academic program and the department that offers the course. Associate degrees should obtain a minimum of 21 credits. The academic programs may select the courses in each one of these aforementioned areas to facilitate students' target towards reaching the goals of the specific bachelor's or associate degree program.

In addition, General Education courses may be added as needed by the program being revised. New courses could be created in agreement among the academic program that offers the degree and the service departments that will offer the General Education course, according to their expertise, to satisfy

the specific needs that cannot be reached with the existing courses. With the recommended courses, the students are exposed to a range of knowledge in such a way as to provide them with the necessary tools to reach the educational goals of the Institution.

The academic programs can include those courses in the recommended areas, which according to the major are better focused for their students and contribute toward the attainment of the program and institutional profile of the alumni. This education component does not establish specific courses (with the exception of courses in the history of Puerto Rico); it only indicates the number of minimum credits that should be included in the curriculums and in the identified areas following the institutional mission, vision and alumni profile.

In 2010 the Academic Affairs Committee analyzed the General Education Component and found that most Bachelor Degree Programs need to comply with Certification # 51 1995-96, that of including 6 credits in History of Puerto Rico. Integrating another General Education course in all Academic Programs is a discussion in progress in the Academic Senate. (see Appendix G-12 Academic Affairs Committee Minutes, 2010 & Certification 51 1995-1996 of the Academic Senate).

How effectively are General Education and academic program requirements linked and interrelated?

General education provides students with a broad, common foundation of study upon which to build an undergraduate education. As described in the Institution's statements of mission, vision, and objectives, our curricula encourage students to combine skills in technological capability, the scientific reasoning, socio-humanistic sciences, accessing and using information, as well as sensitivity to ethical and aesthetic values. The UPRB General Education and the academic program requirements are closely related since the skills, values and knowledge acquired in the General Education courses establish a strong base in students helping them perform in courses in their major and eventually in their profession. All the educational goals are developed in the General Education component and are strengthened in the courses of students' major.

The planning of the Institutional Educational Goals (IEG) and the development of instruments to measure these goals at institutional and departmental levels are connected to the students' general education. During the academic year 2006-2007 a collaborative effort between the Institutional Committee for the Assessment of Student Learning (ICASL), the Institutional Committee of General Education, and faculty representatives identified the most relevant characteristics of student learning to produce an alignment among the UPRB's IEG and the UPRB alumni profile (See -Document C in the PIAAE, available on the UPRB webpage). This alignment occurred during 2008-2010 when the institutional committees of educational goals, assigned to the Office for the Assessment of Student Learning, identified the competencies and success indicators each of the seven learning goals should have. The product of this last effort was in accordance with MSCHE Standards 12: General Education and 14: Assessment of Student Learning and with the recommendations in the area of General Education made by higher education organizations, such as, the Association of American Colleges and Universities (AACU). The institutional committees, the Institutional Committee of Educational Content Goals (Comité Institucional de Metas Educativas de Contenido [CIMEC]) and the Committee of Interdisciplinary Educational Goals (Comité de Metas Educativas Interdisciplinarias [CIMEI]), composed by faculty members representing each of the academic programs are the ones to decide which aspects are to be measured and what instruments will be used at institutional level. In addition, these committees foster and facilitate the active participation of their respective faculties in the selection and production of the instruments

At departmental level, the aspects to be measured in the Academic Programs and in the service departments include the competencies of each Institutional Educational Goals. For this purpose, the Programs generate assessment plans and document the achievement of General Education learning goals in Document G: Model for the Revision/Development of Plans for the Assessment of Program Student Learning and Document H: Form for Reporting Data/Results directly related to the Assessment of Student Learning. Document G contains how the departmental learning goals are related to the Alumni Profile. In addition, the Academic Programs establish a matrix to inform courses and its relationship with each of the Program and the institutional goals.

The Academic Programs and the services departments also utilize Document H to inform direct and indirect measures of learning that demonstrate how the student has reached the program goals and the IEG. (Document G and Document H for the Academic Programs and the Services Departments are available in the Office of Assessment of Student Learning)

The General Education Proposal explains the link among the General Education courses and those in the majors. The proposal states that the General Education requirements contribute to the attainment of the campus mission and goals. Therefore, the knowledge, skills and values learned in the General Education courses should be reinforced and have continuity in the courses of the academic programs. With the recommended courses the student is exposed to a range of knowledge which allows him/her to acquire the tools necessary to obtain the educational goals of the Institution. UPRB recommended the alignment among the courses and the educational goals that are directly or indirectly obtained through the courses. Within a coherent and integrated curriculum, students should learn about their culture and other cultures and integrate thoughts and diverse ideas throughout the different disciplines. Although the General Education component in associate degrees (AD) is less, it should provide the fundamentals in the same way so that AD graduates can successfully transfer to a bachelor's degree program, if they so desire. In sum, the Academic Program requirements are closely interrelated with the General Education course in which undergraduates gradually are provided the opportunity to obtain the skills appropriate to their major and at the same time those competencies that have to do with general knowledge.

How are graduates meeting expected competency levels? How does the Institution address this? To what extent and in what particular ways has the Institution used assessment results to modify the educational program and services?

Graduates are expected to meet acceptable levels of proficiencies from an integral perspective where the courses in the academic programs and the general education courses contribute to the holistic development of the student. The Institutional Plan for the Assessment of Student Learning (IPASL) is the document that guides the student learning assessment process at the institutional and departmental level. The fundamental goal of the IPASL is to facilitate the identification of institutional strengths and weaknesses in order to help students reach their maximum academic potential with regard to the Institutional Educational Goals as well as the Departmental educational goals. (IPASL-UPRB, Appendix G-13)

The faculty identified the most relevant characteristics of student learning to produce an alignment among the UPRB institutional educational goals (IEG) and the UPRB alumni profile (Document C: PIAAE-UPRB webpage). During academic years 2008-2009 and 2009-2010, the Interdisciplinary Educational Goals and of Educational Content Goals committees adhered to the Office of Assessment of Student

Learning (OASL) developed the document that served as a base to prepare the assessment instruments for each IEG. (Appendix G-14: PIAAE- UPRB webpage)

Measurement of learning by first year students in studies related to the IEG competencies were administered to the 2010-11 cohorts in August of 2010. At present the OASL is analyzing and interpreting the results of the IEG except for the Communication in Spanish and Scientific Reasoning competencies which are in the process of administering a pilot test. The OASL office expects to have results of these pilot test instruments by February 2011. The measurement of student learning instruments will again be administered to the 2010-11 cohorts when they become graduates to see how the institution's graduates are meeting the expected, acceptable levels of competency in the IEG. (IPASL- Revised April, 2010). In addition, other assessment means used by the academic programs that have obtained or are pursuing professional accreditation have documented that graduates meet most of the competencies (See Self-study Accreditation Reports available in the departments).

In 2004, the UPR Board of Trustees, through its 2003-2004, 138th Certification, institutionalized a policy requiring that all UPR's academic programs and services susceptible to professional accreditation should pursue accreditation in order to guarantee academic excellence and competitiveness by meeting widely established professional standards. From there on, the academic programs started working towards meeting accreditation standards as established by the accreditation agencies; such as, ABET (Accreditation Board for Engineering and Technology), NCATE (National Council for the Accreditation of Teacher Education) and ACBSP (Accreditation Council for Business Schools and Programs). These revisions examine the effectiveness and pertinence of the program in preparing professionals for the industry. These modifications include recommendations of the Department's Advisory Board and the program faculty resulting in modifications to courses, curricular sequence, required courses and similar actions that preserve the essential elements of the program's conceptual framework, curricular structure, content, focus and fundamental purposes of an existing academic program.

At the departmental level, student's learning and performance processes are evaluated by means of direct and indirect strategies. The results of the students' learning outcomes are compared to the Programs' learning goals and CPC's (Common Professional Component [Componente Profesional Común]). By comparing the intended learning outcomes and the actual learning outcomes, it is determined how well our students are performing and the new directions to take in order to foster the goals. Changes to the academic programs have occurred as a result of the faculty's work towards guiding the programs for professional accreditation.

