



PaSCoR



*Partnership for Spatial and
Computational Research*

Assessment Strategy

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University of Puerto Rico at Mayagüez

Assessment Strategy

- Purpose:
 - to determine the project's strengths, opportunities for improvement
 - to determine participants' outcomes (e.g., student learning, employer satisfaction)
 - to determine the effectiveness of the project's activities & overall achievement of goals & objectives

Plan

- **Assessment Team**
 - faculty & partners
 - charter: to design & implement the assessment strategy & to disseminate results to constituents
- **Elements of the Assessment Strategy**
 - internal (self-assessments)
 - external (outside of the project)
 - multiple criteria
 - holistic
 - qualitative & quantitative components

Steps

- Study project goals & objectives, expected outcomes & performance indicators/metrics as per Strategic Plan
- Develop specific criteria for each metric
- Develop assessment tools & data collection methods
- Establish assessment schedule
- Conduct assessments
- Analyze data
- Report to constituents

Some Performance Indicators Identified

Course development

- Number of new courses created
- Number of courses revised to include RS-GIS modules/activities
- Number of faculty participating in course development (formal courses & developing modules for SMET courses)
- Student learning outcomes, including development of 'soft' skills.
- PaSCoR Engineering courses' compliance with ABET 2000
- Quality of courses
- Number of students obtaining the RS-GIS certificate per year
- Number of students/graduates placed in jobs related to RS-GIS

Undergraduate Research

- Number of faculty mentors
- Number of undergraduate students participating
- Number of Summer internships
- Quality of student research activity
- Use of existing laboratory facilities

Some Performance Indicators Identified

Partnerships

- Number of industry, government and other institutions collaborating in research, Summer internships and other activities
- Number of student projects provided by industry (& other) partners
- Number of experts brought to the classroom for lectures, seminars and workshops

Outreach

- Web-page
- Newsletter
- Brochures and posters distributed
- Recruitment activities carried
- Number of peer-reviewed publications, books, citations, presentations per researcher and students per year
- Additional external funds obtained per year
- Number of industrial collaborations/contacts made by researchers
- Curricular materials dissemination to other institutions
- Production of a CD-ROM with curricular material

Some Performance Indicators Identified

Other

- Infrastructure development
(laboratory facilities enhanced
and created)
- Equipment purchases
- Donations

Tools Developed

- ❑ Overall Project Assessment Matrix
- ❑ Project Activity Assessment Form
- ❑ Evaluation of Student Performance in Summer Internships
- ❑ Course Development Evaluation Form
- ❑ Oral Presentations Assessment Form
- ❑ Report Assessment Form
- ❑ Assessment of Teamwork Experiences

PASCOR Overall Assessment Design Matrix

	GOALS AND OBJECTIVES	STAKEHOLDERS		
Implementation		Students	Faculty	Industry /others
	<ul style="list-style-type: none"> Develop a new interdisciplinary, practice-based curriculum in RS-GIS, that balances content with 'soft' skills 	X	X	X
	<ul style="list-style-type: none"> Integrate these new courses into the permanent academic programs of ECE, Geology, Mathematics and Agricultural Sciences 		X	X
	<ul style="list-style-type: none"> Facilitate and encourage the inclusion of RS-GIS content into existing SMET courses 		X	X
	<ul style="list-style-type: none"> Develop an RS-GIS undergraduate engineering curriculum in compliance with ABET 2000 		X	X
	<ul style="list-style-type: none"> Implement the Learning Factory concept (hands-on, research)curriculum activities into the SMET/RS-GIS curriculum 	X	X	X
Undergraduate				
	<ul style="list-style-type: none"> Establish a faculty/expert mentorship program for undergraduate students 	X	X	X
	<ul style="list-style-type: none"> Establish linkages and collaboration with industry, government and other schools 	X	X	X
Partnerships				
	<ul style="list-style-type: none"> Establish an Advisory Board to provide guidance and support to the project 		X	X
	<ul style="list-style-type: none"> Expand the sponsor base 		X	X
	<ul style="list-style-type: none"> Coordinate the development of research projects for undergraduate students 		X	X
	<ul style="list-style-type: none"> Identify strategies to amplify the effectiveness of the Learning Factory 	X	X	X
	<ul style="list-style-type: none"> Develop a process for the members to fully share instructional, laboratory, and experiences 		X	X
	<ul style="list-style-type: none"> Develop a process for continuous communication of project activities and outcomes to all stakeholders 	X	X	X

PROJECT ACTIVITY ASSESSMENT

March, 1999

The Partnership for Spatial and Computational Program (PaSCoR), a 5-year project sponsored by NASA, is completing its first year. The project leaders would like to assess the attainment of the project goals and objectives in all of its areas: curriculum, undergraduate research, industry partnership and outreach.

The purpose of this assessment is:

- To determine the respondent's satisfaction of his/her involvement in the PaSCoR project, and,
- To establish the effectiveness of the strategies being implemented.

The results of this assessment will help the PaSCoR Team to better plan and adjust the project's strategy in the future.

