

STANDARD II- CURRICULUM

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Introduction

In the [Program Presentation 2008](#), of the Graduate School of Information Sciences and Technologies (GSIST), University of Puerto Rico, to the Committee on Accreditation (COA), the School referred to the update development and implementation of its curriculum. The [updated curriculum](#) was approved by the University in [April 2011](#). The process required identifying societal changes on the Island and globally; describing the environmental context in which the School functions, trends in the library and information field and competencies needed for the new professional. This information was used to review the Program's [Vision, Mission, Goals and Objectives](#). The academic program that resulted from this process has been implemented during the past seven years. The aim has been to educate students as multifunctional information professionals, addressing the needs of the communities the School is responsible for and is seeking to serve.

Since 2008, the School has continuously engaged in a systematic planning process that has resulted in the revision of its objectives. In 2004, the School added an additional objective to incorporate distance education ([Objective #22](#)). This objective now supports the initiative to offer the [Master's program online](#).

As of 2011, with the curriculum update, the Graduate School of Information Sciences and Technologies is offering a [Master's degree in Information Sciences \(MIS\)](#) that encompasses two areas of emphasis or tracks: one on Library and Information Science, and the other one on Knowledge Management. (See Program offerings, [1st Semester](#) and [2nd Semester](#)). In addition to the Master's program, the School continues to offer two (2) post-bachelor's certificates and two (2) post-master's certificates. The Post-Bachelor's Certificates are: Teacher-Librarian, aimed at current and prospective school librarians; and Archives and Documents Management, aimed at training archives directors and those willing to serve in public and private institutions. The Post-Master's Certificates include: Academic Library Administrator, focusing on leadership and management competencies for academic librarians; and the Legal Information Specialist, focusing on updating knowledge and skills of professionals working in law libraries. Currently, both the Teacher Librarian and the Archives and Documents Management certificates are most demanded by students.

The Master's Degree in Information Sciences

Structure of the MIS Curriculum

The updated master's program curriculum is built upon a common set a total of [36 credit courses, including Core, Required, Highly Recommended and Electives](#).

Courses are offered in semester tracks allowing for an intertwined constructivist

sequence geared to the acquisition of new knowledge and development of skills. The sequence introduces students to areas of information that they have not been previously exposed to, allowing an incremental exposure to more complex issues and specific areas of study in one of the two areas of emphasis: Library and Information Sciences or Knowledge Management.

There are three (3) special transversal focus integrated in all courses: [Evidence-based practice for information professionals](#), [Problem-solving based learning](#), and Applied information technologies and communications. The required thesis or research project was substituted for a [Seminar on Knowledge Application \(Capstone\)](#) under one or more faculty members. Courses are concerned with recordable information and knowledge, and the information services and technologies to facilitate their development, production and use. Technology is studied and applied in all courses, allowing for the development of competencies for its effective use. The elaboration of an [electronic Professional Portfolio](#) is retained as a requirement evidencing competencies acquired. In the discussion of class activities and special projects students integrate the processes on the way to enter the [Seminar on Knowledge Application \(Capstone\)](#). Through the activities and class discussions, students become aware of trends, issues and concerns impacting the field. They are able to explore these trends and issues during the course. Students can develop the skills and competencies needed to confront and handle the implications of these trends and issues in libraries and other information agencies. They can use what they have learned in their courses to suggest changes and improvements in the way that libraries and other information agencies function today. [Research posters](#), essays and articles, some published in [Simbiosis Estudiantil](#), are prepared by students as a result of the Capstone experience.

The curricular sequence is presented below.

Table 2.1: Area of Emphasis: Library and Information Science. Curricular sequence.

Semester	Codification	Title	Credits
1 st Semester	CINF 6705	Information, Knowledge and Society	3
	CINF 6706	Research Methods in Information Science	3
	CINF 6707	Information and Knowledge Technologies	3
Second Semester	CINF 6708	Foundations of Information and Knowledge Organization	3
	CINF 6806	Organization and Retrieval of Information and Knowledge (Basic)	3
	CINF 6807	Reference Products and Services	3
Third Semester (Choose 9 of 12 credits)	CINF 6808	User Studies and Information Needs	3

	CINF 6809	Selection and Acquisition of Information and Knowledge Resources	3
	CINF 6810	Organization and Retrieval of Information (Advanced)	3
	CINF 6815	Information and Technological Competencies	3
	CINF 6816	Administration of Information Services	3
Fourth Semester	CINF 6998	Research Seminar on Knowledge Application (Capstone)	3
	CINF	Elective	3
	CINF	Elective	3
TOTAL:			36 crs

See [courses syllabi](#)

ELECTIVES

CINF 6017: The school library programs integrated to the curriculum (3 crs.)

CINF 6015: The public library: Its clients and services (3 crs.)

CINF 6105: Information production and use of information in the Humanities (3 crs.)

CINF 6107: Information production and use of information in the Social Sciences (3 crs.)

CINF 6109: Information production and use of information on Economics and Business (3 crs.)

CINF 6110: Information production and use of information in Law (3 crs.)

CINF 6118: Information production and use of information in Sciences and Technologies (3 crs.)

CINF 6215: Introduction to the design of computerized databases (3 crs.)

CINF 6416: The school library (3 crs.)

CINF 6507: Document conservation and preservation (3 crs.)

CINF 6800: Clinical experience in information services (1 cr.)

Table 2.2: Area of Emphasis: KNOWLEDGE MANAGEMENT. Curricular sequence.

Semester	Codification	Title	Credits
First Semester	CINF 6705	Information, Knowledge and Society	3
	CINF 6706	Research Methods in Information Science	3
	CINF 6707	Information and Knowledge Technologies	3
Second Semester	CINF 6708	Foundations of Information and Knowledge Organization	3
	CINF 6905	Foundations and Application of Knowledge Management	3

	CINF 6906	Knowledge Management Strategies, Innovations and Techniques	3
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Semester	Codification	Title	Credits
Third Semester	CINF 6907	Generation of Knowledge, Communication and Organizational Learning	3
	CINF 6908	Innovation Management: From Ideas to Implementation	3
	CINF	Elective	3
Forth Semester	CINF 6998	Research Seminar on Knowledge Application (Capstone)	3
	CINF	Elective	3
	CINF	Elective	3

HIGHLY RECOMMENDED

- CINF 6010 User studies and information needs (3 crs.)
- CINF 6100 Selection and acquisition of information resources (3 crs.)
- CINF 6005 Organization and retrieval of information (Basic) (3 crs.)
- CINF 6016 Information and Technological Skills (3 crs.)

ELECTIVES

- Web design and development
- Knowledge management in libraries
- Knowledge management in higher education
- Communities of practice
- Project management
- Systems for document and content management for business
- Processes management for business

This part of the Program Presentation describes how during the past seven years, 2008-2015, the School's curriculum objectives have been met, and the COA's curriculum standard has been addressed. For each section of the standard, it presents a summary of the School's compliance with that section of the standard, achievements, evidence, challenges, and steps that need to be taken.

Standard II.1 (Part 1): *The curriculum is based on goals and objectives, and evolves in response to a systematic planning process.*

Summary of School's compliance with this standard

One of the steps taken during the curriculum update process from 2008-2011 was the reexamination of the Program's [vision, mission, goals and objectives](#). During that period the faculty met in annual retreats and monthly meetings to identify trends in Puerto Rican society and the information industry from a global perspective and

trends in the library and information field. Focal groups and special meetings with alumni and employers were also celebrated to elicit information and find out about their expectations. Feedback was taken into account to determine competency areas needed to be satisfied, including skills, knowledge, and attitudes.

The increased need for diversity in recruitment of new professionals, in the provision of new services and development of collections reflecting changing demographics, and the changing character of local communities as they impact the school's offerings were also taken into account. The need for updating knowledge and for acquiring new skills for lifelong learning became an essential part of this context. With the faculty curriculum update the two areas of emphasis were recognized: Library and Information Science and Knowledge Management.

From 2008-2015, in continuous annual retreats and monthly faculty meetings, the GSIST faculty has systematically identified, evaluated and discussed priorities in terms of needs the Program seeks to satisfy. Through the two strategic plans elaborated for 2008-2011, and 2012-2016, the GSIST has been able to focus and monitor its path.

The School's objectives are grouped into categories reflecting the ALA Standards: program objectives, faculty development, students, administration, physical facilities and resources, curriculum development and services to alumni and the field. The School's objectives directly related to curriculum are: program objectives in terms of curriculum design (#1-14, 16-19) and program development objectives (#20, 22-23). The specific objective (#20) related to the Continuing Education and Professional Development Program and certificates is included in "Services to alumni in the field". The objectives guide the GSIST's curriculum design, implementation and instruction.

Achievements

1. With the updated curriculum syllabi have been revised to ensure that the objectives are stated in terms of educational results to be achieved. Class activities and learning strategies are included in course objectives, in order to facilitate achievement of educational results.
2. New strategies and techniques for course evaluation are being implemented in an effort to determine how the course has facilitated student learning. [A Bank of Rubrics](#) has been developed to assist in student's learning assessment.
3. Interest for the delivery of the master's program through distance education have grown out of demand in Puerto Rico and the Caribbean, and has led the School to present the project to the institution. (See [Objective #22](#) and [Proposal](#))

Evidence

1. GSIST's Vision, Mission, Goals and Objectives ([Online](#) and on-site).
2. Courses Descriptions and Syllabi (See Core, Required, and Highly Recommended courses) [online](#)
3. Student's Course Evaluations ([online](#) and [on-site](#))

4. Student's Electronic Professional Portfolios (See [Manual and Examples](#))

Steps to be taken

- Continue to revise the vision, mission, goals and objectives aligned to the institutional and the GSIST's strategic plans.

