

Proposal for Development

Institution: Federal University of Rio de Janeiro (UFRJ)

14 / 07 / 2021

SWOT Analysis

Strengths

One of the largest Universities in Brazil
Internationally recognized research laboratories

Weaknesses

Each department works as a isolates island
No classes offered in foreign languages
University bureaucracy

Opportunities

interest in Internalization

Threats

Governmental budget cuts
Brazilian economy situation
University resistance to change

Proposal

Context

The Federal University of Rio de Janeiro organizational structure makes each department/Institute/School work as an isolated island despite them all required to use a single IT tool. The result is that each island of the university deals with exchange students in a different way and mainly use paper-bases process to manage exchange students requests . The result of this scenario is a slow, labour intensive and bureaucratic recognition process.

We identified many parts of the recognition process that could be automated or improved with the approval of new university resolutions. However, this proposal will attack the most time consuming task that has the most potential to be used and approved by the university sectors.

Nowadays, all documents issued in a foreign language is hand-made by the course secretary and must be translated by a certified translator as required by Brazilian law. Some examples shown during recmat demonstrated how we could improve and speed up the process to reduce the employees workload and the consequently less time for the recognition.

Tool(s) to be improved or developed

Our system is divided in modules. This project main goal is to migrate the legacy module to register courses syllabus and upgrade our document module to include the generation of documents in English.

Impact on recognition of mobility

The automatic generation of the most time consuming mobility documents will ensure that international students gets their recognition for the classes taken faster while reducing the university employee workload. This project will also create a single document model with an electronic signature through out our university that will help others universities to recognize and process them.

Scope

The Project will be split in two distinct fronts: the syllabus management and the document generation.

The syllabus management system must ensure a version control of a course syllabus and allow the user to register a English version of it. A syllabus English version must be checked or made by a certified translator to comply to the Brazilian law.

The document generation module must be updated to create new documents for the recognition processes. The English version of the document must be electronically signed by the university certified translator. Using as reference the examples shown during recmat, this update will try to make our documents more customizable.

Technical requirements

- Must be able to register a version history of the course syllabus
- Must be able to determine the syllabus version that the student took
- A syllabus in English must be made by a certified translator or approved by one to be used in a document
- The generated documents must contain all the necessary informations for the student recognition

Number of estimated working days for the development

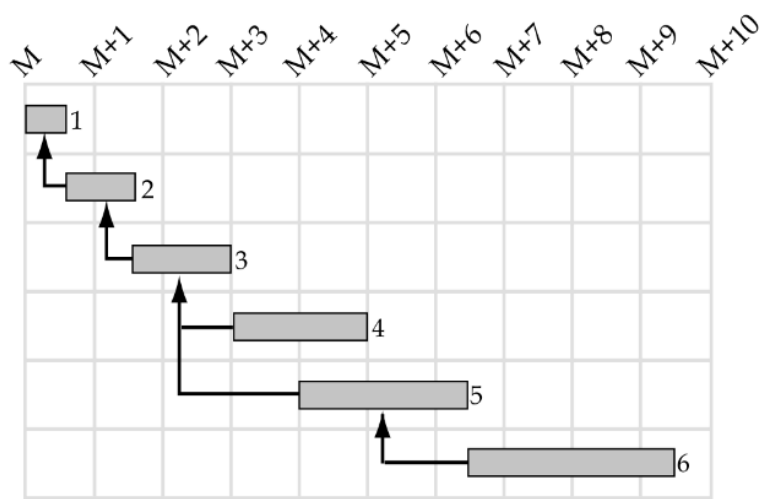
Since this project must be approved by the University board, will migrate a legacy registration system and upgrade our documents module, this project is estimated to be completed in 10 months .

Departments / Services involved

The teaching council of the university, all university units (Schools / Institutes / Departments)

Gantt Chart

- 1- Requirements gathering
- 2- Designing of new documents models to be approved by university council
- 3- Development of the new syllabus registration system
- 4- Development of translation registration and approval system
- 5- Development of new documents models
- 6- Development of document personalization





Proposal for Development

Institution: Universidade Federal do Rio Grande do Sul

19 /07 / 2021

SWOT Analysis

Strengths

- Qualified IT Staff
- Open Source Culture
- Law of Innovation (tax return for IT companies investing in Education)
- Favourable local ecosystem

Weaknesses

- Unstable environment (Human Resources/Priorities)
- Heterogeneity and size
- Poor “computational culture” on average
- Financial difficulties
- Legacy systems
- Limited international thinking

Opportunities

- Pandemic and virtualization
- Staff renewal
- RNP (National Internet Provider for education)
- Mobile computing and web development

Threats

- Dependency on foreign software / solutions/technology/"intelligence"
- Loss of relevance of the (internal) processes
- Loss of relevance of the University!

Proposal

Context

Universidade Federal do Rio Grande do Sul's overall strategy is defined by two documents:

1. A "strategic plan", which lifespan is 10 years. The current one was written in 2014 and should end in 2024. The next one has not started to be written yet.
2. A "management plan", that lasts 4 years. At the beginning of each new presidency, the leadership issues a new document.

For IT, a specific strategic plan called PDTI, is written every five years. The current one was written in 2015, for the period 2016-2021.

The current PDTI already included internationalization as a driver for part of the IT solutions to be redeveloped at UFRGS. Unfortunately, for many complex reasons, the plan could not be implemented. It is to be expected, thus, that what could not be done in the last plan will be part of the next one.

Tool(s) to be improved or developed

With regards to internationalization, five of the planned actions were:

- 1) Automate the process of international academic mobility (4)
- 2) Develop a system to manage the international contacts (5)
- 3) Develop a system to manage the international agreements (1)
- 4) Integrate the academic systems with a system of mobility (4)
- 5) Develop a system to manage the mobility of Faculties and researchers (4)

(The number, between 1 and 5, was the priority given to each activity. 1 = low, 5 = maximal.)

