Recommendations to make FIB a better faculty

Writing Skills for Engineering

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1. Introduction

Recently, there have been some significant problems that are on everyone's lips. This is related to different topics such as administration, the academic environment and the facilities. In addition, there appears to be a high dissatisfaction between students and teachers regarding the ideas that will be presented in this report. In order to retrieve information about these concerns we decided to make some surveys to students and professors of the faculty. By doing this, it was possible to state some problems that required an immediate solution. What is more, with the aim of solving these problems, it was necessary to do some field work and comparing different aspects of the faculty with other universities was mandatory. This resulted in better approaches that could be implemented. Discussing the scope of the situation, it is clear that there are some things that need to be changed as these problems are gaining importance. As a means to solve them, this report needs to be considered by the rector's office and relevant people in the faculty. For this reason, the purpose of this document is to recommend some solutions to their problems by warning about the potential inconveniences they might have.

2. Administration

To start with the topics of this document, we are going to go through Administration issues that affect students from the first time they enroll at the university. This is an issue that, although it has nothing to do with the syllabus of their degree, it directly affects the students' studies and happiness with the university.

2.1 Enrolment and degree credits

The first thing that students find when they access the degree they want to study is that they need to carry a lot of cumbersome paperwork in order to enroll in all the syllabus they want to take. To do this, the information available is very poor and the sources they should consult are not unified, so they need to search information from several sources.

Once enrolled, the student must pay very high fees, especially considering that it is a public university. Taxes to pay go up to EUR 830 (in case the student is not taking any course for a second time) per semester plus administration fees (EUR 90), which is a lot of money taking in account that this is a public university. In fact, it is well known that this amount of money is much bigger than in other autonomous communities. For

all those people who can't afford to pay that amount of money, some discounts and scholarships are available. Because the information and deadlines of all the available discounts and scholarships are very hidden sometimes, some people can't take advantage of those discounts as they don't even know the existence of one concrete scholarship/discount or how to claim it.

2.2 Scheduling and timetables

Once having passed the first semester of the degree, students are faced with the problem of not being able to enroll with a good schedule. During the enrolment, the students are asked in which group of each subject they want to join. This process was born with the idea that every student could choose when to do each class and be able to do other activities such as working or helping at home, among other things. This process of enrolment lasts three consecutive days; but, every 10 minutes, a group of ten students is able to start their own enrolment. The enrolment order is created from different variables such as the number of passed subjects and the average mark in the last year. Therefore, the problem appears for students who do not have a good enrolment order, because in their case they will end up with a chaotic schedule.

In addition to the chaotic schedule problem,students are not even being able to enroll in the desired subjects. This problem becomes even more evident for third and fourth graders when they want to enroll in electives. As the faculty doesn't know how many students are interested in each subject, they open an amount of spots, probably based on previous courses, and this way to decide how many places are available causes students can't enrol in all the subjects they want.

2.3 Administration services and support

The administration support is very important in all the faculties, but in FIB there is a great lack of good administrative staff. First of all, there is an insufficient number of workers at FIB's secretary. Secondly, their attention is very poor, because sometimes the students' doubts are never answered, or sometimes they are answered several days apart.

Because of COVID-19, it is difficult to speak face-to-face with clerk workers. The communication is done through email or telephone, which causes the problems mentioned in the previous paragraph to be accentuated. Furthermore, there are some times when the clerk workers don't answer phone calls even though they are during business hours.

Following the last problem, people who are new at FIB (that is, first-year students, mostly) are more lost and have more doubts than the rest of the students, so the administration support becomes extremely poor for them. To improve this, FIB established a mentoring program for new students. However, the mentoring program needs some changes because it is not useful for everyone. First, the program covers some topics that are irrelevant. Second, some of the relevant topics are covered much earlier than they should be, so students don't end up remembering. These problems cause lots of students don't attend this program anymore.

2.4 Recommended solutions

The first that we would like to recommend is to gather all the necessary information for academic matters and fees, especially for new students, on the FIB's website. Besides, the website should give more information about the scholarships and how to apply for them and their deadlines. Moreover, we believe it would be a good idea for the UPC and FIB to give more scholarships to offset the high tuition fees, as well as simplify the entire administrative process of first registration once the degree begins.

Secondly, we believe that the faculty should extend the use of the pre-enrolment process not only to mandatory specialized subjects but also in optional syllabus. In this way, the needs of the students, which are the basis of any university, will be accomplished and they will be able to study what they are really interested instead of unloved subjects.