In the Electronics Program the level of achievement of the program's educational objectives (EOs) was measured through surveys to alumni (n=30) and their employers (n=11). Most of the students categorized the level obtained in the areas of oral and written categories, scientific and quantitative reasoning and computer literacy between high and intermediate (86% or more for both of these levels combined). In the categories of technological capacity and critical analysis and reasoning, the percents between the high and intermediate levels together fluctuated from 53% to 96% for the skills obtained by the students. Most of the students in the associate degree of Instrumentation Technology categorized the level obtained in the areas of oral and written communication, scientific and quantitative reasoning, technological capacity, computer literacy and critical analysis and reasoning between high and intermediate (88% or more for both of these combined). The results of the Employer Survey demonstrate that graduates scientific and quantitative reasoning and verbal communication in general, are meeting the objective with 50% or more. However, written communication was not as high as expected. The results also suggest that the alumni do not have or demonstrate having an

appreciation for modern social, environmental and ethics issues. In conclusion, the achievement levels of all educational objectives were measured in alumni and employers, and these were generally acceptable, but at different levels as most need some corrective actions. The Electronics Program Assessment Committee made several recommendations for improving the achievement levels of the program’s educational objectives. The following is a discussion of changes that have been suggested as a result of the formal evaluation of the achievement levels of program educational objectives and program outcomes. The BA and the AD programs carried out a series of changes in the curriculum sequence that came into effect in August 2010. This latest program revision to the bachelor’s degree consists mainly of changes to existing courses and the addition of new courses to substitute existing ones, resulting in a decrease from a total of 134 credit-hours to 132 credit-hours. The specific actions upon modifying the current curriculum reflect changes in the General Education courses. The changes are summarized as follows:

- The MATE 3001 (Introductory Mathematics I) course was introduced to address the marked differences in the mathematical skills observed by the faculty in the majority of new incoming students admitted to the program.
- Humanities Electives: Two courses (HUMA 3111 Occidental Culture Compendium I and II and HUMA 3112 Occidental Culture Compendium III and IV) required in the old curriculum were substituted with two elective courses in humanities. This allows students the flexibility of selecting humanities courses that fit their particular interests, thus contributing at a more personal level towards their professional formation. These elective courses should be at the bachelor level (courses with codes 3000 or 4000) from the Humanities department, as long as the student meets the pre-requisites. These elective courses include humanities, music, art, languages, and history, among others.
- In order to strengthen skills and knowledge, without increasing significantly the total number of credits for the program, it was necessary to eliminate six courses from the old curriculum. The General Education courses that were eliminated from the program are:
 - ✓ QUIM 3002 General Chemistry II, 4 crs.
 - ✓ QUIM 3004 General Chemistry II Lab, 0 crs.
 - ✓ FILO 3005 Ethics, 3 crs.
 - ✓ INCO 4015 Conversational English, 3 crs.
 - ✓ REHU 4405 Human Resources Management, 3 crs.
 - ✓ ESCO 4005 Spanish Technical Report Writing, 3 crs.

In *the Associate degree* program: the following table G-2 reflects the courses eliminated and the courses added in the current program.

Table G-2 Courses Eliminated and New Courses in the Electronics Associate Degree Program

Course Eliminated in the Program	New Courses
MATE 1001-Technical Mathematics I, 4 crs.	MATE 3001-Introductory Mathematics I, 3 crs.
MATE 1002-Technical Mathematics II, 4 crs.	MATE 3171-Pre-Calculus I, 3 crs.
FISI 1003- Technical Physics II, 3crs.	CIQA 3001-Chemical Sciences I, 3 crs.
FISI 1004- Technical Physics II Lab., 1 cr	

The Self Study indicates that mathematics is added to the program to increase the level of mathematics obtained by the student. The revised program meets the requirements for the areas of communications, socio-humanistic, mathematics, Chemistry, and Physics, including the mathematics level of integral and differential calculus. For a detailed description of the Electronics Program revision see ABET Self Study Reports for the Bachelor of Science in Electronics Engineering Technology and the Associate Degree in Instrumentation Technology (see Appendix G-15 Electronics Program Self study report Alumni and Employer Surveys). The assessment process suggests the students need to develop an appreciation for technological (professional), environmental, social and ethical issues. The Faculty and the Advisory Committee agreed that in order to have a long-term impact, a series of conferences or seminars should be developed at the Department level in which several areas within these four types of issues could be presented periodically.

The Teacher Preparation Program has examined its alumni's performance through the administration of indirect measures to cooperating teachers and graduates of the TPP-UPRB. The Cooperating teachers were consulted through a questionnaire and the evaluation form that accompanies the Formative and Summative Evaluation instrument (FCSETC). The results indicated that the cooperating teachers were totally in agreement or in agreement with the candidate's preparation rating this category from 95.8% to 100%. The alumni questionnaire revealed that they were satisfied to very satisfied rating this aspect from 86% to 100%. In addition, the questionnaire entitled *¿Cuál es tu opinión?* [What is your opinion?] was administered to graduates to obtain feedback of their experience in the teacher preparation program. This questionnaire measures candidate opinions with a scale of "very adequate," "quite adequate," "adequate," "hardly adequate" and "inadequate" to various questions related to the evaluation of the program operations. During 2008, 81% (n=90) of the candidates and in 2007, 80% (n=117) of the candidates evaluated the competencies developed in the TPP-UPRB as *very adequate* in the level and subject to be taught. In terms of the pedagogical preparation, 79% (2008) and 82% (2007) evaluated it as "very adequate." In regard to its evaluation of student teaching for both years, candidates evaluated their experience as "very adequate" with an 81% rating. For 2007 and 2008, 78% of the candidates indicated that they were *very satisfied* with their academic preparation. Consequently, these data have been used for decision making in order to improve these services. Specifically, a pilot project was designed as part of a required course (EDPE 4335) to incorporate in field experiences study habits, time management and stress control. This pilot project will be evaluated during the 2009-2010 academic year, so it may be incorporated into other courses as part of the unit and greater work can be done in the student teaching course (see Appendix G2. What is your opinion Survey).

The Teacher Preparation Program systematically uses the results obtained through the diverse assessments tools to evaluate the program's efficacy and initiate changes. An example of these efforts is the test developed by faculty of the Special and Elementary Physical Education to measure the candidates' content knowledge before exiting the program. In addition, our Unit does the following to enhance our candidates' knowledge: a) Provide candidates with workshops on the use and integration on the latest technology in the classroom. b) Provide candidates with workshops on the use of assistive technology for students with special needs and essay writing. Another example of how the unit facilitates collaboration is the Sedere test to determine their writing skills in Spanish. Through the analysis of the results, the program chairs of the TPP-UPRB met with the chair of the Spanish department to discuss how to improve Spanish courses to address the student needs identified and to reserve the ESPA 3135 course and MATE 3041-3042 courses, respectfully, for students enrolled in the TPP Program. As result, the Spanish Department revised a second year course on grammar and composition to specifically address the skills required by the undergraduates.

As indicated before (Refer to Question 1 of this section of the report), the Computer Sciences Program polled companies that hired the UPRB graduates of the program and the UPRB alumni hired to learn how competent these were and how pertinent the program had been in the preparation of professionals in the field. The results demonstrated the companies' satisfaction with the UPRB alumni skills and the willingness to recommend these alumni to other companies as well. Responses provided by the graduates indicated that organizations require "a lot" of the following from their employees: knowledge in oral and written communication (80%); ability to carry out analysis and present solutions to problems posed (67%); ability to install, configure and administer networks (53%); ability to do research (30%) and system analysis and design (60%). However, 48% of the graduates indicated that companies require "little" knowledge in the development of methods in numerical computations. Even though 74% indicated that the degree obtained had helped them in their job performance, 24% responded the contrary. Graduates not feeling satisfied with the education received revealed the following: 63% stated the knowledge acquired did not help them meet the expectations of the organizations and approximately 68% recommended creating other majors and updating the present program (See Appendix G-16 Computer Sciences Accreditation Report).

In 2008 proposed changes to the bachelor's degree in Computer Sciences were made official by the Computer Sciences Program. The revision includes the actualization of the conceptual framework of the bachelor's degree in response to the accreditation agency's criteria and a reorganization of the curriculum. This is emphasized by:

- ✓ The reduction in the total credits required for the bachelor's from 134 to 130.
- ✓ The introduction of the two areas of emphasis within the bachelor's degree: Science of Applied Computations and Technologies and Information Systems.
- ✓ The 48 credits in the major fulfill the accreditation agency's requirements. This component consists of no less than 1/3 (33%) and no more than 2/3 (67%) of the total credits required for the degree.
- ✓ The presentation of a good analysis of the coherence and suitability of the proposed curriculum based upon its alignment with the TAC-ABET indicators.

The proposed curriculum presents an interesting situation in that both areas of emphasis introduced include courses in the components for the requirements in the major (14 credits out of 24) and for the major (6 credits out of the total of 48), respectfully. Nevertheless, the credits of these alternate curricular routes (20 credits) were kept within the 50% of credits in the major that contemplate an institutional definition, in addition to not affecting the actual placement of the bachelor's degree in the System for the Classification of Instruction Programs of the United States Department of Education (CIP Codes), recognizing it as a novel way of establishing the concept in the areas of emphasis in the curricular design. This meets the ABET minimum criteria for BA and AD degree programs.