The first item started to be specified in 2011. By the end of 2012, first specs had been defined, at least for the incoming students. In 2013-2014, experimental prototypes were programmed. An attempt to outsource the development was also made, which failed. In 2015, it was added to the PDTI, thus making it a formal objective of the IT sector. In 2016, a renewed attempt to develop the system started. It was stopped within a few months to focus on other, urgent priorities.

Thus, the main recommendation would be to finally develop and integrate a system:

- For outbound mobility students, to include a learning agreement in the current system, that would register the courses taken abroad, and facilitate the recognition process.
- For inbound students, to integrate the enrollment process with the system used for regular, non-mobility students.

Impact on recognition of mobility

For inbound students, the system would enable a faster, and more reliable enrollment. The professors in charge of each student would have a better view of the enrollment process. The heads of departments would know better how to manage those students, and in which courses to enroll them. The IO would have a better monitoring.

For outbound students, the mobility would be totally integrated into the portal that enables them to manage their studies. The mobility would appear totally as part of their learning experience. Plus, the courses taken abroad and how they have been revalidated by UFRGS would appear explicitly in their transcript of records.

Scope

The scope of the project is its main difficulty, and the reason why it has not succeeded yet: more than a huge effort in developing new tools, the difficulty is the integration of the system with complex legacy software. The system that manages undergraduate students (SISGRAD) needs to account for more than 30.000 students, and to enroll them in 90+ degrees, each one composed of tens, if not hundreds, of courses.

Importing external software, or outsourcing the development, is difficult for the same reason. In many ways, it might be easier to reimplement the whole system than to try to develop an “add-on”.

Technical requirements

The system would need to be adaptive, and usable on mobile devices. Web and mobile development should be prioritized.

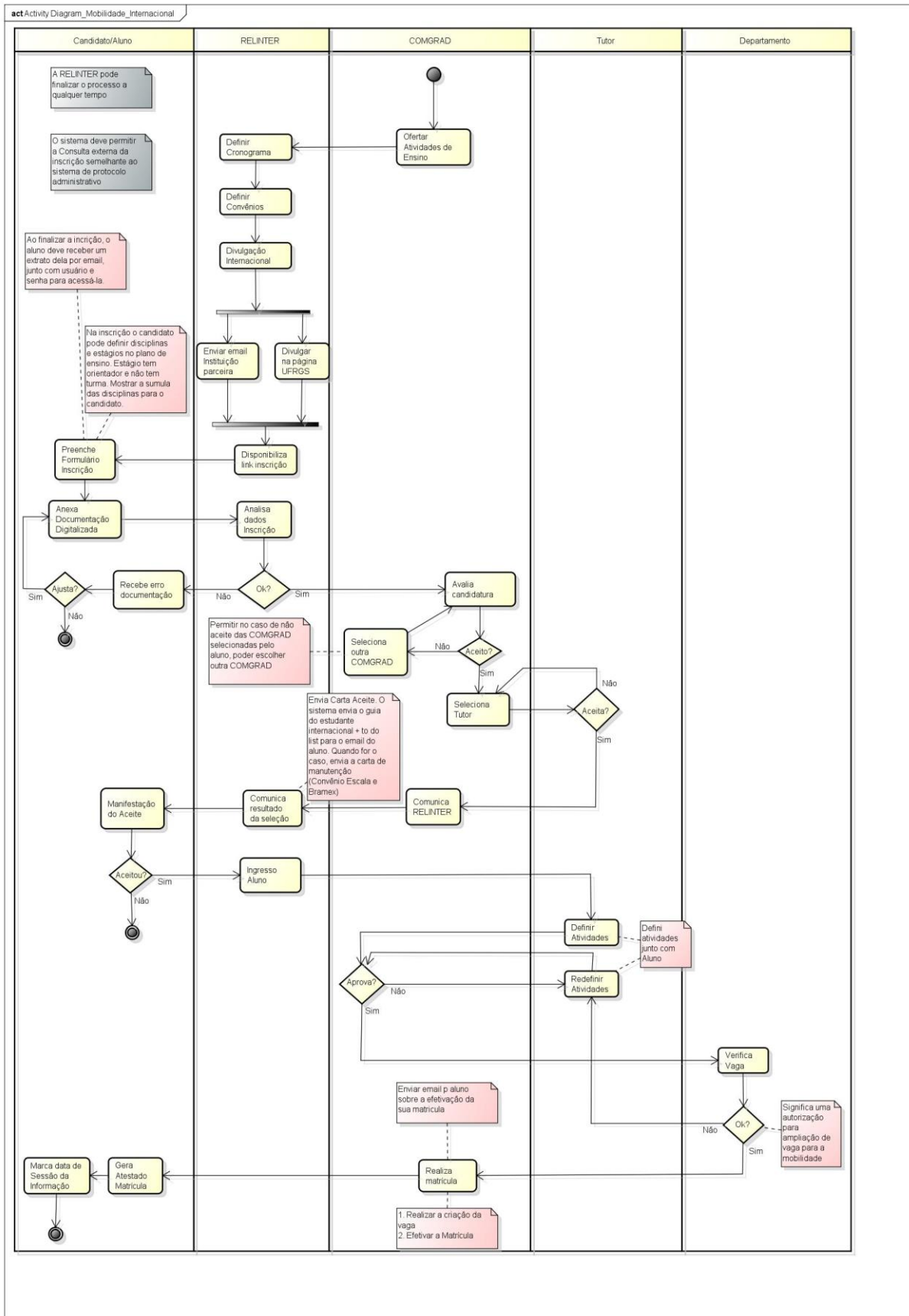
Number of estimated working days for the development

N/A

Departments / Services involved

A use case, for inbound students, would be as described in the chart below. It mentions the services that are involved:

- The student (aluno),
- The International office (RELINTER),
- The Degree coordinator (COMGRAD), which, at UFRGS, enrolls the students into given courses,
- The Tutor, who oversees a given student,
- The Department (which, at UFRGS, oversees the nomination of the teachers to give a specific course).



Gantt Chart

An original time estimate was that:

- The update of the system for incoming students would take 6 months,
- The update of the system for the outgoing students would take three months.

