

Consejo Nacional de Acreditación en Informática y Computación, A.C.

Organismo acreditador con reconocimiento del COPAES

Self-evaluation form

Document prepared on the basis of

ACCREDITATION CRITERIA Informatics and Computing Academic Programs HIGHER EDUCATION

- BA Degree Level

Institution:	
Campus:	
Program Name (BA/Eng/TSU):	
Profile (A/B/C/D):	

Last Version: 2021

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GENERAL DATA.

A1. TECHNICAL DATA SHEET (INSTITUTION AND SCHOOL GENERAL DATA)

preparation	i
INSTITUTION	
Name	
Mission	
Vision	
Policies	
Strategic Lines	
FACULTY, SCHO	OL, DEPARTMENT OR DIVISION
Name	
Campus	
Operations start	
date	
Mission	
Vision	
Strategic	
Objectives	

A2. TECHNICAL DATA SHEET (ACADEMIC PROGRAM GENERAL DATA)

ACADEMIC PROG	RAM
Name	
Official Creation	
Document*	
RVOE** Number	
RVOE** granting	
date	
Institution	
granting RVOE**	
Mission	
Vision	
Strategic	
Objectives	

^{*} Public Institutions

Academic Program Faculty

Concept	Three- quarter Half time		Half time Subject	Total		Studies degree				Total	
		Half time			TSU	PA	L	Е	M ES	D	
Number											
Percentage											

Abbreviations: TSU - Senior University Technician / PA - Associate Professional/ L - Bachelor's degree/ E-specialty/ M - Master's Degree/ D - PhD.

Academic Program Registration Number

	Ne	w admiss	ion	Re-adm	ission*			Total	
Generation	Men	Women	Subtotal	Men	Women	Subtotal	Men	Women	Additio
									n
Last									
%									
Penultimate									
%									
Antepenultima									
te									
%									

^{*}Note: It refers to students who temporarily left the program and were returning to it.

^{**}Private Institutions

School performance rates of the past three generations of the academic program per generational cohort

Generation	Number of students admitted (1)	Dropout (2)	Dropout Rate (2)/(1)	Failure (3)	Failure Rate (3)/(1)	Graduate (4) =(1)-(2)- (3)	Graduate Efficienc y Rate (4)/(1)	Degree Complet ed (5)	Degree Comple tion Rate (5)/(4)	Net Degree Completi on Rate (5)/(1)
Last										
Penultimate										
Antepenultima te										

Faculty or school organization structure descriptive chart.

CATEGORIES, CRITERIA AND INDICATORS

1. Academic Staff ¹		
1.1 Recruitment. To have a regulated procedure for the recruitment of acade involves the evaluation of their knowledge, experience and ability to ex (process to identify and attract qualified candidates to fill the vacancies).		
1.1.1 Is there a formal academic staff recruitment process?	Yes □	No 🗆
If yes, describe in summary the most important aspects of the process.		
Are there academic staff recruitment regulations?	Yes □	No 🗆
If yes, please provide a copy.		
1.2 Selection. To have a regulated procedure for the admission of acade involves the evaluation of their knowledge, experience and ability to ex (process to identify and attract qualified candidates to fill the vacancies).		
1.2.1 Is there a formal academic staff admission process?	Yes □	No □
If yes, describe in summary the most important aspects of the process.		
Are there academic staff admission regulations?	Yes □	No 🗆
If yes, please provide a copy.		
1.3 Hiring. To have a regulated procedure for hiring academic staff, whi evaluation of their knowledge, experience and ability to exercise teaching with the future work relationships law) and in order to follow up criterion:	g (in accord	
1.3.1 Is there a formal academic staff hiring process?	Yes □	No 🗆

¹ **Academic Staff** Personnel performing teaching and research functions, as well as cultural dissemination and extension. Indistinct for face-to-face, mixed learning and e-learning.

If yes, describe in summary the most important aspects of the process.						
Are there academic staff hiring regulations? Yes No						
If yes, please provide a copy.						
1.4 Development. To have an academic improvement continuous plan in which plans for the full-time academic staff that does not have a postgraduate to get it are implemented The plan must be approved by the maximum personal or collegiate authority in the institution.						
1.4.1 Is there a permanent academic growth plan for full-time academic staff that is approved by the highest personal or collegiate authority in the institution? Yes □ No □						
If yes, please provide the following information.						
Name of the growth program Benefits for full-time academic staff						
 1.4.2 To have an update/training program that will enable the rapid response to emerging issues in the area, as well as to maintain the academic staff up-to-date. Are there programs in the institution, academic unit or career, for the upgrade and improvement of academic staff? Yes □ No □ 						
If yes, provide the following information for the past three years:						

Name or description of the program or courses	Responsibility [*]	Last three years in which they were taught			Number of participants
		l	l	l	

• Is	there any other mo	odality of support academic	staff for update and	d improvement? Yes □ No □
If ye	s, please describe b	riefly:		
1.4.3	There must be perma	anent training plans for prof	essors ² .	
• Is	there a teacher train	ning program?2:		Yes □ No □
If ye	S:			
a.	Point out respons	sibility held by:		
	Institution	Academic Unit	Program	
b.	Briefly describe h	ow it works:		
C.	List some of the r	esults obtained:		

* Write in this column if the responsibility is institutional, of the academic unit, of the program, or external

² **Professors' training.** Díaz Barriga points out that teacher training can be seen from three different perspectives: the technological behaviorist one, which refers to media that support educational work; constructive perspective, focused on the subject and the personal quest for knowledge; and the reflective critical perspective, in which the teacher is self-critical of his/her work.

Explain how this estimation was performed.

³ **Professors or professors** in face-to-face educational model and **facilitators** in distance educational model

- 1.5.6 At least 30% of the total professors who are not full-time must have postgraduate studies or the equivalent in professional development and prestige in their specialty area.
 - To estimate the percentage of the total number of professors who are not full-time who
 have graduate studies or the equivalent in professional development and prestige in
 their specialty area.

Explain how this estimation was performed.	

- 1.5.7 There must be an appropriate balance between newly hired professors and professors with teaching experience.
 - Provide the following information for the past three periods

Period	No. of new professors	No. of professors with teaching experience.

- 1.5.8 There must be a balance between professors with academic degrees of the institution and other institutions.
 - Provide the following information for the last three periods:
 - * Academic Balance: 50% of professors with academic degrees from the institution to be assessed and 50% from other institutions.

Number of professors assigned to the program with degrees from the institution

Bachelor's degree	Master's degree without degree	Master's degree	PhD without degree	PhD with Degree	Anoth er degre e	Total
			_			

Number of professors assigned to the program with degrees from other institutions

Bachelor's degree	Master's degree without degree	Master's degree	PhD without degree	PhD with Degree	Anoth er degre e	Total

1.5.9 Do professors, facilitators, tutors and advisors have experience in distance, virtual or on-leducation and have knowledge and command of technological platforms?	ine
YES [] NO []	
In any case, briefly explain:	

Provide professors, facilitators, tutors and advisors resumes, that demonstrate the experience and knowledge of what is here stated.

- **1.6 Distribution of the academic load of full-time professors.** Each full-time professor must be assigned to at most 16 hours a week of class in front of a group. The rest should be distributed in some of the following activities:
 - > Attention to Students (counseling, tutoring, thesis direction).
 - Class preparation, educational materials preparation, homework revision, and correction of tests
 - Academic update and improvement
 - Research and/or technological development
 - Institutional Participation
 - Engagement with the productive and service sectors
 - Writing of articles for magazines
 - Writing of textbooks

1.6.1 Indicate the number of face-to-face class hours of each professor assigned to the program, and an estimate of time devoted to the activities identified.

Professor	Hours in other academic activities	Total

	Г		Γ	Т	
development develo	opment proje e productive a ate the percological deve	ct in the area, or and/or services sentage of the full blooment project	ull-time faculty must lin the area, or to a	a of the educa be linked to project of th	tional program a research or
educa	ational progra	m for the produc	tive and/or services se	ectors	
Explain I	now this estin	nation was perfor	med.		
the teac	hing perform		that allow, from evalua fessors, carry out acti plemented.		
acade	emic staff for	the purpose of re	ler to assess the teach etention and promotio ed academic commiss	n. This Evalu	
Are the No □	nere teacher p	performance eval	uation and faculty res	earch mecha	nisms? Yes □
• Is it re	egulated?:				Yes □ No □
	summary of bilities they h	-	cating those who tak	e part in it, a	as well as the
1.7.2 Tead	cher evaluation	ons should be u	ndertaken on a period	dic basis, at	east once per

school term, and its results should be made available to the professor along with

recommendations that must generate an improvement plan.