During the academic year 2006-2007, the Biology Program Assessment Committee asked different employers (n=11) interested in hiring professionals in the area of natural sciences to complete the questionnaire entitled *Needs in the Work Force from Graduates with a BS in Biology*. The most relevant findings revealed:

- The skills that stood out the most among the recruitment criteria were writing skills, communication skills, ethical conduct and the capacity to be a self-learner. These criteria obtained more than 80% under the rating of "very important." Ten other skills that were also considered important obtained 80% or more when the "very important" and "important" columns were added together. These were previous relevant job experiences, mathematics and science skills, a university preparation from a recognized institution, interpersonal skills, knowledge in biology and chemistry, and personal

recommendations and experiences in research. (see Appendix G17 *Needs in the Work Force from Graduates with a BS in Biology*)

The Engineering Technology Program level of achievement of graduates' competency levels was measured partially through surveys to alumni and their employers (IET Employer Survey and Alumni Survey) that addressed the General Education skills. Throughout the assessment process, the results of the surveys show that the Program Educational Objectives were achieved. The self-study found areas for improvement, such as:

- *Surveying, Roads and Structural Civil Construction Technology Program* results revealed that the criteria measuring Quantitative Reasoning is considered barely met; therefore, student level of achievement requires improvement. Secondly, the criteria measuring Communication- specifically to correctly express applicable concepts to a given problem and public expression needs to be improved.
- The *Civil Engineering Technology-Construction* surveys disclose that in the Employer Survey (n=3) a 67% obtained intermediate achievement for mathematical principles, and 33% obtained a low achievement. For recognition of scientific principles, only 33% obtained intermediate achievement, while 67% were judged to have a low achievement. This data suggests that the quantitative reasoning criteria require improvement. In addition, the Alumni Survey disclosed that for the aforementioned competencies, 67% obtained either intermediate or high achievement of the objective. The other 33% is identified as "not applicable", indicating, quite likely, that this alumnus is working in a field not requiring application of the above skills.
- *The Industrial Engineering Technology Program* discloses that in the Employer Survey the competencies revealed the following: Communication: 42.9; scientific reasoning: 50%, technological competence: 57.1, critical thinking: 66.7, information literacy: 57.1., and socio-humanistic: between 50% and 71.4. The Alumni Surveys revealed the following: Communication: 66.7; Scientific reasoning: 100%; technological competence: 100%, critical thinking: 33.3, information literacy: 66.7, Socio-humanistic: 66.7 and, quantitative reasoning: 100%. Furthermore, the Alumni Survey revealed the following: Verbal communication: 67%; Written communication: 33%; socio-humanistic: 67% (see Appendix G-4 Employer Survey and Alumni Survey).

The above data tends to indicate that the alumni have a more optimistic vision of their achievements than the employers. One thing, though, is evident for both set of data; the alumni have greater difficulty recognizing scientific principles than dealing with the other subtopics. The modifications in Industrial Engineering Technology Program (IET) include the introduction of two science courses existing within the UPR System but new to the program. The students are given the alternative to choose among the following general education courses: chemistry, physics, and biology including their respective laboratories.

In the Business Administration Program, the evaluation measure containing IEG items is *The Opinion Questionnaire for Graduation Candidates* (OQGC) administered to the graduation class in June 2008 (n=76). It will be administered annually to graduating classes in May. The questionnaire measures the level of graduate candidates' satisfaction with their professors (in terms of teaching), required courses, academic aspects, student-related matters and the Program's learning goals. The area of personal satisfaction provides for graduates to indicate their perceptions regarding satisfaction toward the professors' performance, both those in the candidate's major and of other professors in the BAP and remaining departments. In addition, they rate the level of satisfaction with required courses, courses in their major and the curriculum as well as to what degree the aforementioned areas facilitated the development of competencies, academic aspects and student related matters. The assessment of core

courses that allow for the obtainment of the educational goals, where all of our students are exposed to these educational experiences, revealed that the performance criteria regarding the level of satisfaction with required courses be they in general education or the business core courses, were met, with the exception of quantitative methods. Furthermore, more than 85% of the graduates interviewed indicated a level of satisfaction from Very Satisfied to Satisfied in regard to the instruction received from the Service Departments (see Appendix G5 BAP Self-study: Figure 4.14). The performance criteria on the degree in which the BAP-UPRB curriculum facilitated the development of the Program Learning Goals was met.

Meetings with professors within each academic major to brainstorm and identify the results of the questionnaire to graduates. (This questionnaire is described and analyzed in detail in the BAP-UPRB Accreditation Report: Standard 4, Section 4.1, Parts d and e: Appendix 9: Graduation Candidate's Questionnaire and findings report; Figures 4.11; Tables 32, Table 33). Each academic year, all modifications to the BAP curriculum suggested and obtained through the available tools in the different majors are incorporated to a lesser or greater degree. The BAP-ACBSP Accreditation Self-Study documents in Standard 4 that as part of promoting an assessment culture, the BAP academic program recognizes the need for evaluating the processes used to assess student learning. Figure 4.19 (see Appendix G-5) presents a summary of this process of continuous improvement and discloses the Student Learning and Performance Processes, the Evaluation Method and the Changes or Modifications to the BAP.

The Office Systems Program collects data from students and stakeholders through different mechanisms (questionnaires, employment statistics, and accreditation standards, among others) before entering the program and after ending it. Direct strategies during the academic years 2007-08 to 2009-2010 show that 70% of the students obtained 70% or more in the application of language skills in written documents and oral presentations in Spanish and English; in the application of math reasoning and skills; in the application of technological knowledge and skills. The results of the indirect strategies demonstrated in Table 4.9 indicate that the program's goals were highly met. The collected data is discussed in the Curriculum Committee and, if any changes are required, the Committee develops the corresponding modifications that will be submitted to teaching personnel in meetings. Minor changes, such as updating of course content, can be made by the teaching personnel of the Office Systems Program. Major changes require the preparation of a proposal to be submitted to the corresponding government bodies of the UPR; such as, the Academic Senate, Administrative Board, University Board, Board of Trustees, and in some cases the Puerto Rico Council of Higher Education. The results of the students' learning process have been used to make the following changes:

1. The Department's description was revised and modified based upon the student's performance, the institutional assessment plan, and the accreditation process of ACBSP.
2. A diagnostic test has been implemented to assess student performance at the entry and exit levels.
3. Rubrics have been revised in order to simplify the student learning assessment.
4. The Moodle learning platform has been integrated to the student's learning process for a better understanding of the course goals and the development of technological skills.
5. A diagnostic test has been implemented to assess student's performance at the entry and exit levels.
6. A standardized departmental test has been implemented at the entry level as a mean to assess students' technological knowledge performance. (see Appendix G-6 Office Systems Self-study: Standard 4—Measurement and Analysis of Student Learning and Performance)

Related Educational Activities

How significant is the Institution's commitment to provide programs and services for under-prepared students? Does the assessment of these programs and services demonstrate that the level of institutional investment and commitment is warranted?

A support system for underprepared students helps undergraduates at UPRB overcome difficulties in their coursework. Diverse offices promote academic development through tend to different needs of students with academic challenges. This campus has provided services to deal with academic deficiencies by means such as tutoring, assistance, training, and study rooms and offered through institutional programs and various Academic Departments. The institutional programs include the Student Support Services Program (SSS), the Office for students with disabilities, the Learning Resources Center, the Biology Program, and the English Department.

Student Support Services Program (SSS): Each academic year, the SSS Program selects and serves eligible students who are identified and selected based on the need of academic support and the SSS eligibility criteria which include being first generation students. At least 200 are selected from the freshman class, while the remainders are former participants with the need of further Program support. Program services include a required minimum of tutoring sessions in English, Spanish, biology, chemistry, and mathematics to a total of 240 students. The academic coordinator places students in the tutoring sections according to the results of the College Board Achievement Tests results. To ensure that the participants' academic progress is satisfactory, their performance is continuously monitored through the following:

- Tutors refer to the academic coordinator those participants who are not attending tutoring sessions on a regular basis or who face special challenges in understanding course content or developing required skills, while professors refer to the area coordinators those students who are not attending classes on a regular basis and those whose performance is below the Program standards or show other problems. The coordinators determine which course of action to take in each case. At midterm, Program staff analyzes participants' performance based on reports by the course professors, as well as at the end of each semester, based on both their GPA and their grades in those courses in which they received tutoring. Students found to be performing below standards receive special counseling and additional academic support. Former participants' academic performance and progress towards completions of the degree are also monitored throughout the time they are enrolled. Students whose work is deemed to be unsatisfactory are referred to the UPRB Counseling Office staff. The evaluation of the tutoring program discloses that an 86% of students polled find that having received the SSS program services during the first year helped them academically and personally. Students specifically indicate the areas of tutoring that helped them with their courses. For example, an 88% find that tutoring contribute to their progress in classes; an 80% indicate that tutoring helps in clarifying doubts, and a 90% find that tutoring serves as a stimulus for studying and reviewing their course materials. (see Appendix G-18; Evaluation of the Tutoring Program, 2009 and the SSS proposal statistics)
- In addition to the tutoring program, during the first semester of the 2007-2008 academic year, MATE 0010 (Preparatory Mathematics) was offered. This was designed as a preparatory course for those students whose curriculums include the MATE 3171-MATE 3172 (Pre-calculus I & II) sequence. A total of 27% or the 230 students in the course came from the Student Support Services Program. The Program decided not to offer tutoring in this area of mathematics, assuming that the course's laboratory covered this support. A model was designed that included a clause which indicated the

course was compulsory for and had to be passed by all students that had obtained 650 or less on the achievement exam offered by the College Board. This compulsory nature of the course was established by Certification #70- 2005-2006 of the UPRB's Academic Senate, which was later eliminated in June by the University Board prior to the course being offered. Retention in MATE 0100 was 42% with absenteeism appearing to be a significant variable and with negative consideration towards the probability of passing the course. In spite of the fact that the preparatory course did not have a positive effect on the academic achievement in MATE 3171, the gains obtained between MATE 0010's pre and post-test appear to be a significant statistical variable and with a positive sign towards the probability of passing MATE 3171. (see Appendix G-7 Cuestionario de Graduados, 2007-2008)