Finally, we would like to recommend hiring more administrative staff, as this will probably solve all the problems that are actually based on the overwork of a few workers. Also, we think that it is necessary to refactor the mentoring program, making that only those topics of more relevance are explained and adapting the dates on which each topic is explained.

3. Academics

Another important topic that we are going to consider in this document is Academics, as it has a big impact on both students' educational development and professors' ability to teach. This being said, certain problems have arisen so they will be analyzed below.

3.1. Curriculum contents and organization

The first aspect that needs attention is related to the **unbalanced subject structure and workload** that exists. There are many courses which do not take into consideration a linear workload distribution along the term. Consequently, students may be overwhelmed during specific periods. Furthermore, they may accumulate a lot of stress as different subjects share this problem. As an example of this, mid-term exams may include a lot of content that is not worth much on the grade in comparison to the final ones. For this reason, it is unfair as students have to spend more or less the same amount of time for both exams when one has way more value than the other. Even though these subject structures may affect each person differently, this distribution is generally not productive nor healthy for students and needs to be changed.

Following the previous problem, there appears to be an increasing need to **update the course syllabus**. The content of multiple subjects is getting old, which will affect the students' professional careers in a negative way. For example, certain subjects include some methodologies that are outdated because the technology is constantly evolving and teaching them seems to be useless.

Last but not least, some students are complaining about the **poor guidance that exists for either choosing specialization or final degree thesis**. Even though there is guidance regarding specializations and thesis, not providing enough help in an important decision of this kind may carry out bad outcomes. Consequently, students may have a bad experience regarding their choice and might finish the degree less prepared and unsatisfied than expected.

3.2. Teacher/students relationships

Concerning the student and teacher relationship, an issue related to **the motivation and effort** that teachers put on their lectures is getting importance. This problem greatly affects the students educational value (respecting what they learn) and their encouragement when doing the subject. For this reason, the professor is the key to reflecting these values to the students, which will drive them to have more interest in the course's content.

3.3. Teaching and assessment methodologies

To begin with, it is important to mention that subjects include **too many assessment methods without caring about inter-subject workload**. Therefore, there is a highly evaluated amount of work (i.e., projects, assignments, exams) which is accumulated between subjects. In fact, this is another problem because it decreases the social life of students.

Secondly, it is known that **exam difficulty may highly vary across terms**, leading to an unfair situation. For example, considering two terms, one may have easier exams than the other and teachers are not taking it into consideration. Due to this, some students may have less problems passing a certain subject or exam, while others may struggle a little bit more.

Finally, an issue that is on everyone's lips between the newest students is related to the fact that **there are no second-chance exams**. We have researched the evaluation methodologies used in other UPC faculties, and found out that they have a similar organization but with more opportunities. For example, the FIB does not have recovery exams while other faculties following the same structure still have them, which is unfair for FIB students. In the end, everybody deserves the same chances when it comes to studying and passing subjects.

3.4. Recommended solutions

Firstly, after having analyzed the problems related to curriculum contents and organization, there are many solutions which could be applied. To begin with, distributing equitably the amount of hours a student needs to learn each topic considering their difficulty could solve the workload problem. Next, the course syllabus should be updated to avoid teaching useless and outdated content. Lastly, as to the guidance provided to the students, it could be enhanced by adding extraordinary seminars in the 3rd course of the degree which will help students solve their doubts.

Secondly, when it comes to the relationship between teachers and students, professors should be encouraged to put more motivation into their lectures. This could be achieved by inviting them to special seminars or meetings that encourage them to have proactive behaviour in class. By doing this, students will be more likely to enjoy the class and have a better understanding of the subject as they will be inspired by the teacher's motivation.

Finally, teaching and assessment methodologies should also be modified. Regarding the inter-subject workload, the different departments of the faculty should reach an

agreement about the amount of work they will place in their respective subjects. Moreover, they should take into account the time periods when the students have more or less workload when it comes to place rated assessments. Another proposal is that exam difficulty should be the same in the different terms to avoid unfairness between students. In that way, everybody has the same chances of passing the exams. The last problem considered is that there are no second exams which could be solved by implementing them so students can have another opportunity. In that way, this would be just like in the other faculties of the university.

4. Facilities

The last topic we are approaching in this document is Facilities, which are the tools provided by FIB to help students. They can have a big impact on our day-to-day activities, and we have detected some notorious issues during our time in university that should be solved. We will analyze each one and finally recommend some possible solutions.