 4 Projects must have the support of the educational institution. Provide project list

 In the case of the Evaluation of academic staff, please indicate who carries it out: 	
Collegiate Groups Students Other instances (indicate which)	
	_
 For each case that has been pointed out in previous line, attach information on the process, such as forms or reports. Summarizing, indicate the form and intervals which they are performed. 	
Is there a dissemination of the results of the process carried out? Yes □ No.	
If so, describe the type of divulge that is performed and provide the results of the late school periods (preferably the last three years).	st
 Indicate what the information from evaluations is used for, if results are delivered the professors, and what actions are taken as a consequence of the results of the 	
evaluations.	
1.7.3 There should be a program of well-defined incentives or stimuli based on academ criteria and according to teacher performance.	iic
Are the academic criteria that assess productivity and teacher academic performance efficiency specified? Yes □ No.	
If yes, summarize the main criteria.	

	 Is there a stimuli or incentive program for professors who meet these continuous No □ 	riteria? Yes □
1.	.8 Promotion. Promotion mechanisms should be public domain.	
	 Is there a formal process for the promotion of academic staff? 	Yes □ No □
	 Are there regulations for this process? 	Yes □ No □
	A brief summary of the process indicating those who take part in it, a responsibilities they have.	as well as the
	Is a dissemination of the results of the process carried out?	Yes 🗆 No 🗆
	If so, describe the type of divulge that is carried out and provide the rest three years.	ults of the last
1.9 I	International mobility of teachers. Is there a formal process for the international mobility of teachers (both receiving)? Yes □ No □	h sending and
	Is there a regulation for this process? Yes \square No \square	
	ke a brief summary of the process indicating who participates in it, as well as consibilities they have.	the

1.9.1 Indicate the mobility in sending and receiving teachers in the last five years.

Professor	Shipping / Receiving	Institution (receiving or sending)	Date

	ers in the last five years.
-	
-	
-	

- A Specific criteria of academic staff on TIC programs. The following criteria are intended to complement the academic staff Evaluation of the category, verifying the conditions and characteristics of human resources dedicated to support the tasks related to the teaching-learning process of the TIC program.
- A.1 Wage and social security benefits level of full-time academic staff, as well as their increments and promotions, must be such as to allow a dignified life, and at the same time make their dedication to academic career attractive. In addition, the fees of part-time professors must be attractive for this type of activity.

Salaries must be competitive in relation to what is offered on the labor market for ICT areas.

Full-time professors:

CATEGORY	No. OF PROFESSORS IN THIS CATEGORY	BASE SALARY	RANGES OF PERCEPTIONS REACHED WITH INCENTIVES, STIMULI AND OTHER INCOME INCLUDE THE SOURCE OF ORIGIN	
			INTERNAL	EXTERNAL

Part-time professors:

CATEGORY	No. OF PROFESSORS IN THIS CATEGORY	BASE SALARY	RANGES OF PERCEPTIONS REACHED WITH INCENTIVES, STIMULI AND OTHER INCOME INCLUDE THE SOURCE OF ORIG	
			INTERNAL	EXTERNAL
				_
				_

Per hour professors (subject)/class:

and/or text books.

CATEGORY	No. OF PROFESSORS IN THIS CATEGORY	BASIC SALARY PER HOUR	% AVERAGE INCREASE TO INCOME BY OTHER BENEFITS

A.2 In order to promote the interaction of the program academic staff with the sector, procedures must exist that regulate such interaction, as well as and external stimuli that professors can obtain as a result of this relationship.	admissions
 Are there written regulations or provisions that regulate the interaction of staff with the productive sector? 	f academic ′es □ No □
 If yes, are income and external income and incentives that professors can result of the relationship included in that regulations? 	obtain as a ′es □ No □
If the answer to the previous question was yes, summarize the main points.	

A.3 The program full-time professors should produce teaching and outreach materials,

Form to be completed by the institution - Page. FI - 18

• Indicate didactic and outreach materials, as well as textbooks that have been developed by professors assigned to the program in the last 4 years:

Professor	Didactic Material	Outreach Material	Text books	Total

know th	ne relationship, in	at least one strategy, nportance and focus re the proper orientation	of each and every su	bject that form it
program	n knows the relati	at least one strategy, s onship, importance ar ve the proper orientati	nd focus of each and e	every subject that
a gradi	uate course are ment of academic	at least one strategy, to in touch with the ne c bodies and research	eds of the education	nal program, the
Does this	strategy exist?			Yes □ No □
Describe w	hat the institution	nal strategies consist o	of:	

2.	Stu	ıd	en	te
4 .	ULL	ıu	CII	ιo

- **2.1 Selection**. There needs to be clarity in the selection of candidates for the educational program, so there must be explicit admission criteria that indicate the minimum conditions that new students must satisfy in order to be admitted to the program.
- 2.1.1 It is required that students entering the academic program meet a minimum of conditions in terms of knowledge, attitudes and skills, and therefore there should be explicit selection criteria that are used to admit first-admission students, which must be:
- Existence of a profile of the applicant who is to enter the program.
- Establishment of the requirement that applicants take and admission test, which allow only to accept those who comply with the minimum knowledge and skills required.

Information on the foregoing points must be written in the form of a guide of applicants.	r manu	al for
Does a profile of the applicant who is to enter the program exist?	Yes □	No □
If yes, provide a copy of the publication.		
 Has a minimum average been specifically required in order to be adm program? 	nitted to Yes □	
If yes, it is from		
Must the applicant to the program take an admission test?	Yes □	No 🗆
If yes, indicate the percentages, which includes:		
Knowledge (%) Skills (%) Abilities (%)		
Other (specify)		
Explain briefly what they are about:		
 Is information provided in writing to the applicant who is to enter the progrades he/she obtained in the admission test? 	gram o Yes □	
 Does the program keep statistical data of those aspiring to enter as we admitted ones? 	ell as d Yes □	

If yes, please provide the following information:

Registration Period	Number of applicants	Number of admitted

]	
studen		s). It is necessary to be support programs, in or			
2.2.1 Are	e the results of nationa	l exam prior to bachelo	r's degree taken into a	ccount? Yes □	
If yes,	provide a copy of it.				
	the academic perform lents to support progra	nance in the previous lams?	level taken into accou	nt to ch	annel
	11 1 3			Yes □	No □
If yes,	provide evidence.				
2.2.3 Do	interviews and/or sur	veys to new students ta	ike place?	Yes □	No 🗆
If yes,	provide evidence.				
2.2.4 ls t	here an instrument to	obtain socio-economic	data of new students?	Yes 🗆	No □
If yes,	provide a copy of it.				
		ch and analysis carrie in order to implement		results	s new
		•		Yes □	No □
If yes,	provide evidence.				
2.2.6 ls	there an induction pro	gram for new students	?	Yes □	No 🗆
	provide a copy of it.	the induction required	for the management o	f tha lag	rnina

2.2.7 In particular, students receive the induction required for the management of the learning environment when using content of the courses in the study plan, with the support of learning platforms?

YES [] NO []
In any case, briefly explain:
Present student induction strategies evidence to the learning environment
2.2.8 Does the educational program include studies that demonstrate that students have the profil required to study in an autonomous way, highlighting responsibility and research skills and being seltaught? YES [] NO [] In any case, briefly explain:
Provide an official document of the studies and their results, which must be current
2.3 School Trajectory. Students must have a plan for monitoring their performance during their stay in the study program, as well as receive feedback to improve it. (Proven trend of decreasing failure rates and dropout rates.)
2.3.1 Is there a monitoring and stay performance plan for students in the study program Yes \hdots No
If yes, provide a copy of it.
- Do students receive feedback to improve their stay in the program of study? Yes No $\hfill\Box$
If yes, describe how the student receives feedback on his/her performance:
2.3.2 Is there a clear trend to decreasing failure rates? Yes □ No
If yes, please provide and justify the corresponding indicators.
2.3.3 Is there a clear trend to decrease in dropout rates? Yes $\hfill \square$ No
If yes, please provide and justify the corresponding indicators.

2.4 Group Size. The size of the groups should not be in any case more than 60 students, and preferably there should be a maximum of 45 students. If this condition is not met,

attention to students must be ensured.