PLEASE ANSWER TO THE BEST OF YOUR KNOWLEDGE ALL QUESTIONS THAT MAY APPLY:

YOUR INVOLVMENT WITH THE PASCOR PROJECT (ACTIVITY):

- PASCOR COURSE: _____
- SEMINAR/WORKSHOPS: _____
- UNDERGRADUATE RESEARCH
- OUTREACH
- INDUSTRY COLLABORATION
- OTHER: _____

RESPONDENT:

- FACULTY
- UNDERGRADUATE STUDENT
year: _____; department: _____
- GRADUATE STUDENT
- ADMINISTRATOR
- OTHER: _____

PASCOR COURSES (OR WORKSHOPS/SEMINARS):

1. Are interesting (content, lectures, resources, etc.)	1	2	3	4
2. Are well organized (#lectures, delivery methods, assessment methods, etc.)	1	2	3	4
3. Are motivating (would suggest to other faculty, students)	1	2	3	4
4. Integrate the use of technology and involve hands-on activities	1	2	3	4
5. Develop teamwork, problem-solving and communication skills	1	2	3	4

UNDERGRADUATE RESEARCH:

1. Provides valuable problem-solving and scientific methodology experience to students	1	2	3	4
2. Provides the opportunity to meet students and faculty from other areas and disciplines	1	2	3	4
3. Provides the opportunity to meet researchers from other universities and organizations	1	2	3	4
4. Motivates the student to consider pursuing graduate degrees	1	2	3	4
5. Motivates the student to earn the RS-GIS certificate	1	2	3	4
6. Establishes a student-mentor relationship				

PARTNERSHIPS:

1. Industry partners provide input and critique to the PaSCoR curriculum	1	2	3	4
2. Partners provide student projects and research ideas	1	2	3	4
3. Partners provide student Summer internships				
4. Partners provide for experts in the classroom, seminars and workshops	1	2	3	4

OUTREACH:

**COURSE EVALUATION
And
ASSESSMENT OF SKILLS and KNOWLEDGE**

Course: _____

Instructor: _____

The purpose of this assessment is:

- to determine your perception of mastery/level of knowledge and skills developed by the students in this course, and
- to establish the effectiveness of lectures and experiences, as well as of the logistics used.

The results of this assessment will help the instructor in charge of the course to better plan and adjust the course's agenda in the future.

PART I: GENERAL OBJECTIVES AND SKILLS

Directions:

Using the scale below, please evaluate (*) your perception of the mastery of skills and experience the students developed in this course in the areas specified.

N: no skills/no experience

R: rudimentary skills/very little experience

F: functionally adequate skills/some experience

A: advance skill/extensive experience

area	*
skill 1	
skill 2	
objective 1	
objective 2	

**University of Puerto Rico
Mayagüez Campus
PaSCoR Project**

Course _____ Department _____

TEAMWORK EXPERIENCES ASSESSMENT FORM

Please answer the following questions regarding your work as a team for the completion of the required task.

TASK(S): _____

1. In chronological order, list what your team did during the _____ activity phase. Explain how tasks were distributed, how decisions were made.

2. What facilitated the decision-making process?

3. What was your contribution to the team when decisions had to be taken?

4. What do you think you would like to do differently the next time when working in a team?

NAME _____ TEAM _____

**University of Puerto Rico
Mayagüez Campus**

PaSCoR Course _____

WRITTEN REPORT ASSESSMENT

Name _____

Team _____ date _____

Evaluator _____

Report Title _____

CATEGORY	ASSESSMENT
Cover, title page, table of contents, list of figures, etc.	/10
Abstract	/15
Introduction*	/10
Body*	/20
Conclusions/recommendations*	/15
Language/grammar/clarity	/05
Figures/tables	/05
Bibliography/references	/05
GENERAL	/15
TOTAL	/100

COMMENTS:

University of Puerto Rico
Mayagüez Campus
PaSCoR Course _____

ORAL PRESENTATION ASSESSMENT

Team _____ Date _____ Evaluator _____

Part 1 - PRESENTATION

CATEGORY	0	1	2	3	4	5
Organization						
Level						
Knowledge of Material						
Time						
Delivery/Transmission of Material						
Quality of Language						
Order						
Management of Questions						
Ability to Discuss Project and Methodology						
Personal Appearance/Manners						
TOTAL						

PART 2 - CONTENTS

CATEGORY	0	1	2	3	4	5
Introduction/Background						
Body						
Conclusion						
TOTAL						

Part 3 – Overall

CATEGORY	0	1	2	3	4	5
Overall Quality of the Presentation						
Perception of Potential Success in a Competitive Forum						
Perception of Potential in Achieving Results						
TOTAL						

GRAND TOTAL						
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COMMENTS:

**PaSCoR Summer Internship
Assessment Form
Summer Session _____**

The Partnership for Spatial and Computational Program (PaSCoR) is a 5-year project sponsored by NASA at the University of Puerto Rico -Mayagüez. The project leaders would like to assess the outcomes of the students' summer internship experiences in order to enhance this learning/research experience. Please take a few minutes to complete this form and provide us with additional information and feedback, if necessary.

Student Name: _____

Department: _____

UPRM Faculty Mentor: _____

Internship Mentor: _____

Institution: _____

Address: _____

Phone: _____ **Fax:** _____ **email:** _____

I. Brief Description of Internship Experience (Please use more space, if needed)

I. Internship Experience.

Student Performance	Excellent	Good	Average	Poor
1. Enthusiasm for the job assignments ability to follow scientific methodology.				
2. Background needed for the job.				
3. Organizational skills.				
4. Oral presentation skills.				
5. Writing reports skills.				
6. Interpersonal skills.				
7. Team work				
8. Potential for graduate work.				

Projections	Excellent	Good	Average	Poor
1. Opportunity for future research collaboration.				
2. Potential for presenting the working in a professional meeting.				

Would you hire this student? ____ Yes ____ No

II. Comments and suggestions concerning the student's experience.

III. Comments and suggestions for PaSCoR Program Leaders