Disabled Student Services (OSEUI- Spanish acronym): The main objective of the Disabled Student Services Office at the University of Puerto Rico at Bayamón (OSEUI) is to provide basic services that address the multiple needs of this community and contribute to its intellectual, emotional and sociocultural development. Some of the services provided for students who report having academic deficiencies are: readers, interpreters, tutors, note takers, and technological equipment and programs that improve and maintain the academic capacities of disabled students. It also provides effective mediation in circumstances that merit reasonable accommodations. Students may request these services by filling out an application and presenting medical evidence of their disability or condition. (see Appendix G-19 OSEUI Assessment Survey Results)

Learning Resource Center (LRC): Learning Center: The Learning Center is located inside the library and is known as the Infonexus Laboratory. The Learning Center serves approximately 1,367 students per semester. Professors of all academic programs and services departments as well as the SSS program staff request diverse trainings for their students. Professors request classes from the INFONEXUS and most of the time it is because they identify that students lack the necessary knowledge in information literacy. The Learning Center promotes el desarrollo de competencias en information literacy para que los undergraduates puedan llevar a cabo el estudio y la investigación eficientemente. The main service provided by this office consists of training on diverse topics such as, resources and services available in the LRC, search and evaluation of online information, use of the online catalog and database, use of writing style manuals, and preparation of essays, monographs and research among others. This office also provides workshops to students in the SSS program on topics such as, Preparation of Research reports, Essay Writing, and Writing Compositions. Appendix G-20 provides results of the evaluation of services. The following table shows the amount of groups and the amount of students who received services at the Infonexus Laboratory for years 2002-2010. (see Appendix G-20 Learning Resources Center: Infonexus Report, 2010)

Table G 3: Infonexus Laboratory Services, 2002 to 2010

Year	Groups of students	Amount of students
2002-2003	112	2,040
2003-2004	127	1,818
2004-2005	86	1,455
2005-2006	77	1,422
2006-2007	61	1,1176
2007-2008	95	1,837
2008-2009	119	2,715
2009-2010	104 ⁸	2,367 ⁹

The Biology program supports underprepared students by engaging in educational innovations geared toward improving student learning. To this end, the Biology Program set up the CAB to provide a study room for students to spend time outside the classroom studying on their own within a supportive learning environment. The CAB (Centro Autotutorial de Biología- Spanish acronym) is a drop-in service. La asistencia ofrecida en el CAB es de aproximadamente 700 estudiantes. Estudiantes por jornal llevan la asistencia y colaboran con los asistentes para repasar lo que se ofrece en los cursos. Upon registration, students are shown where services are located and how to use them. Students are welcome to the following services: textbooks, computers with access to the internet, microscopes, and Power Point presentations. According to the Biology program coordinator, the Biology program does not have a tutoring program. The Biology Department does not consider CAB to be a tutoring program, but understands that it is something to be considered to work on for the future. (see Appendix G-21 Biology Program Annual Report, 2009-2010).

Academic Department: Mathematics

During 2007-2008 the Mate 0010 course was designed as a preparatory course for students with academic deficiencies whose curriculum included Mate 3171-Mate 3172 (Pre-calculus). This course had been submitted as a proposal and approved through Academic Senate Certification #70-2005-2006. This certification was abolished, and so was students' interest in taking a course that was not an obligatory requirement. Despite an increment in absences to the course, the pre/post test analysis revealed that students who completed the preparatory Mate 0010 course were better prepared to undertake the requirements of the Pre-calculus course. Recently, through Certification #14-2010-2011, the Academic Senate reviewed the proposal for offering the preparatory course and approved a tutoring program for students who present academic deficiencies and need to clarify doubts. These students cannot be participants of the Student Services Program. (see Appendix G-22 Mathematics Department Proposal)

⁸ Total sumado por la Srta. Ana C. Vega Novoa, Secretaria Administrativa de la Oficina de la Directora del CRA

⁹ Total sumado por la Srta. Ana C. Vega Novoa, Secretaria Administrativa de la Oficina de la Directora del CRA

Academic Department: English: Writing Room- The Writing Room also provides support to prepare undergraduates with peer input in the revision and editing phases of the writing process. The Writing Room is located in the 100 building. The tutors serve student clients with a variety of writing projects that include, but are not limited to, paragraphs, essays, research papers and business letters. Student writers usually feel comfortable about having their peers help them to polish their papers. The members of the English Department faculty that send their students to the Writing Room have indicated that their student's papers improve with the service provided to them in the Writing Room. They also indicate that the valuable work carried out by tutors helps to lessen the amount of paper work they encounter during the writing process of student assignments. Last semester due to the strike, the number of students served was 743, but as of November 18, 2010, 823 students have been served in the Writing Room. There have been semesters where over 1000 students have been given service. When questioned, the English Department faculty overwhelmingly indicates that the Writing Room is a service that is necessary for our students, and that it should continue being provided. (see Appendix G-23 Writing Room-report)

In what ways and for what reasons have procedures for approving, administering, and evaluating non-credit offerings changed over the past five years? What has been the impact of these changes?

The Division for Continuing Education and Professional Studies (Known by its Spanish acronym DECEP) at the University of Puerto Rico at Bayamón has established and revised procedures and policies regarding administrative and academic management for non-credit courses.

DECEP Administrative Structure: As described in Certification 190 (academic year 2000-01), the Board of Trustees establishes the systemic policies and procedures related to continuing education, lifelong learning and its link as part of the Academic Affairs Office. For the first time, terms such as, traditional and nontraditional students, credit and non credit courses as well as its mission, function and duties related to continuing education and lifelong learning are defined. It also describes administrative positions and personnel needed to develop and perform such mission. Administrative personnel positions were revised according to the Human Resources Office policies. Many contract services were not renewed based on the functional structure proposed in the certification and the real campus needs. From a total of 7 people working for DECEP, 3 have prevailed. These changes brought the minimal administrative structure cited in Certification 190 as a starting point to comply and perform the Work Plan.

Non-credit course approval and authorization: Academic offerings at the DECEP are available to the community based on specific course needs or as required by external agencies (public and private). Prior to 2003, procedures related to new courses were managed without the approval of the Academic Affairs Office. Even though the criteria were almost the same, it didn't follow the guideline established by this office. Quality and excellence must be guaranteed for both credit and non-credit courses. So, after reviewing procedures, a course proposal must be submitted at the DECEP office following the guideline established by the Academic Affairs Office and the Academic Senate at the UPRB. By these means, DECEP aligns its procedures to the academic affairs criteria. The course is evaluated by the Assistant Dean for Continuing Education and Professional Studies and the Academic Affairs Dean, followed by a personal interview. Once the course has been authorized, it is included in the promotion brochures and the media initiatives prior to enrollment.

From 2003 to 2009, DECEP divulged its academic offerings during three seasons of the year. These were first semester, second semester and summer. Enrollment rates for various courses have dropped lately,

so, changes have been made to enhance Media promotions. At present, media promotions are developed as “five” seasons including a midterm promotion each semester. Important information related to short courses is included in every announcement to the community; such as, enrollment period, course information, cost and office location as well as web address and phone numbers. Assessment results on these changes are not available.

Financial Analysis and academic offerings: During the enrollment period, the DECEP administrative personnel analyze the course financial sustainability. This criterion requires that the course delivery will be paid fully by means of the enrollment income, including faculty salary. If the course does not meet these criteria, it may be cancelled or postponed. Reimbursement process will be used for participants already enrolled.

Course Administration: Non-Credit Course Administration requires specific process, as follows:

- a. Faculty Recruitment: non-credit course faculty varies during a season/year. Tenured and non-tenured faculty may be recruited.
- b. Tenured Faculty – These include highly qualified faculty from the Academic Departments recruited to offer a non-credit course. Non-credit course load will not interfere with “for credit” courses and other academic tasks. Salary will constitute an additional compensation based on the Rules and Procedures for Recruitment and Compensation established by the DECEP.
- c. Non-Tenured Faculty (part-time/adjunct faculty) – The Human Resources Office establishes the required conditions to hire external faculty for non-credit courses. The Academic Affairs office qualifies the candidate based on Academic preparation, background and experience. If a candidate didn’t meet the criteria to be qualified, he/she would be declined

DECEP performed the hiring process assisted by the Human Resources Office. The salary scale was revised and guidelines were included in a document titled “Política de Reclutamiento y Remuneración de la División de Educación Continua y Estudios Profesionales”. It established policies based on expertise, academic background and experience. No faculty may start offering a course if the hiring process is incomplete.