Form to be completed by the institution - Page. FI - 22

•	Provide the average group size of the last two years
•	How many groups in the past two years had more than 60 students?
•	How many groups in the past two years had more than 45 students?
	Describe how to guarantee the attention to students in groups with more than 45 students.
_	
_ 2.5	Degree. There must be one or several regulations of students, to consider the following
s r d	aspects: Subject accreditation and evaluation mechanisms, rights and obligations of the student and certification mechanisms. Also the options to obtain the degree must be regulated, and there must be a procedure that ensures the quality of degree works. In the degree requirements, the score obtained on the TOEFL test or equivalent shall be at east 500 points or equivalent in other means of formal evaluation.
2.5	5.1 There must be one or several regulations of students, to consider the following aspects:
	Subject accreditation and evaluation mechanisms Student rights and obligations Degree Mechanisms.
•	Are there regulations for students?
11	f yes, please provide a copy, and the following information.
*	Maximum number of opportunities to approve a subject, either for having studied it, for having held sufficiency exams, or through any other mechanism:
*	Maximum number of extraordinary, sufficiency, or similar examinations throughout their studies:
	Same subject
	Of all subjects studied
*	Maximum number of years, semester, or school periods in which the student can finish covering the credits for the differentiated program if it is a full time (TC) or part-time (TP) student.
	• TC
	• TP
•	Main reasons to automatically discontinue a student:

 How and when the student becomes aware of the content of students (if any)? 	the regulations	for
May the student take part in the collegiate bodies of the institution? Y	es 🗆 No 🗆	
With a Voice	Yes □	No
With Vote	Yes □	No
Briefly indicate the requirements for this:		
2.5.2 The institution must have degree options regulated, both on procedure.	requirements	and
 Are there regulations that indicate degree options, both on re- procedure? 	quirements and Yes □ N	
If yes, provide a copy of it.		
2.5.3 There must be procedures in place to ensure the quality of the de academies or any collegiate group designated for this purpose participation take part.		
• Is there a procedure to ensure the quality of degree works?	Yes □ N	lo □
If yes, indicate what it is and those who participate in it:		

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2.5.4 The score obtained on the TOEFL test or equivalent shall be at least 500 points or equivalent in other means of formal evaluation.
Yes No
2.6 School performance rates per generational cohort. The dropout rate must show a decreasing trend, and there shall be reliable statistics to observe it. Never less than 20 % terminal efficiency.
\bullet Does the program have data that make it possible to analyze the flow of students in the different periods and know school drop-out rates by period? Yes \Box No \Box
2.7 International student mobility.
 Is there a formal process for international student mobility (both sending and receiving)? Yes □ No □ Is there a regulation for this process? Yes □ No □
Make a brief summary of the process indicating who participates in it, as well as the responsibilities they have.

2.7.1 Indicate the mobility in sending and receiving of students in the last five years.

Student	Shipping / Receiving	Institution (receiving or sending)	Date
			_

	2. Indicate the products and results obtained from these mobilities in sending and ving students in the last five years.
_	

3. Curriculum

3.1 Rationale. Official documentation must exist to support the program creation, retention and/or update. (The program must have curriculums that make it possible to evaluate the relevance of the curriculum according to the demands of society and the labor market, as well as scientific and technological progress) (frame of reference profiles ANIEI - CONAIC).

3.1.1 Rationale for the program	
• Is there a document that justifies the creation of the program?	Yes □ No □
Expose in a clear and concise manner the following:	
The reasons for which the program was established (why and what	for)
The reasons for which the program is currently ongoing	
What specific demand the program aims to satisfy?	
What specific demand the program meets?	

3.1.2 It is important that there be consistency with institutional missic objectives, the objectives of the national development plan (ongoing) (ongoing) of the country, as well as with the objective of higher education	and educa	ation
 Are the institutional mission, vision and objectives published? 	Yes □ N	Vo □
If yes, please provide a copy.		
In one paragraph, justify consistency between the mission, vision and objective, and the higher education objective.	ectives and	the
3.2 Admission and graduate profiles There must be a definition and con overall objective of the program and the graduate profile, as well as co developments in the specific knowledge area.	•	
3.2.1 There must be a definition of the overall objective of the program and gr	raduate pro	ofile.
Is the program curriculum published?	Yes □ N	No □
If yes, please provide a copy of the program documentation.		
Does program documentation describe the graduate profile?	Yes □ N	No □
Does program documentation describe the program objectives?	Yes □ N	No 🗆
3.2.2 Consistency between graduate profile and objective is important.		
In one paragraph, justify consistency between graduate profile and progra	ım objectiv	e.

3.2.3 The objective must be consistent with the present and future developments in the area of knowledge.

In one paragraph, justify consistency between program objective and present and futu developments in the Informatics and Computing area.
3.3 Permanence, graduate, and revalidation regulations. There must be regulations the clearly indicate the permanence, graduate, equivalence, and revalidation requirement of the academic program and whether it spreads among the student community.
3.3.1 Are there regulations that clearly indicate the permanence, graduate, equivalence and revalidation requirements of the academic program and whether it spreads amone the student community? Yes □ No
Briefly describe permanence, graduate, equivalence, and revalidation procedure of the academic program
Attach the regulations that support the statement.

3.4 Subject Programs. Time units⁵ dedicated to each knowledge area of the program should be calculated, considering two classifications: One that is generic and includes 4 areas: 1) Informatics and Computing, 2) Mathematics and Basic Sciences, 3) Social Sciences, Humanities and 4) Other; and the other one, that is specific of the Informatics and Computing knowledge area, and that covers 8 areas: 1) Man-Machine Interaction, 2) Information Treatment, 3) Programming and Software Engineering, 4) Database Software, 5) Networks, 6) Computer Architecture, 7) Social Environment, and 8) Mathematics.

Annex for Informatics and Computing Academic Programs

Program Total Units

3.4.1 Indicate 5 time units2 dedicated to each knowledge area of the program, considering two classifications:

⁵ To be able to compare the curricula of various programs, reference is made to units in each course. For the purposes of equivalence, a unit eguals 1 hour of face-to-face theory, or 3 hours of face-to-face practice for bachelor's degree and, in the case of Senior University Technician, the equivalence is 2 hours of face-to-face practice. The Commission recognizes that there are new pedagogical models where students engage in self-study; in these cases, the institution seeking accreditation must justify the equivalence used for the number of units.

Period	Course name	Informatics and Computing	Math and Basic Sciences	Social Sciences, Humanities	Other
1					
2					
3					
4					
Total					
Grand Total					

Form to be	completed	by the	institution -	Page	FI -	20
	COLLIDIETER	DV IIIC	III SULULIOI I	i auc.		

Units of Informatics and Computing

3.4.2 Indicate the units dedicated to each area of the knowledge of Informatics and Computing on the basis of the following classification.									
Pro	file ⁶ :	A 🗆	В□	С		D 🗆			
Period	Course	Man- machine interactio n.	Informati on treatment	Softwa re prog. and eng.	Databas e Software	Network s	Compute r Architect ure	Social Environ ment	Mathem tics
1									
2									
Total									
Grand Total									
 3.5 Contents. Each subject program must contain the location within the curriculum, general objective, objectives for each section of the course, topics by section, practice (if any), basic bibliography, necessary resources, hours of use of computing infrastructure, evaluation form, hours of theory and/or practice and the equivalent in units, for the purpose of validating responses 3.1 and 3.2 3.5.1 Program Subjects Is there a list or curriculum map with subject serialization? 									

⁶ A: BA in Informatics; B: Bachelor's degree in Software Engineering; C: Bachelor's degree in computer science; D: Computer engineering.

lf :	yes, provide a copy of it.		
•	Is this information provided to the student?	Yes □ I	No 🗆
•	Are the synoptic programs (condensate) of all subjects available? Yes what %	□ No □	Ir
•	Are the analytical programs (detailed) for all subjects available? Yes No What %		

If the answer is yes, attach the analytical programs of all subjects.

Based on the total of the analytical programs of the program subjects, indicate what percentage of them are specifically mentioned:

ELEMENT	What % of the analytical programs of the subjects include it
Prerequisites	
General Objective	
Objectives for Each Section	
Topics by section	
Practices	
Bibliography	
Necessary resources	
Hours of use of computing infrastructure	
Evaluation Form	
Hours of theory and/or practice	
Professor's desirable profile (graduate education and experience in the field)	

3.5.2 The subjects corresponding to the specialty include projects aimed to develop the student's ability to solve real problems in accordance with the technological needs of the program itself.

Indicate the subjects of the program in which projects target to develop the student's ability to solve real problems in accordance with the technological needs of the program itself.

SUBJECT	Describe the nature of the projects to be carried out by the students

3.5.3. The curriculum should consider the development of team work and an interdisciplinary approach.

Indicate in which subjects of the program team work and an interdisciplinary approach are developed.

SUBJECT	Describe how team work and interdisciplinary work are developed

3.6 Curricular flexibility. Curriculum should be revised and updated, if applicable, at least every five years and there should be a formal procedure for review and updating, in which collegiate bodies, external advisers, representatives of the productive sector, active graduates and recognized researchers must participate. There should also be a permanent curricular evaluation process.

Indicate the elective subjects offered in the last three years.

SUBJECT	PERIOD	UNITS and AREAS ⁷

⁷ Subject units and areas should be considered in terms of the classification indicated in the responses 3.1 and 3.2.

- **3.7 Evaluation and updating.** Curriculum should be periodically reviewed and updated, and official procedures should exist in order to perform this, which should indicate collegiate bodies, consultants, graduates and recognized researchers.
- 3.7.1 Curriculum should be revised, and updated if applicable, at least every five years.

Date of review

Please indicate which were the latest revisions to the curriculum and what was involved in each review.

What was the review about?

