



**Erasmus Mundus Master Course in
Chemical Innovation and Regulation**

Annual Report 2023

for the Programme Committee

University of Algarve

December 15, 2023





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Summary

This report serves as a comprehensive overview for the Programme Committee's annual evaluation of the ChIR programme. It summarises the key activities and results from the second year of the 2021/23 (sixth cohort) and the initial year of the 2022/24 (seventh cohort) within the Erasmus Mundus MSc in Chemical Innovation (ChIR) programme.

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1. Introduction

1.1 What is the EMMC-ChIR?

The ChIR - Erasmus Mundus Master in Chemical Innovation and Regulation - is a MSc providing professionals with the key tools and knowledge needed from the scientific, the regulatory and the economic point of view to manage the risks of chemicals responsibly and to address chemical legislation requirements worldwide.



The ChIR was created in 2012 as a Joint Degree by the ChIR Consortium of European Universities. As a Joint Degree offered by the ChIR Consortium, it benefits from a much larger offer of contents and facilities than would be possible in a single university. As an Erasmus Mundus project, ChIR also aims to promote research and collaboration in the EHEA supporting the implementation of chemical safety regulations.

The course website provides more detailed information: www.emmcchir.org.

The ChIR is managed by the Consortium of the University of Algarve (UAlg), University of Barcelona (UB) and University of Bologna (UniBo). The UAlg is the current coordinator of the ChIR Consortium.

The programme was redesigned in 2019, keeping the same overall objectives. Heriot-Watt University (HWU) was a full partner of the consortium until 2019 and is now Associated Partner.

The Masters course has a duration of 2 years and comprise a total of 120 ECTS credits.

There are two main components: first, a fully integrated taught (curricular) part of 66 ECTS credits (one year). Second, a period dedicated to an internship (15 ECTS credits, 3 months) and research (39 ECTS credits, 9 of which dedicated to a curricular unit of preparation for the research thesis). The curricular course is hosted in turn at the European Universities, as shown in the table.

Edition	Academic Year	Host University
6th	2021 / 2022	UniBo
7th	2022 / 2023	UAlg
8th	2023 / 2024	UB
9th	2024 / 2025	UniBo

1.2 Contents of the course

The course is organised into eleven disciplines, within which a minimum of three different optional units are offered. Each optional unit is made of three stand-alone modules of 2 credits (1 week of classes). The table below depicts the relation between disciplines, course units and modules.

Group 1 - Design <table border="1"> <thead> <tr> <th>Innovative Products Design</th> <th>Applied New Products</th> <th>Alternative Pharmaceutical Products Design</th> </tr> </thead> <tbody> <tr> <td>D01 Alternative Green Products</td> <td>D04 Food and Chemistry</td> <td>D06 Drug Design</td> </tr> <tr> <td>D02 Structure Toxicity Relationship</td> <td>D03 Design of Chemical Formulations</td> <td>D01 Alternative Green Products</td> </tr> <tr> <td>D03 Design of Chemical Formulations</td> <td>D05 Properties of Materials and New Materials</td> <td>D02 Structure Toxicity Relationship</td> </tr> </tbody> </table>	Innovative Products Design	Applied New Products	Alternative Pharmaceutical Products Design	D01 Alternative Green Products	D04 Food and Chemistry	D06 Drug Design	D02 Structure Toxicity Relationship	D03 Design of Chemical Formulations	D01 Alternative Green Products	D03 Design of Chemical Formulations	D05 Properties of Materials and New Materials	D02 Structure Toxicity Relationship	Group 6 - Toxicology <table border="1"> <thead> <tr> <th>Toxicological Perspective</th> <th>Human Toxicology</th> <th>Toxicological Assessment</th> </tr> </thead> <tbody> <tr> <td>T01 Toxicology</td> <td>T01 Toxicology</td> <td>T02 Principles of Toxicological Assessment</td> </tr> <tr> <td>T02 Principles of Toxicological Assessment</td> <td>T04 Genotoxicity Assessment</td> <td>T04 Genotoxicity Assessment</td> </tr> <tr> <td>T03 Guidelines for the Testing of Chemicals: Toxicology Approaches</td> <td>T05 Toxicokinetics and Toxicogenetics</td> <td>T06 Biosafety</td> </tr> </tbody> </table>	Toxicological Perspective	Human Toxicology	Toxicological Assessment	T01 Toxicology	T01 Toxicology	T02 Principles of Toxicological Assessment	T02 Principles of Toxicological Assessment	T04 Genotoxicity Assessment	T04 Genotoxicity Assessment	T03 Guidelines for the Testing of Chemicals: Toxicology Approaches	T05 Toxicokinetics and Toxicogenetics	T06 Biosafety
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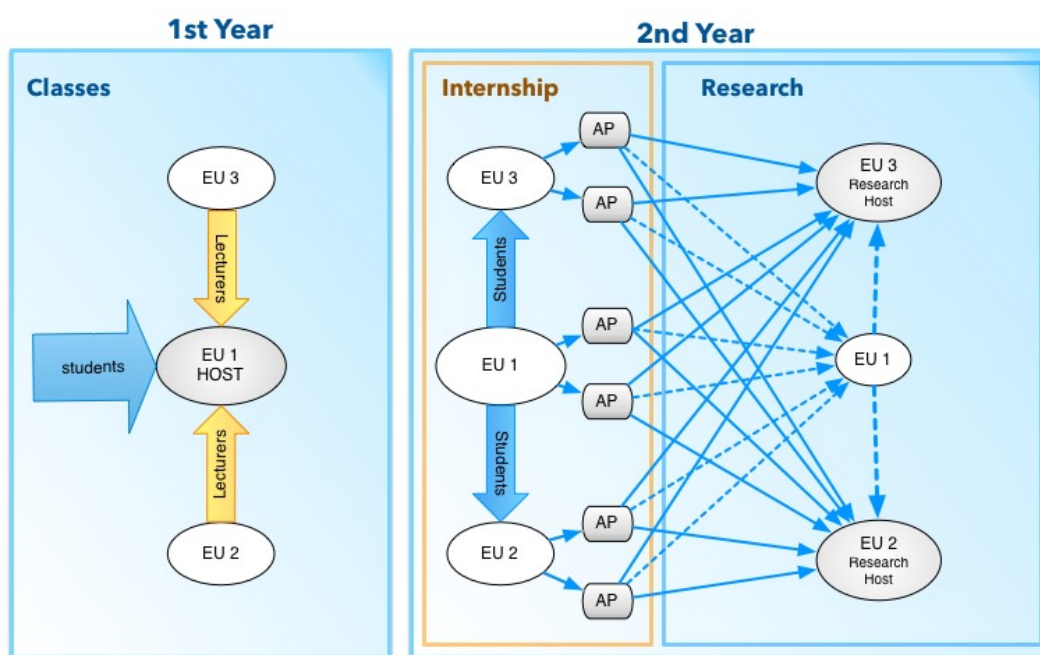
The contents of course units SU-1 “Risk and Safety” and SU-2 “Chemical Safety” in group 9 were revised before the start of the 8th edition, so the study plan available to students of this cohort is not exactly the same as the 7th cohort.

Changes to the composition of course units T-U1 “Toxicological Perspective” and T-U2 “Human Toxicology” have also been approved, following the findings of the quality assessment from 2021/2022. These changes were approved internally in the universities of the consortium during 2023 and will be accessible to the 9th cohort.

1.3 Mobility Paths

International mobility is embedded in the ChIR structure, both for students and lecturers. Lecturer mobility is implicit because the Host University (EU1, in the figure below) rotates every year and hence classes take place in a different university of the consortium each year. Lecturers from universities EU2 and EU3 teach under mobility. Students take all classes of the curricular year in the same university but must spend a minimum of 6 months in a different country of the consortium during the second year, leading to the possible paths below.

The 7th cohort studied together in the UniBO in 2021/2022. In 2022/2023 the group was distributed throughout Italy, Spain and Portugal pursuing internships and research projects.



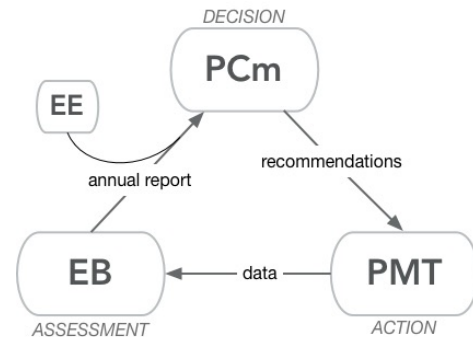
Mobility scheme for ChIR students and lecturers

The 8th cohort studied together in the UAlg in 2022/2023 and was distributed through Portugal, Spain and Italy for internships and research projects.

1.4 Jointness

The course is fully integrated in the Universities of the ChIR Consortium and is managed by joint management bodies where these universities are represented. These management bodies are:

- the Programme Committee (PCm);
- The Programme Management Team (PMT)
- The Examiners Board (EB)
- The Selection Committee (SC)



ChIR Joint Management Bodies

Annex 1 indicates the members composing each of the joint management bodies in 2022/2023.

2. Students

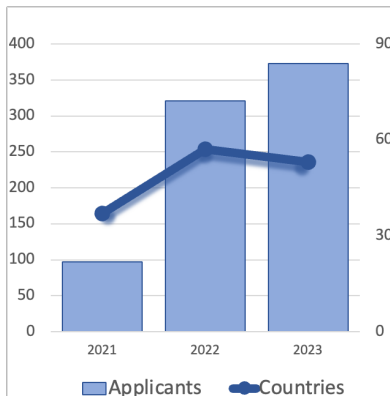
2.1 Selection Procedure

The Consortium used the online student application form developed in 2021, which has been improved based on the experience during the previous selection process.

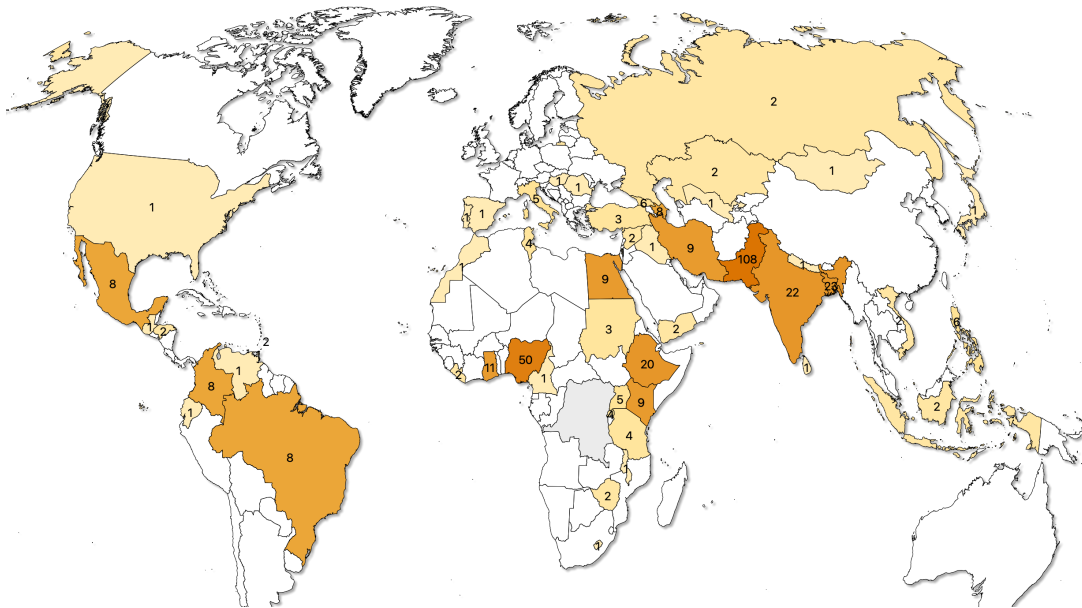
The selection of students is done every year by the Selection Committee (SC), a joint body in which the three partner universities are equally represented. The SC evaluates all student applications according to the established procedures and criteria, ensuring consensus among the partner universities in the acceptance and evaluation of each candidate. SC members collaborated online sharing information and discussing using a dedicated platform created in the ChIR Moodle. Two meetings took place to approve the lists of students for the 2023/2024 edition: the first on March 24 for selection of the Erasmus Mundus grant holders and the second, held online in July, to approve the lists of self-funded students.

2.2 Student Applications

The ChIR has received each year near 500 online applications, but only 97 (2021), 321 (2022) and 373 (2023) were complete and eligible applications. Candidates apply from countries distributed all over the world. Compared to 2021, when the consortium received candidates from 37 countries, the number of applicants and diversity of their origins increased in 2022 to 57 countries. In 2023 the number of countries decreased slightly to 53 but the number of candidates increased to 373.

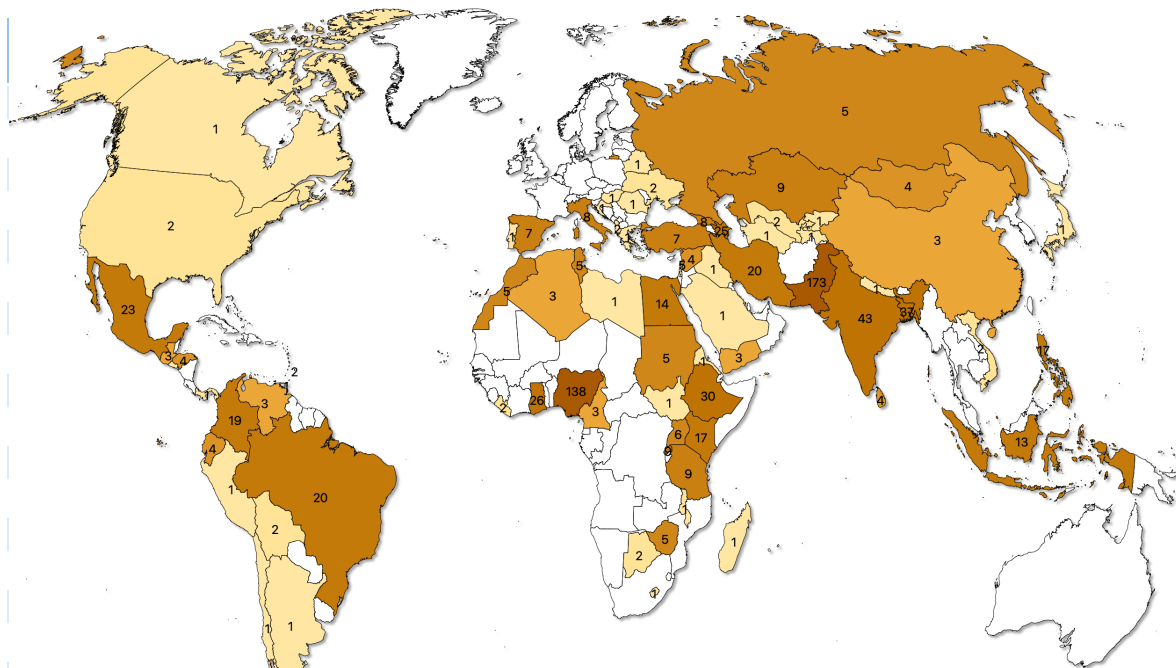


Evolution of the number of complete applications and nationality of applicants



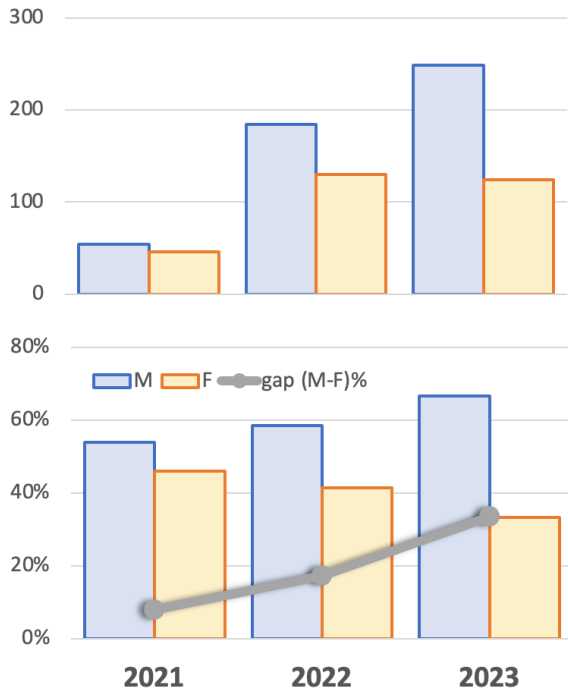
Geographical Distribution of ChIR candidates in the ChIR 2023 selection

Geographical distribution of ChIR candidates for the 2021, 2022 and 2023 selection