The experience of these last years is that the timeframe does not depend on the development cycle, but on the priority that the IT Sector can give to this task. This means that the “gantt chart” is dependent on the political priority of internationalization, and of student mobility in particular, given by UFRGS.



Proposal for Development

Institution: UNESP - São Paulo State University

2021

SWOT Analysis

Strengths

UNESP, São Paulo State University, has a lot of systems developed by its own IT team, like undergraduate students system, human resources, agreements, financing, etc. Lately, the developers have made efforts to program integration between these systems by REST, which is a strength to promote modifications as credit recognition because it reduces the system's coupling.

Before changing systems, it is very important to have regulations supporting the process. Public Brazilian Universities usually require such documents to have employees' cooperation, it is an organizational culture where the work must be based on internal regulations. UNESP already has such laws for international mobility, for sure it is going to help the credit recognition because it describes, for example, the steps about the inclusion of subjects taken abroad by the student.

Another strength to be mentioned is the fact of the International relations office with one system analyst worker dedicated to internationalization, which means that the IT team has someone focused on one important aspect at University helping the others by projecting and developing the required tools for this area.

Weaknesses

Although UNESP has one IT worker dedicated to internationalization, the university has a lack of human resources, taking a long time to develop improvements because there is a huge line of them.

Through the Student Mobility System, they are able to register for international exchange and create the learning agreement. But the academics maintain a rigid curriculum, some of them refuse subjects that are not very similar to the origin course, which is a problem to be faced by the university's managers.

Usually, students already have the learning agreement registered on the system before an international exchange, in addition, they have it approved by academics. But, when they come back to Brazil, sometimes, the study contract is reviewed, and part of that is not accepted anymore.

All these things mentioned on this topic, rigid curriculum and contract review, have non-compliance with the resolution, so it is a challenge to structure all the processes until credit recognition regulations are written and followed.

Opportunities

Every four years UNESP changes the main administration, even though internationalization has been a very important topic for all of them and it is not different for the current rector because he considers this as a priority in his strategic plan. So, actions to promote a better international curriculum would be stimulated and supported by managers.

Although UNESP has a lot of schools distributed in several cities, it was possible to organize the international university's issues by allocating dedicated offices in each place. The administrative center keeps in touch with them in order to have a strong link and promote good practices.

The location's international offices often receive training and they have a special mailing list with news about internationalization. This helps us to change roles and processes easily because they are able to participate in some decisions and send feedback, this kind of collaboration stimulates them to work based on new methods.

UNESP aims to be internationally recognized, so the knowledge of others is very important. Rec-Mat IT training showed ways to improve systems that support this target. Although there is an exchange system for students, grade conversion is not possible yet, but the training presented very good ideas that inspired this development proposal.

Threats

The current pandemic situation has demanded a lot of IT teams to maintain remote activities possible. Unfortunately, before that our institution was already operating with a reduced IT staff, which means that new system features require a long time to be done because there is a long line of them.

After the development of the improvement is necessary to engage users to start a new way of working and operating the new system function. It is very usual to face a non-adaptation to processes, one characteristic that requires more time to be solved by planning strategies according to undesired employees actions.

The resistance to change demands more efforts from the IT teams to produce ways to help users to get interested to see and start using a new system functionality. Lately, it is necessary to create an informative website, recorded online training, and short Youtube videos explaining a specific part of the system.

Proposal

Context

Currently, UNESP, São Paulo State University, counts on 58 systems to control several institutional activities. In this proposal, we are going to focus on two of them, both web-based and developed in-house: SISGRAD (Student Information System) and Student Mobility System.

SISGRAD is the system to manage undergraduate students' information such as student data, teachers, study programs, course descriptions, individual curricula of students, grading, diplomas, among others functionality related to this area.

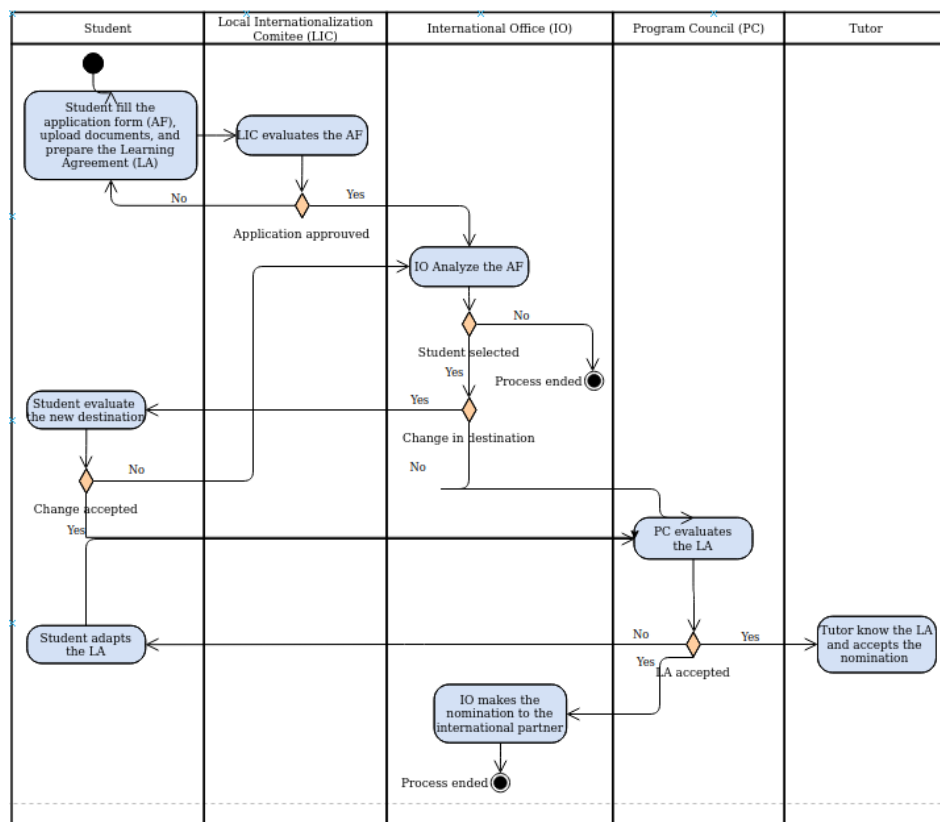
Connected to SISGRAD through web services, the Student Mobility System is responsible for the following purposes: student applications, nominations, learning agreements, courses abroad, courses at sending institutions to be replaced during mobility, transcript of records.