		<u> </u>	
	There should be a odating.	formal and functional procedure for th	ne curriculum review and
• Is	there an official pro	ocedure for curriculum review?	Yes □ No □
Briefl	y describe the prod	edure for curriculum review and updation	ng.
as ar	s well as of a group nd graduates in acti	ating processes must have the participal of external advisors, representatives we service, and recognized researchers participate in curriculum revision and up	of the productive sector, s.
In wh			103 - 140 -
**!	nich way?		
	nich way?		
	nich way?		
	nich way?		
• Ar	ŕ	rs and representatives of the prodund updating?	ctive sector involved in Yes □ No □
• Ar	re external adviso	·	

\bullet Are graduates of the program involved in curriculum review and upo No \square	lating?	Ye	s 🗆
In which way?			
Do recognized researchers take part in curriculum review and update.	ting? Yes	□ N	1o 🗆
In which way?			
3.7.4 There should also be a permanent curricular evaluation process.			
Is there a permanent curriculum evaluation procedure?	Yes	□ N	10 [
Describe this procedure:			
8 Divulge. As a fundamental part of the teaching-learning process, upon each and every subject that is part of the curriculum should be available by: professors, students and general public.			
3.8.1 The updated programs of every curriculum subject are available for the part of professors, students and general public?		ation	
3.8.2 Please indicate which of the following aspects are made know to the	ne studen	t.	
Curriculum Structure Objective	Yes Yes	□ N s □	No No
□ Profile	Yes	; 🗆	No

Subjects		Yes □	No
□ Hours		Yes □	No
		100 =	110
Duration		Yes □	No
	V □	NI	
Serial (subjects) Specialty(ies)	Yes □	No ⊔ Yes □	No
		165	NO
If yes, please describe how a person have access to information	about prog	ırams:	
3.8.3 Mechanisms must exist for external promotion (visits to high outreach through mass media, etc.) of the program.	ner-level s	ites, lea	flets,
Do mechanisms exist for the external promotion of the program	n?	Yes □	No □
If yes, indicate what they are.			

- **3.9 Justification of the Competencies.** The competences of the program to be evaluated should be analyzed, considering the competencies defined by ANIEI in its most updated version, justifying the profile A, B, C or D of the model through a matrix.
- 3.9.1 Table of compliance with transversal competences. Consider the definition and justification of initial competencies, development and evaluation. Fill in the transversal skills table. Planning stage of the competency model.
- 3.9.2. Table of compliance with specific competences. Consider the definition and justification of initial competencies, development and evaluation. Fill in table specific skills. Planning stage of the competency model.

4.	Evaluation	of L	.earning

- **4.1 Continuous Evaluation methodology.** In this criterion the relevance of the evaluation method applied and the curriculum objectives must be assessed. In this sense, this criterion provides for a number of aspects that must be taken care of, among them: the use of computer during teaching-learning process must be included; in the courses which by their nature so require; there must be strategies to ensure the compliance of each subject curriculum; teaching methods different from the traditional ones must be included; the evaluation of student performance should be done through the combination of several mechanisms; feedback mechanisms to improve the teaching-learning process; teaching a foreign language must be considered, and there must be mechanisms for measuring the competencies of the students at the end of their school career according to their graduate profile.
- 4.1.1 The use of the computer during the teaching and learning process, in the courses which by their nature so require, must be included.

•	Does	the p	orogram	have	statistics	on	the	use	of	computing	tools	by	the	stude	ents?
													Ye	25 🗆	No 🗆

If yes, provide the following information for the last school periods:

School Period	Average number of hours of use per student

- 4.1.2 At least 90% of curriculum subject programs must be covered.
 - Are there statistical data that show the percentage that is covered in each subject with respect to the program?
 Yes □ No □

If yes, include the results in the table below

% Covered	Number of subjects	Reasons for not being able to cover 100% of the program (for each subject)
100%		
Between 90% and 100%		
Less than 90%		

4.1.3 Every program must establish that in several courses teaching methods different from
the traditional teacher oral exposure are included in whole or in part, such as the use
of audiovisual, multimedia, interactive classrooms, project development, laborator
practices, etc., as well as other kinds of activities aimed at improving the teaching learning process.
- ·

•	Are methods different from the traditional teacher oral exposure used in	the tead	ching
	of courses of curriculum subjects? (Visual support, multimedia, interactive	classro	oms,
	project development, laboratory practice, etc.):	Yes 🗆	No □

If yes, indicate:

Method employed	Number of subjects	Reasons why the use of this method is relevant

- 4.1.4 Student's performance quality during his/her stay in the program should be assessed through the combination of several mechanisms, such as exams, homework, problems to solve, laboratory work and reports, and his/her skills in areas such as: oral and written communication, project management, professional ethics and sustainability must be considered.
 - In order to check the academic rigor in the Evaluation of learning, the program manager will need to collect a representative sample of the following material prepared by students, to be revised in the visit:
 - Graded exams for each subject for all semesters (3 for each subject: 1 worst grade, 2 regular, 3 best).
 - Series of exercises, homework, and other works used in the teaching-learning process.
 - Laboratory practices and reports that are taught.
 - Class notes.
 - Briefly describe the way in which the skills are developed: oral and written communication, project management, sustainability, student's social commitment and ethics, as well as the existing institutional support (writing courses, etc.):

_		CONAIC's Manual - Se	elf-evaluation Form
4.1.5 Feedback mechanism teaching performance of the teaching-learning process mu	eir professors, carry		
Do Students perform cou	urse evaluations?		Yes □ No □
If yes, describe how the restaken to improve them:	sults of course evalua	ations are made knowr	and the actions
1.1.6 There should be a strat	egy for the education	in, and practice of, a fo	oreign language.
Does curriculum establis some extent in a foreign		nt that students are or	become fluent to Yes □ No □
If so, briefly describe what t	his requirement is:		
 What mechanisms / stra in a foreign language? 	tegies are used for st	udents to become fluer	nt to some extent

 4.1.7 Is there a measurement mechanism on the competencies developed by students at the end of their academic career according to their admission profile? (Certification of competencies under national or international standards according to ICT profile to be assessed for Bachelor's Degree and senior university technician (TSU) reflected in ANIEI-CONAIC 2014 updated curriculum models)

If yes, please des	scribe competen	cy measuremen	t and certificatio		No [
Fill out the Cross the profile to be e				es table, accord	ding to
4.2 Incentives to performance, eve to students who time as possible recognition systeschool period; be community.	ery program mus show academic to their studies. T em to acknowle	st consider a sch ability, in order The program also dge the acader	nolarship prograi to encourage th o must have at le nic developmen	m for economic s nem to devote as east an incentive nt of students or	suppoi s muci and/o ver the
4.2.1 Is there a sch	nolarship progran	m for students?		Yes □	No 🗆
If yes, describe s that are granted t	. •	iting requiremen	ts, as well as th	e types of schola	arship
		No. of students benefited from		scholarships ar it from them: No. of students benefited from loan	nd Ioai
		scholarships	Controlarempe	scholarships	
4.2.2 Are stimuli t granted?	o or recognitior	of the good a	cademic perfori		udents
List them, indicati (P) level.	ng if they are gra	anted at the instit	ution (I), Acader	mic Unit (A), or P	rogran

Stimulus description	Level

- 4.3. Evaluation of graduation attributes. Describe the method of evaluating the graduation attributes with the corresponding evidence, to ensure their achievement
- 4.3.1 Does the Educational Program have a method or combination of methods that allows it to ensure the evaluation of graduation attributes, which guarantee their achievement in graduates?

 YES[] NO[]

In the affirmative case, fill in Table 1. Evaluation of graduation attributes and their compliance. Briefly explain the evaluation method or method used.

Evidence the method

Table 1. Evaluation of graduation attributes and their compliance (Based on Table 1. Attributes of the graduate Planned graduation competencies SEUOL ACCORD / CONAIC. See in page: https://www.conaic.net/ingles/publicaciones/Mapping%20Seoul%20Accord%20and%20CONAIC%20Graduate%20Attributes.pdf)

	Attribute	Evaluation Method	Evidence of Compliance	Observations
1	Academic Education			
2	Knowledge for Solving			
	Computing Problems			
3	Problem Analysis			
4	Design / Development of			
	solutions			
5	Modern Tools Usage			
6	Individual and Team Work			
7	Communicatión			
8	Computing and			
	Professionalism and			
	Society			
9	Ethics			
10	Life-Long Learnng			

5.	Integral Education					
4 1	Entropropourial Davidonment	Thora ora	04=040=:00	that nu	 	0 10 4 11 1

5.1 Entrepreneurial Development. There are strategies that promote an entrepreneurial attitude through the operation of entrepreneurial development programs, courses, workshops, business incubators or the like. 5.1.1 Are there strategies that promote an entrepreneurial attitude through the operation of entrepreneurial development programs, courses, workshops, business incubators or the like? Yes □ No □ If the answer is yes, please briefly describe in which programs and projects are students and professors involved: For this purpose, it is necessary to know: How many students and professors participate in the program? What percentage of the program tuition does it represent? • The number of companies promoted. Events organized within the campus. • Events organized by other educational or business sector institutions to which they attend. • If awards have been obtained, how many and in which forums have they been granted?