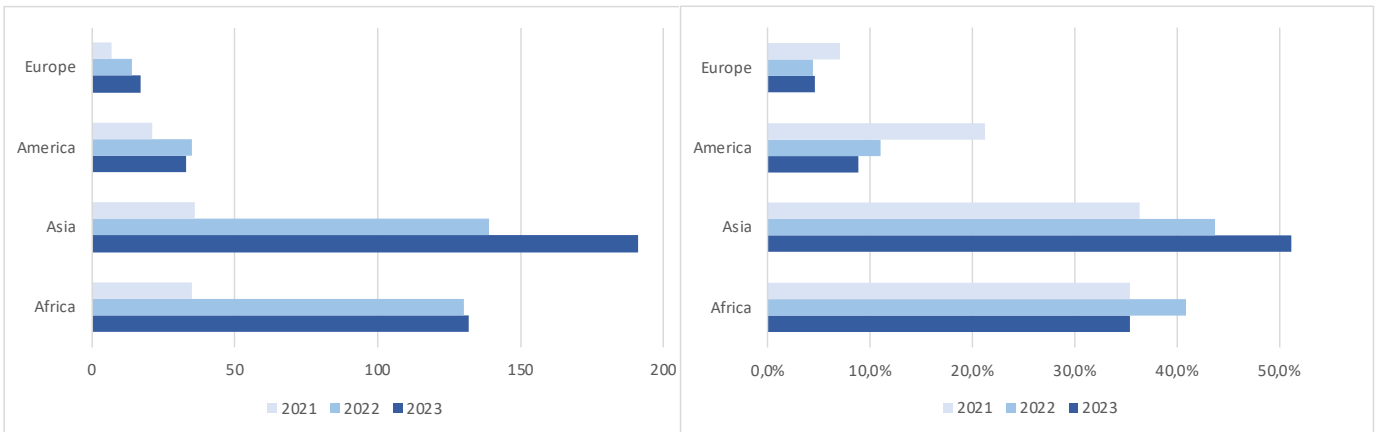


Croatia	1	----	----	Russia	----	3	2
Ecuador	1	2	1	Rwanda	----	5	4
Egypt	2	3	9	South Sudan	----	1	----
El Salvador	----	1	----	Saudi Arabia	1	----	----
Ethiopia	1	9	20	Spain	1	5	1
Eritrea	----	1	----	Sri Lanka	----	3	1
Georgia	----	2	6	Sudan	----	2	3
Ghana	2	13	11	Syria	----	2	2
Greece	1	----	----	Tajikistan	----	1	----
Guatemala	1	1	1	Tanzania	1	4	4
Honduras	1	1	2	Trinidad and Tobago	----	----	1
Hungary	----	----	1	Tunisia	----	1	4
India	3	18	22	Turkey	2	2	3
Indonesia	3	8	2	Turkmenistan	----	1	----
Iran	4	7	9	Uganda	----	1	5
Iraq	----	----	1	Ukraine	1	1	----
Italy	1	2	5	United States of America	----	1	1
Japan	----	----	1	Uzbekistan	----	1	1
Kazakhstan	1	6	2	Venezuela	----	2	1
Kenya	----	8	9	Vietnam	----	----	2
Kyrgyzstan	----	1	----	Yemen	1	----	2
Lesotho	----	----	1	Zimbabwe	1	2	2
Liberia	----	----	2				

Geographical cumulative distribution of ChIR candidates in 2021, 2022 and 2023



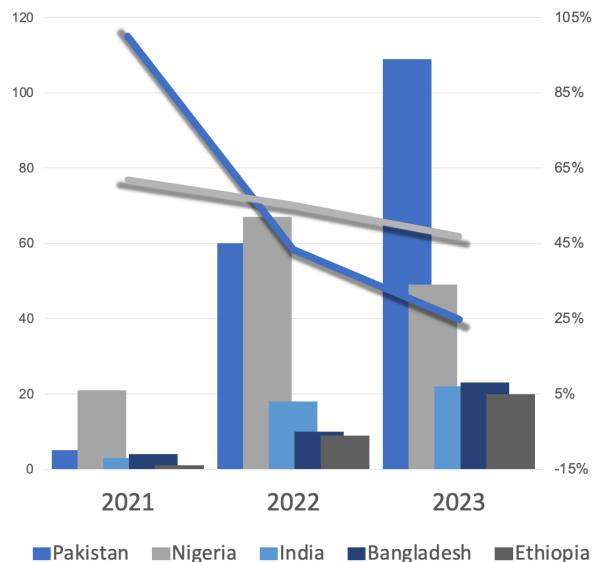
In 2023, most candidates applied from Africa and Asia, followed by the Americas and Europe, similarly to previous years. The most relevant change in 2023 was a very significant increase in applicants from Pakistan which led to a concomitant increase in applications from Asia.



Distribution of candidates by region in absolute number of candidates (left) and relative to the total number of candidates in the same year (right).

Gender distribution of candidates, in percentage (bottom) and absolute numbers (top)

Gender distribution continues to be skewed towards male candidates. The gender gap among candidates has increased consistently



from 2021 to 2023. In 2023 female candidates were only 34 % (43 % in 2021 and 41 % in 2022) of the evaluated applicants while 66 % were male (57 % in 2021 and 59 % in 2022).

A closer analysis shows that the increasing gender gap is due solely to the large increase in number of applications from countries with a wide gender gap, in particular Pakistan. In fact the data shows an improvement in gender balance among candidates from Pakistan and Nigeria, the two countries contributing with most candidates.

Evolution of the number of candidates from the five countries with most candidates (bars) and decrease in the gender gap (difference between % of male and % of female candidates relative to the number of candidates from the same country) in Pakistan and Nigeria (lines).

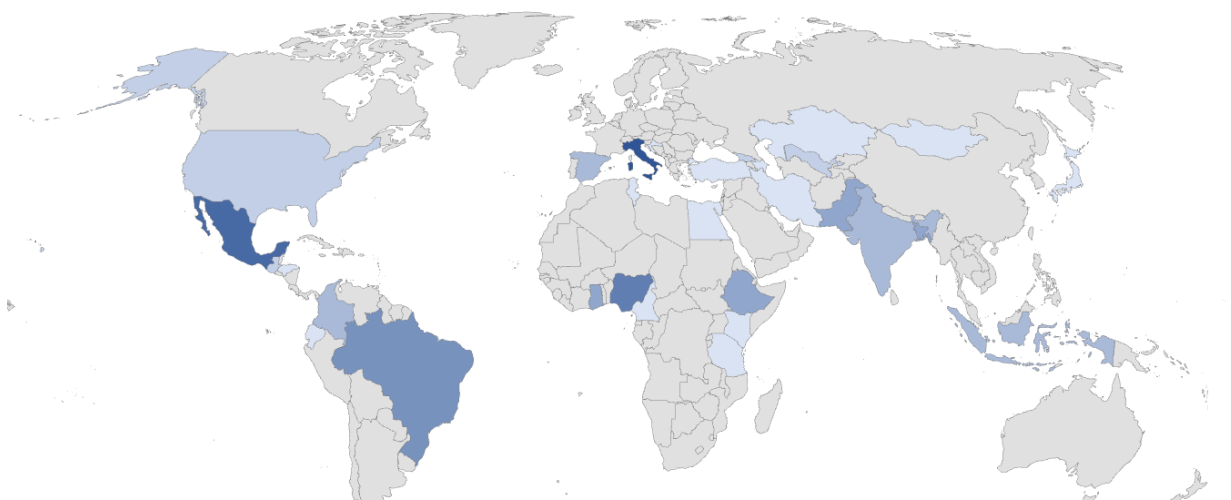
2.3 Selected Students

In the 2022-2024 (7th) edition 25 students were selected for Erasmus Mundus studentships. The consortium lost contact with one student assigned a studentship, Tewodros Shibabaw from Ehtiopia, who stopped replying emails expected to enrol in the ChIR. One self funded student, Alex Kamande from Kenya, joined to cohort for a total of 25 student enrolled.

For the 2023-2024 (8th) edition starting point the UB in October 2023, 25 students were selected for Erasmus Mundus studentship. Two students declined the studentship and were not replaced. Ten additional self-funded students enrolled, for a total of 33.

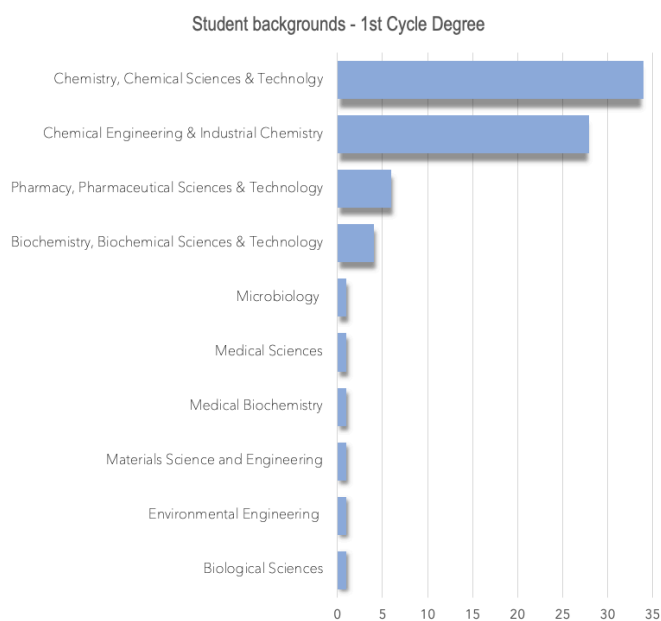
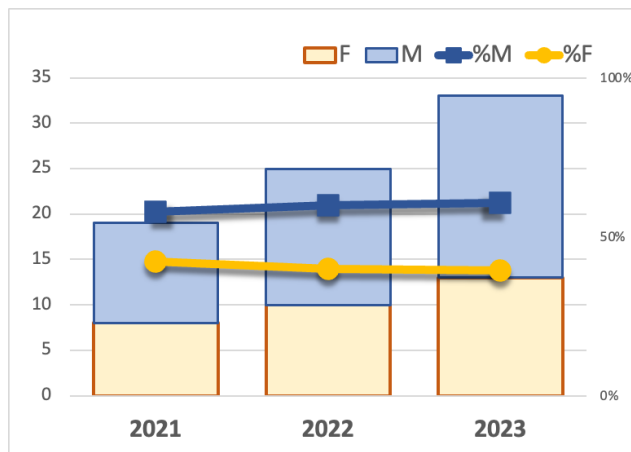
Geographical and gender balance are controlled when assigning Erasmus Mundus studentships. **Geographical balance** requires that no more than three students from the same country are funded by the Erasmus Mundus Programme. This rule assures a variety of nationalities and cultures in each ChIR cohort. The programme structure further facilitates intercultural contact. As all students are together during the first year they constitute a multicultural group which fosters personal growth and the development of "international" soft skills. Working and studying for one year within such a group students have the opportunity to communicate and collaborate with colleagues of completely different backgrounds, which

would not be possible in traditional study environments.



Cumulative geographic distribution of nationalities of ChIR students enrolled from 2021 to 2023.

The **Gender balance** rule requires that each gender represents a minimum of 40% of grant-holders. This contributes to more balanced cohorts and opens opportunities to female candidates.



The ChIR is open to candidates holding degrees where chemistry is taught. This allows for candidates from varied **scientific backgrounds**. The graphic shows that the predominant background of students joining the ChIR between 2021 and 2023 has been, by far, Chemistry and Chemical Engineering.

The next tables detail the members of the 6th, 7th and 8th cohorts. It should be noted that two students from the 6th cohort dropped the programme in jaunt 2022: Lea Lemajic, for health reasons, and Seyed Shah, because of difficulties felt while applying for the Italian study visa.

The 8th cohort hold a record number of students 33, including ten self-funded students. The predominance of Italian students, seven, attests the excellent level of promotion of the programme by the UniBo.

ChIR students enrolled in the 2021-2023 (6th) edition: gender, nationalities and scientific background.

Name	Family Name	Gender	Nationality	Background
Aladdin	Mardanov	M	Azerbaijan	Chemical Engineering
Leticia	Anjinho de Barros	F	Brazil	Technological Chemistry with emphasis in Quality Management
Carla Thaís	Pereira Coelho	F	Brazil	Chemistry
<i>*Lea</i>	<i>Lemajic</i>	<i>F</i>	<i>Croatia</i>	<i>Medical Sciences</i>
Adriana	Gonzalez Alcivar	F	Ecuador	Environmental Engineering
Negussie Darota	Daka	M	Ethiopia	Forensic chemistry & Toxicology
Charles	Ayi	M	Ghana	Chemical Engineering
Juan	Chajón	M	Guatemala	Chemical Engineering
Reyhan	Ammar	M	Indonesia	Chemical Engineering
Fajar Ramadhitya	Putera	M	Indonesia	Pharmacy
Majid	Esmaeili	M	Iran	Analytical Chemistry
Erika	Martinelli	F	Italy	Chemistry
Gisela	Obregón Gutiérrez	F	Mexico	Chemical Engineering
Marcelo	Martínez	M	Mexico	Chemistry and Nanotechnology
Héctor	Romero	M	Mexico	Nanotechnology & Molecular Engineering
Mariana	Martínez Valdovinos	F	Mexico	Pharmaceutical Biological Chemistry
Yusuf	Ibrahim	M	Nigeria	Industrial Chemistry
Nneoma Chizurumoke	George	F	Nigeria	Microbiology
<i>*Syed Akbar Ali</i>	<i>Shah</i>	<i>M</i>	<i>Pakistan</i>	<i>Biomedical Engineering</i>
Segismundo	García Valverde	M	Spain	Chemistry and Law
Ariana Gabriela	Neyra Pérez	F	Spain	Pharmaceutical Biological Chemistry
Abdulrahman Badr Hasan	Al-Kubati	M	Yemen	Chemical Engineering

** Dropped the programme in January 2022.*

ChIR students joining the ChIR 2022-2023 (7th) edition: gender, nationalities and scientific background.

Name	Family Name	Gender	Nationality	Background
Sultana	Chowdhury	F	Bangladesh	Applied Chemistry & Chemical Engineering
Aysha	Siddika	F	Bangladesh	Chemistry

Name	Family Name	Gender	Nationality	Background
Adrine Elisabeth	Ganimian Tcharkhetian	F	Brazil	Chemistry
Breno	Savazini Leone	M	Brazil	Chemical Engineering
Elizabeth	Alvarez Pérez	F	Colombia	Chemistry
Sara	Ghazy	F	Egypt	Biochemistry
Getachew	Gebrehiwet	M	Ethiopia	Biological and Chemical Engineering
Mariam	Abramishvili	F	Georgia	Chemistry With the Emphasis in Biochemistry
Gideon	Asew Boafo	M	Ghana	Chemical engineering
Raphael	Mensah	M	Ghana	Chemical engineering
Prince	Ebo-Donkor	M	Ghana	Industrial Chemistry
Gavrilla	Sompie	F	Indonesia	Chemistry
Marlen	Mustafin	M	Kazakhstan	Technology of pharmaceutical engineering
Sharon	Otieno	F	Kenya	Medical Biochemistry
Alex	Kamande	M	Kenya	BSc chemistry major
Bryan Leonardo	Morales Espino	M	Mexico	Engineering in Biotechnology
Moses	David	M	Nigeria	Applied Chemistry
Perfect Peace	Sunday	F	Nigeria	Chemical Engineering
Samuel	Amali	M	Nigeria	Chemistry
Abdul	Miraj	M	Pakistan	Polymer Engineering
Jalal	Ahmad	M	Pakistan	Biological Sciences
Jordi	Falguera Garcia	M	Spain	Chemistry and Physics
Ayoub	Antar	M	Tunisia	Chemical Engineering
Ana	Diges	F	USA, Spain	Materials Science and Engineering
Bositkhon	Akhmedov	M	Uzbekistan	Chemical Engineering and Technology

ChIR students joining the ChIR 2023-2025 (8th) edition: gender, nationalities and scientific background.