Standard II.1 (Part 2): *Within this general framework, the curriculum provides, through a variety of educational experiences, for the study of theory, principles, practice and values necessary for the provision of service in libraries and the information agencies and in other contexts.*

Summary of School's compliance with this standard

The GSIST's curriculum aims to develop a multifunctional professional with basic competencies in designing and offering information products and services in different environments. It is multidisciplinary in nature, and with the updated curriculum it focuses on two areas of emphasis: Library and Information Sciences and Knowledge Management, with 3 specific transversal focuses integrated in the overall courses: Evidence-based practice of the information professional, Problem-solving based learning, and Applied information technologies and communications. A variety of educational experiences are provided throughout the curriculum geared to the study of theory, principles, practices, and values, in the context of information resources and services in libraries and other information agencies.

The introductory course, Information, Knowledge and Society (CINF 6705), the Foundations of the Organization of Information and Knowledge course (CINF 6708), the Research Methods in Information Science course (CINF 6706), and the Information and Knowledge Technologies course (6707) are particularly relevant in this context. The introduction to theory begins with the Information, Knowledge and Society course (CINF 6705), where new students are exposed to basic competencies, ethics and values of the profession.

The School provides highly recommended clinical experiences as fieldwork (CINF 6800, 6805), and offers students the option of taking courses in other areas of interest through independent study, special topics, workshops and cross-listed courses from other departments. In this respect, it addresses and facilitates development in students of basic competencies needed to function as effective information professionals, in a diversity of environments and contexts. The focus reflects the broad, multidisciplinary nature of the curriculum.

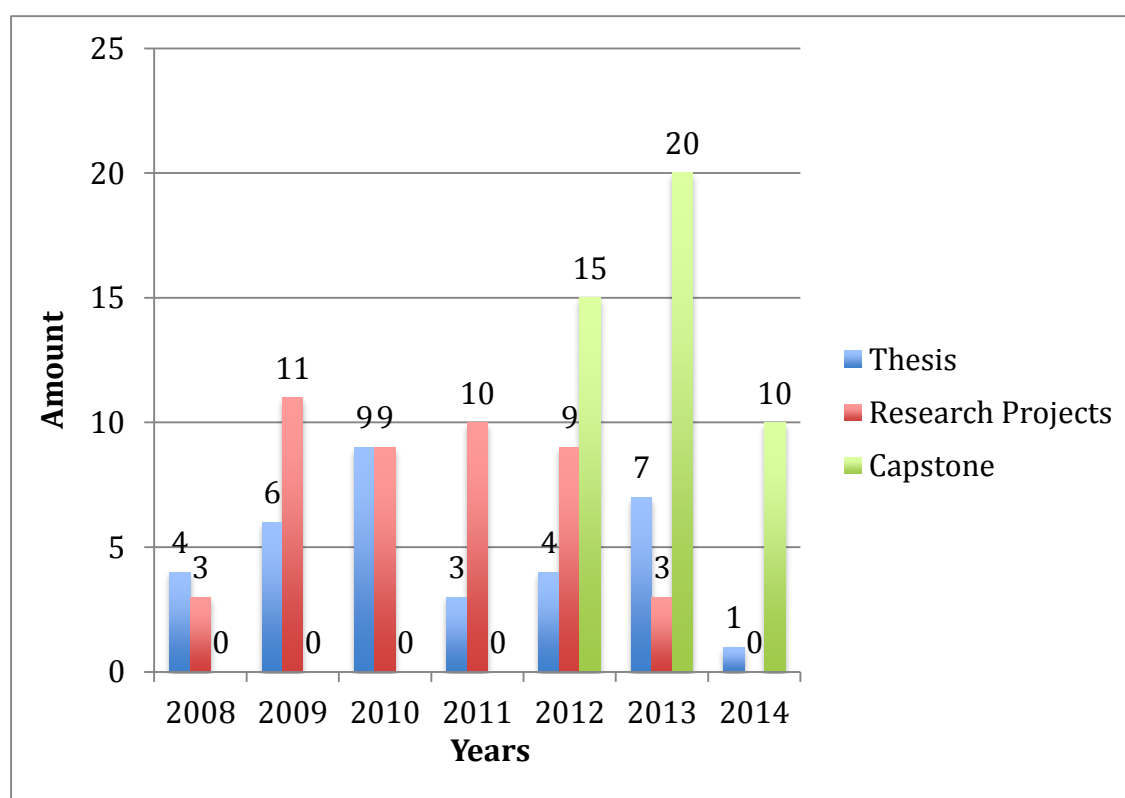
Learning strategies and educational experiences are included as components of each course syllabus. The design of learning strategies relates to course objectives, content, materials and resources, and evaluation. Strategies such as team teaching, collaborative learning, added value products, site visits, case studies, group projects are part of course design.

Research is included in the curriculum, particularly with the research methods course, the two transversal focuses integrated in all the courses: Evidence-based practice of

the information professional and Problem-solving based learning, and the Seminar on Knowledge Application (Capstone).

From 2008 to 2014, the School approved 124 research experiences. In Graphic 1 below, the preparation of 34 theses (28%), 45 research projects (36%) and 45 (36%) contributions in the Seminar on the Application of Knowledge (Capstone) is highlighted.

Graphic 2.1: Comparative Research Efforts - Thesis, Research projects and Capstone, approved from 2008-2014, N=124



Achievements

1. The GSIST's learning strategies toolbox includes a variety of educational experiences to evidence knowledge acquisition and competency development, such as creation of blogs and wikis as part of the core and required courses; student presentations in classes and in special events (such as [Jornadas de Investigación](#) (Research Forum, conferences); student publications in [Simbiosis](#) (the School's electronic journal), group projects, such as the development of learning skills modules.
2. The curriculum includes a series of courses in which theory, principles, practices and values important for the provision of resources and services in libraries, information agencies and other contexts are presented, using a variety of teaching and learning strategies.

3. The curriculum allows students to take fieldwork (practicum), independent study, and special topics courses which address their specific needs and interests, as well as provide them the opportunity to develop competencies needed to provide effective information services in libraries, information agencies and other contexts.

Evidence

1. Courses [Descriptions](#) and Syllabi. (Core, Required and Highly recommended [course syllabi online](#))
2. Student [program electronic portfolios](#)
3. Conference programs showing student participation. (On site)
 - 3.1 ACURIL 2013 Puerto Rico;

<http://egcti.upr.edu/images/sampled/ata/acuril2013.pdf>

Examples of these have been:
 - La Biblioteca Ángel Quintero Alfaro, de la Facultad de Estudios Generales, en la *Universidad de Puerto Rico, Recinto de Río Piedras diseñada como un “Commons” de Aprendizaje: Un ejercicio preliminar*, by **Gina Rivera-Santos**, Master student, Graduate School of Information Sciences and Technologies, University of Puerto Rico
 - Transformación del Centro de Recursos Electrónicos en la Biblioteca General, de la Universidad de Puerto Rico en el Recinto de Mayagüez, en un Commons de Aprendizaje : Propuesta en Acción Proactiva, by **Anidza Valentín-Rodríguez**, Master student, Graduate School of Information Sciences and Technologies, University of Puerto Rico.
 - PENTAGRAMA: Espacio virtual de música y lectura para la comunidad de estudiantes subgraduados del Conservatorio de Música de Puerto Rico con un “commons” de aprendizaje e investigación, by **Yolianna León-Santos**, Master student at the Graduate School of Information Sciences and Technologies, University of Puerto Rico.
 - El desarrollo de un ciudadano como e-Paciente para lograr el apoderamiento de la información en salud: Antecedentes y elaboración de un portal de información como *un “commons” de información*, by **Mary Ann Pérez-Pérez**, Master student at the Graduate School of Information Sciences and Technologies, University of Puerto Rico.
 - 3.2 ACURIL 2014 Bahamas:
 - Forty-Five Years of Learning, Teaching, Research, and Service at the Graduate School of Information Sciences and Technologies (1969-2015): Documentary Research Project Presenters: Research students: **Glorimar Rodríguez-Sánchez** glorimar.rodriiguez17@gmail.com, Jorge Ruiz-Rodríguez Jorge.ruiz.rodriiguez@gmail.com, **Gretchen Carrasquillo-Ramos** gretchen.carrasquillo@upr.edu, Jan Albino-González janalbino@gmail.com, and Luisa Vigo-Cepeda, Ph.D., Project Director luisa.vigo@upr.edu Graduate School of Information Sciences and Technologies, University of Puerto Rico: <https://www.smores.com/6hhhg-caribbean-boulevard-at-acuril-2014>; <https://www.smores.com/prd2p-44th-acuril-conference-in-bahamas>

Challenges

- There is a need to identify, expand and diversify the opportunities for students to be exposed to more practical experiences in the fieldwork, or

with a practicum course, in order to incorporate theories, principles, and values in the provision of library and information services.

- To offer the GSIST’s master’s as a distance education program.