Course Delivery: A set of rules is brought and discussed with faculty offering non-credit courses prior to commencement (See Appendix G-24). It establishes what the DECEP has defined as “Rules and Procedures” for non-credit courses. This includes the DECEP faculty and students, required contact hours, responsibilities, office hours; educational strategies and evaluation; attendance sheets and withdrawal policies, among others. A classroom is assigned based on the course specific needs. The assistant dean and his/her coordinator are always available to handle any situation related to students and/or faculty, course, calendar compliance and classroom facilities. Classroom access is coordinated by the DECEP personal in accordance with the Administrative Affairs Office and maintenance personnel.

According to the Emergency Plan established by the Administrative Affairs Office, and considering the importance of student, faculty and personnel security during the evening session, the DECEP/ UNEX (Extended University) also developed a “Protocol for Notification of Emergencies during the Evening Session.” The statement provides immediate resources to notify and receive assistance in case of an emergency between 5:00 and 9:00 pm (see Appendix G-25). At present, DECEP keeps record of any incidence reported in the evening period.

Course/Faculty Evaluation: The Academic Affairs Office rules the faculty evaluation procedures. The process of evaluation was revised, and it was determined that evaluation forms must be modified and approved by the Academic Affairs Dean. Faculty offering non-credit courses is evaluated by the participants following these criteria:

- First timers – Faculty that has been recruited for the first time to teach a new or existing course at the DECEP is evaluated each semester during the first year.
- Already recruited – Faculty that has been recruited on a cyclical basis is evaluated yearly.

In both cases, the following is considered:

1. Evaluation calendar is prepared and announced prior to the established date.
2. Evaluation results are discussed with faculty, whenever possible.
3. Evaluation summary is retained at the DECEP office.

Policies and procedures used in the last five years have been necessary to assure high quality in course academic and administrative management. Results regarding those changes have been evident in many ways and are immediately related to those procedures. Appendix G-26 includes such procedures and a set of data gathered as assessment practice to provide evidence. A summary of these milestones are as follows:

- a. High standard courses have been developed
- b. A serious commitment with academic excellence and faculty recruitment has been strengthened.
- c. High levels of satisfaction have been evidenced within participants and the external community.

In sum, the DECEP faces the present expanding educational market with the same functional structure and marketing strategies for the past decade. The structure has worked, yet times change and so do the needs of those who strive for professional development. A complete analysis of this new scenario as well as an internal transformation is vital if the DECEP is to cope effectively with the new market demands. The resulting structure has to be agile and its professional team well acquainted with market analysis, and aggressive promotion. Educational trends must be identified in a timely manner and addressed properly with a competitive and creative offer. Sharp distinctions must be made when dealing with the content and marketing strategies of professional development seminars, conferences, and workshops. These strategies represent an excellent opportunity for course block development, tailored accordingly to corporate and governmental needs in terms of employee training. Finally, DECEP has a well-rounded small block of distance learning courses that must be revisited if we are to compete effectively with the growing market demands for this modality of teaching.

Recommendations

1. The General Education component should be aligned to the Institution's educational goals so that graduates achieve them independently of the program they graduated from.
2. A minimum standard in all programs (all programs should complete at least a minimum number of credits in General Education) should be established so that graduates from the Institution achieve the educational goals independently of the program they graduated from.
3. The General Education courses (General Education component) should be revised every five years to adapt them to the present time even though there are universal values that never change.

4. It is important that faculty in courses of majors continue strengthening this knowledge (acquired in General Education component) so that students realize that general education is not just a requisite but an integral part of a good professional.

INSTITUTIONAL ASSESSMENT AND ASSESSMENT FOR STUDENT LEARNING

The Institutional Assessment and Assessment for Student Learning Subcommittee evaluates how the institutional assessment plan and the learning assessment plan evidences the way in which the Institution achieves its mission effectively and efficiently, as well as the competencies, knowledge and skills the alumni present in accordance with their educational goals and the goals of the Institution.

Institutional Assessment

How does the institutional assessment process present validated information that evidences the accomplishment of the UPRB's mission and goals?

The University of Puerto Rico at Bayamon recognizes the importance of evidencing effectiveness in terms of the achievement of its mission and institutional goals. In this same way, the Institutional Assessment Plan (*IAP-Plan de Assessment Institucional* [PAI, Spanish acronym] reflects the Institution's commitment with the assessment process (See Appendix A1). This plan was developed in the Office of Planning and Institutional Research (OPIR), whose task is to introduce the plan and put it into practice.

The IAP is based upon an alignment process among the following documents:

- (a) Mission and Vision of the UPR System ([Certification 25-1996-1997.] See Appendix A2)
- (b) Planning Agenda 2006- 2016: *Diez para la Década* ([Board of Trustees Certification 128-2005-2006]. See Appendix A3)
- (c) Mission and Vision of the UPRB ([Academic Senate Certification 14- 2007-2008]. See Appendix A4)
- (d) Institutional Strategic Plan ([Administrative Board Certification 16 -2008-2009]. See Appendix A5)
- (e) Mission and Vision of the UPRB's departments and offices (See Appendix A6).
- (f) Work Plans of the UPRB's departments and offices (See Appendix A7).
- (g) The alignment among the UPR Mission, the Agenda *Diez para la Década*, and the institutional goals (included in the UPRB Strategic Plan). See Appendix A1, Page 10).

The IAP includes processes directed toward compiling qualitative and quantitative information based on institutional indicators geared to collect data to show the accomplishment of the institutional goals (See Table II of the IAP). There are indicators that represent shared purposes and goals within the institutional assessment and the assessment of student learning components (See Table III of the IAP and Table III of the IPASL in Appendix A11).

Beginning in the 2010-2011 academic year, the components of the student and administrative deanships carefully revised their annual work plans. This was done to ensure that the alignment was in accordance to the Institutional Strategic Plan, their respective missions and visions and that the instruments responded to the aforementioned (See pages 23 to 34 of the IAP for a short description of the assessment processes the constituents \ offices of the deans of Administration and Students Affairs are going through and the internal and external audit reports in Appendix A8). See also documents produced by the components, available in the respective offices and in the OIPR.

As indicated in the Institutional Assessment Plan, the OPIR facilitates the process for the integration of information included in the Institutional Annual Report. Resulting from the analysis of the Institutional Annual Report, necessary changes are made and documented. For example, the Chancellor's office, the deans and the directors of the departments and offices evaluate the Institutional Strategic Plan in regard to its achievements and areas needing improvement. In addition, these components take into consideration the results of the internal and external audit that intervene with the Institution from the federal and state governments and from private agencies. The discussion and analysis of all of the above promotes the improvement of the planning and revision processes as well as the assignment of institutional resources. Also, it is evident that most of the information gathered, analyzed and generated by the OPIR is disseminated in various forums; such as, faculty meetings, meetings with the academic program directors and deans, the UPRB web page (www.uprb.edu), leaflets, statistical reports and institutional studies published for the university community.

The IAP reflects planned and systematic collection of evidences with the goal of organizing and deriving inferences and making the necessary adjustments to improve the quality of the academic, student and administrative services to demonstrate the accomplishments of the UPRB mission and goals.

How does the UPRB gather and analyze the information required for decision making, and how is it disclosed and used?

The University of Puerto Rico at Bayamon mainly collects information from a variety of reports produced in the academic, administrative and student areas and through various mechanized systems that generate data bases presently centralized in the Information Systems Office of the Central Administration of the UPR System. Among these are the following:

- ORACLE - PATSI
 - ✓ Finance Module - UFIS (University Financial Information System)
 - ✓ Admissions Module
 - ✓ Financial Aid Module
- HRS (Human Resource System) – Human Resources Office and Finance
- SIS (Student Information System) - Dean's Office of Academic Affairs, Registrar's Office

The ORACLE system is the most recent and has been implemented through modules or phases. In the first phase the Admissions Office was included, followed by the offices of Financial Aid and Finance. As part of the process, data interfaces have been made from one system to another in order to satisfy the offices' needs. These interfaces are mainly carried out by the Central Administration in coordination with specialized personnel in the UPRB Information Systems Office (ISO).

On the other hand, the ISO of the UPRB developed internal data bases that address the particular information needs of the Institution. Among these, the following can be mentioned:

- Faculty & Personnel
- Admitted Students
- Graduation Index
- Registered Students

All of these systems generate a large variety of documents, which compile the information needed in the Institution's offices. This variety includes historical documents and documents that are generated on a daily, monthly, trimester and annual basis according to their nature.