- **5.2 Cultural Activities**⁸. The institution must have facilities for the promotion of cultural activities and a formal program for the development of these activities, involving students of the educational program.
 - 5.2.1 Make a list of the facilities intended for cultural activities for the promotion of academic life, indicating how many users they serve simultaneously in each case.

⁸The Program should ensure cultural and sports activities through its own facilities, through an agreement, etc.; it must describe such activities.

5.2.2 The institution must have a formal pro- in which students of the educational pro-	gram for the development of cultural activitie ogram take part.
	f cultural activities in which students of the as the percentage in relation to the tuition of
	nstitution must have facilities for the promotion or the development of these activities, involving
5.3.1 Make a list of the facilities for sports indicating how many users they serve s	activities for the promotion of academic life imultaneously in each case.
5.3.2 The institution must have a formal prog in which students of the educational pro	gram for the development of sporting activities ogram take part.
	activities in which students of the educational entage in relation to the educational progran

⁹The Program should ensure cultural and sports activities through its own facilities, through an agreement, etc.; it must describe such activities.

		cientific and technologion te integration of graduat		
		in which professors and Informatics and Comput		technological
		·		Yes □ No □
If the ansi	wer is yes, please d	escribe briefly what pro	grams or projects stu	dents take part
confe		academic-scientific eve s, co-curricular, among e carried out?		
to be	come graduates, to	dance program in opera enter the labor market y experts from the labor	in the appropriate ma	anner (courses
				Yes □ No □
		ce and to keep a record anded in the last three so		on the number
	School Period	Type of event*	Number of attending students	
	*Seminars, Congresses, Fo	orums, Conferences and co-curri	cular courses among others.	
violence,	sexual education, a	Inseling program for pre mong other aspects) or onal program of vocation	to support students w	hen they apply
	education, among	ogram for prevention of other aspects) or to su	•	

If th	ne answer is yes, please describe briefly what programs or projects stud	dents take part
.5.2 I	ls there a vocational guidance and counseling institutional program?	Yes □ No □
If th	ne answer is yes, please briefly describe the nature of the programs.	
req	edical Services ¹⁰ . There must be an appropriate place with drugs quired for first aid; these materials must be available for academic and ff, and students.	
	Is there medical service or first-aid materials? es, please describe briefly	Yes □ No □
I	Is this service accessible for academic and administrative staff and student of the staff and staff a	dents? Yes [
.7 Sc	chool - Family Link. With the purpose of supporting the integral format	ion of students

 10 In the case of face-to-face or mixed learning programs, medical services must be guaranteed through strategies set by the institution itself and should be described and evidence presented.

it is convenient to have communication with parents, so it is a good idea to define the

appropriate communication channels, induction activities and orientation courses for parents, among other mechanisms.
5.7.1 Is there communication with parents?
If the answer is yes, please briefly describe what these channels of communication consist of.
Induction activities in order for parents to get to know the institution
Parent orientation courses
• Other
6. Learning Support Services.

- **6.1 Tutoring.** With the purpose of supporting students in their school careers, it is a good idea to offer support through academic counseling and tutoring to help them complete their studies. Measuring the impact of the mentoring program.
- 6.1.1 Tutoring to students is offered in a constant and organized manner?

Yes □ No □

	number of studen teaching staff dedi			ods and the total time the
	School Period	Support Mechanism	Number of students who receive support	Teaching staff time dedicated to these activities
6	6.1.3 Are there mechai impact?	nisms and instrum	ents to assess the Tuto	ring Program, as well as its
				Yes □ No □
	If the answer is yes,	please briefly des	scribe what is the mech	anism and its impact.
pro	vide a permanent aca	demic counseling	•	nanisms and instruments to ea, it is also necessary to ailure rates.
6	6.2.1 Program profe Yes □ No □	ssors provide a	cademic advice perm	anently to the students:
		ed in the last three		e information on the number e total time of the teaching
	School Period	Support Mechanism	Number of students who receive support	Teaching staff time dedicated to these activities
		<u> </u>		

6.1.2 In case this service is offered, and that a record is kept, provide information on the

6.2.2 Are there mecha well as their impac			ne advisory se	rvices program, as
If the answer is yes,	please briefly des	scribe what is the	mechanism ar	nd its impact.
6.3 Library - Access t				
sufficient space to p well as suitable pla groups, exhibition sp	rovide service, at ces for the provis	the same time, to sion of other serv	at least 10%	of the students, as
• •	n conducts their a		s, or the virtual	l library guarantees
For libraries with physis the library of the virtual libraries, desc	academic areas	where the progra	m develops.	
Library services av	vailable to the pro	gram are:		
 Institutional With a wealth of _ With capacity to s With open shelving 	copies serve	users simultaneou	usly	Yes □ No □
With the following	•	i priysical library		Tes - No -

¹¹ The programs may or may not have a physical library, but what is essential is that access to information is ensured, as set forth in this criterion.

	copies users simultaneously he case of a physical library	Yes □ No □
	copies users simultaneously he case of a physical library	Yes □ No □
student community? (I include audiovisual equi computer equipment for the student student for the student for the student stud	re provided by the library in which the pointh the case of libraries with physical facture in the case of libraries with physical facture in the case or consultation, consultation via the Interpaper library, video library, etc.; in the case ervices)	illities describe if they study groups, printing, ernet, exhibition halls,
 Do general and specific comply with the rules 	noose and comply with the standards, for the specific service libraries that serve the collibraries that provide service to the program of the Higher Education and Research its fundamental points?	program. gram being evaluated
	titles of reference texts used in the course	work for the program,

for at least 10% of the students enrolled in them, when it is in physical form, and for

100% in the case of digital forms.

following:
Reference texts mentioned in the subjects of the study plans: Yes □ No.
Different titles for each subject that is taught in the program Yes □ no
Percentage of students who can make simultaneous use of reference texts available
\bullet Are there subscriptions to journals in the area of specialty and basic sciences? Yes No \square
6.3.4 There must be infrastructure for access to digital collections via the Internet.
\bullet Does the library have infrastructure for access to digital collections via the Internet Yes \square No
6.3.5 The library must be able to provide access to relevant journals and publications in th Informatics and Computing area.
The bibliographic material existing in the library on which the program rests has th following:
- Access to publications and journals relevant in the field of informatics and computin Yes $\hfill\square$
Attach a list of journals related to Informatics and Computing.
6.3.6 The library must have collections of reference works that include technical manuals special and general encyclopedias, dictionaries, statistics, etc.; to support th program.
The bibliographic material existing in the library on which the program rests has th following:
 Technical manuals in the area: Reference collections such as dictionaries, general and special encyclopedias Yes □ No
• Statistics Publications: Yes \(\text{No} \)
6.3.7 The bibliographic wealth and subscriptions to magazines should be subject t ongoing renewal.
\bullet Is there an ongoing renewal of the bibliographic wealth and subscriptions to journals Yes \Box No

The bibliographic material existing in the library on which the program rests has the

How is the out?	ne renewal of the b	ibliographic wealth a	nd subscriptions to	journals carried
	must be electroni	ic means which all	low automated se	arch within the
The library h				
•		automated search wit	hin the bibliographio	c wealth: Yes
the num		stics of the provided s the service type po manner		
	ry that supports the in recent periods S	ne program has up- chool:	to-date records of	library services Yes □ No □
If yes, provid	de data for the last t	three school periods:		
Service Type	General Users	Program users	School per	riods
		participate in the bibl		·
Briefly de in it.	escribe bibliographic	cal material selection	process, and those	e who participate
6.3.11 There	Must be an efficient	mechanism for the a	cauisition of biblioa	ranhical materia

 Briefly describe the mechanism of acquisition of bibliographical material, and how it meets the needs of the program.
6.4 TECHNOLOGICAL AND LEARNING PLATFORMS Software or learning environment that the institution uses as a mechanism to create, approve,
store, distribute and manage teaching and learning contents and activities for distance, virtual,
or on line learning, and even as a complement to face-to-face learning. Focuses on managing content created by a wide variety of sources, serving to support the actors of this modality, such
as students, professors, tutors, administrators and guests. The intention is to make available to
students the methodology embodied in the organization or didactic structure of the materials, homework, forums, chat (among others) created by a group of professors to promote learning in
a particular area. Some of the functions of these learning environments are to manage
users, resources, training and content; to manage access; learning process control and follow-up; evaluation; to generate reports; to manage communication services such as
discussion forums, video conferencing, among others.
6.4.1 State the type or types of technological platform used for the administration of the educational program contents: Proprietary or licensed (Example: Blackboard, WebCT, OSMedia, Saba, etc.) [] State which:
Free or Open Source Software (Example: ATutor, Dokeos, Claroline, dotLRN, Moodle, or institutional developments, etc).
State which one, and if it is an institutional development describe it:
Public or private cloud computing for higher education, although it is not strictly speaking a platform, serves as a support for face-to-face modality, and even for the distance or virtual modality (Example: Udacity, Coursera, Udemy, Wiziq, or institutional developments, etc.) []
State which one, and if it is an institutional development describe it:
Provide evidence, either license, development, or use, as the case may be.
6.4.2 Select from the list below, the characteristics ¹² (see description on footer) of learning environment
12