Steps to be taken

- Work more closely with the School’s Advisory Board, which includes representatives of local and regional professional associations and communities of practice, to obtain their input and ideas on how to expand and diversify fieldwork experiences for students. The close contact of the School with local professional associations, where faculty members play leadership roles, facilitates this collaboration.

Standard II.2: *The curriculum is concerned with recordable information and knowledge, and the services and technologies to facilitate their management and use. The curriculum of library and information studies encompasses information and knowledge creation, communication, identification, selection, acquisition, organization and description, storage and retrieval, preservation, analysis, interpretation, evaluation, synthesis, dissemination, and management.*

Summary of School’s compliance with this standard

This section identifies basic competencies required for the information professional. Several courses, core, required and elective, incorporate these numerous elements and develop the competencies required. Core and required courses help ensure that competencies are acquired by all students. In addition, special topic courses (CINF 6995) also facilitate the acquisition of those competencies.

The following table indicates that with the updated curriculum, which includes core, required, highly recommended and elective courses, the aspects of information knowledge creation, communication, identification, selection, acquisition, organization and description, storage and retrieval, preservation, analysis, interpretation, evaluation, synthesis, dissemination and management, are present. Students are exposed to basic and advanced levels of knowledge acquisition and the development of the basic skills relating to these subject areas.

Table 2.3: Curriculum Elements and Identified Courses by Code

Curriculum Elements	Number of Courses	Course Code
1. Information & Knowledge Creation	5	6705, 6706, 6810, 6815, 6908
2. Communication	6	6707, 6810, 6816, 6905, 6906, 6907
3. Identification, Selection, Acquisition of Information	7	6808, 6706, 6708, 6806, 6808, 6809, 6810
4. Organization & Dissemination of	8	6708, 6806, 6807, 6815, 6810, 6905, 6906, 6907

Information Organization & Description, Store & Retrieval		
5. Preservation	3	6809, 6507, 6800
6. Analysis, Interpretation, Evaluation, Synthesis	10	6706, 6708, 6808, 6809, 6810, 6815, 6816, 6905, 6906, 6998
7. Management	4	6708, 6810, 6816, 6907

Achievements

1. In response to societal changes and information demands, the School has incorporated a variety of educational experiences that apply information technology into traditional library and information studies courses. As a result, the scope of the curriculum has expanded and become more multidisciplinary.

Evidence

1. Courses Descriptions and Syllabi. Courses have been organized under main topic areas, covering the essential character of the field of Library and Information Science as well as Knowledge Management. (All courses' syllabi are available [online](#), as well as on-site).

Standard II.3.1: *The curriculum fosters development of library and information professionals who will assume an assertive role in providing services.*

Summary of School's compliance with this standard

The GSIST's curriculum provides students opportunities for the acquisition of knowledge and and development of skills related to playing an assertive role in providing services. See [Courses Descriptions](#). Leadership, assertiveness and commitment to the profession are stressed and developed in courses, but particularly in the following courses: Information, Knowledge and Society course (CINF 6705), Management of information services (CINF 6816).

Involvement in other activities such as the Student Council, school committees, professional organizations, presentations of research results (papers, posters) in conferences, all of which are encouraged by the School, fosters student's commitment to the profession, to providing library and information services.

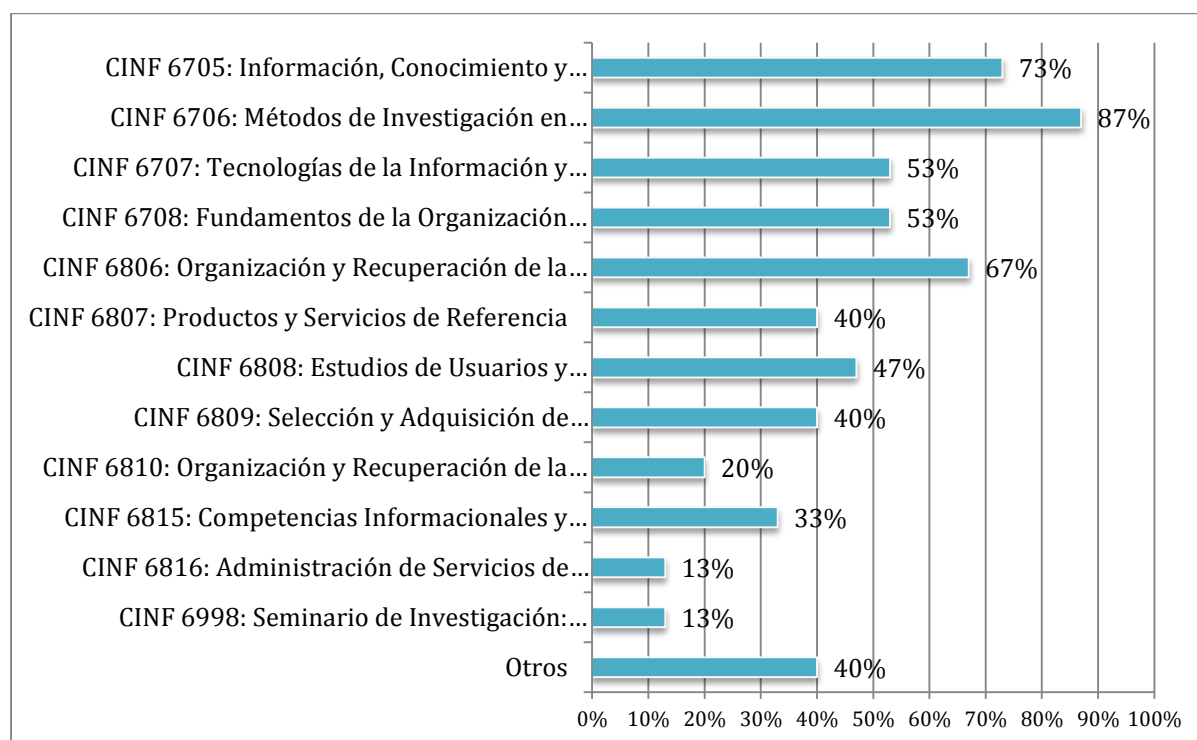
The [Student's Professional Portfolio](#) provides evidence of knowledge acquisition and competencies development, and demonstrates participation in various aspects of the Program. It documents the student's commitment to the field.

Achievements

1. Since 2007 the Student's [Electronic Professional Portfolio](#) has improved the process to evidence the level of knowledge acquisition and competencies development, as well as making it more useful for students in seeking jobs and future career development.
2. Student evaluations of the following courses have been most positive: CINF 6705, 6706, 6707, 6708, and 6806.

In a survey conducted during October 2014, [students' opinions](#) are shown regarding courses they feel are preparing them for the field, particularly on research, Foundations of the field, Organization and Retrieval of Information, Information technologies, User studies and information needs. Fifteen (15) second-year students participated in this survey.

Graphic 2.2: Second-Year Student Survey Results about Course Satisfaction (Track: Library and Information Science)



This response reinforces the importance of the particular areas of the curriculum, which focus on preparing professionals with leadership knowledge and skills.

3. Student opportunities to develop leadership skills and provide services within their course of studies at the GSIST has expanded and broadened, particularly with their participation in professional associations, committees, councils, research projects and special School activities.

Evidence

1. Student Course Evaluations (On-site) (See instruments [Online](#) and [on-site](#))
2. Exit [Interview Questionnaire Instrument](#) and Results (On-site)
3. Student Electronic Professional Portfolios ([Online](#))

Standard II.3.2: *The curriculum emphasizes an evolving body of knowledge that reflects the findings of basic and applied research from relevant fields.*

Summary of School's compliance with this standard

Research is an essential element in the GSIST philosophy and it is evidenced in the incorporation of the special focuses on Evidence-based practice of the Information Professional in different courses, as well as the Problem-solving approach, applying new technologies. As a key component for the future development of the profession, research is an important means through which the instructional program is enriched. Research contributes to solving problems faced by professionals in the field; provides answers to significant questions and offers opportunities to develop policies and new products and services. The students participation in the Seminar on Knowledge Application (Capstone) contributes significantly to evidence the research basic knowledge acquired and skills development within the research endeavor.

During the process of updating course syllabi, faculty members incorporate results of basic and applied research from relevant fields. This is reflected in course bibliographies, in student assignments, and in topics covered in courses. The need for graduate students to experience the research process throughout their curriculum is recognized as critically important by the Dean of Graduate Studies and Research, as well as by the faculty and administration of the School.

The research courses in the curriculum include the evaluation of research in the field and in related fields. These courses include Research methods in the information field – CINF 6706)), and the Seminar on Knowledge Application ([Capstone-CINF 6998](#)). In addition, all core and required courses include the Evidence-based practice for information professionals and the Problem solving based learning transversal focuses and provides activities to secure the learning process.

Since 2012, based on Academic Senate [Certification #38](#) (2012-2013) all graduate programs on campus include a thesis or research project component as a graduation requirement. Student theses and/or projects are an essential part of the curriculum's focus on research. With the updated curriculum, the School chose to have students align their research experience to a [faculty research line](#) (as identified by ALISE). The experience is provided through the Seminar on Knowledge Application ([Capstone-CINF 6998](#)).

