

Modernization of curriculum of Textile Engineering and Textile Technology in Indonesia, Malaysia and Pakistan



WP1: Deliverable 1.3 Context Analysis for Internship Programmes and Mobilities in Asian Universities



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Abbreviations and Acronyms

EACEA	Education, Audiovisual and Culture Executive Agency
EC	European Commission
EU	European Union
GA	Grant Agreement
HEI	Higher Education Institution
ICT	Information and Communication Technologies
РС	Project Coordinator
WP	Work Package
IPs	Internship Programmes
YFJ	European Youth Forum
ECTS	European Credit Transfer and Accumulation System
IAESTE	International Association for the Exchange of Students for Technical
	Experience
WBL	Work-Based Learning
TVET	Technical and Vocational Education and Training
PEC	Pakistan Engineering Council



1. General considerations

An internship is an opportunity employers offer to students interested in gaining work experience in specific industries and conduct an important step to building a solid career before jumping into their professional work life. This seems viable for the growth of both the students and the industrial sector. Internships can contribute their part in the path to the labour market as they provide an opportunity for students to bridge the gap between academical skills students acquire and professional life. Industrial placements or internships have become a part of higher education courses, ranging from engineering to accounting and social work, in the past decade. Moreover, the European Higher Education Area (EHEA) has a dedicated contribution to the ample growth of the internship market. Many Higher Education Institutions (HEIs) have adopted an educational platform that includes an internship a part of the curricula and are developing their curricula adding mobility programs and/or are encouraging undergraduates and masters students to conduct an internship. Building the capacities of higher education institutions by adding internships in curricula helps provide students with an education that is more aligned to the needs of the labour market and society.

The European Union (EU) has encouraged students to embark on the work-based learning experience abroad through one of its most well-known mobility programs named *Erasmus+*. The EU also promotes the internationalization of higher education institutions around the world. The human interactions promote greater intercultural awareness and understanding between students from different countries and cultures. It broadens their minds to different ways of being, acting, and seeing. It promotes greater tolerance and less prejudice, more necessary than ever.

Transnational cooperation projects such as the capacity building in higher education are programs between HEIs in Europe, so-called program countries, and HEIs around the world, so-called partner countries. This specific project aims to work together in partnership to bring about change. The focus of the project is broader in context to increase the capacity of educational institutions, working directly with professors, administrative staff, and students. Building their skills, knowledge, and expertise leads to a bottom-up approach to change in higher education institutions. Internships, for students, can help enhance their technical skills and help to furnish themselves professionally. Ultimately, these capacity-building projects aim to improve the quality of education for the students by conducting quality internships before they jump into their work life. For almost 30 years, the Erasmus program was a very successful European mobility scheme, for EU higher education institutions only. The new Erasmus+ program launched in 2014 now welcomes countries from the entire world to participate in its activities. It no longer focuses exclusively on mobility but includes capacity building activities targeting many countries worldwide.



1.1 Regulatory framework

With this context analysis we want to identify the regulatory framework in which the internship programs would operate. This concerns the legislative and regulatory framework as currently present for internships in Higher Education in each partner country. The current internship programs in the program countries are analysed next. This allows to distil some best practices which can aid in the further evolution of internships in the partner countries.

An important part for every internships should be a clear regulatory framework taking into account the following **four important points**.

1.1.1 Learning Experience

The aim should be on learning the exact context outlines of internship already defined in written agreement. Interns should be given tasks to enrich and furnish their skills, gain valuable experience and prepare themselves for the labour market before they enter into their professional life.

1.1.2 Written agreement

The Agreement between the intern and the employer should be written and outlined. The internship context should be well defined in order to properly outline the rights and responsibilities of both interns and employers.

1.1.3 Internship duration

In Ghent University, duration of the internship is dependent on the number of credit hours and the type of internship. A minimum of one month and maximum duration of six months for internships although it is sometimes pointed out that this duration is a point of reference and should be flexible whenever necessary. Erasmus+ traineeships can be extended to up one year.

1.1.4 Working conditions

The proper working conditions regarding maximum working hours every day, minimum resting time, holiday's entitlements and other incentives should be well defined.

1.2 Quality of internships

To analyse the quality of internship initiatives several initiatives exist. Quality internships orbit around improving technical skills and knowledge for the students in HEIs. The Collective Awareness Platforms for Quality Internships - CAPQI project, recognized that quality internships





usually tend to satisfy the following four requirements: 1) raising global awareness, 2) informing stakeholders & policy innovation, 3) advocating for quality mobility internships & financial support, and 4) fostering employability & skill development.