Detail of learning environment characteristics: 1) interactivity. It refers to all synchronous and asynchronous communication tools, such as those of cooperation, collaboration, sharing and generation of content (such as chat, forums, wikis, collaboration in the cloud or other similar system, creation of working groups, survey creation, Evaluation test, video conferencing, activities and mail delivery spaces within the learning tool, among many others that exist and that are still being created to communicate and interact; 2) Flexibility. Refers to the degree of adaptability, both technological and pedagogical; it must have the tool to encourage lifelong learning; 3) scalability. It refers to projections for the future, i.e., to have control and be able to follow up, so that the educational environment can be transformed and adapted to existing or future resources; 4) Usability. It refers to the platform ease of use by learning actors -professors or facilitators, guardians, students, administrators; it has to do with the integration of the accessibility, navigation, programming, management, design and image features of the learning environment; 5) Ubiquity. It is the ability of the learning environment of being able to be used in all parts simultaneously and to be transparent to the student, making him/her feel that everything he/she needs for learning is within such an environment, at the same time for the rest of learning actors, which allows them to be, be there, create, and modify the student's environments. I.e., the degree of presence provided by the platform and its ability to integrate with other external autonomous systems (such as social networking sites, etc.); 6) Functionality. It refers to the level of efficiency, effectiveness, portability and ease of installation. That is, the combination of technological requirements, infrastructure and resources from the server; 7) Standardization. It refers to the acceptability of standards such as SCORM or the ease to import or insert other resources or conte

hat it uses for its educational program: [
Please describe briefly what they are about:
Provide evidence of their use
5.4.3 Briefly describe the technological platform technical requirements, such as bandwidth, type an expacity of the server, operating system and software needed for instructional design and content development or multimedia materials, etc.
Provide evidence of their use through printed manuals or online, as well as computer hardware an software that is being used 5.5 LEARNING MATERIAL AND RESOURCES USING EDUCATIONAL TECHNOLOGY.
Learning material and resources play a very important role in the teaching-learning process, both face of office and virtual, distance, or on-line learning, but for this last non-face-to-face educational modality hey become indispensable. This requires reviewing that the material has a functional didactic structure of support student's autonomous learning and to allow interaction between learning actors.
5.5.1 Do didactic or learning materials of the various subjects of the academic program consider content highly flexible to the different learning styles of the students, appropriate for their level (self-sufficient e., consider an integral and holistic design to be used by the students and encourage their autonomous earning?
YES [] NO
n any case, explain:
Present evidence of didactic material developed
5.5.2 The organization or didactic structure of learning material includes some or all of the following: Learning Objectives Content and topics of the course or subject Learning Activities for the acquisition of competencies according to the graduate profile A system for prior, formative and final evaluation, in accordance with program objectives, content

and skills [] References		
Provide as evidence: example of courses designed in this way that are currently being used provide the evaluators with access to your platform.	. In th	e visit,
6.5.3 Use any methodology or tool for the Evaluation of content and topics of the course your material to evaluate at least the following aspects: motivation in students for its use; the information presented; temporal and spatial effect; quality in the content presentation wording, spelling, typography, graphic design, color, originality; etc. In addition to indicating take part in the Evaluation of the material (content experts, professors, educational petechnicians in audio, video, and computer; graphic designers, communication specialists facilitators, guardians or advisers, and students) YES [timeling (in teaching those sychology), professional	ness of rms of se who logists, lessors,
Briefly describe its elements:		
Provide an official document with the methodology or tool, and the results of its application 6.5.4 Does it use any methodology or tool that allows to evaluate the design, impact, produced and coverage of students, ease of distribution, availability, and interaction between content of learning, students and between students, other media, other materials, hypertexts, hy hypermedia. YES [Briefly describe its elements:	luctior t, facil	n time, litators k, and
Briefly desertee its elements.		
Provide an official document of the methodology or tool, and the results of its application,	update	-d
6.5.5 Didactic or learning materials involve technical aspects such as the interface design deployment time, music, ambient sound, voice, equipment, ease of use, versatility, in germanagement and multimedia integration. As well as signal transmission and reception.		
YES [[]] NO]
In any case, briefly explain:		
		_
Provide an example of material with these features being used or a link where the same can In the visit, provide the evaluators with access to your platform where the materials used by		

6.6. INTEGRATION OF LEARNING ACTORS.

Learning actors are all those involved in the teaching-learning process and those who support the administration of the technological and learning platforms; thus, professors or learning facilitators, tutors

or advisers, students, and administrators of the learning platform, support and development managers have all been considered.

6.6.1 As part of the educational model, in the case of non-face-to-face nor mixed learning programs, face-to-face meetings are held in different venues to strengthen the interaction - in a defined time and a physical space - between all members that are part of the learning community: students, professors, facilitators, tutors and administrative staff, to share experiences and broaden learning horizons?

	YES [] NO
In any case, briefly explain:	 	

Provide formal minutes of meetings that evidence them and their results.

7. Linking - Extension	
7.1 Interaction with public, private and social sectors. In an explicit way must have strategies for the interaction with social and productive sectors, or international levels, as well as result monitoring and evaluation.	
7.1.1 Does the program have a mechanism for formal interaction with the productive sectors?	ne social and Yes □ No □
If yes, please indicate the type of follow-up and Evaluation of the correspond	nding results.
7.1.2 There should be collaboration agreements with external entities to substantive functions of university affairs and have tangible results.	support the
Are there collaboration agreements in operation?	Yes □ No □
If so, describe them briefly and indicate what tangible results they have.	
7.1.3 Do you have an established regulations for professional practice in the space of work?	es and stays
	Yes □ No □
If yes, please describe briefly	
- 7.1.4 Are there training programs for students through scholarship	e granted by
 7.1.4 Are there training programs for students through scholarship. 	o granieu by

the companies to carry out technical activities in specific projects or for them to

be trained in emerging disciplinary topics specific to the discipline of the

program, and/or have access to specialized equipment with modern technology; elements that facilitate their insertion in the labor market?
Yes □ No □
If so, describe them briefly and indicate what tangible results they have.
7.1.5 Are there mechanisms and instruments to measure the extent of the interaction of IES with the productive sector?
of IES with the productive sector?
Yes □ No □ If so, describe them briefly and indicate what tangible results they have.
7.2 Graduate follow-up. There should be a follow-up program for graduates and a mechanism to ensure that their points of view are considered in the restructuring of the curriculum.
7.2.1 Does the program have a mechanism for the follow-up of graduates that includes surveys to employers for the job performance of graduates in the labor field and surveys to the own graduates to conduct research about their opinion on the study program they coursed, as well as mechanisms to ensure that the results of the surveys are taken into consideration for curriculum restructuring?
Yes No
If yes, briefly describe some of the results obtained.
7.2.2 Are there updated databases of graduates from the academic program? Yes No
 7.2.3 Are periodic surveys to graduates in order to know their work situation and the degree of satisfaction with the relevance of the program carried out? Yes □ No □
TCS - TVO -

that are in full force a allow developing stu well as of professo	nd effect with othe Ident mobility prog rs and researche	er national and foreign e grams that contribute to	demic exchange agreer ducational institutions, v o their integral educatio dividually or in collabo
7.3.1 Do these agree	ements exist?		Yes □
If so, briefly describ	e what these agre	eements are, and prese	ent evidence of operatio
•		· ·	•
		rofessors of the educ	cational program that
Submit the list of participated in acad		rofessors of the educ Number of students who receive support	cational program that Support Mechanism
participated in acad	demic mobility. Mobility	Number of students	
participated in acad	demic mobility. Mobility	Number of students	

List them:

7.4 Social Services The Program must adhere to constitutional guide of social service, and an appropriate follow-up must be carried out.	
7.4.1 Does the program keep track of students Social Service?	Yes □ No □
If so, briefly describe what it is, and the way in which the institution the corresponding constitutional guidelines.	າ ensures to abide by
¿Is there any information on the type of activities carried out by requirement of social service?	students to meet the Yes No
If yes, indicate the percentage of those activities which are relate educational program:_	ed to the area of the
7.5 Career Office. The educational program must have a career of graduates (appropriate and efficient).	fice for students and
7.5.1 Does the program have a Career Office?	Yes □ No □
If yes:	
• Is it adequate?	Yes □ No □
Why?	

- **7.6 Outreach.** There must be mechanisms for culture outreach of the educational program academic area, such as: articles, research reports, periodicals, books, lectures, exhibitions and other. Part of this outreach must be targeted to children and youngsters. There must also be continuing education courses, language centers, external service and community service.
 - 7.6.1 What media the Institution provide and at what level (General, Directorate, headship, program, etc.) for cultural outreach, such as: Articles, research reports, journals, books, lectures, exhibitions, etc.?