Students present their research findings in the [Jornadas de Investigación](#), an annual research forum held at the School. Students and practitioners in the information field are invited to share their research activities. In addition, students present their

research proposals or results in professional organizations, such as the Association of Caribbean University, Research and Institutional Libraries ([ACURIL](#)).

Achievements

1. The [OERI](#) (Observatory of Information Studies), the School's research unit, with its new vision has stimulated and strengthened the research environment of the School. It pursues to provide students with more information about research activities (through the School's website), as well as to alert about opportunities to participate in research projects.
2. The development of the [OERI](#), is expanding the School's research commitment and activities, including the dissemination of information for faculty and students on the School's website.
3. Until 2011 students engaged in thesis and research projects continued to do so. Students' theses drew on basic and applied research from related and relevant fields, such as communications, education, law, psychology and sociology, reemphasizing the importance of a multidisciplinary point of view. Participation in research demonstrated high interest in research projects.
4. Several students have been invited to present their research in professional events, both within the Island (ASEGRABCI, the School's Alumni Association and ABESPRI, the Association of School Librarians) and outside of Puerto Rico (Association of Caribbean University and Research and Institutional Libraries, ACURIL). One student published her research findings in a conference proceeding, and others have published their results in *Simbiosis* and local professional publications.
5. The local and regional organizations continue to bestow research awards to students recognizing those students who, according to their research commitment, have contributed with exceptional research at the Master's level.

Evidence

1. Examples of students' theses, research projects, from 2008-2013 ; Special research conducted comparing [output of theses, research projects and capstones activities 2008-2014](#); and outcome examples from the Seminar on Knowledge Application ([Capstone](#)). (List Online and work On-site)
2. Examples of presentations in the [Jornadas de Investigación](#) en el Campo de la Información, program materials for this activity. (Online and On-site)
3. ACURIL 2013 and 2014 programs with mention of students presenting research. (Online and Samples available On-site.)
4. Articles related to students' research findings. (Samples available On-site.)
5. Course syllabi. (Core, required and highly recommended courses, and course syllabi available [online](#) and On-site)
6. Student's electronic [Professional Portfolios](#) (Online)

Challenges

- There is a need to continue promoting more student participation in national and international conferences, as well as more efforts to publish and share the results of their research.

Steps to be taken

- To continue with the celebration of annual Jornadas de Investigación and students' awards program, to promote more student participation in conducting research, to publish and share research results. [Symbiosis, the School's electronic journal within the OERI](#), will continue featuring student work in a special issue, which will serve to stimulate student publication.

Standard II.3.3: *The curriculum integrates the theory, application, and use of technology.*

Summary of School's compliance with this standard

Since the curriculum update in 2011, the School has emphasized the importance of technology as a working tool in the curriculum. Technology has been identified as a core component to be integrated in courses offered across the curriculum. In addition to the basic course on information technology (CINF 6707), the curriculum includes courses that focus on application of technology in handling documents, in designing databases, in systems analysis, in automation, in data networks. All courses (core and required) include information technologies in a variety of ways. In the first semester of Academic year 2012-2013, [students in the Technologies applied to information and knowledge course \(CINF 6995-003\)](#) presented a variety of applications studied evidencing their handling of new technologies.

The following table identifies specific courses with technological components.

Table 2.4: Technological Components in Courses

Technological Components	Number of Courses	Courses (Core, Required)
Theory, Application and Use	7	6706, 6707, 6806, 6807, 6810, 6815, 6998
Information Products	6	6707, 6806, 6807, 6810, 6815, 6998
Applied Technologies and Working Tools	8	6707, 6806, 6807, 6809, 6810, 6815, 6816, 6998

The emphasis on students acquiring competency in handling new technology is reflected in the content of these courses, as well as in teaching and learning strategies, including assignments using the hardware and software available as part of the School's technological infrastructure

Achievements

1. Since 2011, courses in the curriculum have emphasized the use of technology as a working tool. The theory, application and use of technology are integrated across the curriculum. In addition to basic and advanced courses in information technology, there are a wide variety of elective courses focusing on different aspects of technology, including, for example, Design of computer databases (CINF 6215 and 6217), Automation of information services (CINF 6307), Fundamentals of data networks (CINF 6315), Design of multimedia products (CINF 6205).
2. Students are able to gain the skills needed to use technology effectively through taking advantage of the School's computer and multimedia labs, with state of the art equipment, hardware and software needed to complete assignments and course requirements. The School's physical facilities and resources provide adequate support for completing study and research assignments and requirements.

Evidence

1. Course syllabi. (Core, required and highly recommended courses syllabi available [online](#): all course syllabi available on-site)
2. Students course projects applying technology and multimedia, for example [Tercer Sector Información a la Orden](#) (2010, with Google sites), by Limarie Colls-Colón and Milagros Arbelo-García and [Conferencias Caribeñas](#) (2011, with the Drupal platform) for the Institute of Caribbean Studies, by Luis Méndez-Márquez and examples of technology projects in classes.
3. Student electronic Professional Portfolios ([Online](#))

Standard II.3.4: *The curriculum responds to the needs of a diverse society including the needs of underserved groups.*

Summary of School's compliance with this standard

In contrast to the United States, Puerto Rican society is more homogeneous. Immigrants are individuals with a shared culture and language, such as Dominicans, Colombians, Cubans, Argentineans, Mexicans, Chileans and those of other nationalities. With few exceptions, immigrants generally integrate themselves in time into the general Puerto Rican population. Since a large group of citizens from the Dominican Republic have settled in various communities of Santurce and Río Piedras, efforts have been made to include historical and social aspects of the Dominican Republic in some of the courses and in extracurricular activities. The diversity and multicultural aspects of library users are reflected in courses such as Research Methods in Information Science, User Studies and Information Needs, Special Topics, and in extracurricular activities.

The underserved community in Puerto Rico includes the blind, deaf, physically challenged, senior citizens, homeless, illiterate, people with special needs (battered

women, people with AIDS, inmates and immigrants), and those living below the poverty level. Special attention is given to these groups in the services courses and in some [faculty research lines and projects](#).

Examples of the application of multicultural and multiethnic aspects of the information field include presentations at the Association of Caribbean University, Research and Institutional Libraries (ACURIL). Practicum or fieldwork included in the curriculum provides students the opportunity to work in disadvantaged areas and with underserved groups.

In 2010, the School was involved in offering a distance continuing education program in alliance with the National Library Pedro Henriquez Ureña in the Dominican Republic. Faculty traveled to the Dominican Republic to support the teaching/learning experience. Close relationship is maintained with various institutions in the Dominican Republic, particularly with the Pontifical Catholic University Madre y Maestra, since a Distance Education Program was offered in 2007, and three students came to the School and finished their MIS degree onsite. These experiences are examples of the School's interest in the multicultural and multiethnic context of the Caribbean society.

The success of this experience is recognized by [ACURIL](#) (the Association of Caribbean University, Research and Institutional Libraries) having selected the School as one of their training sites and continuing education. One of our faculty members serves as Executive Secretary of the organization. The School's strong and continued relationship with ACURIL allows students and faculty participation in and exposure to the multicultural, multiethnic and multilingual aspects of this international regional library association.

In addition, the School is an integral part of the [BIREME-Virtual Health Project](#) through the [Virtual Health Library of Puerto Rico](#) and is supporting the School with technological infrastructure to assist in continuing education. The School and the University are committed to continue strengthening future options in these areas.

The partnership with the [University of Tennessee's School of Information Sciences](#) has broadened the opportunity for the School's students to learn more about the diversity of cultures in the United States, and to obtain a broader understanding about multicultural, multiethnic, multilingual issues and concerns.

From another standpoint, there have been theses and research projects on services to the poor, the elderly, the physically and mentally challenged, school dropouts, and other underserved groups evidencing the School's interest to cater to the needs of all members of the population.

Achievements

1. Since 2000 students have had the opportunity to work, as volunteers, in ENLACE, an information center in the Río Piedras community, located in the heart of Río Piedras, adjacent to the University. The project is geared to the low-income community, immigrants and the homeless in Río Piedras. This is

an example of the School's moving beyond the curriculum to respond to the information needs of the surrounding community, including the needs of underserved groups.

2. A new professor from Perú joined the faculty in 2010, and students from Dominican Republic, Ecuador, Guatemala and Mexico are now part of the School's community. This action provides an opportunity to share experiences and ideas from a multicultural and multiethnic perspective.
3. The [alliance with the University of Tennessee](#) has provided an opportunity to broaden and enrich the multiethnic and multicultural experience of faculty and students in the US. The newly alliance signed between the University of Puerto Rico and [Universidad Carlos III de Madrid](#) opens new avenues for closer collaboration in teaching, creativity and research.
4. The School's strong and continued relationship with ACURIL allows students and faculty's participation and exposure to a multicultural, multiethnic and multilingual international regional context within the functioning of this library association.
5. Diversity and multiculturalism are reflected in both required and elective courses, including, for example, the Information, Knowledge and Society course, the User studies and information needs course, the Products and reference services course, the Selection and Acquisition of information resources course, and the school-special-public library courses. Issues dealing with multiethnic and multilingual populations, with underserved groups in society, are identified and discussed in these courses.