Various programs have tools to design and produce documents and reports by its users, according to their need. The *Discover Viewer* in ORACLE is an example of this. Another tool is *COOL*, which is used solely for accessing historical documents. Yet other tools are various mechanized programs through Excel, SPSS and others created by the Central Administration, ISO or office personnel.

The documents and reports available in the data bases come from data related to all the institutional indicators utilized in the Institutional Assessment Plan. These reports are verified, analyzed and consolidated once they are utilized for the reports required by the US Department of Education (For example the IPEDS- Integrated Postsecondary Education Data System) and the Puerto Rico Council on Higher Education. The UPRB completes the reports required by the deadlines set by the aforementioned agencies; these reports become public documents. The diversity of documents and reports allows the OPIR, the ISO, the Chancellor's Office and its deanships and other components to manage reliable information for its decision-making processes.

It is important to point out that the UPR System's data base is generated at the Central Administration and transported to the UPRB, where these are worked with. These processes are closely audited and fulfill all security standards established by the University of Puerto Rico and federal agencies' laws and policies. This is demonstrated in the internal and external audits results made and fulfilled in the area by the UPRB (See Appendix A8).

Presently, the UPRB has various tools it uses to disseminate the data and reports. One of these is the University web page (www.uprb.edu), where each office has its space and includes informative bulletins.

How does the institutional assessment process support that budget and resources are assigned according to the institutional needs?

The Institutional Strategic Plan (ISP), which comprises the years 2006-2016, was aligned with the Planning Agenda of the University of Puerto Rico system: *Diez para la Década*. The objectives and activities corresponding to each goal of the ISP were established in consultation with all sectors of the UPRB during a long process and with feedback. In this way the possible necessities of the deanships, academic departments, and service and support offices were taken into consideration (See ISP, Goal 9, Objective 4 in Appendix A5). The ISP guides all institutional processes including suggestions for the assignment of funds for each goal.

The UPRB's annual budget is assigned by the Board of Trustees through certifications (See Board of Trustees Certification 93-2008-2009 – Appendix A9). The process is based upon a budget request or petition made according to the needs of each unit of the system. However, in the past two years the budget petition or request has been modified due to the economic crisis the country is facing. This means that the Central Administration has assigned a proportional budget to the institutions according to the funds the UPR has received. Later, each institution is in charge of distributing and administering these funds based upon the ISP and the Annual Work Plan (operational).

The Annual Work Plan (operational) is also aligned to the Institutional Strategic Plan (ISP). This plan facilitates the annual assignment of the institutional budget since it projects the annual funds necessary to meet with the activities and goals needed to obtain the institutional mission. The ISP is utilized in the Institution as a tool to identify the funds needed to carry out the activities outlined by the deanships, academic departments and offices as well as for evaluating achievements (See the Strategic Plan, Goal 9, Objective 4 (Appendix A5), and Institutional Indicator: Fiscal Resources, in Table II of the Institutional

Assessment Plan (see Appendix A1). In this way the needs of the components are identified, and the limited financial resources are assigned wherever they are needed. On the other hand, the Budget Office distributes the funds available in the Institution based upon the historical behavior of budget assignments by office and dependency.

One of the main purposes of the Institutional Assessment Plan (IAP) is to guide the offices and its components in measuring their effectiveness in terms of the achievements as mentioned in their Work Plans and through their Annual Report (available in OPIR – Appendix A10). The data gathered through these means are analyzed by OIPR to measure the fulfillment or non-fulfillment of the goals and activities proposed in the work plans and how the budget affected these fulfillments. As part of the process, the necessary feedback is given directed towards suggesting ways to give follow-up, improve activities and services, and present ideas for the maximum use of the assigned funds.

How does the Institution ensure that procedures and academic policies are appropriate, widely distributed, fairly administered and updated when necessary?

The University of Puerto Rico system has the UPR Law and General Regulations which are the instruments that guide all the units in the system. In addition, the system has different organisms that direct the various units. These are the Board of Trustees, the University Board and the President of the University. These bodies generate policies and procedures for the university system.

The Chancellor of the UPRB has the responsibility of carrying out the established regulations by the aforementioned bodies and guarantees that all components fulfill them. As an autonomous institution, the UPRB has an Administrative Board and an Academic Senate that establishes and approves policies and internal procedures that arise from academic and administrative needs. This autonomy comes from the University Law which gives the chancellor of the institution the responsibility of administering the institutional budget. This administration is founded on the distribution of the institutional budget according to the priorities and needs of the different deanships. The University Law as well as the General Regulations of the UPR and documents generated by the bodies at system and institutional levels are published in the UPR and UPRB web pages.

The Dean's Office of Academic Affairs has an advisory body, the Institutional Personnel Committee, which helps the dean meet with the certifications related to professors' promotions, probationary status and tenure, among others. At department level, the director with the Department Personnel Committee guarantees that the dispositions related to the departments are met.

The documents generated by these bodies are periodically revised to guarantee that they gather the university community's needs and that they are as fair as possible. The members of these bodies amend and publish the new versions through all possible means. On the other hand, the UPRB, as an institution of higher education, receives federal funds, fulfills the laws and policies established by the federal government, and therefore maintains eligibility for funds. In addition, it is intervened by internal and external audits carried out regularly to guarantee that the regulations are met.

The evidence of the results of the aforementioned processes sustain that the UPRB has appropriate and fair mechanisms. These are adequately published and distributed and if necessary, updated.

Assessment for Student Learning**How does the UPRB Institutional Student Learning Assessment Plan facilitate the assessment of learning and the improvement of students' learning processes, across all levels of assessment?**

With the aim of facilitating the assessment process at all levels, the Institutional Plan for the Assessment of Student Learning (IPASL- *Plan Institucional de Assessment del Aprendizaje Estudiantil* [Spanish acronym-PIAAE]) includes a model of the process, described in pp. 5-7 of this plan. In addition, at institutional level the process is guided by four groups of questions that orient the process (See the group of questions in Frame 2 of the IPASL, Appendix 11).

The main goal of the assessment process, described in the IPASL, is to promote and facilitate the production of evidence and the use of the results or findings by different components of the UPRB with the aim of strengthening or promoting student learning. Another purpose is to expedite joint efforts among the different components basically directed toward documenting, evaluating and enriching the curricular processes, the teaching-learning process and other aspects that foster or facilitate student learning. The IPASL provides the infrastructure for generating and sustaining the data base of student learning as well as for improving it.

At department level, each academic department (AD) collects and analyzes evidence needed to demonstrate the AD's effectiveness in terms of learning achieved by students they serve. The AD data base comes from the implementation of their respective student learning assessment plans (See the guide for the development of assessment of learning plans, Document G, that accompany the IPASL, Appendix 11). A selection of information or learning data generated and collected by the ADs is shared with the Office for the Assessment of Student Learning (OASL) so that it makes up part of both data bases: departmental and institutional (See Appendix 2 of the IPASL in Appendix 11).

The institutional assessment is under the responsibility of the OASL from where the production, collection and analysis of evidence are facilitated. At this level, the evidence related to student learning is mostly utilized in terms of: (a) the Institutional Educational Goals (IEG), (b) the data provided by the ADs in their annual assessment reports on student learning, and (c) other evidence and data closely related to student learning. The OASL also compiles information from the AD related to the assessment modes, among other aspects contemplated in the IPASL. The recent data and results coming from this effort will be available during the first academic semester 2010-2011 (See Questionnaires 1 and 2 used to gather information from the ADs. The respective results will be available at the exhibit room in Appendix 12).

To facilitate the collection and analysis of learning data and the use of the results by the UPRB components, starting in the 2008-2009 academic year, the OASL provides to each AD and selected components of the Dean's Office of Student Affairs a document for them to inform the annual assessment results on student learning and aspects related to it (See Document H in Appendix 1). To achieve consistency in the collection processes and analysis of data, the OASL generated procedures for the compiling of data and ways to disseminate the results to the components that hand in their reports. A selection of learning measurements from the ADs is grouped representing the UPRB students. To make this grouping or classification possible, the OASL asks the ADs to inform the results of the direct measurements of learning in terms of the Institutional Quality Scale of Student Learning (See Description of this scale in Figure 4 of the IPASL, Appendix A11).

During the 2010-2011 academic year, the assessment cycles of the IEG (Institutional Educational Goals), described in Appendix 1, Table A of the IPASL, were initiated (Appendix A11). In this initial phase, the cycles were altered to include all possible measures of the IEG. After this initial phase, the IEG measurements will be carried out as indicated in each assessment cycle. With the goal of having information of student learning available for all of the components in the university, a data base is being developed by the OASL with the help of UPRB specialists in statistics and computer sciences and students from the Computer Sciences Program.