The integration between these two systems makes better control of all exchange processes by offering exchange opportunities to internal and international students, creating an evaluation workflow, and also taking care of the enrollment and transcript of records. Although internal students have the international subjects recognized by this process, nowadays there is no way to show grades and presence in this case, it is not possible to convert such information to be shown in our system.

This development proposal will offer a technical solution to improve the registration of transcription of records to guarantee the full information about what the student completed at university abroad. For sure such improvement will help UNESP achieve better internationalization processes.

Tool(s) to be improved or developed

Student Mobility System and SISGRAD are integrated systems, the first controls exchange opportunities where students can register and participate in an evaluation process. A student plan is an important form they must fill to have authorization for exchange. This data is sent to SISGRAD after having the exchange application approved.



The program council receives a request to evaluate the learning agreement and nominate a professor as the tutor of the student exchange. The approval of the international relations office and program council is mandatory before the student goes abroad.

When the student returns to Brazil, it is necessary to present proof that the learning agreement has been completed successfully in the international university. The program council will evaluate the proof and confirm in SISGRAD if the subjects must be sent to the transcription of records. Nowadays, the system doesn't consider grades and presence, then it fills this information with "***" automatically.

2º semestre de 2016							
0004625	Administração de Sistemas de Informação	Bac	4	60	8.8	93,33%	Aprovado
0004621	Cálculo IV	Bac	4	60	7.4	100%	Aprovado
0004624	Estruturas de Dados II	Bac	4	60	8.7	96,67%	Aprovado
0004622	Pesquisa Operacional I	Bac	4	60	8.8	100%	Aprovado
0004626	Sistemas Operacionais I	Bac	4	60	8.6	93,33%	Aprovado
0004623	Teoria da Computação e Linguagens Formais	Bac	4	60	8.3	100%	Aprovado
Média do ano de 2016: 8,467							
1º semestre de 2018							
0004546	Algoritmos Avançados	Bac	**	**	**	**	Cumpr. Intercâmbio
0004629	Banco de Dados I	Bac	**	**	**	**	Cumpr. Intercâmbio
0004628	Compiladores	Bac	4	60	10.0	100%	Aprovado
0004633	Computação Gráfica	Bac	**	**	**	**	Cumpr. Intercâmbio

Advanced Algorithms
Database I
Computer Graphics

2º semestre de 2018

Image: SISGRAD Transcript of Records example

This proposal intends to act at this point of the system. The program council must be able to fill the grade and student class presence. The hardest function to be developed is the grade conversion that will be inspired by what was shown in the Rec-Mat IT Training, a free tool available online for this purpose.

The Egracons (European Grade Conversion System) tool will be used to convert grades before registering them in SISGRAD. Egracons mapped grading practices in countries and individual institutions leading to a full description of the grading systems in use in Europe. It also developed an online, web-based Egracons tool that allows direct and automatic conversions of grades on the basis of annual, statistically-based grading tables supplied by individual institutions as part of an overall database.

My Institution

Country

Belgium (NL)

Institution

Ghent University (UGENT)

Grading Table Years

2017-2018 2018-2019

Degree cycle*

MASTER

Degree title

Select

ISCED code *

0914 - Medical diagnostic and treatment technology

Host Institution

Country*

France

Institution*

The University of Lille (LILLE)

Grading Table Years

2014-2015 2017-2018

Degree cycle*

MASTER

Degree title

0914 - MASTER ING DE LA SANTE - HEALTHCAR

ISCED code*

0914 - Medical diagnostic and treatment technology

Country Report

Institution Report

Override?

Grade Conversion

Awarded grade at host*

15

Suggested result grade

16

Shortened grading table

46.92 (13.81) 39.27

Show Details

Image: Egracons, grade conversion example

The amount of credits in UNESP is related to the number of hours, 1 credit is equivalent to one hour of class. For this conversion, the Student Exchange System will have fields in the student learning agreement form to know the number of class hours per week and the total during the exchange, so SISGRAD will be able to convert this information easily.

Impact on recognition of mobility

International mobility, the best-known driver of internationalization, was the first aspect of internationalization to which special attention was given. It took place primarily in graduate courses. It was necessary to organize and standardize these activities once they expanded to undergraduate courses. Through this, the process gained formal and rigorous procedures that have improved academic mobility with innovative ideas. These procedures, which became a reference for different HEIs in Brazil, aimed to facilitate the recognition of credits abroad and the development of double degrees. Resolutions and a specific information system have now been developed, automatizing the process.

Student and staff mobility are the main drivers of internationalization around the world. At UNESP it is not different. The university will continue to offer to all students and staff the opportunity to carry out a mobility period with international partners abroad, open to international students and staff as well. This experience represents an added value to all, not only at a professional and academic-scientific level but also on a personal level.

Students already have the international subjects in their transcript of records which adds an important skill to be presented in the recruitment process in companies and master/doctor programs applications. For this last item mentioned, most of the time the universities require the grades to compare students' performance to choose which one should be selected for the master/doctor program. Unfortunately, SISGRAD doesn't provide such information and this proposal intends to solve this problem by giving ways to input and output that data, improving student transcription of records to be used in many future opportunities.