	CO	ONAIC's Manual - Self-evaluation Form
	_	
5.2 There should be training pro	ograms for different s	sectors.
Does the program conduct tra	aining programs for a	different sectors?
Does the program conduct to	aning programs for c	Yes No
yes, provide the following infor	rmation for the past t	hree periods.
		•
Program		Company/Sector
congresses, seminars, etc.		graduate programs, conferences
Briefly describe what they consis	st of, as well as resul	Its obtained.
		Consulting, Advisory) to companies in additional economic resources.
		Yes □ No
Briefly describe what they consist	st of, as well as resul	Its obtained.

7.6.5 Is there an institutional foreign language education service in operation?

	• Yes □ No
Briefly describe what it consists of, as well as results obtained.	
8. Research	
te As for this criterion, in the senior university technician level, technological search shall be considered in the same conditions due to the education profile spec	
8.1 Research lines and projects. There must be an institutional policy research lines and regulations; research lines should group projects with charge; and the leaders linked to research lines must have relevant aca	ith one person
8.1.1 Is there an institutional policy that clearly states research lines with regulations?	their respectiv
If so, briefly describe what this policy is about:	
8.1.2 Research lines defined, which grouped projects with an assignee.	
If the program has research lines defined, list them and describe to form.	hem in synthet
8.1.3 Leaders linked to research lines that have relevant academic degree	96

• Make a list of the Leaders of projects related to the lines of research, and indicate the

level of academic degrees that has each one (master's degree, doctorate).

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8.2 Research Resources. It is necessary to allocate budgetary resources for research and/or technological development to enable BA teaching staff to comply with thes substantive functions; there must be academic staff to develop networking and research activities, as well as the sufficient infrastructure, relevant to project development; there must be regulations for the development of research, and support staff enough, according to project size and importance.
8.2.1 Are budget resources allocated for research and/or development? Yes No
If yes, include evidence of budget allocations per project.
8.2.2 It is recommended that the institution has a program to interact with the productive of services sectors and research with the following characteristics:
 A group of undergraduate academic staff, integrated to develop networking activitie and research, constituted by a minimum of two people with postgraduate studies i the specialty area of the program, preferably with a Ph.D. degree and at least thre professors, professionals or students.
 A sufficient and relevant infrastructure regarding spaces and equipment for th development of an interaction with the productive or services sectors and research.
It shall include a list of the physical spaces and equipment exclusively for research Please indicate how many researchers use this infrastructure.
8.2.3 Specific and approved regulations for the development of the research.
$\bullet~$ In the institution, regulations relating to research tasks are explicit and duly approved Yes $\square~$ No
If yes, please explain the most important points.

8.2.4 Sufficient support staff (research technicians, holder professors, associate professors, etc.), depending on the size and importance of each project.

 Does the program have enough support staff for research development? Yes □ No □
If yes, please describe the roles and list the personnel involved.
8.3 Divulge of Research Results. There must be mechanisms for the dissemination of research generated in the academic area of the educational program.
8.3.1 What media does the Institution provide and at what level (General, Directorate, headship, program, etc.) for the dissemination of research in the academic area? Articles, research reports, journals, books, chapters of books, conferences, exhibitions, etc.?
8.4 Research Impact. The educational program should display research results consistent with teaching, as well as the transfer of research results for technological advancement
and social environment improvement; therefore, the institution must provide the research projects linked to the program, and these must include: Project Table, Schedule by quarters and list of research projects completed in the last five years, funding per project and related production.
3.4.1 Provide research projects linked to the program in the following ways:
 Project table Schedule by quarter List of research projects completed in the last five years.
Table per project Project Name Scheduled Ending Date
Project Start Date Scheduled Ending Date Summary (Gestation, Evaluation, Current Status and Goals):

Person in charge of the project:		Time dedicated (hrs/week):	
Project participants:		Time dedicated (hrs/week):	
, , ,		/	
	L		
Funding sources:			
Production related to:			
1. Thesis level: Bacheld		Master's Degree	
2. Patents	_		
 Prototypes Scientific production 			
4. Scientific production			
9.4.2 Machanisms for		ne teaching practice of the results of i	research,
	an educational innovat	tion.	
	an educational innovat	tion.	
	an educational innova	tion.	
	an educational innova	tion.	
	an educational innova	tion.	

9	Infrastructure	and ed	juipment
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In the TIC area, equipment and infrastructure are essential for curriculum development. The profession is strongly supported by telecommunications networks, computer equipment, and software of different natures, to mention some aspects.

9.1 Infrastructure¹³. The physical spaces where computing services are offered must have adequate working conditions, safety and hygiene; with the exception of BA in Computing profile, the other profiles must have electronic laboratories; must have computing services for specialized courses and a staff with experience and an appropriate profile; it must take into account the opinion of professors for the design, upgrade and operation of computing services; classrooms must be functional and sufficient; there must be cubicles for professors, and for advisory services to students; there must be also auditoriums or appropriate and sufficient spaces for the various academic, research, and cultural outreach activities, and the toilets for students and professors must be appropriate and sufficient.

9.1.	9	s, ventilation,	, , , ,	uting services, fire extinguishe	`

- 9.1.2 With the exception of programs that correspond to the BA in Informatics profile, all programs must have at least one electronic laboratory conditioned to support them.
 - For each program to provide the following information.

Program name	No. of electronic laboratories that are assigned to the program

¹³ For this section, either that the programs are face-to-face, mixed learning or e-learning, the program must ensure access to physical and virtual laboratories, as the case, and the need, may be.

9.1.3 The program must have the necessary computing services for specialized courses and activities related to it.
List the existing computing services for specialized courses and activities.
9.1.4 The persons in charge of computing services must be experienced staff, and their profiles should be related to the area.
State the necessary profile and experience of the staff in charge of computing services
9.1.5 The design, equipment and operation of computing services must take into account the views of the professors participating in the program.
• Are the views of the professors participating in the program taken into account for the design, equipment and operation of computing services? Yes □ No □
In which way?
9.1.6 Classrooms ¹⁴ should be functional, have sufficient space for each student and have adequate hygiene, security, lighting, ventilation, temperature and noise isolation and furniture conditions.

¹⁴ These are applied mainly to face-to-face programs. In the case of mixed learning or e-learning programs, a platform that enables virtual classrooms should be guaranteed, and these ones must be described, although it can also be considered to have support physical centers for students who are nearby, and they must have the features requested here.

• Information about classrooms according to dimensions and capacities.

TYPE OF CLASSROOM (CLASSES, PROJECTION, AUDITORIUMS, MEETING ROOMS)	AMOUNT	SUP. In M ²	CAP. MAX.		FEATURES	
				A B	E	I
				C	G	K
				D	H	<u>``</u>
				Α		1
				B	F	J
				C	G	K
				D	H	L
				A	E	I
				B	F	J
				C	G	K
				D	H	L
				A	E	I
				B	F	J
				C	G	K
				D	H	L
				A	E	l
				B	F	J
				C	G	K
				D	H	L

INDICATIONS TO FILL OUT THE CHARACTERISTICS:						
Letters "A" to "D". Mark with an X when there is:						
A: Palette chairs	B: Work tables	C: Isoptics	D: Professor's podium			
Letters "F" to "L". Mark with a Y if it is ideal, B if it is good, R if fair and M if it is bad:						
E: Blackboard	F: Lighting	G: Noise isolation	H: Ventilation			
I: Temperature control	J: Space	K: Furniture	L: Electrical Connections			

- 9.1.7 The number of classrooms will be sufficient to provide for the teaching of courses that are scheduled each school period.¹⁵
 - Information on the programming of courses in the classrooms described in the previous criterion in the last two class periods.

PERIOD	COURSE	GROUP	NO. OF	TYPE OF
			STUDENTS	CLASSROOM

¹⁵ These are applied mainly to face-to-face programs. In the case of mixed learning or e-learning programs, a platform that enables virtual classrooms should be guaranteed, and these ones must be described, although it can also be considered to have support physical centers for students who are nearby, and they must have the features requested here.