The assignment of various committees to the OASL facilitated a joint effort towards creating and validating the instruments for the assessment of student learning in terms of the IEG and the respective administrative protocols. The administration with cohorts of new incoming students began with the 2010-2011 new students and will continue in different stages: during the second year and the last year of studies. The results of the analysis of the 2010-2011 incoming students IEG measurements will be available in the OASL, which facilitates the use of results at all institutional assessment levels (See the IEG assessment instruments and administration protocols which will be available in Appendix A13).

The Institutional Plan for the Assessment of Student Learning (IPASL) considers the data and information generated by the ADs and in other departments and offices closely related to student learning. The OASL combines results and achievements to maintain a data base and generate documents to supply information that can be utilized by different components. For example, the ADs use the results and achievements from the assessment of student learning at institutional level to analyze the student learning they address in terms of the IEG and the departmental educational goals. In the same way, the departments and offices closely related to student learning utilize the institutional data base as well as the results from their own assessment processes to improve the services that strengthen the student learning addressed.

According to their plans for the assessment of learning, the ADs generate data and analyze and utilize them for the following:

- Maintain the quality or improve learning in the classroom.
- Generate and sustain changes at different assessment levels.
- Combine AD's learning assessment results with data and results generated at institutional level. In this way the data base of the assessment system requested by the agencies accrediting the UPRB's programs is expanded.

The institutional level efforts are made so students can become aware of the IEG and become responsible for learning the content and developing the skills and competencies included in these goals. For example, during the orientation week for new incoming students, they participate in an interactive presentation that allows them to recognize and apply the content of the IEG. In addition, students sign an agreement through which they make a commitment with their learning in terms of the IEG. In the academic year 2010-2011, a total of 900 new students signed this agreement.

At the institutional level, the assessment results and achievements related to student learning are mainly utilized to promote the analysis of student learning at the ADs' level in order for them to verify if the students achieve the IEG and the departmental educational goals. In addition, these are used to:

- Offer feedback to the UPRB constituents so these may have the information at their disposition and use it, for example, in *conversaciones* (informal talks) and in individual and group reflections at meetings and activities of professional and curricular development.

- Inform especially the Chancellor and the academic and student deanships, the quality of learning achieved by the UPRB students.
- Disseminate the achievements of student learning through all possible means, for example, through “*Entérate*”, a bulletin generated and distributed by the OASL; through documents included on the UPRB web page; and in meetings with the AD directors and other deanships (See examples of this bulletin in Appendix A14).
- Give the committees assigned to the OASL (during monthly meetings) the opportunity to analyze the learning assessment results and process through which the data were generated. Once informed, the committees can comply with their responsibility of requesting a meeting with the directors of the ADs to disseminate relevant results to their respective faculty and propose how to use these results to foster or improve learning (See examples of these presentations in Appendix A15).
- Offer data and information on student learning to the entire UPRB community, the accrediting agencies and external community.
- Promote educational research, utilizing the institutional assessment results of student learning, to faculty who wish to become involved in research geared towards facilitating and improving student learning (examples of these efforts will be available at the Exhibit Room in Appendix A16).

How adequate are campus efforts to encourage, recognize and value faculty efforts to assess student learning?

The efforts of the UPRB, in terms of promoting, recognizing and valuing faculty efforts in carrying out the assessment of learning, both institutional as well as classroom efforts, are fostered and valued in diverse ways; such as,

- The active participation of faculty in all institutional matters and activities related to the learning assessment of the UPRB students is promoted; for example:
 - ✓ The faculty members that participated in the development of the IPASL belong to different academic departments. This committee is recognized as an institutional one, and its members are appointed by the chancellor of the moment.
 - ✓ The joint effort of the institutional committee members of General Education and of the Assessment of Learning to produce a document of common alignment was recognized as the base for formulating the IEG and the respective assessment cycles (See Appendix 1, Table 1A of the IPASL in Appendix A11).
- The faculty of the ADs, represented in the committees assigned to the OASL, are encouraged to become involved in the exploration, selection and evaluation of the most adequate methodologies (the most pertinent and sustainable) to produce, compile and add learning data at institutional level (See minutes of meetings, available in the OASL, with committees assigned to the OASL).
- As indicated in the *Guía de Ascenso en Rango de la UPRB* [UPRB Guide for Promotion in Rank], the participation of the faculty as members of the institutional committees assigned to the OASL is useful evidence for promotion files. In addition, in the area of *Creación y Divulgación* [Creativity and Dissemination], the faculty members may include educational research utilizing the data bank of learning. This is an alternative for the recognition of their contribution in terms of facilitating and strengthening student learning.
- In the academic programs that have been accredited or are in the process, faculty efforts are promoted, recognized and valued through participation in the design and development of the assessment systems of the program accreditation agencies. The faculty that is dedicated to these tasks, on the average, receive economic stimulus, such as compensations.

How effectively do academic and support programs document that the curriculum or program helps students achieve each key learning outcome?

The academic and support programs effectively document how the curriculum and its programs help students reach each of the learning goals. This is done in various ways:

1. The academic programs, which are accredited or in the process of accreditation, prepare documents of preconditions and assessment systems through which they inform how the curriculum or program promotes students to demonstrate different levels of excellence in each learning goal. In addition, they propose how each goal should be reached and how the assessment of learning will be done. In general, for this, the following is made: (a) an alignment between the standards of the accrediting agency and the departmental competencies of its graduates and (b) a selection of courses representative of the department's curriculum where data and evidence that demonstrate how the student develops and demonstrates learning utilizing particular assessment modes is compiled. Once approved by the accrediting agency, the assessment system is placed into operation. Data and evidence is collected for a period established by the agency to demonstrate if the students reached the learning goals. The process of preparing evidence of students' learning (tasks previously established) are generally accompanied with assessment criteria that help students as well as faculty to recognize the level of excellence achieved in tasks that respond to each of the learning goals. The data generated by the different program assessments are analyzed by professors at different times and decisions are made, for example, course changes, changes in the assessment instruments, or changes in the curriculum. This process identifies those students who have not met expectations and offers them additional opportunities for them to meet them and helps to maintain those who did meet expectations at that level of excellence. Moreover, the process documents (a) student performance from the moment they begin in the program, (b) participation in the curriculum which helps them develop the competences of graduates, (c) certifications, in those programs that have licensure tests, and (d) those who are practicing their profession after graduating from an accredited program with standards of excellence. The aforementioned places in manifesto the level in which the students fulfill the expected performance regarding the learning goals in the selected courses and in the totality of the program (See accreditation self studies from different academic programs in Appendix A17, available at the Exhibit Room).
2. Another way to document the achievement of the departmental learning goals is found in the initial stage of the implementation. This stage promotes academic and support programs of student learning to document the achievement of their goals through information included in the annual reports on student learning, which is handed in to the OASL. To generate assessment plans and to develop the aforementioned reports, the departments utilize two documents associated with the Institutional Plan for the Assessment of Student Learning: Document G: *Modelo para revisar/ crear planes de assessment del aprendizaje estudiantil departamentales* [Model for the Revision/Development of Plans for the Assessment of Departmental Student Learning] and Document H: *Plantillas para informar datos/resultados directamente relacionados con el assessment del aprendizaje del estudiantado* [Forms for reporting data/results directly related to the assessment of student learning] (See documents of the IPASL in Appendix A11, in the UPRB web page and in the OASL).

- a. The guide for the development of assessment plans (Document G) allows the DA's to show how the departmental learning goals are related to the alumni profile (See Document G in Appendix A11). In addition, the ADs establish a matrix to inform courses and its relationship with each of the departmental and institutional learning goals. The aforementioned help to establish the aspects or type of learning to be measured and the origin of the data or information on learning that will be measured to evidence the way in which students can be helped to achieve the set goals.
- b. The ADs utilize Document H (See Document H in Appendix A11) as a guide to prepare their assessment of learning annual reports. Through this report, the DA's inform direct and indirect measures of learning that demonstrate how the student has reached the departmental and institutional educational goals. In addition, these departments inform (1) how the results are used to improve or facilitate student learning, (2) those innovations in which the department is involved in and (3) the effect of the innovation on student learning. Regarding the service offices, Document H helps them to inform the type of activity held, its purpose and action taken to strengthen its link to student learning. This generates new opportunities to determine in a concrete manner, actions geared toward evaluating possible activities among the departments and the support programs directed toward improving student learning.

This process of submitting annual reports of student learning, which is in its initial stage of implementation, promotes each department and support office to reflect upon results and lead them to improve their services, offerings, courses or programs with the aim of facilitating student learning. This can be demonstrated through different routes, either by departmental or institutional assessments or through activities generated by other service components.

In addition, the annual reports facilitate the academic departments and service offices, directly related to student learning, to prove their effectiveness through varied efforts and from different sources. Moreover, the contribution offered by the OASL in the process of preparing the annual reports is fundamental in guiding them to identify the processes that are inclined to effectively evidence learning and utilize information to strengthen their activities, curriculums or programs.

What improvements has the academic program made with the assessment outcomes? How does this process of improvement happen?