1.2.1 Raising global awareness

A survey conducted by Erasmus Student Network – ESN had as focus some good practices regarding internship schemes in Europe, and Erasmus internships in particular. It proved important to organize different activities and events to raise global awareness of internships in Europe. According to ESN, the platform hosts more than 10,000 unique offers each year and continues to extend its reach across the Europe.

Likewise, all partner countries (Indonesia, Malaysia, and Pakistan) who are participating in the capacity building project, need to create a platform within their country that arranges several events inviting enterprises, companies and organizations to participate in such events together with the universities across each partner country. This way, more and more students will get to know about the opportunities available for them in the job market and can participate in a better way.

1.2.2 Informing stakeholders & policy innovation

A European quality charter came to existence in 2010 on internships that aim a consultation process with partner organizations and the stakeholders who decide to guide and advocate better quality internship standards focusing on education, rights, and remuneration. Solely, the charter serves by providing the institutions and employers with the policy recommendations and guidelines to upscale the quality of the internships.

1.2.3 Advocating for quality mobility internships & financial support

The International Interns' Day event is arranged by Intern's GoPro (IGP) to give a boost to youth employment, including fair remuneration and learning content of internships. It also works on how to improve work placement rights for interns.

1.2.4 Fostering employability & skill development

An initiative was taken within Europe for Erasmus interns named House of Brains (HoB) that works on enabling stronger university-business cooperation. It also provides enterprises with a better match of students having better skills by developing an internationally recognized online training fostering entrepreneurship. Entrepreneurial learning modules were developed especially for Erasmus interns' skill development and raise their chances of employability.



1.3 Methodological aspects

This document is divided in 3 parts. In **Part I** we present the context in which IPs must be set up in the partner countries, that is, the legislative and regulatory framework for internships in HEI.

In **Part II** we present different internship programs in the Programme countries.

Finally, in **Part III** we present best practices, and our recommendations.





PART I: INTERNSHIP REQUIREMENTS IN THE PARTNER COUNTRIES

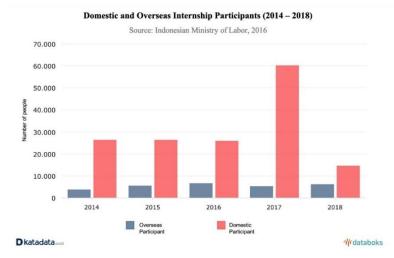
2. Internship programs requirements in Universities of Indonesia, analysis of the legislative and regulatory framework for internships

2.1 Internship trends in Indonesia

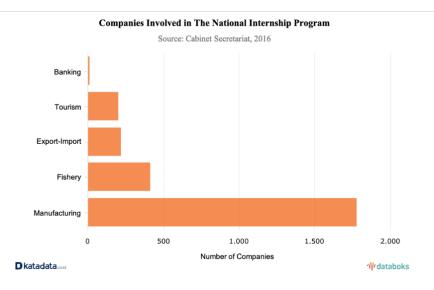
In general, the internship program, called *magang* in Indonesia, is regulated by the Ministry of Manpower regulations (Regulation of the Minister of Manpower, 36, 2016). It is defined as part of the on the job training system that integrates training and practical work under supervision with a maximum duration of one-year in corporations, government and non-government organizations. Based on the regulation, the companies or organizations must have a training division that supervises all the internship programs that are running within the organizations. However, in practice, it is not always the case resulting in some internship programs that are not supervised under a training division. The interns would work under the supervision of a senior employee, based on their desirable position. The internship program referred to in this regulation is for job seekers which may also include students of HEI. Detail of the internship program regulation under the Ministry of Manpower is provided in section 2.6. Data on the internship trend in Indonesia is rather limited. However, this section will give an overview of Indonesian internship programs in the past five years and the direction of the Indonesian internship program in the future.

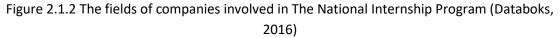
A survey in 2019 by the Ministry of Manpower stated that the number of internship employee from 2014-2018 reached almost 180,000 people (Widowati, S., 2019). The study established the number of internship programs that were conducted in Indonesia and abroad. The result showed that the majority of internship programs were conducted in Indonesia (Figure 2.1.1). However, the field distribution of where the internship programs were conducted was not mentioned in the study. Figure 1 addressed the number of internship participants from both the Higher Education Institution (HEI) students and the non-students. Based on the HEI's statistic in 2018, there were eight million of HEI students in Indonesia (PDDI, 2018). On that account, the number of internship participants in Figure 1 is considered as relatively small in comparison to the number of HEI students in 2018.