4.1 Student tools

The first issue we are going to tackle is the coexistence of two similar educational web platforms available for FIB students: el Racó and Atenea. To put this in context, the first one is managed by the faculty and the last one by the university. Hence, some teachers, who are more involved in the university ecosystem than in the faculty one, make students use Atenea and vice versa. Moreover, both platforms offer similar features, such as a notification service for every subject, a calendar, a qualifications table, etc. Thus, students may feel confused and finding what they are looking for might be tricky.

Secondly, we will talk about the lack of available previous exams and their solutions in some subjects. In the first mandatory subjects of the degree, students are able to check all the exams and their solutions from previous years. Later on, this option starts disappearing, and students can't revise using last years' exams anymore. This is a very good tool to pass exams due to the fact that they help students know which will be the exam format or what will the teacher ask for.

4.2 General services and facilities

The next topic to be addressed, regarding the facilities, is the general services. This topic is so broad that we decided to focus on the facilities that make life on campus more practical. Here, we obtain some different issues to report but we choose the two we consider most important.

First and foremost, it is a fact that students do not have many dining rooms in the campus or they are too small. In favour of the faculty, we could say that they have opted for a good bar where many students have lunch there. Nevertheless, rainy days or people who don't want to eat in the bar (maybe because it is too expensive or maybe because they do not offer a varied and complete menu) leads to the necessity of having decent dining rooms. Moreover, in these small dining rooms the number of microwaves to heat the student's meal is not enough for the large number of students on campus. Due to this lack of microwaves, long queues occur at rush hours.

Secondly, access to the classrooms could be a headache for disabled students. Although Campus Nord is very well built in terms of architecture, some disabled accesses are still missing, especially in some laboratories. Furthermore, many classrooms have disabled access but do not have tables adapted to their necessities.

4.3 Equipment

Finally, as we all know, during the last years, technology has continued to evolve very fast. Due to this, and since FIB is a faculty where almost all degrees are related to this field, it has done a good job keeping its technological equipment up to date.

Nevertheless, there's many things where FIB has absolutely forgotten about student equipment. First of all, the classroom chairs. There are some classrooms where the chairs are decent and they are pretty comfortable. However, in the majority of classrooms the chairs are falling apart. Most of them are broken and due to that they are really uncomfortable and it is hard to concentrate while trying to keep your balance while writing down notes.

Furthermore, there are some classes where the projectors don't work or the light intensity they reflect is very low. Due to this, it is really hard for students to really see what is being presented on the screen by the professor. Adding to that, many professors struggle with the way projectors and computers in the classrooms work since they are not teached how the new equipment has to be used.

4.4 Recommended solutions

Regarding the student tools issues we discussed before, there are many solutions that could be applied. To begin with, it would be much easier to have only one educational platform with all the necessary features for the students. Atenea may be more complete than Racó, but it has a worse notification service. Hence, we came up with two possible solutions. First, the notification service could be improved in the Atenea platform and second, the missing features could be implemented in Racó. Lastly, to approach the last solved exams issue, we encourage teachers to upload every semester all the exams students take and their respective solutions.

Providing solutions for general services and facilities will be easier than other topics. For the first issue exposed, the easiest and cheapest solution is to enable more dining rooms. It can be achieved by converting any empty room into a dining room. Furthermore, the faculty only needs to purchase some more microwaves for those new dining rooms. Regarding the disabled access, adding some adapted tables in every classroom will be a good and necessary solution.

Finally, FIB should invest enough on equipment in order to provide students with the most basic necessities such as having a good place to sit comfortably, allowing this to increase their level of attendance. Additionally, replacing the old projectors by new ones would allow students to follow their classes in an easier way since the reflection on the screen would be the ideal as well as making the lesson explanation easier for the teacher.

5. Conclusion

To gather everything up, some important problems divided by topics were stated with their respective recommendations. Firstly, problems regarding administrative tasks were discussed in relation to enrollment and degree credits, bad time scheduling and insufficient administrative support. Next, some recommendations like extending the pre-enrollment process to even more subjects or providing more scholarships to students were suggested. Secondly, issues related to the academic environment were mentioned. We were able to highlight problems with curriculum contents and organization, a bad student/teacher relationship and a deficient structure when it comes to teaching and assessment methodologies. Finally, some drawbacks were found in the faculty as facilities appear to have old equipment and poor installations. What is more, the coexistence of two virtual platforms for posting the subject information is giving students some trouble. In general, different approaches to these problems were stated and could be carried out in order to make the FIB a better faculty.