Name	Family Name	Gender	Nationality	Background
Afsana	Nahrin	F	Bangladesh	Bachelor of Pharmacy (Honours)
Saad Ahmed	Sami	M	Bangladesh	Pharmacy
Jonathan	da Silva Borges	M	Brazil	Chemical engineering
Jude Fungi	Ambebila	M	Cameroon	Microbiology
Angela Patricia	Valencia Mejia	F	Colombia	Pharmaceutical Chemistry
Anderson	Rodriguez Mantilla	M	Colombia	Chemistry
Tsegaye Adane	Birhan	M	Ethiopia	Chemistry
ADUGNA	ABERA AYU	M	Ethiopia	Chemistry
Amanuel Teshite	Guye	M	Ethiopia	Industrial Chemistry
Tamari	Batsankalashvili	F	Georgia	Chemistry
Bayron	Sandoval	M	Guatemala	Chemical Engineer
Ana Lucia	Reyes Rodriguez	F	Honduras	Pharmacist
Tushar Dilip	Bhosale	M	India	chemistry
Soundharya Dharshini	Nachimuthu Shanmugam	F	India	Chemical Engineering
Devipriya	Mudiyil	F	India	B. Tech. Chemical Engineering
Sara	Bortolotti	F	Italy	Chemistry and Technologies for the Environment and Materials
Riccardo	Natali	M	Italy	Chemistry

Name	Family Name	Gender	Nationality	Background
Italo	Riverso	M	Italy	Industrial Chemistry
Francesco	Sartori	M	Italy	Chemistry
Lorenzo	Cristini	M	Italy	Chemistry
Clara	Atorino	F	Italy	Chemistry
Silvia	Torrisi	F	Italy	chimica e chimica dei materiali
Minoru	Tanino	M	Japan	Chemistry, Materials and Bioengineering
Roxana Melina	Montes Garcia	F	Mexico	Biology and Pharmaceutical Chemistry
Sonia	Vazquez	F	Mexico	Administrative Chemical Engineer
Angiraa	Erdenesanaa	F	Mongolia	Biochemical Engineering
Adewale	Aderogba	M	Nigeria	Pure and Applied Chemistry
Mmaduabuchi	Udoji	M	Nigeria	Pharmacy
Osama	Shahab	M	Pakistan	Chemical Engineering
Muhammad Hasnain	Yousaf	M	Pakistan	Bachelor's of Science in Chemical Engineering
Danford	Mkunda	M	Tanzania	Molecular Biology and Biotechnology
John	Morrell	M	USA	Chemistry
Yasmin	Isaeva	F	Uzbekistan	Chemistry

3. Scholars

3.1 Teaching staff

The academic year 2022-2023 counted with the collaboration of 54 lecturers, of which 40 lecturers came from the Universities of the Consortium. Half of the teaching staff taught under mobility: fourteen lecturers from the UB and six from the UAlg.

The ChIR consortium invites experts from external institutions and companies to teach their fields of expertise. In 2021-2023 fourteen external lecturers contributed to the course.

Lecturers contributing to the 2022-2023 study plan

UAlg	UB	UniBo	External
Ana Rosa Garcia	Albert Romano	Alessandra Bonoli	Angelo Romasanta (ESADE)
Clara Costa	Anna de Juan	Alessandra Tolomelli	Carlos Molina (FEIQUE)
Isabel Cavaco	Anton Vidal	Chiara Samori	Cristina Massa (ALBA)
José Moreira	Carme González	Claudio Trombini	Drinalda Mehja (Fresenius Kabi)
Luis Nunes	Carolina Estarellas	Emilio Tagliavini	Eugenia Anta (FEIQUE)
Lurdes Cristiano	Daniel Sainz	Fabrizio Passarini	Helder Mota Filipe (OF)
Sara Fernandes	Jaume Argerich	Giuseppe Falini	Irene Belincion (FEIQUE)
Vera Marques	Merce Segarra	Laura Tositti	Isabel Tomaz (FCT-UL)
	Pilar Ramirez de la Piscina	Luca Ciacci	Matteo Pori (BASF)
	Rafael Llorach	Luca Evangelisti	Teresa Fernandes (HWU)
	Rubén Huertas	Marco Bandini	Victor Garrido (ALBA)
	Santiago Esplugas	Marco de Angelis	
	Susana Amezqueta	Marco Lombardo	
	Xavier Saurina	Paola Galletti	
		Silvia Bagni	
		Walter Cabri	

4. Activities

4.1 Induction activities, student guidance, teaching methods and evaluation.

The induction meeting of the 7th cohort took place on October 3, at the beginning of the 2022/2023 academic year. The Programme Coordinator was absent for health reasons but the UAlg Programme Directors welcomed the students and presented information on the choices they must do while building study plans, deciding on internships and research projects.

The main platform used for communication and sharing of information between lecturers and students is the ChIR Moodle Teaching and Collaboration Platform. The platform was hosted for the first time in the servers of the UAlg and available from <https://emmcchir-learning.ualg.pt/>. This platform is used for submission of assignments, feedback and grading.

Classes are organized in weekly modules, each taught by a lecturer who often is teaching under mobility. As a consequence, during the week they teach lecturers are completely available to students during the time after classes. After returning to their home institutions students and lecturers keep in contact through the ChIR Moodle Platform.

Students attending classes remotely, because were still awaiting travel visas, communicated with lecturers via the Moodle platform, email or by videoconference through the UAlg Zoom system.

Students' performance is evaluated for each module in their Study Plan. For each Course Unit students receive a grade calculated as the average of the grades achieved in the three modules which compose the Course Unit.

Room 2.11 in Building 2 of the Department of Chemistry and Pharmaceutical Sciences of the UAlg was reserved and dedicated to ChIR classes. This room, with the capacity for 25 students, was equipped for blended / hybrid teaching and learning, simultaneously in presence and by videoconference through the UAlg Zoom system. In June, because of a malfunctioning air conditioning, classes were moved to room 3.42 in the same building, equally equipped. The classrooms were equipped with a large smart interactive screen. UAlg IT staff were available to help visiting lecturers with the connections. A small office close to the classrooms was reserved for the visiting lecturers.

Students David Moses, Ayoub Antar, Getachew Gebrehiwet and Raphael Mensah could not be present at the start of the academic year and, because of visa issues, arrived to Europe only in November. In order to allow these students to follow the classes these were held in hybrid mode during the month of October and November.

Students of the 7th cohort were concerned throughout the academic year about the legalisation of their status in Europe. In previous years students would receive a short term Portuguese student visa, allowing entrance in Portugal, after which they would apply for a residence permit. The situation was completely different in 2022/23. Most students received long term entry student visas, valid for one year. The SEF¹ was dismantled in 2023, and the year preceding this was disastrous for all Erasmus Mundus programmes in Portugal. Students holding a student visa are not allowed to enter other EU countries, but they can do so as long as they hold a Portuguese residence permit. Waiting lists for residence permit at SEF had more than 6 or 9 months waiting time, even being scheduled for remote parts of the country. This was disastrous for most Erasmus Mundus programmes, which have 6 months mobility periods, but not for ChIR, which has a first mobility of one year. SEF eventually advanced interviews to Erasmus Mundus students from other programmes to earlier dates not to risk their mobility to other EU countries, but there was no reason to open such exception for ChIR. Students naturally wished to resume their legalisation processes as early as possible, to visit Europe or, in two cases, to be joined with their families who could not stay with them in Europe under a student visa. Such arguments were not relevant for SEF, though. The programme director made several contacts to SEF which probably had no role facilitating the interviews and residence permits which were eventually provided to all students except two, who already held visas valid until after the end of the mobility period in Portugal. Students received Portuguese residence permits valid for two years, longer than the remaining study programme, which avoids the need to reapply for visa or permit in the second country.

4.2 Calendar of classes 2022/2023

The calendar for classes was built after agreeing with each lecturer the best possible week considering their availability, the necessary precedence of some modules over other and obeying the following principles: (1) not more than two modules can take place in the same week for the same students; (2) modules taking part in the same course units would be taught as close as possible within the academic year; (3) modules would be taught in

¹ SEF - *Serviço de Estrangeiros e Fronteiras*, was the Portuguese unit responsible for the legalisation of foreigners.

presence, unless strong reasons oppose it. Annex 2 represents the definitive calendar showing the dispersion of individual modules composing each course unit.

4.3 Study Trips

Study trips are no longer part of the curriculum of the new ChIR structure but continue to be organised by the consortium every year, as they are an excellent means to provide some direct contact of the students with several industries, to promote the programming by showing the students to industry stakeholders and to strengthen the existing connections or pursue new contacts with the industry.

While in Barcelona and Bologna the university partners organize short study trips to nearby industries, distributed along the year, this is not possible in Algarve because it is a mostly touristic region, well known for its nature attractions but where heavy chemical industry is nonexistent. In order for the ChIR students to benefit from study trips the UAlg has dedicated a full week to a trip to Lisbon or Oporto, offering students bus transport and accommodation at *Pousadas da Juventude* hostels and visiting several chemical industries in the region as well as cultural sites.

In the academic year 2022/2023 the ChIR planned a study trip to Lisbon for the week of April 25, a national holiday, which was kept empty of classes for this aim. Students were naturally looking forward to it. Unfortunately, all the companies contacted were unavailable for study trips within that week. Some companies, such as Hovione, were still not hosting study visits because of COVID-related safety concerns. Others had employees still working remotely, and therefore they would not have staff available to handling the visit. Others did not have enough staff to receive the students because of the holiday. While trying to find an alternative week for a trip to Lisbon later in the year, it became patent that this would be impossible.

Accommodating students in unknown hostels was not an option because of safety and comfort standards. The only option for accommodation would be *Pousadas da Juventude*, a reliable group of hostels offering good conditions for a reasonable cost. Nevertheless, even though *Pousadas da Juventude* has several hostels in the region, they were all under renovation in preparation for the World Youth Day². There were not enough places for a group of 25 students. The trip to Lisbon was abandoned. Alternatives were companies which could be reached and visited within one day from Faro.

A study trip to the installations of Air Liquide Portugal in Sines was organised and took place on June 16th. The students had the opportunity to listen to a presentation on the company

² The world youth day is an Catholic Festival which was organised in Lisbon in July 2023 and was considered the largest event ever organised by Portugal, with 354.000 pilgrims and 1.5 million attendees.

by Eng. Micael da Silva, describing the international company and its products, and also the organisation and the technical/chemical details of the activities carried out in the Sines plant. A short time was dedicated to the discussion about the students' curiosities and questions. Prepared with personal protective equipment, the students were divided into two groups and lead to visit all the facility's departments, the plants, the reagents storage areas and the waste treatment areas.

4.4 Research Topics

Students were offered the list of research topics approved by the Programme Committee in November 2022. Assignment of research topics was done according to student choices as far as possible, avoiding overlap of topics. When more than one student applied to the same topic, the selection was made based on the student original ranking during the selection procedure and the suitability of their background.

Assignment of Research Topics - 7th cohort

Student	Research Host	Supervisor	Research topic
Abdul Rahman Miraj	UB	Daniel Sainz	Analysis of EU chemical regulations and SDGs
Adrine Elisabeth Ganimian Tcharkhetian	UB	Carolina Estarellas	Computational modelling of taste receptors.
Alex Kamande	UB	Joan Albert	Implications in the design and sustainability of C-H bond catalytic reactions.
Ayoub Antar	UB	Marta Estrader	Hybrid anisotropic magneto-optical nano-objects for water remediation applications
Aysha Siddika	UB	Rafael Llorach	Polyphenols analysis in food products
Gideon Asew Boafo	UB	Albert Romano Daniel Sainz	Monitoring climate change gases with sensors based on 2D materials
Jalal Ahmad	UB	Laura Rodriguez	Supramolecular tools for the molecular recognition of environmental contaminants
Mariam Abramishvili	UB	Carolina Estarellas	Computational modelling of taste receptors
Moses Kolade David	UB	Santi Esplugas	Application of biochar for the recovery of phosphorus in wastewater: a technology for a green future
Perfect Peace Sunday	UB	Pilar Ramirez de la Piscina Narcis Homs	New catalysts for green H ₂ production from biomass-derived alcohols
Prince Ebo-Donkor	UB	Santi Esplugas	Solar-assisted activation of chlorine for water remediation: characterization and feasibility
Raphael Mensah	UB	Pilar Ramirez de la Piscina Lourdes Mestres	Study of 2D materials for sustainable conversion of CO ₂ through catalysed processes
Samuel Amali	UB	E. Carolina Sañudo	Green Chemistry synthesis in coordination complexes
Sharon Otieno	UB	Albert Romano Daniel Sainz	Metal organic frameworks (MOF) for chemical sensing of environmental pollutants.

Student	Research Host	Supervisor	Research topic
Sultana Chowdhury	UB	Carme González	Development of nanoemulsification technologies with application in food
Ana Diges	Unibo	Silvia Bagni	Alternatives of Development Models in Environmental Law
Bositkhon Akhmedov	Unibo	Giuseppe Falini Devis Montroni	Synthesis of green insulating materials
Bryan Leonardo Morales Espino	Unibo	Paola Galletti Chiara samori	Development of new chemicals and materials from renewables and waste
Gavrilla Anggastanadia Datu Sompie	Unibo	Giuseppe Falini Devis Montroni	Synthesis and characterization of polysaccharide-based materials for wound dressing
Jordi Falguera Garcia	Unibo	Antunes Staffolani	Towards green batteries: sustainable materials and processes
Sara Ghazy	Unibo	Luca Gentilucci	Use of non-toxic inorganic materials as recyclable reagents in organic chemistry and mechanochemistry
Marlen Mustafin	Unibo CNR	Silvia Panzavolta Anna Costa	Safe and Sustainable by Design hybrid nano-structures, exploiting natural sources.
Breno Savazini Leone	Unibo CHIMIND	Fabrizio Passarini Luca Ciacci	Environmental impact assessment of product-systems and industrial processes from the chemical industry
Elizabeth Alvarez Prez	Unibo CHIMIND	Fabrizio Passarini Luca Ciacci	Characterization of anthropogenic flows and stocks of targeted substances for environmental protection/elemental circularity in materials' value chain
Getachew Gebrehiwet	Unibo	Cristian Torri, Amiza Amiza	Carbon Capture and Utilization (CCU) for production of renewable chemicals: preparation and test of novel biochar-based material for enhancement of homoacetogenic fermentation

4.5 Internships

Internships are offered through the existing collaboration and contacts between internship hosts and the universities of the ChIR consortium. Students were offered a list of the internship hosts approved by the Programme Committee in February 2023. For reasons detailed below, this list had to be revised and a new one approved in June, delaying the internship assignment process. Considering the increasing number of unpredictable difficulties in visa and residence permit applications, students not exempt from these procedures were asked to take internships in the the same country as their research topic.

Original contacts with companies must be done several months in advance before the effective beginning of the internship; eventually the availability of some companies was refused. In some cases the company communicated that they were no longer accepting students for internal reorganization (BASF, Autiphony). Another reason was the change of management, which determined a different policy on internships (CAVIRO). Some companies, initially giving their support, did not confirm without any specific reason.

For this reason, the program directors managed to find other opportunities, possibly in the same business sector. The students originally choosing BASF were accepted at DOW chemicals and GVS Polymers, the student expected to go to CAVIRO is doing the internship in Graphene GTX, the student supposed to go to Autiphony pharma start-up was accepted by Alfasigma pharma company. The student who asked to do the internship in CP essenze (cosmetic fragrances) is doing the internship in Eley cosmetic company. Finally the student who asked for Temix Oleo is now in Newchem pharma company.

The new agreements were finalized during the summer and students begun the internship in September/October 2023. They are expected to finish the internship before the end of 2023.

Only one student, Breno, is currently doing the research activity for thesis in Rimini with Profs. Ciacci and Passarini and he will do the internship later in DOW Company at Carpi (60 Km from Bologna). This swap in the period dedicated to the two activities was due to the fact that Rimini is a touristic place and the accommodation in the summer is difficult to find and very expensive.

In the case of the internships linked to UB, some of the companies preferably accept students that speak Spanish or another latin language like Portuguese or French (besides English) because of the difficulty of the communication with the workers, but they did interviews with all the candidates. These companies (Ramboll Iberica and B&B asesores) accepted two students. The company Massó accepted one student, but it was not possible sign the agreement, because according to the new law in Spain it is mandatory that the students have a Spanish Social Security Number to do an internship, and this is only possible if the student has a Spanish Residence Permit, not a Portuguese one. This student has a Portuguese Residence Permit for two years. Now we are working with this student and the rest (in total 8 students) in the application for the Spanish Residence Permit under the European Inramobility framework for studies. After this, they will apply for the Spanish Social Security Number and they will be ready for do the internship in any Spanish company.

Companies like CEPSA, Ercros, Kao, AkzoNobel, Lipotrue, and Lipotec prefer to have internships students at the end of the second semester or in the summer period. This will be the option for the rest of the students. Massó does not have a preferential period, but in this case, because of the Spanish law, they will need to wait until the end of the second semester to receive our students. Massó will then accept two students.

Grifols and Galenicum only will accept students for long internships (from 6 months to 1 year with a competitive selection) and in this moment these possibilities are out of ChIR curricular Internships.

UB will sign the agreements with companies in April and the students will start their internships in May or June. All the students that are not doing the internship in this moment are doing the Research project.