Scope

The following items must be executed by the IT team:

- Exchange Student System

- Add fields of class hours per week and total hours in the learning agreement for each subject.
 - Update REST Webservice sending de credit information to SISGRAD (in hours)
- SISGRAD
 - On the option to confirm learning agreements completed abroad, add fields grade (converted) and presence percentage.
 - For the grade conversion, create an icon linked to Egracons System.
 - In case of not having the conversion, keep the possibility to fill with “***”
 - Update the Webservice to receive the data about credits (number of class hours of each subject)
 - Output credit information in the learning agreement.
 - Output credit information, grades, and presence in the transcript of records
- Egracons registration
 - Generate a student database of the university holding the grades (marks) that all the students have obtained over the last 2 or 3 years.
 - Prepare the database according to [Egracons template online available](#).
 - Send the template filled to Egracons
 - Register account using institutional email

Technical requirements

The improvements proposed in this document requires:

- Mentawai Web Framework: It is a full-stack, action-based, MVC open-source Java web framework, it is going to be necessary to add new fields in the Student Exchange System.
- Primafaces: It is a popular open-source framework for JavaServer Faces featuring over 100 components, a touch-optimized mobile kit, client-side validation, theme engine, and more. The SISGRAD's exchange management screen must be edit using technology to provide new fields in learning agreement approval and transcription of records.

- Postgres table: The learning agreement table in Postgres must be altered to store the additional information about class hours for each subject (credits), presence, and grades. The models (java classes) must be updated with these fields, then Hibernate will be able to manage such data.
- Webservice update: A new version of the Rest Webservice must be released and must be able to send the new data (presence, grades, and credits) between SISGRAD and Student Exchange System.

Number of estimated working days for the development

The total number of working days for this proposal is 30 days. Find below the distribution of that work time:

- Systems analysis, 2 to 3 days
- Development - 23 days
- Test - 3 days
- Publication - 1 day

The estimation time may change depending on the team's availability.

Departments / Services involved

The systems improvements proposed in this document must have the participation of the following areas of the institution:

- AREX: It is the International Relations Office and helps to develop strategies for university internationalization.
- PROGRAD: Office of the Vice President for Undergraduate Studies, organize issues related to undergraduate studies.
- NDSI: Developers team of institutional systems, it is the IT area responsible for systems improvements and they will execute the updates explained in this document.

Gantt Chart

The Gantt Chart below shows the development timeline of this project:

Improve the Internal Information System					UNESP				07-fev.-22				11-mar.-22											
PROJECT NAME					INSTITUTION NAME				START DATE				END DATE											
Task ID	Task Name	Start Date	End Date	Duration (In Days)	2/7/2022	2/8/2022	2/9/2022	2/10/2022	2/11/2022	2/14/2022	2/15/2022	2/16/2022	2/17/2022	2/18/2022	2/21/2022	2/22/2022	2/23/2022	2/24/2022	2/25/2022	3/7/2022	3/8/2022	3/9/2022	3/10/2022	3/11/2022
P01	Exchange System																							
T01	Systems analysis	2/7/2022	2/8/2022	2																				
T02	Add new fields	2/8/2022	2/10/2022	3																				
T03	Update REST Webservice	2/11/2022	2/15/2022	3																				
P02	SISGRAD																							
T04	Systems analysis	2/7/2022	2/9/2022	3																				
T05	Add new fields	2/9/2022	2/11/2022	3																				
T06	Update the Webservice	2/14/2022	2/17/2022	4																				
T07	Learning agreement modification	2/18/2022	2/22/2022	3																				
T08	Transcript of records	2/23/2022	3/7/2022	4																				
P03	Others																							
T09	Egracons registration	2/16/2022	2/16/2022	1																				
T10	Test	3/8/2022	3/10/2022	3																				
T11	Publication	3/11/2022	3/11/2022	1																				

Proposal for Development

Institution: UNIVERSIDAD NACIONAL DEL LITORAL

08/07/2021

SWOT Analysis

Strengths

Advantages over others

UNL has:

- A self developed and good working IT platform to the administration and follow up the incoming and outgoing international mobility students (Gea).
- Over 25 years experience in international student mobility based on permanent improving and innovation policies.
- Highly qualified and competent professional team to manage the international students mobility.
- Highly qualified and competent IT team at UNL staff.

Weaknesses

Disadvantages relative to others

- Rigid and obsolete pedagogy and curriculum which hinders the recognition process.
- Insufficient and incomplete institutional regulations concerning academical recognition.

Opportunities

What we could exploit to our advantage

- Steady growth of undergraduate students interested in mobility and having the real chance to get their academic activities recognized, both incoming and outgoing.
- Recent approval of new certification/accreditation standards for some courses in Argentina. This situation can anticipate that curricular modifications will be carried out in those courses, in order to adapt the study plans to the new standards.

Threats

What could cause trouble for us?

- Possible changes or modifications on regulations on a national level, even on the national students platform, Siu Guaraní.
- Rising salaries in the Informatic technologies private sector make it difficult to conform long-term working teams.

Proposal

Context

Give some context about proposal for development and the functionality you aim to improve/develop

At UNL, a web platform is used for the selection of outgoing students, the application to the destination university and the monitoring of the exchange until the return of the student. Regarding the recognition of the academic activities carried out at destination universities, it should be noted that the predominant teaching model at UNL (as in most Latin American universities) is aimed at the acquisition of content and the development of abilities to the graduated students' performance in their subsequent professional activity.

The aiming is organized and structured in the study plans of the programas /careers, assigning them a time / content rate by subjects. This system encourages students to move forward in their careers as far as they complete the acquisition of content in a certain time. The underlying logic considers the teacher as the one who possesses the knowledge (content) and the student is who must acquire it. On the contrary, the most innovative higher education systems have adopted pedagogical approaches that focus on the student - on their interests and expectations - and are based on the development of competencies that allow them to evolve as people and citizens, beyond their professional profiles. This becomes a much more flexible curriculum capable of assessing and incorporating knowledge, experience and skills that are acquired outside of the formal prescriptions. These different concepts generate serious complications when recognizing the activities that students carry out within the framework of their international mobility. To our system, symmetry, balance or content parity seems to be the only reference to be taken into account when activities come to recognition.

The proposals developed in this project tend to make transparent, simplify and provide greater access to information on content, timetables and other essential information for academic recognition, in order to make a significant contribution to improve the process and the quality of the international students' mobility and exchange.

However, it is necessary - to the changes result in real and consistent benefits - to go further, devising a flexible curricular structure that allows compliance not only with the standards established by the accreditation mechanisms in force in Argentina but, at the same time, admitting that part of the training can be carried out in others academic environments (for this case foreigners).