Evidence

1. [Thesis and research projects dealing with topics relating to needs of a diverse clientele, from 2008-2011](#); experiences from the Seminar on Knowledge Application (Capstone) (2012 on) (on-site); and the comparison made regarding [research production of students 2008-2014](#).
2. Courses syllabi. (All core, required and highly recommended [course syllabi available online](#) and on-site)
3. Examples of student assignments and projects in courses including multicultural content (On-site)
4. Documents relating to the [SIS University of Tennessee](#) and [Universidad Carlos III de Madrid](#) alliances. (Online and On-site)
5. ACURIL materials, documents, faculty and student participation (Online and On-site)
6. BIREME-VHL – [Virtual Health Library of Puerto Rico](#) project documents

Challenges

- There is a need to increase students' participation in fieldwork experiences and community projects related to multicultural and underserved clientele. A heightened awareness of the value and importance of this work needs to be strengthened and continued.

Steps to be taken

- Identify effective strategies to increase student awareness and participation in fieldwork experiences and community projects relating to multicultural and underserved clientele. Develop outreach efforts to bring representatives of community groups to exchange ideas with students, their interest and commitment to participate in fieldwork and community projects will be stimulated.

Standard II.3.5: *The curriculum responds to the needs of a rapidly changing technological and global society.*

Summary of School's compliance with this standard

As previously explained in Standard II.3.3, the School is committed to the integration of technology in the curriculum. Ongoing curriculum updates based on the assessment process, the use of special topics courses and workshops provide the flexibility required to respond in a rapid manner to the needs of a changing technological and global society. Course syllabi are revised and special topics courses (CINF 6995) are developed as these needs are identified.

A significant increase in the integration of information technology in the School's curriculum has been evident since the year 2000. Technology has been identified, as an important element in the curriculum, with the transversal focus in all courses and it is an integral part of the content, or integrated as a tool to be used by faculty and students in the teaching-learning process. As previously indicated, applied technology is integrated in all the curriculum, particularly core and required courses, as a means to impact and support the teaching/learning process and the delivery of new kinds of library and information services in response to the needs of a rapidly changing technological and global society.

Courses dealing with technology as a main focus of study in theory, application and use; to create information products, and as applied technologies and working tools, are 6707, 6806, 6807, 6809, 6810, 6815, 6816, and 6998.

In addition, special topics and workshop courses allow the School to respond quickly to new trends, issues and concerns in this context.

Achievements

1. The GSIST is recognized as having taken a leadership role in the use and application of new technology on campus. The involvement of some faculty members in the Title V project, focusing on information and computer literacy, demonstrated this leadership role.
2. All core courses incorporate issues of global trends and technologies. One of the core courses is specifically about information technology (CINF 6707).

3. The range of courses offered reflects the importance of the application and use of technology in all aspects of the field. Students are able to take special topics courses (CINF 6995), which focus on new issues, trends and developments in technology, such as: Introduction to Community Informatics, Evidence-based Librarianship and Comparative and International Librarianship.
4. Students have selected thesis topics that relate to the impact of technology on the field, or involve the application and use of technology to carry out the research.

Evidence

1. Course [syllabi](#), with specific activities involving the integration of information technology and references including readings related to technology and global changes. (Core, required and highly recommended courses syllabi are available online and on-site)
2. Examples of student [thesis and research projects](#), and products emanating from the Capstone experience involving technology (on-site)

Challenges

- Within the context of rapid changes in the global society and the impact of the digital divide, faculty need to be assertive and proactive in stimulating students to be creative and innovative in considering solutions or alternatives to confront this issue.
- Given continued technological development and applications in the field, students need to continually expand and update their knowledge and skills in the application and use of information technology. The School needs to expand its co-curricular activities that focus on developing the continued acquisition of knowledge and skills in this area.

Steps to be taken

- Identify and develop colloquia, dialogues and other kinds of extra curricular activities that aim to continually expand and update students' knowledge and skills in relation to applications and use of technology. Involve the Student's Council in planning these activities.

Standard II.3.6: *The curriculum provides direction for future development of the field.*

Summary of School's compliance with this standard

The faculty acknowledge that one of the School's greatest contributions to the present and future development of the field in Puerto Rico and the Caribbean has been students research endeavors, thesis or research projects, that cover a variety of topics relevant to the future development of the field in Puerto Rico and in other countries of the region. However, with the updated curriculum the thesis and research project requirement was eliminated. One of the reasons for this action was the delay in which the research requirement was taking place. An alternative for the research endeavor was selected; the Seminar on Knowledge Application (Capstone) aligned to the faculty research lines (following the ALISE research areas), with projects responding to those lines.

Students are encouraged to present their work at the School's *Jornadas de Investigación* (the School's research forum), and at conferences of local and international professional organizations, as well as to publish the results of their research. The School supports student attendance and participation in various conferences. Student participation in ACURIL (Association of Caribbean University, Research and Institutional Libraries) annual meetings in different countries in the Caribbean is strongly encouraged. Students are exposed to different cultures and points of view within the diversity of the Caribbean experience as it is related to the library and information field.

Since 2008, the Continuing Education workshops have had an impact on the development of the field by facilitating and updating information professionals' interchange of ideas and acquisition of new knowledge, skills and competencies.

Achievements

1. The School's program includes Post-Master and Post-Bachelor's certificates, besides the Master's degree, which provide students opportunities to specialize and explore new areas and aspects of the field.
2. The School's continuing education activities have also provided opportunities to learn about new trends and developments in the field. In 2013 the School formally established its Continuing Education and Professional Development Program to cater to the needs and upgrade and enrich the knowledge and skills of its alumni, students and other information professionals.
3. A variety of continuing education congresses, conferences, seminar/workshops have been delivered during the period of 2008-2014, among them:
 - [IFLA 2011 Puerto Rico](#)
 - International Open Access week in [2014](#)

- [BIREME-VHL Virtual Health Library of Puerto Rico](#) Trainings, and development of the Community of Practice in 2012
 - [ACURIL 2013 in San Juan, Puerto Rico](#): Alumni Meetings/Accreditation Process, [2013](#), [2014](#)
4. Student's course projects, theses and research projects and projects resulting from the Seminar on Knowledge Application (Capstone) reflect an interest in new trends and developments in the field, including technology, digital libraries, virtual reference services, intellectual property and intellectual freedom.
 5. Students have presented the results of their research every semester at the School's *Jornadas de Investigación* events. This forum provides an opportunity for the entire School community to learn about what research has been done by students as part of the curriculum. In addition, students have presented their research at ACURIL conferences in different Caribbean countries.

Evidence

1. Students' [theses and research projects](#), 2008-2011; outcome from the Seminar on Knowledge Application (Capstone), 2011(on-site)
2. Examples of presentations in the [Jornadas de Investigación en el Campo de la Información](#) and in ACURIL (programs) (Online and on-site)
3. Materials describing the School's certificate program (on-site)
4. Examples of student course work and projects (on-site)
5. Continuing Education materials (Online and on-site)

Challenges

- There is a need to continue to provide financial support for students to attend and participate in regional and international professional association activities, to be able to present their work at these activities. Sources of external funding need to be identified and obtained.
- The School's Continuing education and Professional Development Program needs to be planned, with a diversity of offerings, and continuously aligned to the curriculum, trends of the field and the needs of the alumni, students and other information professionals.
- There is a need to promote more effectively the School's post bachelors and postmaster's certificate programs, to increase the demand for these programs.
- There is also a need to create a Certificate on Knowledge Management to cater the needs of the industry.

Steps to be taken

- Identify and write proposals for both institutional and external funding to support student participation in professional association activities, presenting and disseminating the results of their research.
- Identify innovative, creative strategies to use in promoting the School's certificate programs.
- Work together with the University's division of continuing education and professional studies (DECEP), to identify avenues to offer continuing education workshops and short courses with credit.
- Work with representatives from local professional associations and other providers of continuing education to explore alliances to offer conferences and congresses in specialized areas, trends, in the field.

Standard II.3.7: *The curriculum promotes commitment to continuous professional growth.*

Summary of School's compliance with this standard

Continuous professional growth is considered an important value to be promoted within the School's faculty, staff, students, and alumni. The school has encouraged faculty and staff to take advantage of workshops offered by the University aimed at professional development. The School's graduates have participated in continuing education activities sponsored by the School, often in collaboration with activities of local professional organizations in the field. In addition, some alumni choose to continue taking courses after graduation to take advantage of elective, special topics. It is also being observed that alumni are pursuing the doctoral degree in Puerto Rico (Faculty of Education UPR, Law School), in the US (Rutgers and with the San José State U program) and in Spain (Universidad Carlos III de Madrid, Universidad de Murcia).

Although up to 2013, the School had not offered a formal continuing education program, continuing education congresses, conferences, seminar-workshops had been designed and directed to cater the needs of alumni and students. The aim had been to develop an active community of learners. Topics presented in continuing education activities are generally not covered in regular courses or to enrich the existing program. The "Achievements" heading of the preceding section (Section 9) includes some examples of continuing education events organized by the School or in which the School has been a key element in the organization.