7th cohort Internship Placements

Student	Internship Host*	Country	Contact University
ABDUL Rahman Miraj	<i>Ramboll Iberica</i>	ES	UB
Adrine Elisabeth Ganimian Tcharkhetian	Ramboll Iberica	ES	UB
Alex Kamande	<i>Grifols</i>	ES	UB
Ayoub Antar	B&B Asesores	ES	UB
Aysha Siddika	<i>Leitat</i>	ES	UB
Gideon Asew Boafo	<i>BASF Española</i>	ES	UB
Jalal Ahmad	<i>Leitat</i>	ES	UB
Mariam Abramishvili	<i>Galenicum</i>	ES	UB
Perfect Peace Sunday	<i>Masso</i>	ES	UB
Prince Ebo-Donkor	<i>KAO Chemicals Europe</i>	ES	UB
Raphael Mensah	<i>KAO Chemicals Europe</i>	ES	UB
Samuel Amali	<i>Ercros</i>	ES	UB
Sultana Chowdhury	<i>AkzoNobel</i>	ES	UB
Sharon Otieno	Luxembourg Institute of Research	LU	UALg
Moses Kolade David	Hovione	PT	UALg
Ana Diges	GrapheneGX	IT	Unibo
Bositkhon Akhmedov	NEWCHEM	IT	Unibo
Bryan Leonardo Morales Espino	Philip Morris	IT	Unibo
Gavrilla Anggastanadia Datu Sompie	Eley	IT	Unibo
Jordi Falguera Garcia	Manz	IT	Unibo
Sara Ghazy	Fresenius Kabi	IT	Unibo
Marlen Mustafin	Alfasigma	IT	Unibo
Breno Savazini Leone	Dow	IT	Unibo
Elizabeth Alvarez Prez	GVS polimers	IT	Unibo
Getachew Gebrehiwet	POLYCRISTALLYNE	IT	Unibo

* internship hosts marked in grey are expected to receive students in May 2024

After the internship period companies were asked to fill a survey evaluating the students' attitude, performance, skills and knowledge and the quality

4.5 Student Initiatives

Sharon Otieno volunteered to represent ChIR in the Erasmus Mundus Association, replacing Sharmaine Atencio who filled the role from 2018 to 2021.

Three student representatives of the 7th cohort were elected on November 2022: Ana Diges, David Moses and Jalal Ahmad.

The elected student representatives attended the regular meetings of the PMT managing the academic year. This facilitated communication with the group of students. Student representatives and the Programme Directors communicated directly by WhatsApp for informing students in a short notice.

An initiative of note was that students offered to manage the ChIR social media. From April 2023 onwards the 7th cohort student representatives managed the ChIR Facebook, LinkedIn and Instagram accounts, which became more active with self-promoting posts by students.

Student representatives are full members of the Programme Committee. While preparing for the annual review meeting of the PCm, student representatives are expected to collect their colleagues' opinions and complaints and collect them into a report. The student report for 2022/23 can be found in annex 5.

4.6 Symposium

The 7th ChIR Symposium "10th Anniversary: Celebrating a decade of ChIR" was organized in the UAlg on July 3rd and 4th 2023, intended to be a celebration of 10 years of the ChIR project.

The initial welcome was given by the Director of the Faculty of Sciences and Technology of the UAlg, Prof. Carlos Guerrero, and by the ChIR Programme Coordinator, Prof. Isabel Cavaco. All the sessions were chaired by members of the Program Management Team representing the three ChIR partner universities.

Having been dedicated to the 10th year of ChIR, it was important to bring together students from previous editions, students from the present editions and students who only started their first academic year at ChIR in October. Having in mind that alumni can serve as inspirational

figures for current students, alumni Askar Nurassilov, Ester Carregal and Ana Vallejo were invited to keynote oral presentations.

The program included two plenary presentations from experts coming from academia, Maria de Lurdes Cristiano (UAlg) and Montserrat Filella (University of Geneva).

Oral presentations were made by the nineteen graduating students. Students had the opportunity to present their research work as a preparation for the upcoming theses defences as well as training for scientific presentations, while in a friendly conference environment. The subsequent discussion provided feedback and a fruitful exchange of ideas among students and researchers.

The symposium was organized in hybrid modality. It was fully streamed through the Zoom platform, allowing participants to follow both in person and online. Thus, out of a total of 110 participants, 61 were present in the conference room and 49 remotely via the Zoom system.

On the second and last day of the symposium, lunch was offered to all participants in the UAlg restaurant. The lunch was a way to conclude the event on a positive note, providing to the participants an opportunity to socialize, increasing the sense of ChIR community, creating connections can lead to ongoing collaborations, partnerships, and a supportive network within the academic or professional community.

The involvement of students of the 2022-24 ChIR edition in the organization of the symposium was crucial and brought numerous benefits to both the students and the overall success of the event. It is worth highlighting the collaboration of students in the logistical part before and during the symposium, as well as in the preparation of the book of abstracts and promotional material for the symposium.

As part of the symposium's social program, a trip to Sagres, the westernmost point of the Algarve, was organized on July 2nd. Participants had the opportunity to take a boat trip to observe dolphins and other marine species off the Algarve coast, as well as to visit the lighthouse at Cabo de São Vicente.

5. Results

5.1 Student Performance (7th cohort)

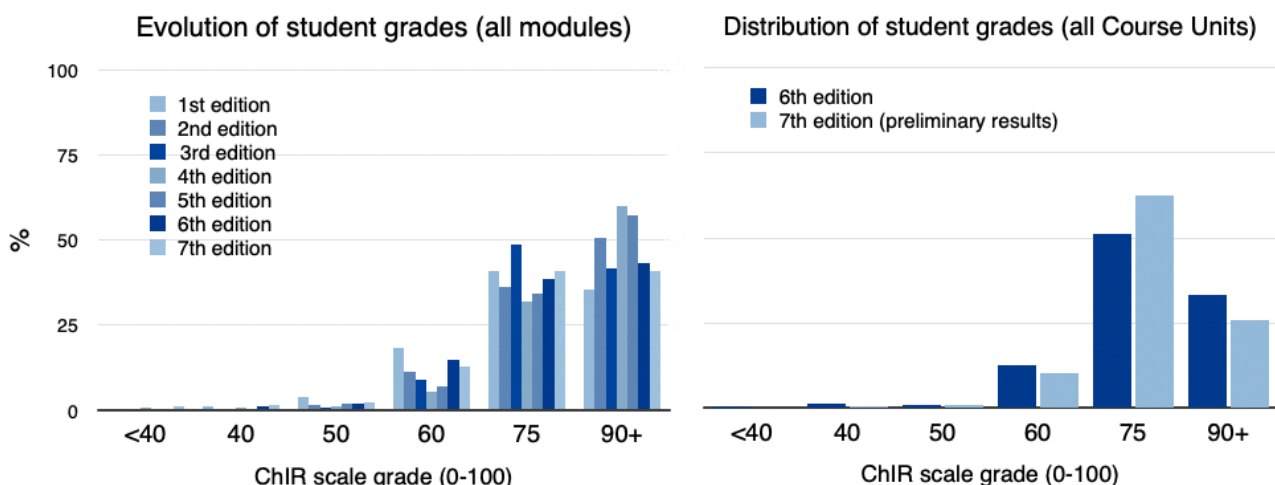
Student performance is measured by module grades following an evaluation of performance in each module. As modules are taught by lecturers from different countries where different grading references are established, this would be quite confusing without the adoption of a common scale. This is the internal “ChIR scale”, ranging from 0 to 100. This scale is used solely in the ChIR consortium for assessing ChIR students. Its relation to the national Portuguese, Italian and Spanish scales is not linear but instead is based on the ECTS statistical scale A-E.

The timeframe for evaluations is 3-4 months: each module is taught in one week of classes, students have 1 month to submit assignments and examinations and the lecturer has 1-2 months to provide grades and feedback.

By the end of July 2023, 27 out of 58 modules had been graded, so 47%, compared to 51% in a similar timeframe in 2022. Modules taught in April and onwards are not expected to be graded by July. Considering this, the number of modules effectively late was 11, i.e. 29% of the modules which should have been graded. This is a worse result than the 6th edition and is close to the former editions, when about 30% grades were late at the end of the academic year.

Lecturers grade students in each module. The grade of each Course Unit is calculated as the mean of the three grades from modules which compose it.

The graphics below depict the distribution of grades of all students in all modules and of all students in all course units. The distribution of module grades is compared with the distribution observed in the previous editions of the ChIR.



The average grade of all Course Units was 84.3% (by September 2023), while the average grade of all modules is 83.1%. These results are not far from the last edition, when the average grade was 83.7% for Course Units and 84.0 for modules.

An average performance of 84% for the whole cohort, roughly corresponding to a B level in the ECTS scale, is above the mean expected performance in regular degrees, which would statistically correspond to a C.

5.2. Student Participation in Quality Assessment (7th cohort)

Students are required to assess each module through an online questionnaire. Student participation in this process is typically difficult. For example, student participation in quality assessment questionnaires varies between 20 and 40% in the UAlg. In the case of ChIR students this is particularly tiresome because of the large number of modules (30) to be assessed.

In 2021/22 the 6th cohort achieved a record participation in module questionnaires of 82% on average. In 2022/23 this was 75%, also very high, but it decayed along the year. Participation of the 7th cohort in the general survey distributed in July was 64% and the student representatives' survey distributed in August had a participation of 47%.

5.3. Quality Assurance at module level (7th cohort)

Questionnaires were distributed to students one month after the week of teaching, allowing for all examinations within module to be completed. The questionnaire measures the students' perception of the quality of teaching, and was originally based on the SEEQ (Students' Evaluation of Educational Quality) reference questionnaire.³ The same reference questionnaire is used by several Portuguese universities when assessing the quality of teaching.

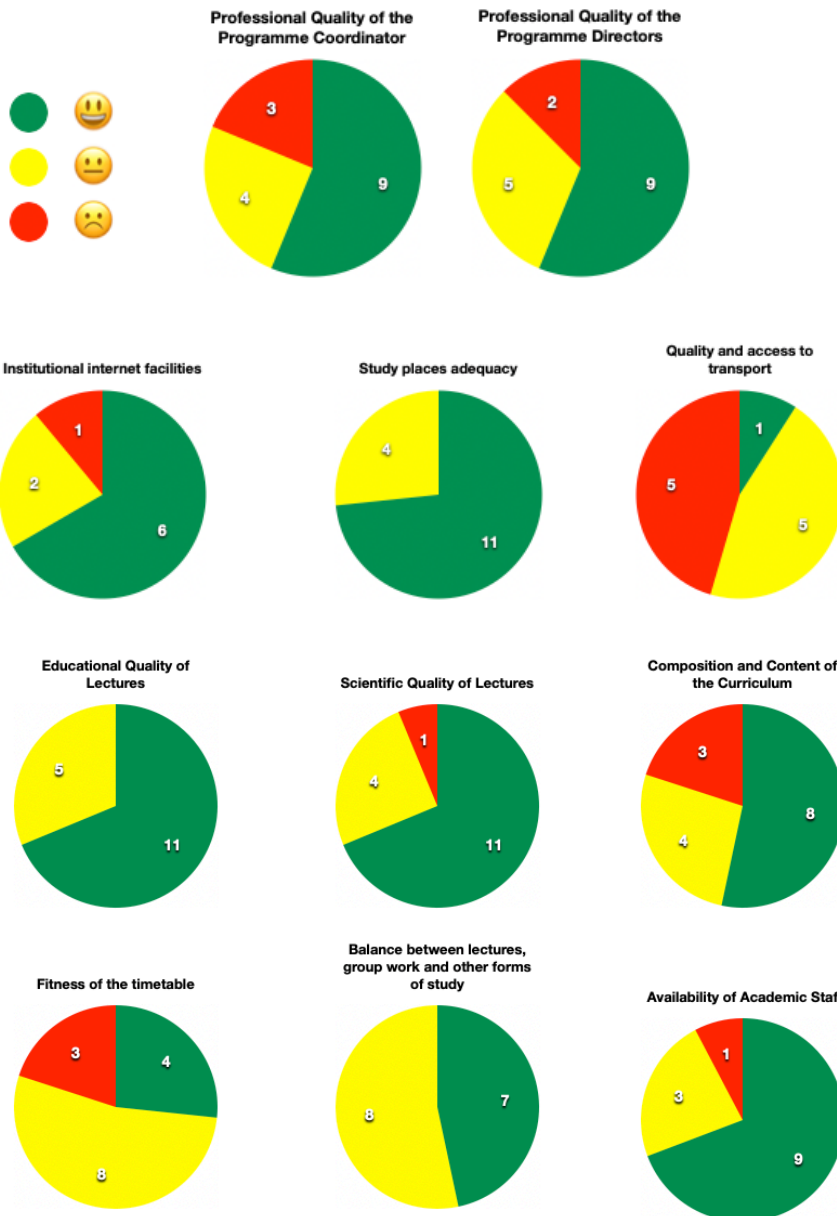
The graphic reports are presented in Annex 4. An individual graphic report for each module summarises the quantitative as well as qualitative analysis of the questionnaires. An overall "green" report does not raise concerns, while the appearance of "reds" requires some attention. Open comments from the students were not included in annex 4 but are available to the lecturer in the moodle portal.

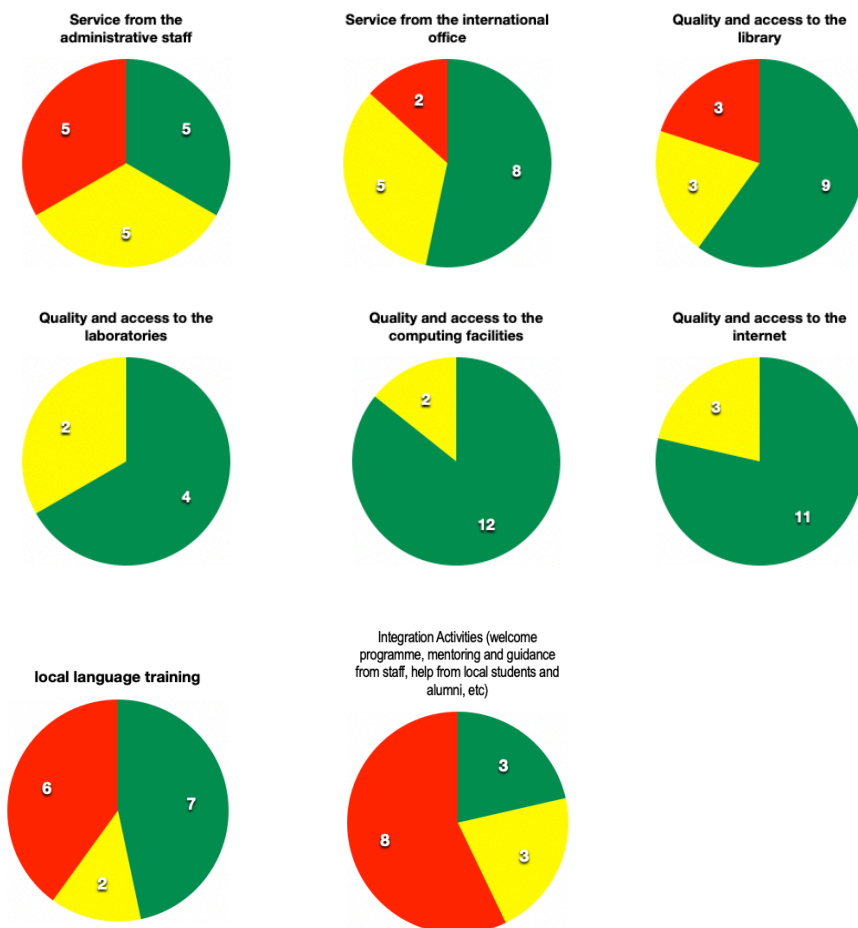
³ "SEEQ: a reliable, valid and useful instrument for collecting student's evaluation of university teaching", H. W. Marsh, British Journal of Educational Psychology, 52 (1) 77-95, 1982

5.4. Quality Assurance at programme level (7th cohort)

The general questionnaire evaluating the overall quality of the ChIR programme and of the Host University was distributed to the 2022 cohort students in July. Sixteen students (64%) participated. The results are presented in the following graphics as well as tables with student open comments.

The text of the questionnaire can be found in **annex 3**.





Comments and suggestions about the study plan:

There are many Courses that are just added and do not have any relation with CHIR Course, many courses are repeated 2 to 3 times. It's better to add more Extra Curricular types of courses like team building, entrepreneurship, and other these type of courses. Some Professors are literally in an exam expecting that students will remember the full 200 slides for MCQs.

It would be better if the students are constantly being updated about news regarding class, intern, thesis, etc. I feel like the program as a whole is not well-organized, and even just to know about information we always need to be proactive in asking. But often with that, we didn't receive the news clearly and must always follow up multiple times to be updated.

In my opinion, there shouldn't be any specific study plan; everyone can attend all the classes and choose which course they want to take.

The study plan for the ChIR Master programme offers a diverse and comprehensive curriculum with a wide range of topics related to chemical innovation and regulation. The modules cover various areas such as toxicology, entrepreneurship, environmental fate of pollutants, and nanotechnology regulations, providing students with a well-rounded education. Additionally, the program includes valuable practical elements like laboratory skills, market research, and industrial forgery detection, enhancing students' hands-on experience and preparation for the industry. The presence of external experts and scholars from different regions ensures a global perspective and enriches the learning experience further. Overall, the study plan appears to be thoughtfully designed to equip students with the necessary skills and knowledge for a successful career in the field of chemical innovation and regulation.