The academic departments generate and use direct and indirect measurements of learning with the aim of evidencing student learning addressed at different levels of assessment. The collection, interpretation and analysis of the data obtained allows for the improvement and innovation of diverse aspects. Some examples of these improved and innovative aspects¹⁰ include:

- revision of regular courses and/or laboratories
- development of new courses
- changes in the curricular sequence of the different majors within a program
- support of learning in the classroom and/or laboratory through technological equipment
- utilization of software programs for problem solving
- development of distance learning courses
- utilization of the distance education platform, Moodle, in onsite courses for the remote access

¹⁰ Data obtained from the AD's and selected service offices annual reports submitted in years 2009 and 2010 ([based on Document H that accompany the IPASL (Appendix A11)]).

- to documents, tasks, course activities, among others
- establishment of tutoring programs or centers
- reinforcement of field experiences, including internship or practicum courses
- introduction or strengthening of co-curricular activities (e.g. BIOBLITZ, BIOEXPO & EXPO ADEM)
- revision of the assessment measurements or instruments of student learning
- development of educational modules
- integration of new and varied teaching methodology
- carrying out of curricular revision

At the institutional level, data generated is mostly related to the IEG and with other aspects that determine learning. The ADs and some student service offices take into consideration or utilize these data and results (a) in their curriculum revisions to offer activities directed toward strengthening specific learning aspects and (b) for revising their learning assessment instruments, at both departmental and classroom levels, among other uses.

The process of identifying the improvement or innovation needed and how to proceed to achieve it is specific for each AD. However, some aspects that are common, given the policies established by the UPRB, can be identified. Each AD should have an assessment structure that could consist of an assessment coordinator and in some instances an assessment committee. In the absence of a coordinator or committee, there are course coordinators in the Academic Departments with degrees. Independently of the type of structure, the ADs, in coordination with the institutional Office for the Assessment of Student Learning (OASL), are responsible for, among others: recommending the instruments to use for compiling data related to various aspects of student learning, collaborating in the administration of the assessment instruments, collaborating in the organization and collection of information or data and disseminating the results of the effectiveness of efforts carried out in the Department related to the aspects mentioned in the educational goals, so these could be used better or for enriching student learning.

It is important to point out that the AD assessment structure works in conjunction with the Curricular Revision Committee (if an active one exists in the department). The meetings among peers are given as part of the dissemination of results to identify the change and submit it to the AD faculty for approval. These changes, previously approved by the faculty, can be established immediately if there is no curriculum change or the approval of new courses (For example: Support towards learning within the classroom and/or laboratory through technological equipment, development of distance learning courses, introduction or strengthening of co-curricular activities, among others).

Changes that would be considered major, as a new curricular structure, must be submitted to the Academic Senate for approval. Changes which are considered minor, as is a change in the curricular sequence, are submitted to the Dean's Office of Academic Affairs for approval.

After the proper approvals, the implementation of the change is immediately effective, unless it requires the disbursement of economical resources.

Recommendations

- a. It would be beneficial for the Institutional Assessment Plan (IAP) to be endorsed by the components of the UPRB, disseminated to the university community and published in the UPRB web page.

- b. It is essential that the data gathered during the establishment of the IAP be analyzed and if possible classified for more effective use. In addition, it is important that it be disseminated; so the components of the Institution can utilize the information.
- c. It is important that the IAP include the procedure that will be followed to evaluate the IAP's implementation process.
- d. It is important that the OPIR have greater intervention to validate the information from the different mechanized systems with the goal of providing institutional data that will result more useful and pertinent by the different components of the UPRB. This could facilitate and promote more effective use of the information in the decision-making processes.
- e. It is necessary that a Webmaster be hired to exclusively attend the UPRB web page. The matters of greatest importance should be the renewal of the web page's graphics and the identification and updating of the existing data and documents, so it truly reflects the efforts carried out and the academic quality of the Institution. The hiring of the webmaster is in process.
- f. Revise the institutional assessment process in relation to the budget to systematically document if the assessment process for the assignment of funds and resources is done according to institutional needs.
- g. Strengthened the process for the establishment of the Institutional Annual Work Plan (operational) with the aim of being more proactive in establishing the most important priorities so that the components are assigned the necessary funds to reach their goals.
- h. Foster an institutional culture towards collaborative work among the components they are in charge of, regarding budget distribution as well as its administration.
- i. Generate an evaluation process for the annual reports that facilitates the extraction of the most important needs of the different components. The result of this analysis should occur starting at the base of the deanships up to the Chancellor's Office with the aim of having the funds assigned according to the most urgent needs within a framework as genuine as possible.
- j. Revise the Institutional Strategic Plan again in accordance with the present and projected fiscal situation to reflect upon the goals and objectives and suggest changes that are merited.
- k. In spite of the fact that the information is effectively disseminated, it is convenient to establish a mechanism which will allow the dissemination of the UPRB's achievements in terms of meeting with the implicit requirements in the accreditation documents, internal measures and in the audits.
- l. In the first phase of the implementation of the IPASL, it is necessary to generate or reinforce procedures that facilitate the dissemination of the student learning assessment results at all levels, including students.
- m. A periodic evaluation of the assessment process included in the IPASL should be maintained with the aim of improving and updating it.
- n. The ADs should facilitate the processes for the development and handing in to the OASL of the annual reports on student learning.
- o. Greater follow-up should be given to the ADs so that they revise or produce their assessment plans of student learning, taking into consideration both the institutional learning goals and their own educational goals (as it is explicit in forms included in the Document G [Appendix A11]).
- p. Generate an institutional effort for ADs to revise their curriculums with the purpose of guaranteeing these provide sufficient opportunities for students served to develop the content, competencies and skills comprised in the IEG. For example, it is recommended to have more periodic meetings within the Dean of Academic Affairs and ADs representatives in order to share

ideas about their experiences doing curricular revision and to discuss the best assessments they can use to evaluate their curriculum revision and implementation.

- q. Strengthen the OASL with the assigned fiscal resources and competent personnel, physical space, materials and equipment. This effort will allow for the speedy processing, analysis and timely dissemination of assessment data of student learning. In addition, it will permit greater dissemination and access to the information through diverse means and offer greater help and advice to the UPRB components in the use of the results related to achievements of student learning.
- r. In the instrument used to evaluate the faculty in the classroom by peers, a criterion to observe and value the use of innovative learning assessment techniques could be emphasized.
- s. An institutional effort should be generated to motivate the faculty to create and publish in diverse ways and media their writings related to assessment results for reinforcing student learning in the classroom.
- t. Reinforce and facilitate the process of submitting annual reports on the Assessment of Student Learning (see forms included in Document H in Appendix 11) by the academic departments and the learning support offices.
- u. Reinforce and facilitate the entering and analysis of data included in the reports on learning with the purpose of preparing periodical reports based on the findings of student learning at institutional and departmental levels.
- v. Strengthen and facilitate the process of dissemination of student learning findings and outcomes to the university community.

Generate guidelines; give follow-up and offer the institutional support necessary to carry out the following: (1) Promotion of establishment of learning assessment committees at the ADs that work in collaboration with the curriculum committees, both with well defined duties, so they can be more able to develop useful student learning assessment plans or systems of assessment in accordance with the IPASL; (2) Collaboration with the ADs in the production of student learning data and in the preparation of annual departmental assessment of student learning annual reports, and (3) Foster and facilitate the use of the institutional assessment results when making educational decisions.

Conclusion

The UPRB's self study process was affected by changes in its leadership and government, student conflicts (causing two institutional closings), a fiscal crisis and probation status applied by the MSCHE that required a monitoring report and follow-up visit. This impact was reflected in the many changes among the members of the Steering Committee and Sub-committees. However, the UPRB's commitment with the profound analysis of the institutional processes allowed for the continuity and fulfillment of the re-accreditation tasks.

From the UPRB's self study process, it is important to note the ample participation of the university community (professors, administrative personnel and students) and the application of a systemic working strategy throughout the Steering committee and subcommittees.

The findings of this self-study have allowed the UPRB administration to develop a plan of work for the coming years to be integrated into the strategic plan, once it is revised. This plan of work will emphasize analyze, understand and disseminate the institutional mission; the broadening of more effective communication through diverse means with all sectors of the university community with regard to the events and decisions that may affect them; and the support towards and continuous development of the institutional assessment of student learning to achieve a culture of documentation and use of evidence for improvement.

On the other hand, support is needed for, the hiring and professional development of faculty and other personnel, the fostering of research, the continuation of the accreditation of academic programs, the widening of the academic offerings in the evening sessions, and the improvement of the physical facilities. To achieve this support, there needs to be an adequate articulation between the planning processes and budgeting, as well as a search for new sources of income and institutional economies.

The aforementioned situations and processes has motivated the UPRB community to use the experience and knowledge obtained in order to become creative by using the resources available to innovate and make changes, develop in all dimensions and continue demonstrating excellence as an institution of higher learning throughout the assessment process.

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