A double way changes should be implemented. On one way the operating ones, formally including those courses carried out outside the institution and on the other, a conceptual change, deep enough to allow passing from the idea of homologation, on which the procedures are currently based , to another that directly includes the international academic activities, as part of a cross-curricular trayectory, aimed at acquiring competencies related to disciplinary knowledge and those that contribute to the comprehensive training of the graduate (as for example: international subjects with disciplinary relevance and international subjects for complementary or general training).

Tool(s) to be improved or developed

Mention the tools that need to be improved or developed

Our proposal aims to improve the recognition process of both incoming and outgoing mobility students.

Regarding outgoing students we suggest:

1- To develop a new software tool where academic coordinators in each UNL School can register the subjects that were passed by UNL students while they were abroad and the correspondent recognition at UNL. Also they should indicate how the recognition process was made (partial recognition, complete recognition, additional exams/practical works requested to students, etc). This way, not only academic coordinators/authorities and student services can have access to this information, but also students when they have to decide which subjects to attend at the host institution and sign their learning agreements. Moreover, when creating this record, academic coordinators can also register the grading scale of each partner university and the conversion method used at UNL so as to be used again in future recognitions.

2- Regarding improvements for incoming students, we suggest automatically registering them on Siu Guaraní when the International Relations Office (IRO) confirms their acceptance on Gea.

3- To Promote the importance of adding the international dimension on the course plan on all UNL courses, as cross-curricular training paths passed outside UNL. All international activities carried out by students should be registered on Siu Guaraní, so as to formally acknowledge those academic achievements on their course track.

Impact on recognition of mobility

Describe the impact on recognition processes

-The first proposed tool will assist the work of academic coordinators, since they can check previous records on recognition to sign future learning agreements. They will be able to plan the student mobility experience more adequately, propose recognition with greater precision and provide higher certainty after the student completes their international stay.

- The second tool, which is the grading scale conversion, aims to guarantee equal grading for all UNL students attending the same host institution.

-The third suggestion would avoid multiple registrations with different information, creating only one record for each incoming student. This would guarantee that Siu Guaraní can correctly inform the transcript of records in one certification, even when the students attended more than one school.

-The fourth suggestion would give the option of being able to indicate that a UNL student has completed an international activity, making this dimension visible, appraising it and fully recognizing it.

We can say that all these propositions not only would improve the administrative processes at the international relations office, student services office and academic coordinator offices but also would be new tools to boost and better the academic recognition for international students.

Scope

Define the scope of the IT-project

- 1) Update data involving the curriculum at SIU Guaraní to allow recognition of the student's academic activities abroad, so as to formally acknowledge those academic achievements carried out internationally on their course track.
- 2) To create a new software tool which allows the academic authorities and academic coordinators in each UNL School to access "study plans" of all careers and associate them

with the academic recognitions as students returns from their aboard experiences, selecting which homologation process was defined for each subject in the plan, depending on the exchange activities carried out by the student; also this tool will provide a way for the academic actors and students to search for other similar recognitions previously made.

- 3) To automatize the applicants migration process from Gea to SIU Guarani.
- 4) To develop a search and management tool for grade conversion formulas for each University with agreements made with UNL.

Technical requirements

Mention technical requirements

Technical requirements can be grouped in 2 categories, because they are for 2 different softwares. One of them involves personalizing data from the “study plans” point of view in order to reflect recognition blocks (this feature is already present in the software base, but is not reflected in the “study plans”) and develop the search tools for that kind of recognition in SIU Guarani, and to develop the “grade scale” management tool as a new functionality, and automation the applicant's migration to Guarani in Gea.

About the first proposal:

- 1.1) Customization of the study plans data in SIU Guarani in order to reflect recognition blocks.
- 1.2) Development of the backend for the international recognition blocks search tool.
- 1.3) Incorporation of the search tool into the teachers and academic authorities user interface in SIU Guarani.
- 1.4) Incorporation of the search tool into the students user interface in SIU Guarani.

About the second proposal:

- 2.1) Development of a CRUD tool for grade conversion formulas, for each partner University.
- 2.1) To develop the automation of the applicant's migration in Gea, using an existing web service endpoint in Guarani.

Number of estimated working days for the development

Give an indication of the workload for the development

Considering a team of two developers, a database administrator and a tester, we can estimate a workload of 3 weeks (15 working days), five days for adjusting data and five days for developing the search tool in SIU Guarani , 5 days for developing each requirement in Gea. Both developments can be done in parallel for each developer, leaving the final planned week for testing.