Having this variety of subjects to choose is an interesting point about the programme. However, this demands a level of organization and administration that the coordination of the programme couldn't achieve. Therefore, the very flexible and diverse study plan turned into a big problem for us, since classes were rescheduled in a short notice, and also for the coordination, since they spent a lot of time organizing these classes and all the other administrative issues have been forgotten.

Activities were not well organized.

Students were supposed to have a 1-week trip visiting companies, but it was canceled due to a lack of organization.

During the symposium, a dolphin-watching trip was organized for the participants of the event. However, while professors and speakers in the symposium had all their expenses covered by the program, the students had to pay for it, many of them not participating in the trip due to the costs.

I really enjoyed having different subjects to learn different topics, but maybe it was too many subjects. At some moments it goes crazy in organizational way. Also there is some content that overlaps in different subjects. I would suggest to have 6 credits fixed subjects in which all the contents are really studied and avoiding repetition or at least having 3 ECTS subjects.

Some courses should be scrapped or combines. For example Toxicology and Principles of Toxicology.

Overall, the study plan contained many useful disciplines. However, there were a few things that should be reconsidered:

1. Too many modules. Considering the study of one module over a 4-day period, and having a 10-page report as a final assignment for almost every module, it was difficult to understand the subject deeply. Even though the assignments were not difficult, they required a substantial amount of time due to their volume and number. I think it would have been better to reduce the number of modules or combine some of them, so that there would be at least 2 weeks for one module instead of 1 week.

2. The contents of some modules overlap. For example, toxicology modules.

3. The majority of professors provide short and vague comments on the assignments; some of them just grade the work without any comment or elaboration. Also, it took several months to get a grade for almost each module (Only Matteo Pori and Luca Evangelisti provided prompt examinations).

The main disappointment was the 'study trip.' We were supposed to have a one-week trip to industrial sites, but instead, we had a boring 1.5-hour tour at a company with only 8 people working there. It would have been nice if we had taken a trip to a bigger company, such as Hovione.

I expected more content and academic rigor. I also hoped for more efficient program coordination.

I think it is very heavy, 33 modules are a lot, some modules don't even need one week while other more important modules may require even one month but the PMT doesn't seem to think so. A lot of repetition in the modules, very unnecessary, it should be reviewed and remove what needs to be removed and give more time for the more important and informative modules that are more relevant to the professional life not academic life especially the regulations related one because it should be the focus of the master.

An orientation regarding choosing the study plan would be helpful. This would help the students to make better choices.

The study plan is very good, but can be improved. For example, some of the courses are repeating the content, though the professors are sometime not aware of it. It is still important to draw a boundary line between which course and what content is taught in that course.

Comments and suggestions about the Host University infrastructure and facilities

The university is a bit old, the classroom was small for 26 people. There was a smell of the mold in the canteen and you have to wait in a queue to have a lunch. In general, university is ok.

The coordinators and administrative staff of the program were very kind.

fix the Gambelas campus infrastructure. For some reason the old campus in Penha has an even better infrastructure than Gambelas !!! the place looks like it spent 50 years with no maintenance ... it wasn't what I expected to see in a European university.

More buses and university accommodation would be extremely helpful.

As we come to University, there is no previous communication about living, accommodation, or helping hand of someone who can guide them, there must be some assistant that can guide and help students to get accommodation and guidance about the city. we received no proper guidance about which type of visa you should have to apply for. 80% of the class did not apply student Residence Visa for 3 Months, because of no Previous knowledge. The international office did not help to get an appointment in SEF Portugal, for visa renewal or apply for a residence permit. The international office literally says that we don't give accommodation to Erasmus Students whether they have availability in University Dorms.

Probably need bigger class room for ChIR

The classroom that we have in UAlg is too small for a large group of our class. The room is too small for 25 people.

Regarding the study trip, I feel like it could've been planned better because we have 2 weeks off where it can be utilized to other class schedule

-Documents for visa applications should be provided with more clarity to avoid the issuance of different types of visas. For example, many students were not able to change their visas for a residency permit. The "declaration for visa application purposes" given by the university could state that the course is 2 years long instead of 1 year, preventing that 1 year long visas are issued. Knowing that the student has to study abroad for 2 years the embassies will only emit 3 months visa and the student will be able to apply to RP, which also facilitates the morning to the second country in the second year. Furthermore, the 1-year long visa prevented students to travel within the Schengen area, obtaining access to the public health system, and developing paid internships.

-The timetable of the classes changes too frequently, which also hinders the students to plan small trips during the semester and enjoy more the opportunity of being in Europe to have deeper contact with the European culture.

-The classroom was small to adequately accommodate all the students, there was no heating or air conditioning system.

-The onboarding program was poor. There was no clear assistance on the steps to follow for registration not to use the facilities of the university. Assistance to find accommodation did not exist. There were no external/recreational activities planned for the students during the whole year.

-There was no availability of university accommodation.

Regarding organization, I know it is very complicated to organize +30 professors coming different weeks to do the lessons, but from the student point of view the master looks very disorganized.

Regarding the language course I would suggest to have the possibility to attend to an alternative group. For example, in this case there was a Portuguese course for Spanish speakers.

Finally, I think it should be mandatory to have a better welcome session activity in order to know each other better and promote different activities between us.

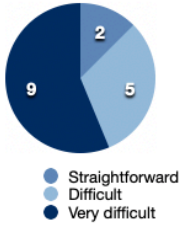
As an international student, it's very hard for a student to get an apartment in Europe, so it would be very helpful to have housing and accommodations for international students.

Having a classroom in the Penha campus would have facilitated many challenges. The bulk of students found housing downtown Faro, which would have permitted walking to Penha without relying on a faulty bus system. This could then allow for more time-efficient schedules (i.e. starting and finishing lectures earlier in the day, liberating more afternoon time to dedicate to work instead of wasting time on busses for +2h every day).

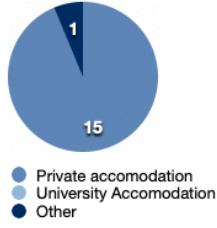
Language instruction was extremely basic. People with no previous knowledge in romance languages experienced added difficulties and gaps in the learning process. I would have welcomed a semester long course, perhaps with placements according to existing personal ability to learn the language.

I am most disappointed by the utter lack of induction activities and their unfortunate consequences to the group's learning and social environment. We are an extremely diverse class that would have benefitted immensely from cultural competence building activities. The group quickly suffered from distrust, misunderstanding, and an unsafe sharing environment, all of which persisted throughout the year. Please consider implementing a welcome program with actual cross-cultural training and opportunities to connect at a deeper level, or regularly scheduled times to gather the cohort and touch base with activities promoting interpersonal growth.

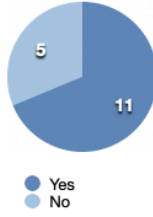
How difficult was it finding accommodation?



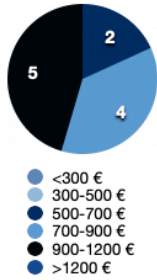
Where are you living?



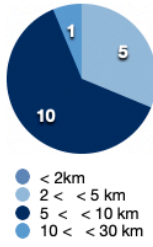
Are you satisfied?



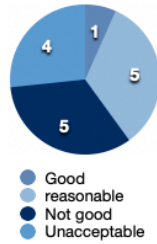
How much do you spend per month?



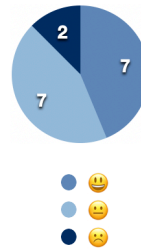
How far is your accommodation from your classroom place?



How do you assess the quality of public transportation that you are currently using?



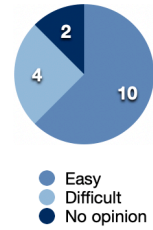
How do you assess life at the university with local and international students?



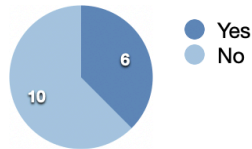
Do you have friends at the university?



Is it difficult to contact European students?

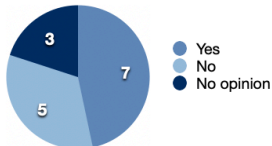


Do you participate in extra-university groups?



ESN, EMA
sport
Sport
Ualg Bike, Academic Association (attending and supporting events), Faro municipality cultural offer (attending and supporting events)
Sport
ESN group

Do you feel accepted / integrated?



it can be hard to convince people that stereotypes are not true.
Most of the people here are not open to the fact that someone doesn't speak Portuguese and that was a big deal for them.
The locals are very reserved. They are not very open to relating with foreigners on a friendship level, hence it's hard to relate with them very well.
It is hard to create connections with local people mostly because of the language barrier and there were no activities to facilitate the approach.

Comments about cultural differences experienced:

<p>I consider the Portuguese to be more organized than in my country. But regarding the way of being they were very kind and supportive similar to my country. I loved Portugal and its people.</p>
<p>Language, social etiquette, Festivals and Celebrations and Cuisine</p>
<p>The way of dressing is very much different, a larger population smokes more freely without fear of being judged, and Europeans are more expressive and direct about how they feel about things.</p>
<p>The food, the daily life, and the way of doing things it was interesting to learn and experience firsthand</p>
<p>The experience of living in Portugal has exposed me to distinct cultural practices, traditions, and social norms, which are different from those in my home country. These cultural differences have provided me with valuable insights into the diversity and richness of global cultures, fostering my intercultural awareness and understanding. It has been an enriching experience, and I appreciate the opportunity to embrace and learn from these cultural differences during my time in Portugal.</p>
<p>there is a lot of negative stereotypes about my culture that are propagated by the media, but thankfully I helped change the negative view about my culture. one thing is that Europeans in general can't grasp the idea that moral standards are different around the world which I had a hard time explaining and convincing people with this idea.</p>
<p>Food and traditions are very beautiful and interesting in Portugal.</p>
<p>If we look at our class (cohort '22-'24), it was clearly divided and there any definitely groups. Although cultural background may have influence the group, I feel that most people in our cohort have very strong opinions and sometimes it's hard to interact with strong-opinionated people especially when they keep forcing opinion. Although discussions are good, but constant debating is very energy-draining.</p>
<p>its mostly related to Friendship, someone helps you or not, at their No one is going to come for help to you.</p>
<p>Food, dressing and character. People here are more reserved and mind their business without caring about how his neighbors are fairing. People are very willing to render help to others when necessary. Most people, especially young people dress to reveal their body which is not too common in my country</p>
<p>Most people will not accept to talk to you if you don't speak their local language even if they can speak yours.</p>
<p>The portuguese people that I've met during my stay in Portugal were very nice and friendly. I did not have any problems communicating with locals. There was some inconveniences like old banking system, we had wait for our banking cards for two weeks. The banking app is inconvenient. A lot of bureaucracy. Compared to my country the level of digitalisation in Portugal is low. Another problem is a transportation system, people have to signal for bus, otherwise it won't stop.</p>

Main Expectations from the MSc course

Main expectations	Have they been fulfilled so far?
<p>My expectations were to have a deep knowledge of chemical substance regulations and novel technologies related to the chemical industry.</p>	<p>My expectations have not been fulfilled. The main regulation module, about REACH and CLP, was very superficial and not clear. I strongly believe the in-class workload for all the regulation course units should be increased. Regarding innovative technology, there were some course units that covered some interesting innovations.</p>
<p>To experience professionalism in my field in Europe in a more advanced way. To travel to different countries and experience different cultures. Make relevant networks.</p>	<p>Partially.</p>

My main expectations were to acquire the necessary knowledge to develop new products, solve problems with current products and improve current processes taking into account sustainability and current regulations.	Expectations have been met so far.
That I will learn very in-depth, but here all the courses taught were only to open doors.	Experience wise, yes, learning wise not so much!
To have an international and intercultural opportunity in an excellence program. Learn different concepts from different areas.	The first one yes, but the second one I would have liked to go deeper in the subjects and have less subjects.
Academic Excellence, Career Advancement, Specialization and Expertise, International Experience, Networking Opportunities, and Research and Innovation	Almost.
When deciding to take this Master course, my main expectations were to gain specialized knowledge in Chemical Innovation and Regulation, experience an international learning environment, and enhance my career opportunities.	So far, my expectations have been fulfilled. The program has provided me with valuable insights, exposure to diverse cultures, and opportunities to develop professionally.
To acquire an international academic experience. Improve my language skills.	Yes
In depth knowledge about chemistry	Although the classes taught in this program are insightful, it's very on the surface. For a master, I expected the materials taught to be more in-depth but so far it's just a refreshing memory from I learned in my bachelor with some new insights
I hoped to learn strong fundamentals to back the practical experiences in chemical innovation and regulation I had obtained before the master, as well as deepen this knowledge and provide vision for emerging issues and future work in the field.	Mostly not. There have been few subjects where I felt like I learned new concepts, and the supposed foundational courses did not feel strong enough, i.e. my previous knowledge from academics and field work were largely equal or superior to the master's classroom contents.
My Main expectation was Friendship, Long live partnerships, Curriculum Structure, Regulation Companies involvement, and easy to be merged in class as usual in every classroom.	Yes all of them are fulfilled. Nice environment, Helping hand for all sides. But in Class the grouping and not giving simple hello gestures, I was not expecting that
To learn on the various disciplines in the Masters	Yes, I have learned alot, I have been challenged and inspired through this masters
To be empowered to take up other opportunities in Europe I expected pristine organization. Better facilities and infrastructure (roads, libraries, canteens, campuses, public transport). I expected good staff and good professors. I expected a lot of extracurricular activities and more field trips.	only the part about the professors, truly remarkable people they are so devoted to what they do, and they are truly amazing people.

Main concerns before coming to study at an Erasmus Mundus Programme

Visa application and accommodation.
How easy or difficult it would be to integrate
My main concerns were the time it would take me to get used to the new places and people, as well as the demands that the master's degree would have compared to the demands of my country.
Accommodation, Racism, Low scholarships and high living costs
Language Barrier, Adaptation to a New Culture, Housing and Accommodation, Visa and Immigration Issues and Social Integration
Before coming to study at an Erasmus Mundus Programme, my main concerns were related to adapting to a new cultural environment, language barriers, and the academic workload.
Visa procedures, accommodation
As a non-EU citizen, the bureaucracy about visa/residence permit became my main concerns
Returning to the academic mindset and rigor, spending long periods of time away from your loved ones.
I did not have any concerns, it is memorable journey of my life
I was worried about the language
the language barrier
Visa application and accommodation.