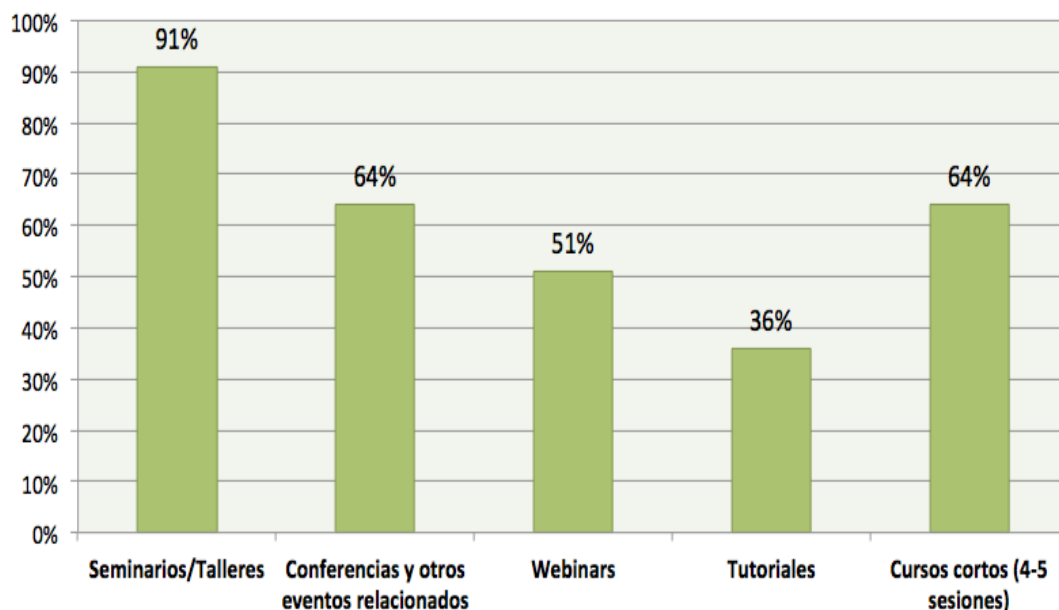
Alumni and other professionals in the field have suggested topics for continuing education in surveys and focus group discussions. Alumni and other professionals in the field have requested advanced degrees and a doctoral program. The certificate program was developed in response to these requests and reflected the School's commitment to its constituency in relation to professional growth.

Achievements

1. The School's electronic [Professional Portfolio](#) was established as a Program's requirement. In the portfolio students are required to include evidence of their participation in continuing education activities. The portfolio evidences knowledge acquisition and competencies development and can document participation in program activities.
2. The School has regularly offered continuing education activities for alumni, students and other interested information professionals. Participation ranges from 75 to 125 colleagues. Some of these activities are planned in collaboration with local and international professional organizations, or products suppliers, and have been most successful.

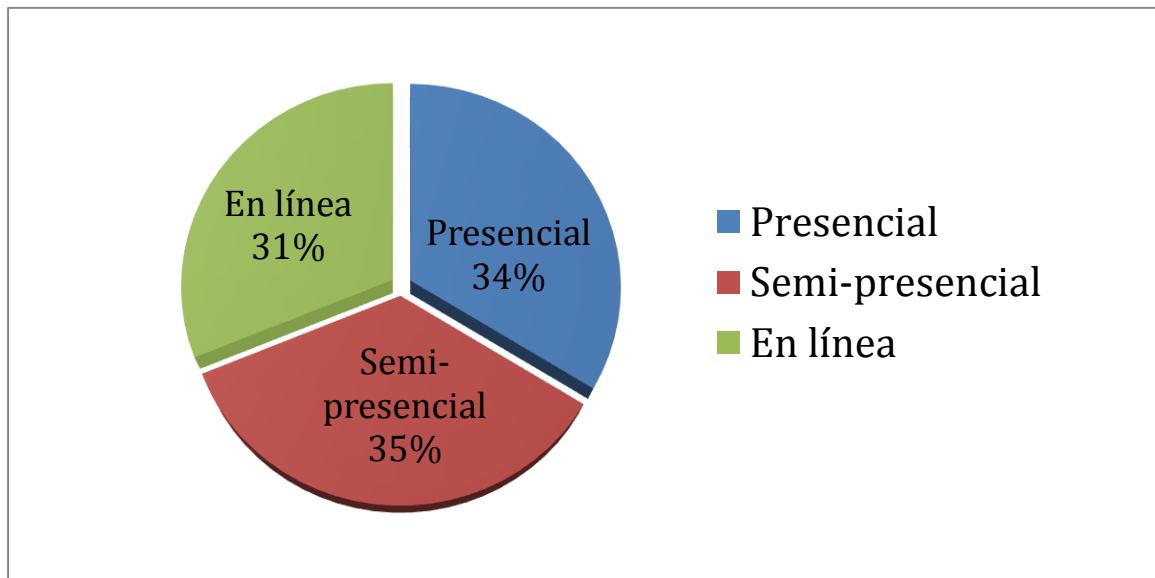
In a recent [alumni survey, conducted in October 2014](#), interest for the delivery preference of continuing education events was expressed as follows: Seminar/Workshops (91%) was highly preferred; followed by short courses with credit hours (64%), and conferences (64%). Webinars (51%) and tutorials (36%), although selected, were not highly preferred.

Graphic 2.3 Alumni Survey Results About Desired Continue Education Courses

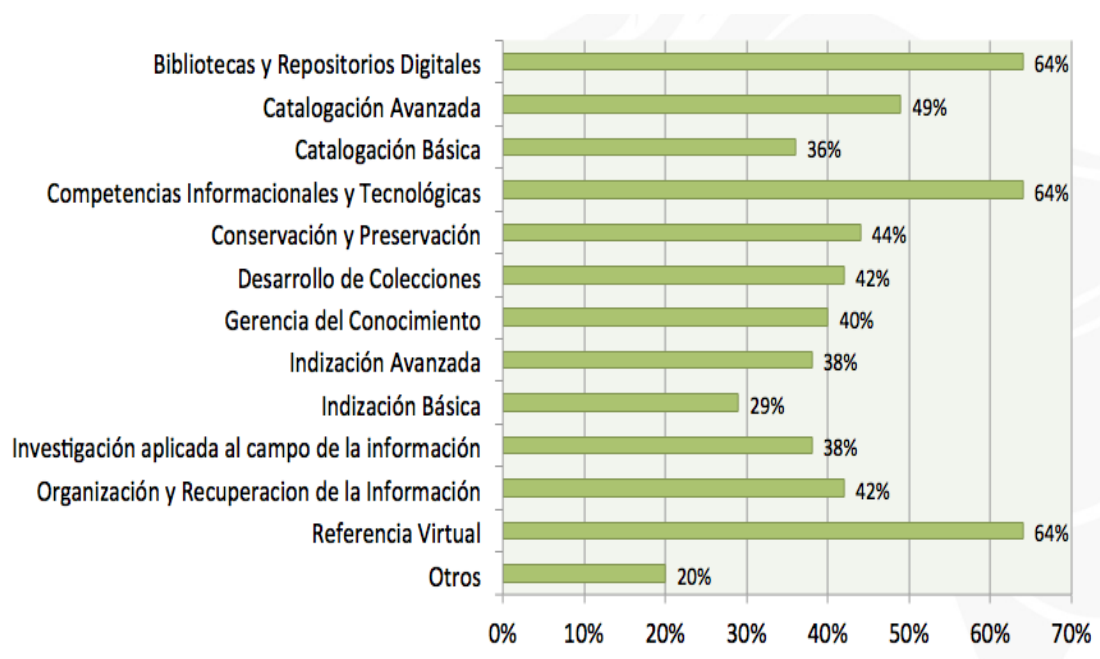


In addition, respondents indicated preference for two modalities: on-site (34%) and hybrid (35%). Distance learning, as a whole, had a lower percentage in continuing education, perhaps due to the type of topic they want to address.

Graphic 2.4 Alumni Survey Results About Online MIS Proposal



Graphic 2.5 Alumni Survey Results About Possible Areas Of Interest In Continuing Education



The highest areas of interests were: Digital Libraries and Repositories (64%), Virtual Reference (64%), Information and Technological Competencies (64%), Advanced Cataloguing (49%), and Conservation and Preservation (44%).

3. The School's post bachelor's and post-master's certificate programs aim to provide a means for professional growth of alumni and practitioners in the field. They reflect the School's commitment in this area.

Evidence

1. Students participating in continuing education activities and receiving scholarships to attend professional association conferences (Samples available on-site)
2. Continuing education materials (Online and on-site)
3. Examples of student's Professional portfolios (Online)

Standard II.4 [Part 1]: *The curriculum provides the opportunity for students to construct coherent programs of study that allows individual needs, goals, and aspirations to be met within the context of program requirements established by the school and that will foster development of the competencies necessary for productive careers.*

Summary of School's compliance with this standard

The updated curriculum offers opportunities to acquire competencies related to areas such as information and knowledge creation; identification, selection, and acquisition of information; organization, description, storage and retrieval of information; preservation and conservation; analysis interpretation, evaluation, synthesis and dissemination of information; and management. Surveys undertaken during the curriculum's implementation indicate that competencies needed for information professionals in Puerto Rico are covered by core and required courses in the curriculum.

In order to provide for student's individual needs, goals and aspirations, thirty-two elective courses (one to three credits) have been developed throughout the past seven years. Additional elective courses are delivered under the special topics code, CINF 6995, with a variety of topics and issues related to faculty and student interests. In addition, elective courses can be taken in other academic units, or in any other accredited ALA LIS School. The independent study and practicum or fieldwork courses provide a means for students to focus on individual needs and interests, in relation to goals and aspirations.