·!		•	•	1	1	1
		nanently insta	alled that ca computer e			
•	Number of clas	SIOOIIIS WILII	auulovisuai	equipment		
9.1.9	professors mus	st have places	s appropriat	orofessors must hav e to their work. (See		
•	What type of pr	ofessors nav	e cubicles?			
•	What other type	e of place exi	sts for the r	est of the professors	s to work?	
9.1.	10 There must b	oe spaces for	advising se	rvices to students. (See footnote on r	page 16)
•		·	•		•	,
•	Are there space	es for advisor	y services t	o students? If yes, p	olease describe bi	riefly
9.1.				ums and/or rooms, re preservation and		oned for

¹⁶ Criteria 9.1.8 to 9.1.13 apply for face-to-face programs. For mixed or distance learning programs, it should be ensured that professors or facilitators and students have services of this type that enable them to develop their teaching or learning as applicable, that is why the program should describe how to guarantee them and in the case of student support centers, describe if these services are available as requested in each of these criteria.

	auditoriums and/or room and outreach, describination		
	eferred to in the above for every ten students nd safety conditions. (Se	enrolled in the pro	
For the spaces mention	oned above, include:		
Number of places as	vailable:		
Offers adequate hyg	giene conditions:		Yes □ No □
Offers adequate saf	ety conditions:		Yes □ No □
9.1.13 Health facilities for (See footnote 16).	r the students and facu	lty of the program sh	nould be appropriate.
 Do you consider sar 	nitary facilities to be app	ropriate?	Yes □ No □
If yes, justify your response	onse.		
9.2 Equipment. The recouse by students and pr		each of the subjects	must be available for
9.2.1 For each subject, m	nention the software use	d and if it is available	within the institution.
Subject	Software	Describ	e availability

- 9.2.2 Every program must have at least the following software: Programming languages, CASE tools, database managers and software in general.
 - Describe the following elements of software infrastructure, including versions and number of licenses:

Programming Languages	CASE Tools	Databases managers	Software in General

9.2.3	The	program	must	have	available	within	the	institution	the	computer	equipment
	indisp	ensable f	or the	praction	ces of the	subjec	ts th	at require i	t.		

•	Number of students enrolled in the program:	
---	---	--

• Explain in which manner it is ensured that computer equipment required will be available for the performance of practices in programs areas as required:

Subject	Computer Equipment	Describe availability

- 9.2.4 There must be a sufficient number of computers available and accessible to students of the program depending on the number of hours of computing infrastructure required by the curriculum.
- Provide the following information

Hours required by curriculum in a period	Available hours of computing infrastructure per period
_	

9.2.5 There must be at least three different computing platforms available and accessible for students and teaching staff of the program.

•	Describe the types of computing platforms available for studenth program:	dents and tead	ching sta	aff of
9.2.0	.6 The program must have the appropriate printing capabil faculty.17	ities for the s	tudents	and
•	Describe printing capabilities available for students and tea	ching staff of t	he prog	ram:
9.2.	.7 There should be at least one local area network and	a wide netwo	ork, with	the
	appropriate software for the most common applications of t	ne program.18		
•	Computer equipment in the Institution is connected in netwo	ork?	Yes □ 1	Vo □
lf y	yes, indicate:			
a) its	What computer equipment (servers and clients) supports characteristics?	the network a	and what	t are
_				
b)	Is there Internet access through the network?			
	For professors		Yes □	No
	For students		Yes 🗆	No
c)	If yes to the above question, what is the average time av access the Internet per week?	ailable for ead	ch stude	nt to
d)	what software packages are there in the academic ne support the program being evaluated?	twork of the	institutio	n to

 17 The academic program must ensure the printing service in those physical spaces that the institution has provided for student support.

¹⁸ The academic program must ensure the network service in those physical spaces that the institution has provided for student support,

9.2.8 There must be access schedules to meet the del good maintenance and pl	mand, as well as tra lans of adaptation t	ained suppor o technologi	t staff. Eccal chang	quipment m es.	iust hav
 Describe the documentat and professors. Explain documentation, as well as 	how students an	d professors			
0.2.9 Computing Services must Service hours provided by		s are the foll	owing:	tenance pr	ogram.¹
Institutional:	from	to	·,	on	days
• In the Academic Unit:	from		to_;	the	days
The Program	from	to	;	the	days
If there is support staff, functions.	please indicate in	each case	the amou	unt, sched	ules and
What kind of staff is availar					

 19 Computing services at least in those spaces intended as support for students and facilitators or professors must be guaranteed.

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9.2.10 Computing Services must have regulations that ensure its are available to users.	s proper functioning and
Are there regulations for computing services?	Yes □ No
If yes, are they available for users?	Yes □ No
Please provide a copy.	
9.2.11 The program professors should be provided with compute them to adequately perform their function. In the case of ful should be provided with a computer for their exclusive use.	
Describe the computer facilities available to professors or resources of this type available for the offices of the academic.	
9.2.12 Computing Services must have adequate technical support	t.
 Are there full-time systems management technicians? Do supporting technical support activities? 	students participate b
Is this level of support adequate? Justing	fy your answer:
If the answer is no, describe the existing constraints:	

Form to be completed by the institution - Page. FI - 72

	equipment, to determine	ere are records and statistics co utilization rates and indicators	on service quality.
•	Are there computing ser	vices user records?	Yes □ No □
		·	
	Period	General Users	Program users
or the telligent ncorpora ntelligent proprietar	lecommunications infrastrution of emerging technolot solutions, process re-en	ff is sufficient and has the right projecture and networks, but also for togies, management and hosting, gineering through the use of IC platform that supports the education	the development of applications, web development, data mining, T and the management of the
			[]
n any cas	se, briefly explain:		
		em as well as a list of their names	

Provide the resume of each one of them, as well as a list of their names, academic degrees, certifications, years of experience in the area of competence related to what is pointed out here.

10 Administrative management and funding
--

10.1 Planning, Evaluation, and organization. The faculty, school, department or division have planning, evaluation and organization instruments that will allow it to have an efficient and effective administrative management.

u	2	n	n		n	\sim	
P	0					u	_
	•			-		3	-

10.1.1. Is there an Institutional Development Program (IDP) and with programs in the short and medium term derived from IDP? Yes □ No □
If yes, summarize main criteria.
10.1.2. The planning of the program must be carried out by the academic staff.
\bullet Program planning (including budgetary plan) is carried out by its academic staff? Yes \square No \square
If so, describe how planning is performed:
Evaluation.
10.1.3. Are comprehensive evaluations systematically performed for the fulfillment of the goals of the programs in the long, medium and short term to allow for the decision- making process?
Yes No
If so, describe how planning is performed:

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Organization.
10.1.4 Does the institution have established clear and precise regulations that relate the academic administrative activities and is operationalized through regulations and manuals (organization and procedures)?
Yes □ No □
If yes, provide a copy of it.
10.2 Administrative, Support, and Service Human Resources. The institution must evaluate the academic and administrative function and it shall be mandatory for it to have the most qualified staff for academic activities management.
10.2.1 Does the Institution have established norms that define the requirements for those who exercise academic-administrative functions? Yes □ No □
If yes, explain what they are.
10.2.2 Academic activities should not be subordinated to administrative processes.
$\bullet~$ In practice, are there academic activities subordinated to administrative processes? Yes $\square~$ No $\square~$
If yes, summarize main criteria.

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10.3 Financial resources. There should be clear criteria established for the determination of expenses on maintenance and operation, of laboratories, workshops, and other infrastructure.
10.3.1 When in the institution there is a defined budget allocation policy, the program must make an analysis of it and see if it is consistent with program needs. If not, as appropriate model of program needs must be elaborated, and it shall consider, among other things, wages, improvement of the academic staff, operating expenses investment, purchase of new equipment and replacement of the existing one, as we as additions to the physical spaces.
\bullet The institution has clearly defined policies and criteria for program budget allocation Yes \square No \square
If yes, indicate what they are.
Have analyses been made to see if they are congruent with the institution needs Yes □ No □
If yes, list the major decisions that have been made in relation to budget allocation policies:
10.3.2 The program must have explicitly a budgetary plan in line with its operation need and development plans.
The program has a budgetary plan in line with its operation needs and development plans: Yes □ No □
If yes, provide a copy of it.

and workshop maintenance and operation? Yes	,
If yes, summarize main criteria.	
10.3.4 The program must have clearly defined its overall operating costs thr expenditure on wages and salaries of personnel involved, as well as its open expenses and investments for the purchase of new equipment and replacement existing one.	rating
 It will be very convenient to present an analysis of the operation costs of the pro (wages and salaries, operation and maintenance expenses, depreciatio equipment, estimated expenditure by facilities leasing, etc.) and to link this benefits obtained (Number of students served, services provided, etc.). Although analysis is not easy to carry out, nor can it be done accurately, since some estin are subjective, efforts should be made to obtain approximations that are very uf for resource distribution or redistribution. 	on of with h this nates

ANNEX 1

Students who passed EGEL-CENEVAL

Generation	Number of graduant students (1)	Number of students who took the test (2)	Application Rate (2)/(1)	Number of students who passed (3)	Approval Rate (3)/(2)

ANNEX 2

Faculty, school, department or division financial structure

Concept	Amount \$	%
Resources allocated by the Institution		
Self-generated resources		
Donations		
Other		
Total		100%

ANNEX 3

Recommendation Follow-up

Academic Program	
Accreditation process date	

Recommendations to the academic program						
Criterion	Criterion Indicator Recommendation					

Annex 3 concerning the recommendations is for the instrument that will be used in the field visit.

ANNEX 4

PROFILE CROSS-CURRICULAR AND SPECIFIC COMPETENCIES ASSESSED BY CONAIC

DEFINED BY ANIEI AND CONAIC