Problems faced so far

<p>Visa application: the program committee/universities take too much time to send information and the documents for application to the students. Booking an appointment at the embassy can be very problematic due to the shortage of spots. It can take more than 3 months just to have an appointment, and after that, the issuance of the visa can take around 3 months as well.</p> <p>Accommodation: no support from the university. Very hard to find available places. On royal state agencies, websites, and Facebook groups places were immediately unavailable after advertising.</p>
<p>Language barrier and search for accommodation</p>
<p>Racism among classmates.</p>
<p>I'm aware about the difficulties in organize a programme like this. However, the most concerning problem I'm still facing is the lack of organization and communication from the coordination, specially when we talk about Barcelona. Those who are going to UB didn't have any orientation about the visa procedures, our acceptance letter came by the end of June, one month after the acceptance letter from UniBo was issued, most of the students still don't have any information regarding the internships, which are supposed to start in one month, and the communication with the coordinator of UB is extremely hard, since the only way for us to communicate is by e-mail and the rate of answers is very low. I should say one more time that I'm aware about how hard is to organize this master, but when you are dealing with a class full of immigrants, where</p> <p>no one knows anything about the bueraucracies of the contry, things like that are unacceptable.</p>
<p>I have faced teamwork problems with people from other cultures who tend to be less time planners or definitely do not take quality seriously when it comes to delivering work, or people who are irresponsible or leave everything to the last minute.</p>
<p>Transportation was the worst.</p> <p>There was some mismanagement in organizing certain activities.</p> <p>Financial issues.</p> <p>Apply for Residence permit</p>
<p>Academic Workload, Time Management, Language Barrier, Adaptation to a New Culture, Housing and Accommodation</p>
<p>During my Master studies, I have faced some challenges related to time management, adapting to different teaching methods, and balancing coursework with other commitments.</p>
<p>Looking for an accommodation</p>
<p>The main barrier for me would be the language. Especially when dealing with bureaucracy, the immigration office refuse to speak English. And it would be great if the university would help about this, but from what I experience the help that the uni give is not quite helpful and thorough</p>
<p>Exhaustion (physical and mental) from homesickness, illness, never-ending personal responsibilities, time management. These sometimes prevented me from doing my Master work (why are mental health costs not covered by our student insurance?).</p>
<p>Related to accommodation and Class bonding, there is no Collaboration in Class because from Start day some people made their group and than no participating activities, nothing</p>
<p>I am concerned about the following modules where the professor did not give clear instructions on her expectations for the final assignments (small details like spacing, commas, full stops etc) and at the end penalizes students for it which I found to be unfair to the students, this happened in 2 modules (Chemical Pollutant Remediation and Wastewater Management) with the same professor maybe this needs to be addressed as I don't think it is in order for a professor to give comments like " your work is unpleasant" yet she does not specify clearly on here expectations giving us poor grades.</p>
<p>the slow management of the program caused me the most headaches and problems, otherwise if the program had a better and more responsible management I don't think there will be many issues. the program certainly needs better management.</p> <p>despite the fact that we are the 11th cohort the program management seems to not have any idea of how to tackle some of the problems that has been happening every year, especially in Portugal, in my opinion Portugal shouldn't be a part of the program because of the lack of organization that is happening there. Some of us even got the wrong visa !! and the program coordinator and the international office don't have a clue of how to fix this and they just direct students to contact the SEF, being the first time in a foreign country it seems absurd to ask someone to go through this. it was a lot of unnecessary stress. Another point is the budget, the field trip (which was only one) was so badly managed, the trip was mediocre overall. the program had ZERO extracurricular activities which is unheard of in the ERASMUS programs! even the welcome parties was done very cheaply, I suggest that the Eruopean commission must overlook better how the budget is being used. The organization was so bad that even the scheduling on google was messed up to the point that teachers don't communicate well enough to set the dates of assignments and exams without overlap! teacher in the same campus don't communicate and a lot of overlapped assignments appeared. The internships in Spain were delayed for many many months, August is almost over, and we still have no info about the internship, it's a complete mess in Spain as well. the coordinator doesn't know anything about the status of our internships. Italy's management is very good and well organized, everything was ready on time.</p>

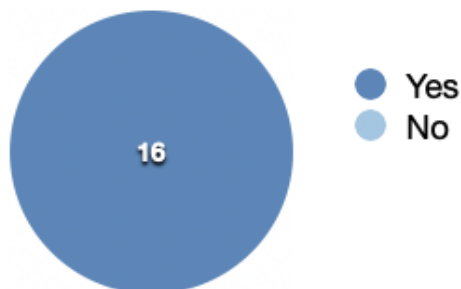
Plans after obtaining the ChIR Master Degree

Find a job or start a Ph.D. degree.
Hopefully, find a job in the industry or take a PhD
Get a job or a PhD
After the ChIR Master degree, I want to stay in Europe working with regulation.
I want to pursue an industrial doctorate, because it is important that science and industry go hand in hand if we want to ensure a more sustainable chemical industry.
Going for Ph.D.
Not sure yet, but right now I would say Industrial PhD.
I want to learn more about regulatory affairs by getting experience at the regulatory farm.
After obtaining my ChIR Master degree, I plan to explore opportunities in the chemical industry, research and development, or regulatory affairs. I aim to contribute to advancements in chemical innovation and regulation, leveraging the knowledge and skills gained during the program.
To apply for a PhD
I'm hoping to find a job in Europe, preferably relating to laboratory
Most likely, seek a traineeship or entry level position at a (inter)governmental agency or similar position in industry with a strong ethical purpose and robust social responsibility compromise. Perhaps a PhD later on (to qualify for teaching at the university level).
I will do a job in Chemical Regulation Company to get more familiarized with the European and Global Regulation Market.
Apply for a PhD
get a job in Europe hopefully!
In the future I also want to open a regulatory affairs firm and help build a regulatory system that is similar to the European REACH in my home country but that will take a lot of time and will require experience, it's a goal for the future.

How will the European Master Degree Help in Career

Having a European Master's degree will open opportunities for me to find a job or a Ph.D. program in Europe and worldwide.
The enormous knowledge and experience of the master's could make it easy enough to transition to the industry or further my education.
Will help me to always approach problem solving from the root cause and try to attain best quality in everything. The research skills acquired can be applied to find solutions to life and career problems
I think it will help a lot because masters like these are needed to improve the current landscape and also to generate people who have the tools to contribute solutions to industry and science.
Well,
It's an experience that shouldn't be forgotten, I am more clear on different cultural experiences and find it helpful in accepting other differences. Though this master's is not very research-oriented, I hope it has already given us the necessary skills to embark on our next journey.
It will obviously increase in my curriculum, but also as a person. The fact of having done this master in a so international environment is also making me a more interdisciplinary person with more resources to deal with different situations.
A European Master's degree provides in-depth and specialized knowledge in the field of Chemical Innovation and Regulation, making graduates experts in this domain.
Obtaining a European Master degree, especially from a prestigious program like ChIR, will significantly benefit my future career. It will enhance my employability, open doors to global job opportunities, and demonstrate my commitment to academic excellence and international experience.
Since we studied so many disciplines, it broadened my knowledge and opened a new ways where I can apply it.
Having a European Master degree would pave more job opportunities if I go back to my home country as an european degree were perceived as more prestige in my home country
Perhaps not the degree itself, but the people I meet in Europe during my 2 years will provide me an invaluable network to grow professionally.
Erasmus's Master's Degree gives me a Unique Integration into European companies. this experience gives me the opportunity to interact with a multicultural community.
I feel empowered and cant wait to ace my PhD applications.
The masters also being an international one i feel it has validated my qualifications making me a more competitive candidate for the opportunities ahead
it's certainly well respected around the world so it will give me an extra edge on any other candidate for any relevant position.

Would you recommend
the ChIR?



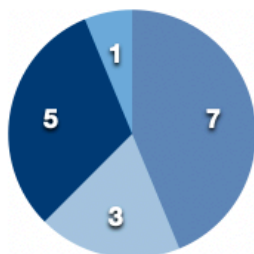
Reasons to recommend / not recommend the programme

The ChIR is a very unique program that gives a good background on chemical substance regulation. I believe this uniqueness should be reinforced with more focus on the regulation modules.
It's a funded program that is hugely packed with interesting courses. Presents an opportunity to have an internship in a reputable organization.
It's a research intensive masters that prepares every professional for the journey ahead. The skills and knowledge acquired can be applied in different fields.
The professors have genuine interest in giving out knowledge.
I wouldn't suggest it for someone who can't withstand stress. The schedule of the program is very tight.
The reasons would be basically that it is a scholarship that allows you to acquire new knowledge and also update you with the current regulations in various fields of the industry.
it taught me many things, especially the outstanding and helpful, or i can say humble, nature of the teachers and coordinators to the students, which impressed me the most!
Organization problems, asking us to do a list of internships on December and knowing nothing at the end of the course should not happen.
Quality Education, Specialization in Chemical Innovation and Regulation, Erasmus Mundus Scholarship Opportunities, Networking Opportunities.
I would strongly recommend a fellow-student to apply for the ChIR Master. For those reason : Diverse and specialized curriculum in Chemical Innovation and Regulation
Access to renowned professors and institutions within the European consortium
Exposure to diverse cultures and experiences through international mobility
Opportunities for research, innovation, and networking in the chemical industry
Potential for scholarships and financial support for qualified applicants
Despite some flaws I will suggest to apply for this program, because it give a lot of career opportunities and allows to get an international experience
Before recommending, I would look at the person first. It really is depends on the person. In my opinion, ChIR program is good for those who already have experience not for fresh graduates.
At least, in our cohort I see that the fresh graduates are the ones who complain the most saying they already learned this and wanting more challenge. For those with experience, this program can refresh the memory and give new insights
It depends on what your goals for applying are. I would recommend it if you would like to experience life abroad and widen your academic and cultural exchange. But I would not recommend it if what you seek is efficient program management or academic rigor.
Its multidisciplinary master that gives you an opportunity to venture into various sectors of academia or employment.
One of a kind masters program that is quite relevant and will remain relevant even in the future for the chemical industry

5.5. Quality Assurance: Research Theses (6th cohort)

A survey was distributed in August to students of the 2021/2024 edition assessing the quality for the research projects pursued. Sixteen students filled the survey. Results are summarised

1. How clear was the RT selection process?

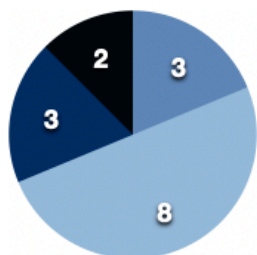


- Very clear
- Extremely clear
- Somewhat clear
- Not so clear
- Not at all clear

There are some topics not covered by the list given by the ChIR program which I believe are very important e.g. regulation of chemicals.
Good range of topics and interests.
Some of the projects had very little detail. Some professors did not answer emails for clarifications.
The project was clear since moment one, including all the tests, and purpose. At the end, I worked exactly on what was arranged in the beginning, just adapting the project when certain tests were not working.
The project was not clear. When I arrived, they were analyzing what could be the topic. I was testing and preparing many materials for a month, and at the end I did not use them in the experiment.
The description given by the tutor before the selection was only partially coherent with the developed project after the arrive in the host university

below.

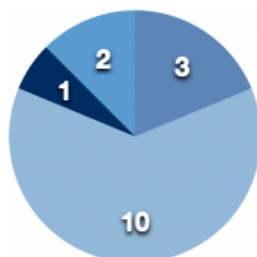
2. How straightforward were the discussions with the Research Host University regarding visa, accommodation and other logistic aspects?



- Extremely straightforward
- Very straightforward
- Somewhat straightforward
- Not so straightforward
- Not at all straightforward
- Somewhat straightforward

Sometimes inquiries from emails were not answered, but the rest was smooth and understandable
The UAIG showed no capacity nor empathy with us at any point, not even for issues like visas. In my case, where I came and stayed 'illegally' for 5 months, the university gave me no assistance at all, and at some point, the IRO even tried to point me as guilty for the portuguese embassy slow working pace. Their communication is deplorable, and only worked when things when according to the manual. If something went out of the 'plan', the UAIG showed no solving capacity.
I was expecting some guidance from the start and I didn't receive much information from the University. I also felt very disconnected at first because I wasn't even in the same city. My mistake maybe was not asking for stuff, but it did happen several times that I didn't even know I needed to ask for documents and got admonished by the University for not asking for them. Maybe that was the most exasperating part of it - the University knew more than me, definitely knew I needed that document, and didn't tell me when I didn't ask for it because I didn't even know. In the end it worked out, but I feel like I did all the work completely on my own.
The visa was delayed for almost five months.

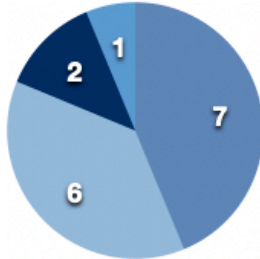
3. How straightforward were the discussions with the Research Host when preparing the scientific aspects of the project?



- Extremely straightforward
- Very straightforward
- Somewhat straightforward
- Not so straightforward
- Not at all straightforward

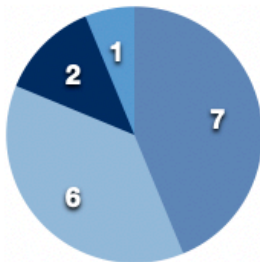
Although my topic was finally changed from the initial one, it was fine because it was still from the same discipline. The thesis structure was sent lately, 2 weeks before the submission (would be better if it was sent earlier)
The research group in the host provided assistance regarding technical aspects of the research.
The scientific details were discussed directly with supervisory.
Considering that I had to actively chase my first supervisor (Prof. Vera Marques) for knowing that my project was canceled, that the solving capacity from the UAIG was really nulle, and that I have a thesis done thanks to external people, I might conclude that not even the scientific aspects of my thesis were covered properly. Once I started working with Dr. Rodrigues everything got far clearer, but again, thanks to her and the lab where I was.
No comments really, in my experience I had no problems with Hovione but similarly I did not conduct lab-centered research.
The tutor was living in another city. It was challenging to use instruments like FTIR because they did not allow me to use them without supervision. This situation delayed my results and created discomfort.

4. How regular and fruitful was the interaction with your supervisory after starting your project?



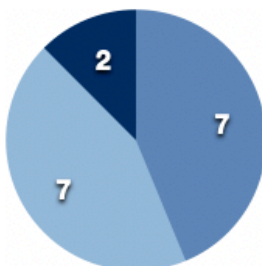
- Extremely straightforward
- Very straightforward
- Somewhat straightforward
- Not so straightforward
- Not at all straightforward

5. Did you have all the required research facilities and equipment?



- Extremely good
- Very good
- Somewhat good
- Not so good
- Not at all good

6. How easy or difficult was it to get in contact with your supervisory team during your research project?



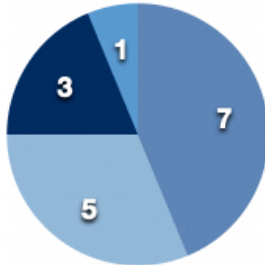
- Extremely easy
- Very easy
- Not easy nor difficult
- Difficult
- Extremely difficult

Really caring, easy to discuss with, and helpful
There are routine weekly reports regarding the progress of the research.
Periodic half-hour weekly meetings. After certain time only meetings by request.
Although they left me by my own considerably early, there was always someone to which I could ask doubts, and if I looked for my supervisors, I could always find at least one of them. Everytime I needed to discuss something, they were there, so I had all my doubts cleared.
In my case I had two supervisors - Ricardo Mendonça in Hovione was very approachable, but also because we saw each other practically every day and our working styles matched very well. In Algarve my supervisor was prof. Ana Rosa Garcia, and with her it was really great as well. We meet in person around January, she laid out that she was more a support in the University and wouldn't be too involved until Hovione signed off on stuff, but I could ask for her support whenever. It worked really great for me, feeling I had an ally but being able to work on my time at Hovione.
I would prefer to have an interaction in person, not virtual, because the communication is more clear.
The interactions were very briefly and lacking of indications.

Everything was provided, even extra events were well accommodated (participating in the congress etc)
The host provided desk, computer, and access to the computational resources.
The lab was clearly overcrowded. I did not have a place to sit most days. Equipment was often broken or not available with more than one-month waiting periods.
Despite the lab where I worked was super crowded, I found a way to work, and to get the results I needed to report. Everything was working, and I had no further problem.
Hovione didn't immediately have computers when I arrived, maybe because the agreement began late. Therefore, they first suggested I used my personal computer, which I refused for other reasons. In the end it worked out and I ended up receiving a computer to work with after a couple of days, but I believe Hovione wasn't too ready for me at first.
I had all the facilities in the main lab. However, some equipment was not always available, like FTIR.
I received all the basic equipments to perform my research project, but whenever I needed extra equipments, they were not of easy access

No problem encountered
There are meetings related with the research every week.
As said before, I could always find at least one of my two supervisors whenever I needed, or if not, it was super easy to reach them by email, and gave me super quick replies. The research group was also easy going, and in the case I needed something regarding lab work, they were also eager to help me.
In my case contact with both my supervisors was really easy - at Hovione I could meet him in person practically every day, and he was very open to meeting with me, and at Algarve maybe meeting was a bit more difficult but we kept in close contact both by email and whatsapp whenever we needed to talk.
It was easy get in contact, both in person and by email.

7. What was the level of feedback received on results and drafts submitted?



- Extremely good
- Very good
- Somewhat good
- Not so good
- Not at all good

My supervisor was quite concerned about revising my work and giving feedback

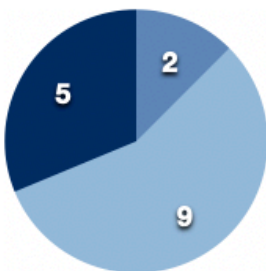
The feedback provided were extremely valuable, including for the poster, presentation and thesis document.

Dr. Rodrigues and Pereira's work was astonishing when revising my drafts. They worked incredibly hard and fast to gave me feedback in extremely short time, and always very assertive.

In my case I was confused about how to send what when. At first I only requested feedback from Hovione, and it wasn't until the last minute when I sent the thesis to professor Ana Rosa in Algarve for her comments, because I was in the dark regarding confidentiality - I didn't know she had also signed an agreement and I could share the thesis before approvals. In this sense, it was a bit bumpy but worked out. Regarding comments, from both sides I got positive feedback and very valuable insights, although I had no guidance on what to write. The way I wrote the thesis was entirely of my making.

I received only few and not oriented feedbacks

8. What was the information level provided on thesis submission and defence?



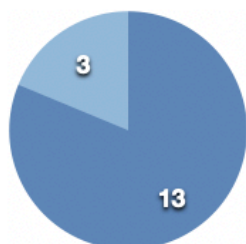
- Extremely good
- Very good
- Somewhat good
- Not so good
- Not at all good

Thesis submission was well informed, but still lacks information on how defence will be performed (schedule, jury, place, etc)

I don't think I can answer further this question, since there has been no feedback on the submission and defence. However, I would recommend the research group I worked in, but definitely not the UAlg.