Achievements

1. The [updated curriculum, launched in August of 2011](#), offers students a range of core, required and elective courses that deal with the basic knowledge and competencies of the field, in two different areas of emphasis: Library and Information Science and Knowledge Management. Separate tracks identifying core and required courses to be taken have been developed for full and for part time students. The resulting schedules help provide students with a means to develop coherent program of study.
2. Elective courses include options such as special topics, independent study and practicum or fieldwork, which allow for individual needs, interests, goals and aspirations to be met.

3. Since 2001, students wanting to specialize in special areas, have the option of selecting a Post-masters degree certificate, including Administrator of Academic/Special Libraries, and Specialist in Legal Information. These certificates are offered on the basis of demand.

Evidence

1. Annual class schedules which list courses offered each semester (From 2011-2014). (See also proposed class schedule in the [GSIST Information Bulletin](#))
2. Description and listing of courses offered in the curriculum (See [GSIST Information Bulletin](#))
3. Core, Required and Highly Recommended [courses by Areas of Emphasis](#)
4. Examples of Student [Professional Portfolios](#) (Online)
5. Listing of special topics courses offered (See [GSIST Information Bulletin](#) and on-site)
6. Fieldwork courses taken by students (Syllabi and a sample of student documents will be available online and on-site.)

Challenges

- There is a need to analyze the lack of demand for post-master's certificates and reassess their importance within the curriculum.
- There is need to consider and evaluate the area of emphasis in knowledge management, included as an area of emphasis in the curriculum update process, and to offer a Certificate on Knowledge Management through DECEP.

Steps to be taken

- Continue with the curriculum update process, evaluating the content of core, required and elective courses.
- Evaluate the post-master's certificate programs, in the context of curriculum update and design other offerings in terms of demand and trends in the field.

Standard II.4 [Part 2]: *The curriculum includes as appropriate cooperative degree programs, interdisciplinary coursework and research, experiential opportunities, and other similar activities.*

Summary of School's compliance with this section of the standard

The School's Master's program includes interdisciplinary coursework and research, experiential opportunities, and other similar curricular and extracurricular activities. Students have the opportunity to take elective courses in areas of interest in other departments within the University, and in other ALA accredited programs. Official

steps have been taken to cross list courses to and from other departments. This promotes interdisciplinary course selection.

Experiential opportunities are included in most of the course syllabi, as part of teaching strategies. These opportunities include, for example, visits to libraries, interviews with information specialists and observations of specific information services. In addition, the curriculum includes clinical fieldwork in information services (CINF 6800), and fieldwork in school libraries (CINF 6805). Student evaluations have indicated satisfaction with the fieldwork courses, and requested that they be required, and that an increased number of credits be assigned.

There are two courses offered in the curriculum related to research. One of them is the core course, Research Methods in Information Science (CINF 6706), and the required Seminar on Knowledge Application (Capstone). In addition, the updated program has two transversal focuses that are integrated in all core and required courses: Evidence-based practice of the information professional and the Problem based learning. These four elements contribute to the students' research knowledge base.

The School has participated in the Permanent Seminar of Research Methods project led by the graduate program in Psychology.

Achievements

1. There are formal agreements relating to courses in other academic units to be taken by GSIST students. Students have the opportunity for interdisciplinary coursework as part of the curriculum. In class assignments and projects they can focus on knowledge and skills from other disciplines that relate to and impact the field.
2. Some faculty members at the School are participating in an interdisciplinary interfaculty seminar ([Seminario Permanente de Métodos de Investigación](#)) aimed at developing a database of peer reviewed research articles focusing on research methods.
3. In order to facilitate interdisciplinary focus in the Seminar on Knowledge Acquisition (Capstone) can include experts with background and experience in relevant fields.
4. The special topics course CINF 6995 (an example: Evidence-based practice in the library and information services), as well as the fieldwork course (CINF 6800) are options to provide experiential opportunities for students. Fieldwork can be done in different types of information contexts or environments. The independent study course also provides the opportunity for students to explore interdisciplinary topics and gain experience in the field. Within other courses, students in completing assignments and projects have the opportunity to connect with the field, gain practical knowledge and understanding of the field.

Evidence

1. Description of teaching strategies in [course syllabi](#). (Core, required and highly recommended course syllabi available online)
2. Fieldwork opportunities (Syllabi and students documents will be available online and on-site.)
3. Samples of students' creative work, theses and projects, results from the Seminar on Knowledge Application (Online and on-site)
4. Brochure and website of the Seminario Permanente de Métodos de Investigación ([Permanent Seminar on Research Methods](#))

Challenges

- There is a need to evaluate the clinical practice or fieldwork course, in the context of curriculum update, to determine whether it should be required, and how many credits should be assigned.

Steps to be taken

- Discuss and reach a decision, as part of the curriculum updated process, about the clinical practice or fieldwork course, its status as required or elective, and the number of credits it should have.

Standard II.4 [Part 3]: *Course content and sequence relationships within the curriculum are evident.*

Summary of School's compliance with this section of the standard

With the curriculum update, the order of courses (core, required, highly recommended and electives) offered in the curriculum has a logical sequence based on content and area of emphasis. This is reflected in the class schedule prepared each semester for part-time and full-time students. Courses offered are chosen carefully in the light of this schedule, to provide the courses that students need to complete the Program, in the proper sequence. The Officer of Student Affairs is in charge of developing this schedule, along with the Director. The new initiative of [Faculty Advising](#) will contribute to orient students in this process.

The curriculum includes core courses which develop the basic competencies of the information field for the two areas of emphasis. The required courses build additional and more complex competencies in the main areas covered by the curriculum. Highly recommended are those courses which the students must take to enrich the competence in the field, (particularly in the area of emphasis of KM students must select courses in the Library and Information Science), and Elective courses contribute to develop competencies in areas responding to students' needs and interests.

Schedules for full-time and for part-time students, developed in 2010, have guided the planning of course offerings each semester. The schedules, available in the School's

[Information Bulletin](#), provide students with a coherent program to meet required competencies and program requirements.

Achievements

1. The sequence of course offerings take into account the fundamental knowledge of the field and the logical order of core and required courses, taking into account pre-requisites. These are included in the course syllabi. Two types of program offerings have been developed and implemented: one for full-time and the other for part-time students. Both programs are offered each year. This planning helps ensure that students take the proper sequence of required courses.
2. Elective courses provide additional opportunities to further develop basic competencies acquired in core and required courses, and to gain additional ones. Students have access to information about courses on the School's website, as well as in the [Information Bulletin](#). They can request guidance from the Officer of Student Affairs to help make decisions about elective courses.

Evidence

1. Academic program: [Class schedules 2011-2014](#); and [Information Bulletin](#))
2. School's [website](#) with information about courses and schedules

Standard II.5: *When a program includes study of services and activities in specialized fields, these specialized learning experiences are built upon a general foundation of library and information studies. The design of specialized learning experiences takes into account the statements of knowledge and competencies developed by relevant professional organizations.*

Summary of School's compliance with this standard

The certificates, post bachelor's degree ([Teacher Librarian](#), [Archives Administration](#)) and post master's degree focus on services and activities in specialized fields, while the Master's program provides a basic introduction to the broader field, including the range of topics and subject areas that are part of the field of library and information studies. Students involved in one of the post bachelor's certificate programs, such as the Teacher Librarian certificate or Archives administration, may decide to continue on with the Master's program.

The design of the certificates' learning experiences have taken into account statements of knowledge and competencies developed by ALA/AASL, as applied by the Department of Education in Puerto Rico, and those of professional archives organizations in Puerto Rico, such as the Society of Archivists and ARCHIREC (Archives Network in Puerto Rico).

Achievements

1. Two of the post-bachelor's certificates started in 2001: Teacher librarian and Archival administrator, and have been most successful. The Teacher librarian certificate, based on guidelines from the Puerto Rico Department of Education, has had the highest demand. Since 2004-2005 the School Library certificate has been offered mostly using the distance education modality.

Evidence

1. GSIST's Certificates Program description (On-site)
2. Statistics on the numbers of students involved in the certificate programs and the Master's program. (On-site).

Challenge

- The post-masters certificates were created as a means to offer specialization in addition to the master's program. Since the demand for these certificates has not met expectations, it is important to assess and reevaluate certificate offerings, as part of the curriculum update process.

Steps to be taken

- Reassess and re-evaluate the offering and continuation of the Post-Bachelor's and Post-Masters Certificates as part of the School's Program of Studies.

Standard II.6: *The curriculum, regardless of forms or locations of delivery selected by the school, conforms to the requirements of these Standards.*

Summary of the School's compliance with this standard

The School has gained experience using the distance education modality in some courses of the Master's program and in special offerings in the Dominican Republic. The first distance education course was offered in the second semester of the academic year 2000/2001. Since that time the number of online courses offered each semester has increased. These courses used to have the Blackboard platform. [Courses are now placed on the Moodle platform.](#)

In 2004, the Council on Higher Education of Puerto Rico approved the School's request to offer the [Teacher-Librarian's post-bachelor's certificate at a distance](#). Since 2004/2005, this certificate has been offered mostly using the distance education modality. Due to its flexibility, attracting students that study and work at the same time, the demand for the distance education format has increased. The number of new students allowed to register for the program at the beginning of each academic year has been no more than fifteen.