Departments / Services involved

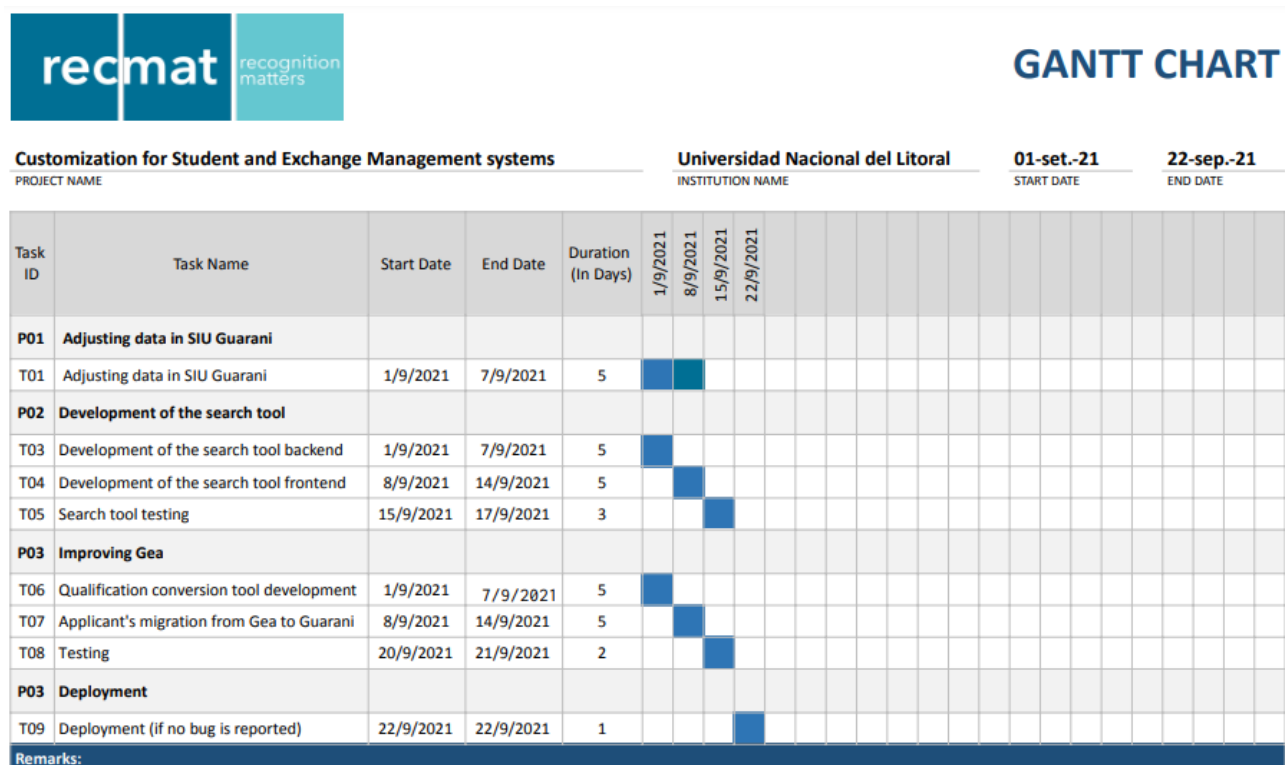
Mention services involved, both from the side of the business owner as of the IT department

-Secretary of Institutional Development and Internationalization
Directorate of International Cooperation

Directorate of Computerization and Technological Planning
-Secretary of Institutional and Academic Planning
Directorate of Teaching and Academic Planning

Gantt Chart

Use the proposed Gantt Chart template to list your milestones in order to track the major deadlines





Proposal for Development

Institution: UNIVERSIDAD NACIONAL DEL SUR

14/06/2021

SWOT Analysis

Strengths

- All parties involved in our process are clearly identified.
- The responsibilities and functions of each workstation are well established.
- The time of each task is known.
- The entire process is documented and supported by UNS rules.
- Process with ISO 9000 certification.

Weaknesses

- the participation of many sectors, offices, people. It requires constant, fluid, precise, and timely communication between all parties, and this is very difficult to manage.
- absence of a document management system that command the entire process. This weakness is closely related to the previous one, since in the case of having a process fully supported in a system or a template, the communication between parties would be much more fluid and controlled, in its content and in its terms.
- absence of a credit conversion mechanism from UNS qualification system into ECTS.

Opportunities

- UNS is working on moving from its current academic management computer system SIU Guaraní 2 to the new SIU Guaraní 3. This is not only a new version but a totally renewed system, with much greater flexibility and capacity to support new processes. Therefore, the possibility of managing a greater number of stages of the international student process with a computer system appears.
- dissemination within UNS of information received in repmat meeting increases the commitment of people who participate in the different process stages, and that commitment will facilitate improvements.
- wide and free dissemination of IT tools aimed at improving process management.

-UNS student's office administrative team has knowledge and commitment towards process improvements, as a result of their training in ISO 9000 certifications.

Threats

-UNS administrative and IT teams have a full schedule of daily tasks, due to the continued adaptation to pandemics, and they have few time and personnel resources to allocate to new developments.

-it is difficult to communicate UNS decision makers about the importance of improvement in internationalization processes, and therefore it is difficult to achieve their commitment and support in provision of resources.

Proposal

Context

Give some context about proposal for development and the functionality you aim to improve/develop

Three offices participate in the management of international students:

-Undersecretary of Internationalization: disseminates, recruits and controls the documentation of students. Participates in internationalization agreements together with the Academic Departments.

-General Directorate of Academic Management: registers, controls and certifies the academic activity of international students.

-Academic Departments: direct, manage, coordinate and control the academic activity of international students. They participate in internationalization agreements together with Undersecretary of Internationalization.