I believe communication is an issue in the masters, and it showed particularly around the thesis. In Portugal we were waiting for some information on deadlines, how to send it in, etc., and didn't really have any information. For someone working at the University maybe that wasn't a big thing, but doing my research at Hovione I had to consider at least 2 weeks of approval processes for everything - from the poster to show at the Symposium to the actual thesis. Therefore, when the professors gave us information (that they already probably had, to be honest) 3 weeks before the deadline, for me the deadline was actually one week later, not three. I felt at a deep disadvantage vs my peers, and that exacerbated my anxiety. I ended up having to continuously ask for the information and pressure the professors for answers - when's the deadline, how do we have to send it in, what are the specific requirements, etc. I felt like Algarve didn't have any regard for my own process (and Hovione's, which of course I needed to respect). I feel like we shouldn't have to ask for every little piece of information last-minute, when maybe the PMT or the University already has that information and is just not sending it out. I understand that people are busy, but having us in limbo is not a solution. As a final note, as of today August 4th, we have no information on how we have to prepare the ppt for the thesis defense. I expect we won't have information until after the summer, in September. To add perspective, if my defense is on the 21st-22nd (when I still don't know), I need to send that ppt in for Hovione's approval maximum around the 5-6th of September. If Algarve sends out the specific requirements for the defense ppt on September 1st, that gives me 4-5 days to either build the ppt from scratch or adjust whatever I'll be doing all summer to their specific requirements. It is just unnecessary reworking!

9. Would you recommend your Research Host another student?



● Yes ● No

Overall, it was a enjoyable and memorable experience, surrounded by great people from the research team; operating new instruments and learning many things
The research project provided me valuable knowledge and practical skills in an emerging field.
It has been a pleasure to develop my master thesis in the research group CATHOM. All the laboratory workers and professors helped me unconditionally. Very good environment of work. Besides, my supervisors always took my input into account, which made me feel included in the final decisions
Although my project was very interesting with promising results, and there was a general good will in respect to it, I felt like the lab and also the team working in it were not prepare to properly supervise and guide my thesis (and the other three thesis developed in parallel during my stay) activities due to a lack of resources and time.
I was initially interested in the title of my thesis and chose it, but upon commencing my research at the university, I realized that the laboratory work included in the title was not as expected. The title encompassed both application and synthesis aspects, but due to the lack of necessary laboratory instruments for application, I have solely focused on the synthesis part of the research. I kindly request the professors to provide more precise information about the title to ensure that the research can be fully conducted within their laboratory facilities."
The research project itself was good, but the context in which it happened, and the way in which I got to it was rather tumultuous. There was a lot of uncertainty at the beginning, and even in the first two weeks of work. The work conditions and the scheme's flexibility made it better.
I was very happy with my project in itself, and the way it worked out. The work I did at Hovione was great and I feel like I learned a lot. My only comments would be around communication from Algarve - people at Hovione even asked me several times if I knew this or if I knew that about Algarve's deadlines, and I didn't know what to answer because Algarve wasn't sending me information either.
I would have had better results if my tutor had been present during the experiments.

5.5. Quality Assurance: Internships (6th cohort)

Students were offered a list of the internship hosts approved by the Programme Committee in May 2022. The assignment was made based on the student choices, limited by the number of available places in the host. Two students proposed internships not originally in the list, NILU institute in Norway and Trinity College in Dublin. An internship agreement was signed between each student, the internship host and the contact university.

6th Cohort Internship Placements

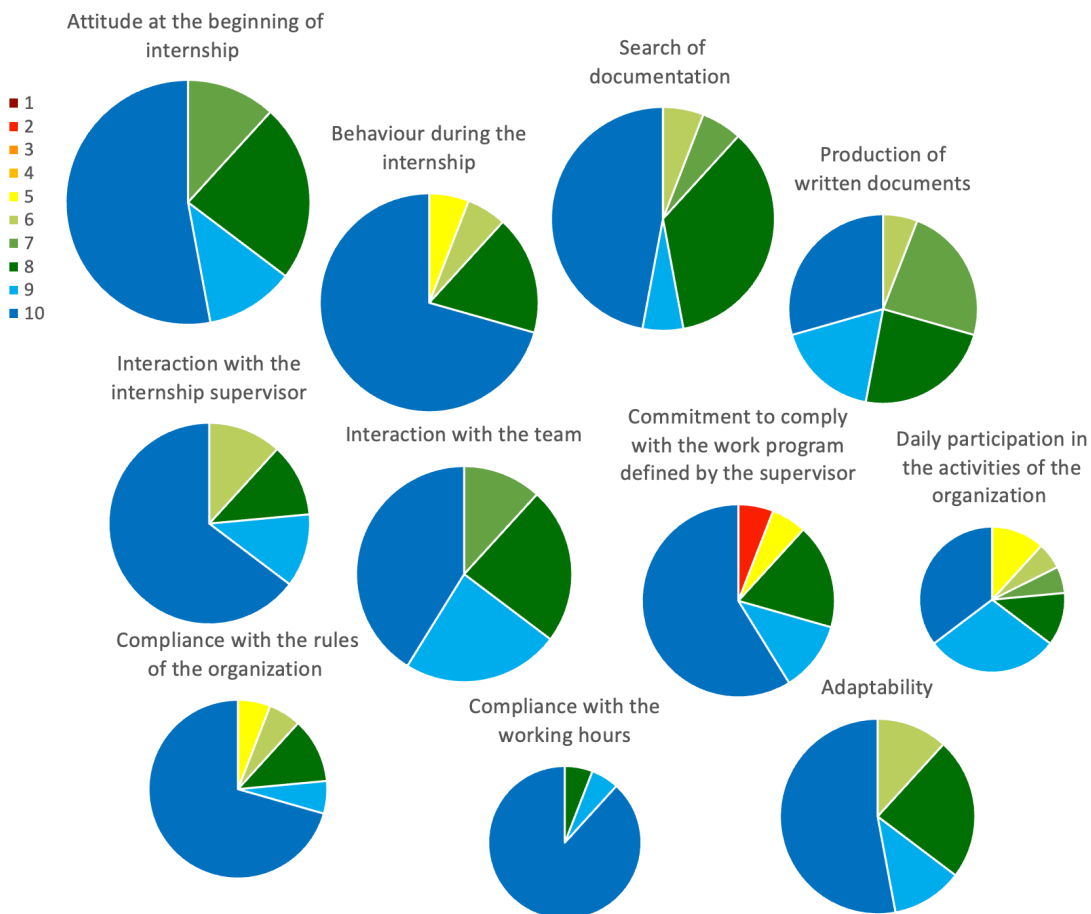
Student	Internship Host	Country	Contact University
Abdulrahman Badr Hasan Al-Kubati	Hovione	PT	UAlg
Adriana Gonzalez Alcivar	B-Plas srl	IT	UniBo
Aladdin Mardanov	Hovione	PT	UAlg
Ariana Gabriela Neyra Pérez	CEPSA QUIMICA	ES	UB
Carla Thais Pereira Coelho	Leitat Technological Centre	ES	UB
Charles Ayi	BASF	IT	UniBo
Erika Martinelli	NILU	NO	UAlg
Fajar Ramadhitya Putera	Ercros,. S.A.	ES	UB
Gisela Obregón Gutiérrez	Hovione	PT	UAlg
Héctor Romero	Cavro	IT	UniBo
Juan Chajón	SERVIREACH	ES	UB
Leticia Anjinho de Barros	BASF	IT	UniBo
Majid Esmaili	Masso	ES	UB
Marcelo Martínez	IQAC-CSIC	ES	UB
Mariana Martínez Valdovinos	SERVIREACH	ES	UB
Negussie Darota Daka	PolyCristalLine	IT	UniBo
Reyhan Ammar	CEPSA Quimica	ES	UB
Segismundo García Valverde	Trinity college, Dublin	IR	UAlg
Yusuf Ibrahim	Masso	ES	UB

After the internship period companies were asked to fill a survey evaluating the students' attitude, performance, skills and knowledge and the quality of the administrative management of the internship by the university. All replied with the exception of NILU and Trinity College. The graphic summary of the results shows an overall very high level of satisfaction from the companies. Only in one case the expectations of both the company and the two students they accepted were frustrated.

Results of the Internship Hosts survey

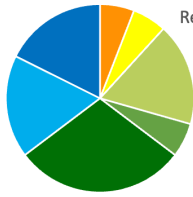
Level of satisfaction from 1 (very bad, red) to 10 (excellent, blue)

1. Attitude

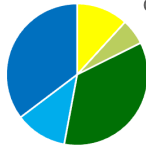


2. Performance

Innovative proposals during the development of the work



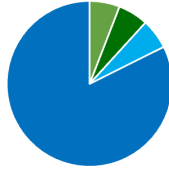
Responsibility assumed during the development of the work



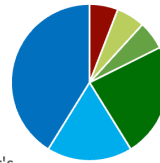
Commitment to daily work



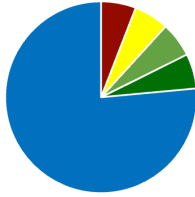
Care of the materials and equipment



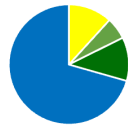
Effectiveness in the performance of duties



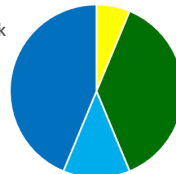
Correct compliance with work guidelines



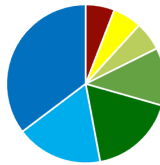
Compliance with the rules of the organizational structure



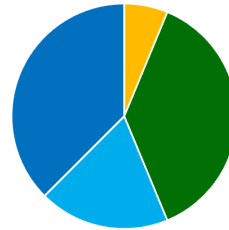
Meeting the supervisor's expectations



Autonomy in the development of work

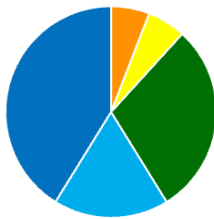


Achieving the objectives established in the work plan

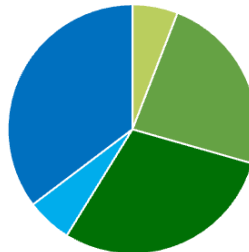


3. Skills

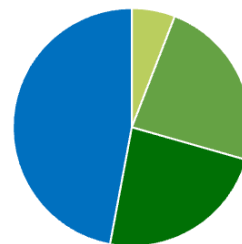
Adaptability Skills



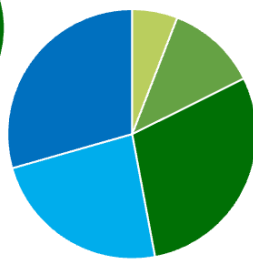
Communication skills (Oral expression)



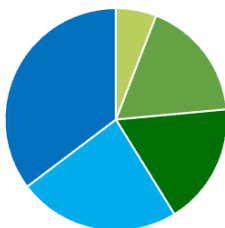
Language skills



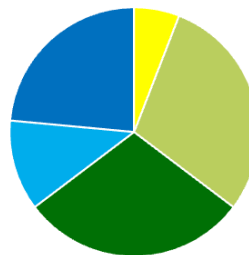
Communication skills (Written expression)



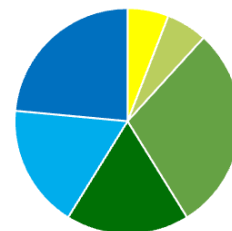
IT (Information Technologies) and Digital skills



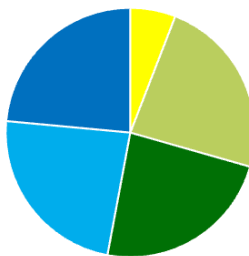
Innovative and creative skills



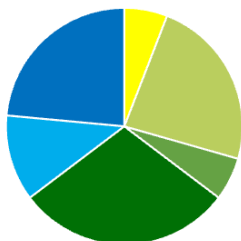
Critical Thinking



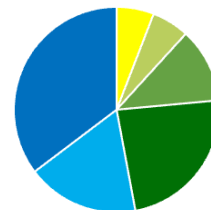
Ability to solve problems, even if unexpected



Decision-making skills

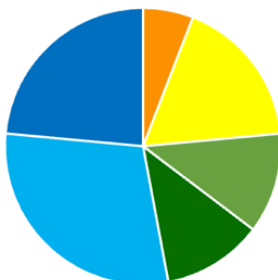


Teamwork skills

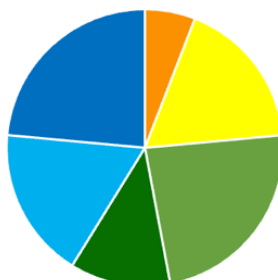


4. Knowledge

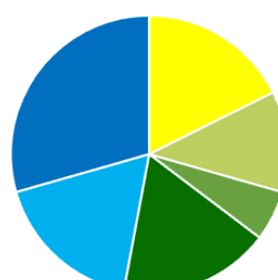
Knowledge of the theoretical issues related with the work plan.



Knowledge of the technical or practical issues related with the work plan.

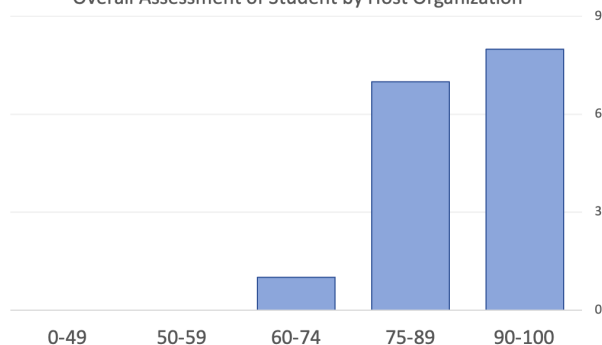


Knowledge of the current developments in the specific internship field.

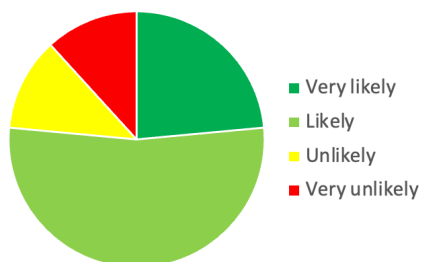


5. Overall assessment

Overall Assessment of Student by Host Organization



How likely would you be interested in a new relationship (new internship, contract, etc.) with this student?

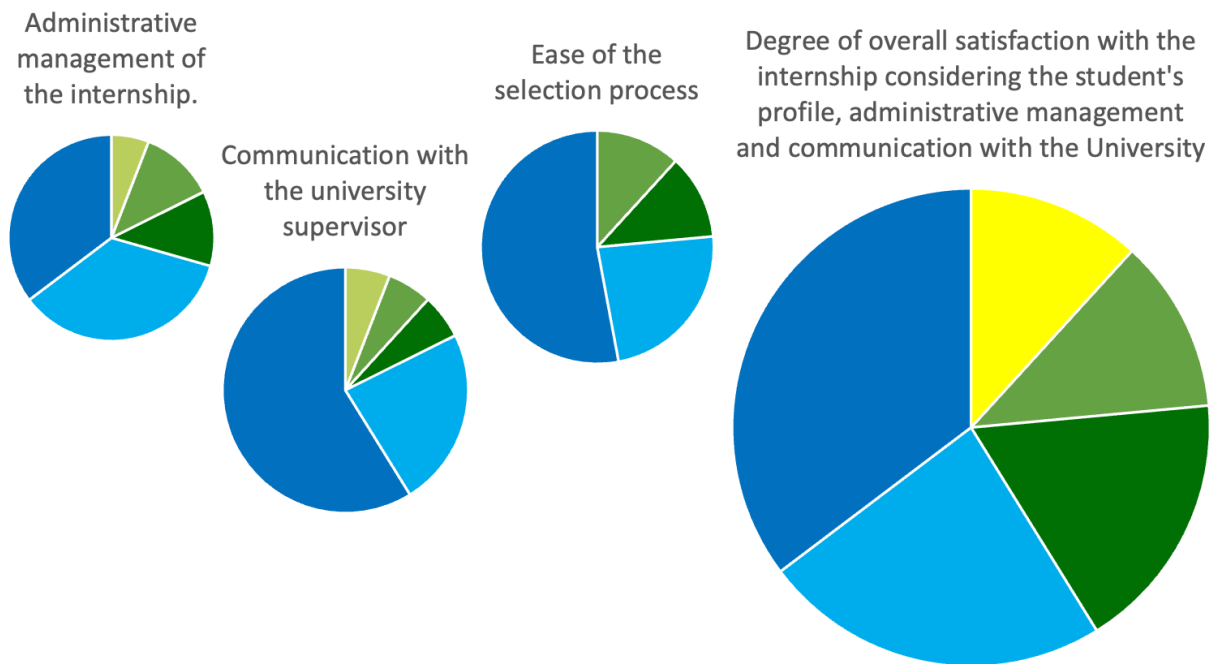


Open comments:

Do you detect any lack of knowledge, competencies or skills which may be covered in this Master programme? If yes, please describe.	You can use the following box to add comments that you think are appropriate:
More training on REACH and CLP. The knowledge about it was very superficial.	The experience with the student has not been good. The learning times have not been met, the work discipline has not been as expected and the knowledge shown by the student during his stay with us is far from what was expected and from previous experiences with other intern students.
The student was well prepared for the internship both in knowledge, competencies (chemistry and professionally) and skills.	
The student has an Engineering background which gave some attrition during the internship, however he managed to overcome the lack of knowledge in the subject area (organic chemistry). He was able to understand the theory of the subject under study (micellar chemistry) and was very good at searching and organizing all relevant literature. With a very good knowledge of the state-of-the-art we were able to define a work plan for his thesis.	
	The student was very well prepared both in knowledge, competencies and skill, at an academic and professional level.
It is usual for students to have some lack of knowledge, especially when the proposed studies are new subjects that are not included in university curricula.	The student liked the theme and will continue working to obtain the following degree.