In addition to accessing the course on line, distance education students receive academic, student and administrative support, both online and on-site. This was the

case with the Teacher librarian certificate program offered in the Dominican Republic in alliance with the Pontifical Catholic University Madre y Maestra (PUCMM). Each faculty member participating in the program visited the PUCMM site at least twice to meet with students and support their educational needs. Information resources were placed online or were available on-site at the PUCMM library. Special funding was provided to support this project. The program was positively evaluated. With this past experience, in 2010, the School offered a Special Continuing Education Distance Program at the Biblioteca Nacional Pedro Henriquez Ureña, in Santo Domingo, República Dominicana. Both experiences proved to be most successful.

Although the Teacher Librarian Certificate via distance education has been successful in Puerto Rico, requests have been made to the School to offer both modalities of the program on-site and on line. The School has responded to this request and offered the certificate through both on-site and online modalities.

Achievements

1. The School Librarian's Certificate continues to be offered in the distance education modality, which has made the program more attractive for some students. There is a faculty member with a background in educational technology in charge of monitoring this program. He assists faculty in developing online courses and assures the quality of the Program.
2. In 2005, the School offered a successful distance education program in the Dominican Republic, at the Pontifical University Madre y Maestra, focusing on the Teacher librarian certificate. Fifteen students from a variety of academic libraries participated in the Program, with fourteen completing the goal. This experience helped develop an offering of Continuing education program, for the library personnel, at the request of the Biblioteca Nacional Pedro Henriquez-Ureña in 2010, which resulted in most positive experience for all. Two faculty regular members and 2 adjunct faculty members participated in this program.
3. The Library Science and Informatics Library (BCBI) expanded its online resources to support the School's distance education programs. The School's technological infrastructure provides adequate, up-to-date technology, hardware and software, to support distance education. The website has expanded in scope, and provides a wealth of information and resources useful for distance education students.
4. The School is developing new guidelines for distance-learning courses aligned with the new University system policy for distance education.

Evidence

1. Students course evaluations (see instruments-online and on-site); and students exit interviews (see instrument online and on-site)
2. Table of distance education courses offered by the School. (On-site)

3. Online data bases (<http://biblioteca.uprrp.edu/Bases-Datos.html>) and other electronic resources available for distance education students.

Challenges

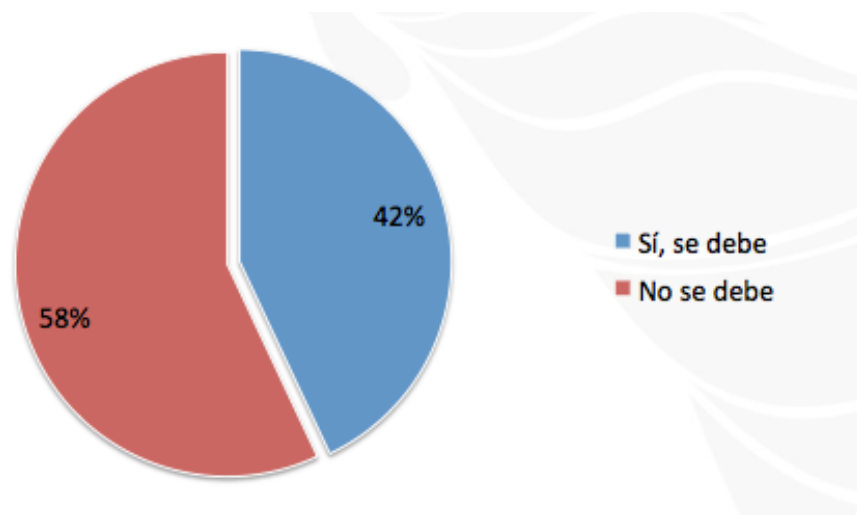
- There is a need to determine the future commitment of the School in this area; how it should modify, change or expand its role in distance education. This is an important aspect for consideration in the curriculum online initiative to be launched.

Steps to be taken

- Undertake an evaluation of the School's accomplishments in distance education to date, including gathering ideas and input from all elements of the School's constituency on the future commitment of the School in this area; what role it should play in providing a modality of distance education in the field: on site, hybrid or completely online.

On a survey conducted on [October 2014, 58% of alumni participants](#) in the study expressed that the program should not be offered completely online, but in a hybrid modality. Some expressed that there are some courses, due to their complexity, that need to be taught on-site.

Graphic 2.6 Alumni Survey Results About Online MIS Proposal



Standard II.7: *The curriculum is continually reviewed and receptive to innovation; its evaluation is used for ongoing appraisal, to make improvements, and to plan for the future. Evaluation of the curriculum includes assessment of students' achievements and their subsequent accomplishments. Evaluation involves those served by the program: students, faculty, employers, alumni, and other constituents.*

Summary of the School's compliance with this standard

The GSIST has continued implementing its program assessment plan. Evaluation and assessment strategies are administered annually at the end of each academic year, some at the end of December for students finishing their studies that semester. Formative and summative assessments are part of the Students Learning Assessment plan, a component of the School's overall assessment process.

In addition to student evaluations of each course, at the end of each semester, a questionnaire is administered. Other evaluation instruments, such as interviews and focal groups are also administered. Questions concerning the curriculum, address:

- The content of core, required and elective courses
- The quality of teaching and academic advising;
- Opportunities students have had to integrate newly acquired knowledge to their clinical experiences; to offer community services; to participate in extra curricular activities; to work in research projects with their professors.

The results have been used to make modifications or changes in the curriculum. They are presented in reports to faculty to discuss at annual retreats and in faculty meetings. The curriculum committee reviews each report to identify ways in which the recommendations can be incorporated into decisions about changes needed in the curriculum.

The newly updated curriculum allows for Curriculum elective options, which includes a practicum (fieldwork experience) and an independent study. The curriculum gives students an overall understanding of the fundamentals of theory, practice and leadership in the field. Courses are designed to provide the knowledge, skills and competencies required in the library and information field. They respond to the needs and interests of a diverse multicultural student body.

The School's program [Students Learning Assessment Plan](#) contributes to the continuous revision and improvement of the curriculum, and has facilitated the School's compliance with its objectives and the COA's Standards. The GSIST has paid close attention to results of student course evaluations and surveys, alumni focus groups, and other types of assessments. In the process of completing their coursework, students are required to document their experience and accomplishments in the required [electronic program portfolio](#). The professional portfolio helps graduates in interviewing for jobs and entering the field as new professionals.

Students also participate in an [exit interview focus group](#) right before graduation. From time to time other focus groups and electronic surveys are conducted with students and alumni. An example of results of [a recent intervention is presented](#). This action provides useful information on students' satisfaction, as well as with alumni, with different aspects of the Program. The input provided by both sectors is an important part of the School's planning and assessment process.

Based on results of students, alumni and employers' surveys and graduates' exit interviews, the GSIST's curriculum continues to comply with its objectives. Since these objectives were aligned with COA's Standards, it can be concluded that the School is also complying with the particular standards.

Achievements

1. Since the curriculum update was implemented in August 2011, it has been systematically reviewed and evaluated by faculty, students, staff and alumni. This action takes place during at the end of the semester, or year, and at the annual faculty retreat, using a variety of instruments developed for this purpose, including surveys, interviews and focus groups.
2. A learning assessment plan was implemented in August 2007, as a new component of the School's overall assessment process, including a variety of assessment strategies: student portfolios, exit interviews, clinical experiences, self-evaluations, faculty evaluation, focus groups, surveys and comprehensive exams. The comprehensive exams were eliminated with the curriculum update. Both formative and summative assessment strategies are part of the learning assessment plan.
3. The assessment process has helped document students' acquisition of basic competencies required for the information professional. Results of student and alumni surveys and exit interviews indicate that the curriculum has included the range of competencies required for the new information professional.
4. New procedures to assess student learning have been incorporated, such as rubrics to include in course syllabi for evaluation of student work. With the curriculum update, course syllabi were revised and others were created to make sure that objectives were clearly written, activities identified to fulfill objectives, and assessment tools chosen, including the use of rubrics.

Evidence

1. Student Learning Assessment and evaluation plans ([2012-13](#), [2013-14](#))
2. Annual Student Learning Assessment Reports [2013](#), 2014: [1st semester](#); [2nd semester](#)
3. Student's electronic [Professional portfolios](#) (Online)
4. Faculty evaluation instruments: [Courses online](#); [Courses onsite](#) ; [Professional evaluation](#)
5. Student course evaluations (See instruments for Courses [online](#) and Courses [onsite](#))
6. Surveys, interview and focus group instruments and results (See instruments); for results, see Student Learning Assessment reports 2013-14 [1st semester](#), [2nd semester](#).
7. Student Professional Portfolios, which provide evidence of competencies acquired through course experience. (See [Manual and Examples Online](#))
8. Second-Year Student Survey 2014 ([Online](#) and on-site)
9. Results of exit interviews (On-site) and Instrument ([Online](#) and on-site)

Challenges

- There is a need to continue evaluating the implementation of the students learning assessment plan to determine how it can best be used to improve the quality of the Program, in terms of teaching, research, and service to the field.

Steps to be taken

- Proceed with the curriculum update process making sure that assessment and evaluation results are incorporated into the planning process, and are reflected in final decisions made concerning the curriculum.
- Follow-up on the impact of the use of new assessment procedures, part of the learning assessment plan, obtaining feedback from faculty, staff, students and alumni, to use in the continued improvement of this plan.