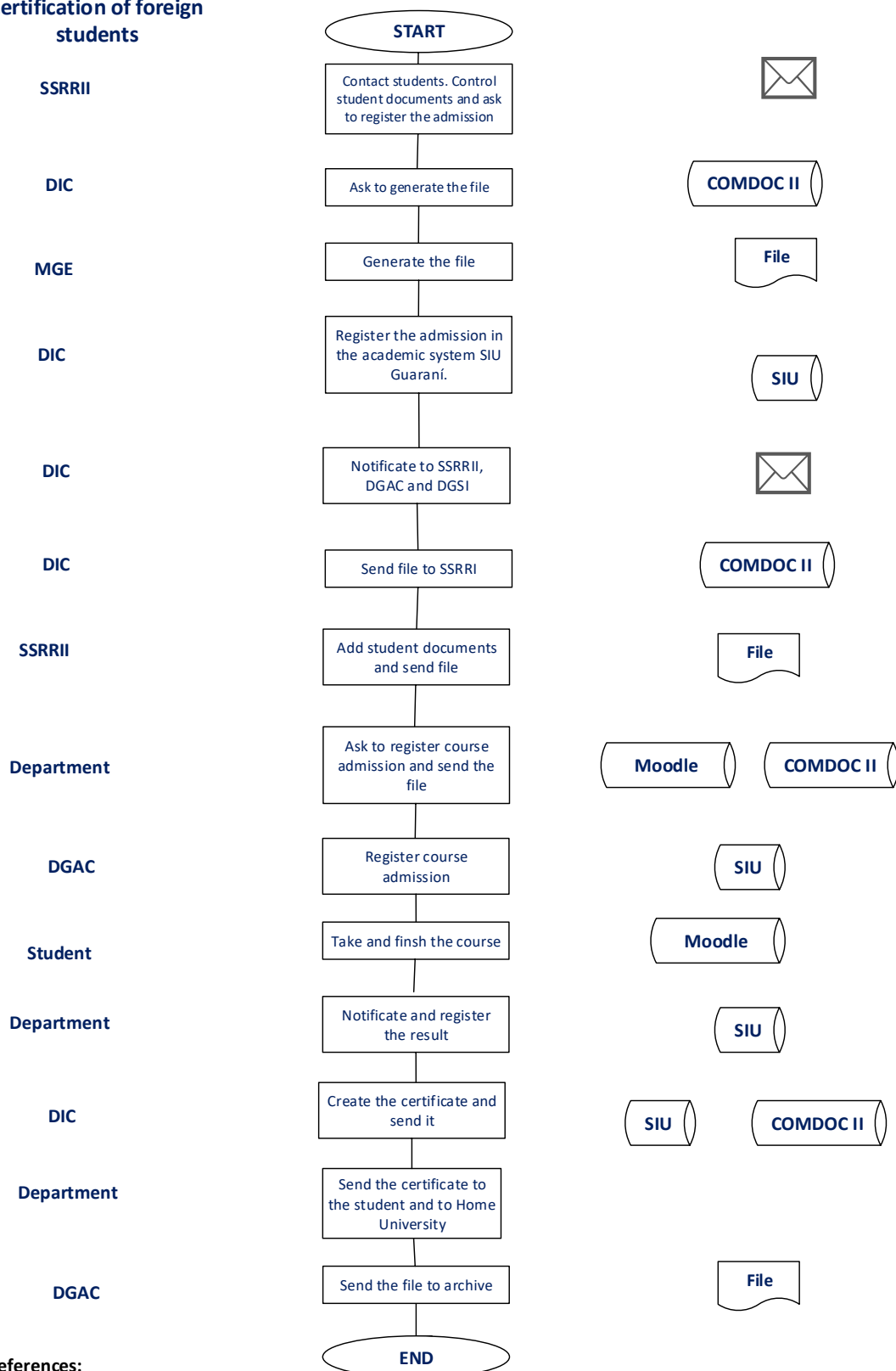
In this context, the admission, studies, certification and recognition path management is fragmented among these participants. And, although the entire circuit is documented and controlled, each sector uses its own IT tools, templates and resources. That reduces the efficiency of the process as a whole, and makes communication between stakeholders difficult.

Therefore, the proposal is aimed at developing a single administrative mechanism that allows the monitoring of the entire process, regardless of which office it is carried out in. This mechanism must be communicated to all parties involved, and must be accepted and used by all.

And it is proposed for a later development stage, to provide this mechanism with a computer support that increases its reliability and improves its response speed (This point requires the installation and start-up of the new academic management system) Until this happens, the proposal is supported in excel format (attached) The file keeps a record of the stages of the process with their compliance dates and the person in charge of each one, allowing to locate in what situation the management of each international student is.

Process managed:

Admission, register and certification of foreign students



References:

DGAC: Curricular Administrative Management Directorate
 DCI: Admissions and Certifications Directorate
 Department: Academic Department
 SSRRII: Undersecretary of International Relations
 SIU: Management System
 Moodle: Learning Management System
 COMDOCII: Documentary Communication System

Tool(s) to be improved or developed

Mention the tools that need to be improved or developed

...

-Diagram and description of the academic-administrative process of international students.

-Computer file (excel format) that allows the description, loading, control and monitoring of each stage of the process for each student.

Impact on recognition of mobility

Describe the impact on recognition processes

...

Most important improve is on the process efficiency. Have a centralized and shared administration tool avoids the duplication of efforts, records and documents; and notably increases the speed of response to situations that require questions, communications, agreements, between the stakeholders.

Scope

Define the scope of the IT-project

...

Improvement proposal affects all stages of international student management process, from the confirmation of the agreement to the certification of the activities carried out. And it will have effect in Undersecretariat of Internationalization, in Academic Departments and in General Directorate of Academic Management.

In its first stage, the proposal does not have an impact on the computerized management system, but on the administrative organization of the process.

Once the renovation of the management computer system begins, the feasibility of adding the proposal must be evaluated.

Technical requirements

Mention technical requirements

...

It will be necessary to have a file that allows to reflect the different stages of the process, the offices and agents responsible for each one, the dates on which each task was carried out and the observations or comments that need to be recorded for each student. The utilities offered by Excel are presented as the ones that best suit those needs.

Number of estimated working days for the development

Give an indication of the workload for the development

...

Eight hours of work are estimated to write the proposal, to write the description of administrative process, and configure the file. And an additional 4 hours are estimated to hold coordination meetings with the Secretariat for Internationalization and with the 16 Academic Departments. The number of days will depend on the availability of dates and times of each involved agency to schedule the meetings.

The implementation will be carried out in stages, executing and testing each one of them in a different semester of academic activity (see Gantt)

Departments / Services involved

Mention services involved, both from the side of the business owner as of the IT department

...

Undersecretariat of Internationalization, Academic Departments and General Directorate of Academic Management are the offices directly involved.

And to evaluate and implement the eventual addition to the computer system, the participation of UNS General Directorate of Information Systems (UNS computer service) will be necessary.

Gantt Chart

Use the proposed Gantt Chart template to list your milestones in order to track the major deadlines

International management academyc process

Project: loads and controls centralized register

Project Activities			DURATION (Days)
START DATE	END DATE	DESCRIPTION	
5/20/21	6/14/21	Build template (excel file)	24
6/15/21	6/16/21	Explain template to DGGA staff	1
8/2/21	2/28/22	Use and check template. Only DGGA. Feedback: make eventual modifications or corrections.	206
3/1/22	3/4/22	Explain template to Undersecretariat of Internationalization staff	3
3/7/22	7/15/22	Use and check template. DGGA & Undersecretariat of Internacionalization. Feedback: make eventual modifications or corrections.	128
8/1/22	8/5/22	Explain template to Academic Departments staff	4
8/11/22	12/30/22	Use and check template. DGGA, Undersecretariat of Internacionalization & Academic Departments. Feedback: make eventual modifications or corrections.	139

Gantt chart