Do you detect any lack of knowledge, competencies or skills which may be covered in this Master programme? If yes, please describe.	You can use the following box to add comments that you think are appropriate:
a more strong in data analysis using software like Excel, Origin or similar would be usefull for data treatment and reporting.	-
Data analysis, extended knowledge of plant equipment	No particular comment
stronger scientific knowledge should be provided (biological and chemical)	
I would have expected better technical skills, but the student was very very committed to learn.	She was a very good student. She was committed to her work and very friendly to all the people she met. She adapted herself to work in three small different projects
The student has well developed technical skills in the lab, when listening to their colleagues or responsible. He proactively read scientific materials and propose changes aswell. The student, however, might grow as well in proposing new solutions beyond the stablsh technical framework.	We appreciate knowledge, the humility and interest of the students in what we request him.
No, he has his own gaps in experience in a job, since he is a student, but he has worked and it has been very noticeable during the internship, since he learns and adapts quickly.	He is a very compliant student with work experience, which has been showed during his activity in the company.
	He is an excellent colleague that is always ready to support in any type of project. When introducing him in a project he has been always open to work and learn on new topics. His written documents are well explained and he has full ability to defend arguments and reach conclusions. In addition, he presents an irreproachable behavior in front of his colleagues, always being respectful and kind.
No, I don't	

6. Administrative management of the internship by the university

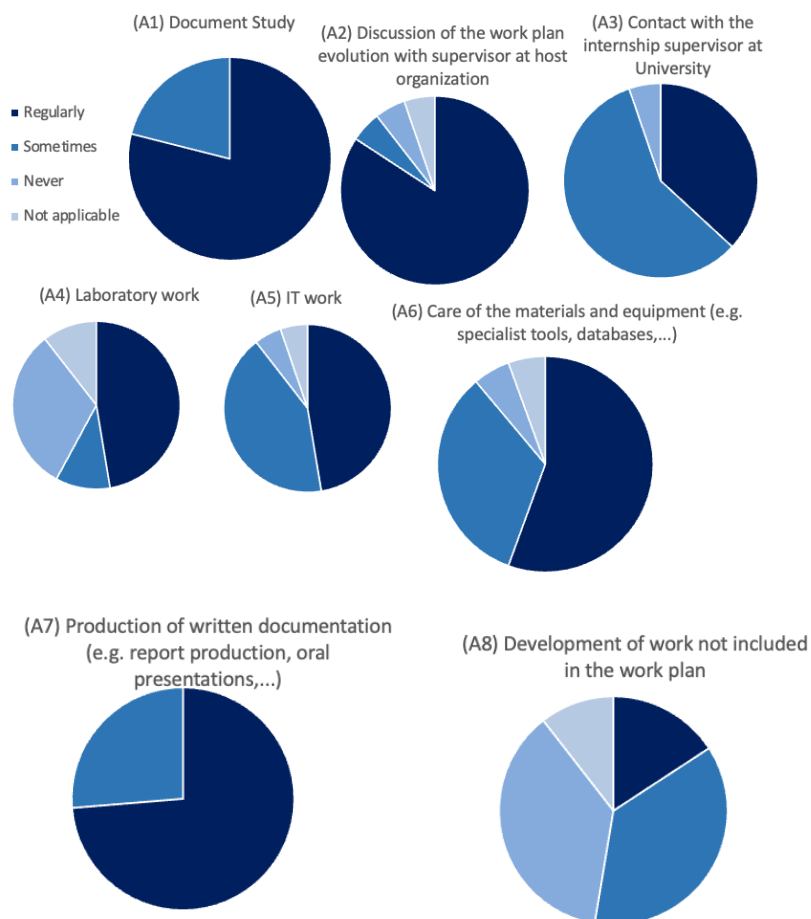


Students were also asked to fill a survey evaluating the internship activities and work, knowledge and skills acquired and the behaviour of the internship host. All students filled this survey with the results summarised below.

Results of the Students' Internship survey

Level of satisfaction from 1 (very bad, red) to 10 (excellent, blue)

A- Activities carried out during the internship:



(A9) Other activities

Reviewing documents, Compiling information, Presenting Tasks, SDSs Inspection for Audit Preparation

I was asked to contribute to the company's growth by expanding our professional network and exploring new business opportunities.

In an effort to leverage the power of LinkedIn, a widely recognized platform for professionals, the management team formulated a strategy to create a database of potential clients. This database would enable sales and marketing team to identify prospects and engage with them to establish fruitful business relationships.

By own initiative I analysed the historical client data base to develop a competitive Business development plan and gain insights to drive better client targeting and customisation consulting packages.

This Organization has a very good atmosphere for work and there is a very friendly place that make working enjoyable

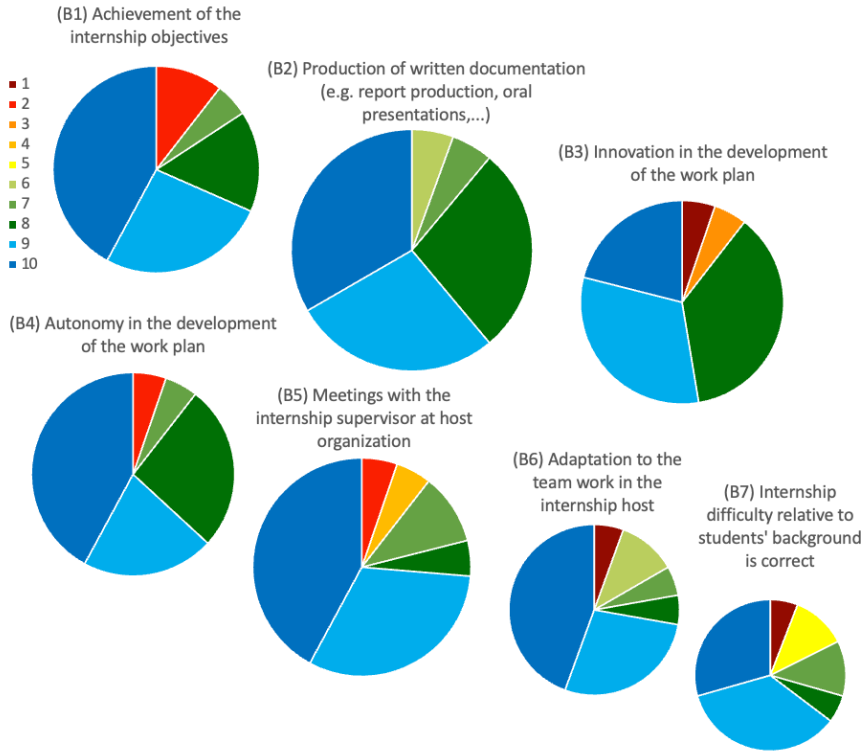
I was kindly invited to participate in several networking events and business trips

Activities with other research groups for the future projects.

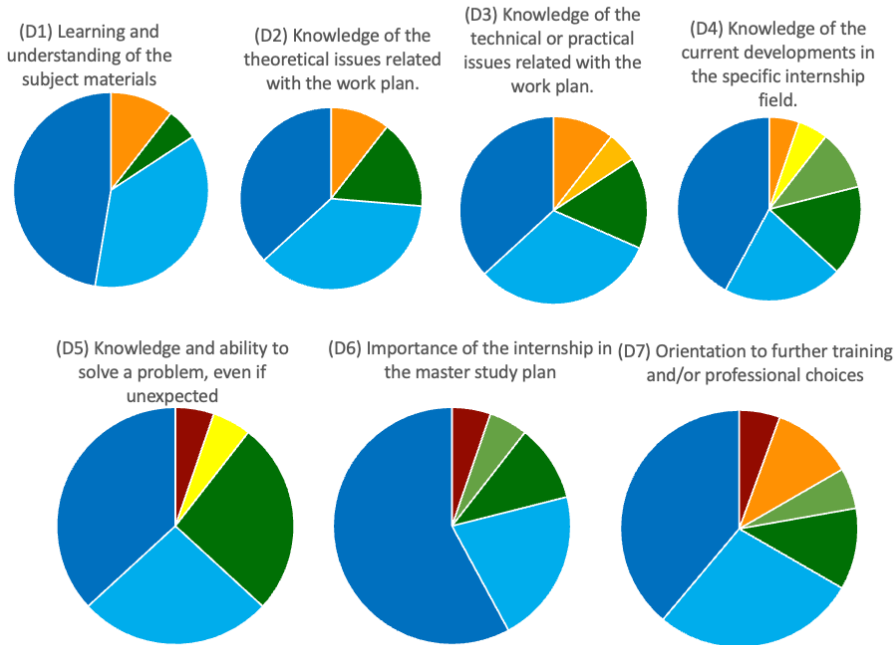
I worked with the regulation of different articles and compounds during the internship, to ensure that the European project's results were in compliance with EU regulations.

Factory visit (production unit, laboratory etc).

B. Evaluation of the work developed during the internship:



D- Knowledge and skills: acquired or improved during the internship

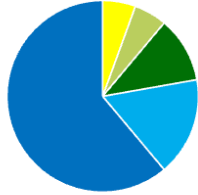


E- Internship Host

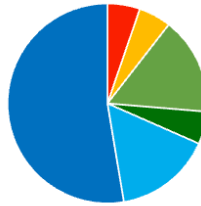
(E1) Welcome by the Internship host



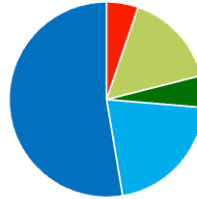
(E2) Interaction with the host organization



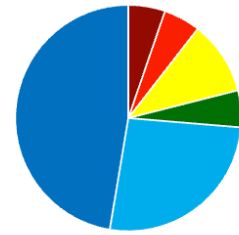
(E3) Interaction with the internship supervisor



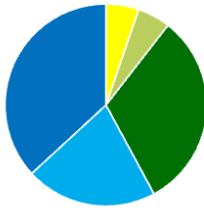
(E4) Interaction with the team at the host organization



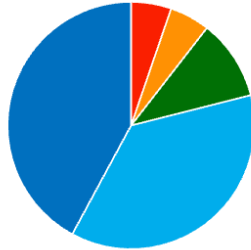
(E5) Encouragement to daily participation in the activities of the host organization



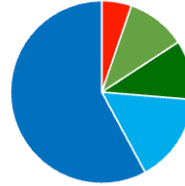
(E6) The work plan was carefully explained



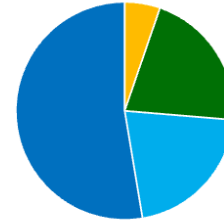
(E7) Support of the host organization to the work program defined by the internship supervisor



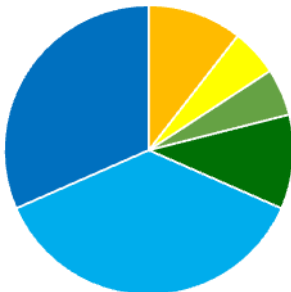
(E8) The supervisor at host organization fulfilled schedules for meetings and other work plan activities



(E9) Feedback and evaluations from the supervisor of the host organization regarding the activities carried out



(F2) General satisfaction with the internship



(F1) Would you recommend an internship in this host organization?

■ yes
■ no



6. Final Remarks

This report describes the main elements for the quality evaluation of the academic year 2021-2021 of the ChIR. From it, a list of issues to improve has been compiled by the EB. The PMT prepared an Action Plan for each issue. These can be found in annex 6 of the report. The same annex also contains a list of detected improvements and examples of good practice.

Annexes:

Annex 1 - Composition of the ChIR management bodies

Annex 2 - Calendar for classes in the University of Bologna, 2021/2023

Annex 3 - Questionnaire assessing the quality of the programme and host institution

Annex 4 - Analysis of Module Questionnaires

Annex 5 - Student Representatives' Report

Annex 6 - List of Issues, Improvements and Action Plans

Annex 1 - Composition of the ChIR management bodies

Members of the PCm in 2022-2023

UAlg	UB	UniBo	External	Student representatives
Clara Costa	Albert Romano	Alessandra Bonoli	Angelo Romasanta (ESADE)	Erika Martinelli
Isabel Cavaco	Anna de Juan	Alessandra Tolomelli	Carlos Molina (FEIQUE)	Héctor Romero
José Moreira	Anton Vidal	Chiara Samorì	Cristina Massa (ALBA)	Abdulrahman Badr Hasan Al-Kubati
Luis Nunes	Carne González	Claudio Trombini	Drinalda Mehja (Fresenius Kabi)	Ana Diges
Lurdes Cristiano	Carolina Estarellas	Emilio Tagliavini	Eugenia Anta (FEIQUE)	David Moses
Vera Marques	Daniel Sainz	Fabrizio Passarini	Helder Mota Filipe (OF)	Jalal Ahmad
Ana Rosa Garcia	Jaume Argerich	Giuseppe Falini	Irene Belincion (FEIQUE)	
Sara Fernandes	Merce Segarra	Laura Tositti	Isabel Tomaz (FCT-UL)	
	Pilar Ramirez de la Piscina	Luca Ciacci	Matteo Pori (BASF)	
	Rafael Llorach	Luca Evangelisti	Victor Garrido (ALBA)	
	Rubén Huertas	Marco Bandini	Teresa Fernandes (HWU)	
	Santiago Esplugas	Marco de Angelis		
	Susana Amezqueta	Marco Lombardo		
	Xavier Saurina	Paola Galletti		
		Silvia Bagni		
		Walter Cabri		

Members of the Programme Management Team

UAlg	UB	UniBo
Isabel Cavaco	Daniel Sainz	Emilio Tagliavini
Vera Marques	Carne González	Alessandra Tolomelli
Ana Rosa Garcia		

Members of the Examiner's Board

UAlg	UB	UniBo
Isabel Cavaco	Daniel Sainz	Emilio Tagliavini
		Alessandra Tolomelli

Members of the Selection Committee

UAlg	UB	UniBo
Isabel Cavaco	Daniel Sainz	Emilio Tagliavini
Ana Rosa García	Carme González	Alessandra Tolomelli

Annex 2 - Calendar for classes in the UAlg, 2022/2023

2nd semester												1st semester																																																																																							
June			May			April			March			February			January			December			November			October																																																																											
2326	2325	2324	2323	2322	2321	2320	2319	2318	2317	2316	2315	2314	2313	2312	2311	2310	2309	2308	2307	2306	2305	2304	2303	2302	2252	2240	2241	2242	2243	2244	2245	2246	2247	2248	2248	2249	2250	2251	2240	2241	2242	2243	2244	2245	2246	2247	2248	2248	2249	2250	2251																																																
																										TS1	M01	D03	TS2	TS1	D02	A01	T01	T02	-	S02	M05	M05	M05	M05	M05	M05	M05	M05	M05	M05	M05	M05	M05	TS2	M03	TS7	TS3	-	-	-	TS4	TS6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	TS1	M01	D03	TS2	TS1	D02	A01	T01	T02	-	S02	M05	M05	M05	M05	M05	M05	M05	M05	M05	M05	M05	M05	M05	M05
Course Unit coherence:																																																																																																			
week module 1 module 2																																																																																																			

D-U1	D-U2	D-U3	I-U1	I-U2	I-U3	M-U1	M-U2	M-U3	G-U1	G-U2	G-U3	C-U1	C-U2	C-U3	T-U1	T-U2	T-U3	E-U1	E-U2	E-U3	A-U1	A-U2	A-U3	S-U1	S-U2	S-U3	R-U1	R-U2	R-U3	

Annex 3 - Questionnaire assessing the quality of the programme and host institution

Annex 4 - Analysis of Module Questionnaires

Annex 5 - Student Representatives' Report

Annex 6 - List of Issues, Improvements and Action Plan

Annual report to the PCm, v2

December 13, 2023