Another related study by the Secretary of Cabinet was conducted in 2016 about company sectors that were involved in the National Internship program (Databoks, 2016). The National Internship program is an agreement between The Ministry of Manpower and The Chamber of Commerce in improving the labour skills to meet the work requirements and demands. The study showed that 2,648 companies had been involved, with the highest number of 1,776 companies coming from manufacturing sectors (Figure 2.1.2).



In addition to the aforementioned internship program, students of HEI are also required to do a practical work in the field that are relevant to their respective majors. This kind of internship is called *praktek kerja lapangan* (PKL) in Indonesian which can be translated as "field practical work" and is a mandatory course usually given in the Semester 6, 7 or 8. One credit of internship is equivalent to 45 hours or five days of working per week (Regulation of Minister of Research Technology and High Education No. 123, Year 2019). The regulation is quite flexible, giving enough room for the universities to manage the credits of internship program based on their fields' necessity. However, the minimum credit hours according to the regulation (Regulation of Minister of Research and Technology, and Higher Education No. 123, 2019) is one month of working, which is equivalent to a minimum of 4 credits.

The aim of the internship program for the HEI students is to complement students' educational processes by providing real-life working experiences on related fields, or it can be translated as a working experience competency (Regulation of the Minister of Education and Culture No. 3, 2020). In addition, the internship program also aims to give the students chance to implement their theoretical knowledge in the real field. By completing an internship program, students are expected to earn hard skills and soft skills plus learn the company requirement skills and work ethics.

The new Minister of Education and Culture, Nadiem Makarim, recently evaluated the maximum duration of an internship program for the HEI students. While the one-year period was a fixed duration based on the regulation stipulated by the Ministry of Labour, Makarim suggested that the university should extend the duration of HEI student's internship program into 18 months (or three semesters) when it is deemed necessary (Chaterine, R., 2020). This suggestion is aimed to increase the HEI students' soft skills and experiences outside the campus and related to his new initiative to set up the Kampus Merdeka (Independent Campus) program. The latter is one of Makarim's programs which encourage Higher Education Institutions to shift their programs to be more independent. The program gives the students more authority to choose their learning activities which include more unconventional and modern approaches. There are eight new suggested approaches in the new policy, with one of them a longer internship program. Looking at this policy, the internship program will hold a more important position among the HEI learning approach. Therefore, an evaluation and improvement of the existing internship program are considered as urgently necessary for the future.

2.1.1 Future opportunities and potential for internships in Indonesia

Small and medium enterprises have been the backbone of Indonesia's economy. In 2014, the number of SMEs reached 59.4 million units (Bappenas, 2014). Among SMEs, the highest number of growth was noted to be among middle-sized enterprises, reaching an annual growth of 8,7%.





These enterprises are divided into several priority sectors. Priority 1 includes machinery, office goods, accounting, data analysis; food and beverage; and non-metal mining. Priority 2 includes other machineries, textiles, and non-furniture wood. Priority 3 includes furniture; garments; and radio, television, and communications.

In comparison to the numbers provided by the National Internship Program, it can be seen that SMEs have not been utilized as internship program holders to their maximum potential. As it is, the number of participants of the internship program also were limited. Therefore, there is an opportunity in involving SMEs as internship program holders for a wider number of internship participants.

In 2007, the State-Owned Enterprises (SOE or BUMN for *Badan Usaha Milik Negara*) of Indonesia established a communication forum of SOE's Human Resources Directors called the Indonesian Human Capital Forum or *Forum Human Capital Indonesia* (FHCI) (<u>https://fhcibumn.com/about</u>). This forum, in 2018, launched a nationwide program that provides opportunities for students of Indonesian HEI's to participate in a 6-month internship program in its 146 enterprises. The program is called *"Program Magang Mahasiswa Bersertifikat"* (PMMB) or "Certified Internship Program for Higher Education Students". According to the statistics reported on its official webpage (<u>https://pmmb.fhcibumn.com/</u>), since the first launch in 2018, the program has now reached 16,648 students distributed among the 146 participating enterprises that are operating in 35 provinces in Indonesia. The program targets to reach a total of 21,000 students in 2020. This program, along with the more recent initiative of Independent Campus and Freedom to Learn (*Kampus Merdeka* and *Merdeka Belajar*) by the Ministry of Education and Culture, which is looking at a longer period of internship of 1-3 semesters, provides an enormous opportunity for student to hone their skills and widen their horizon through internship program.

The official state documents that have become the foundation for this program is MoU between five ministries (Ministry of Industry, Ministry of Education and Culture, Ministry of Research and Technology, and Higher Education, Ministry of Manpower, and State Ministry for State-Owned Enterprises) on the development of competency-based vocational education that links and matches with industry. Other legal documents that back the program are Circular Letter from the Director General for Learning and Student Affairs at the Ministry of Research and Technology, and Higher Education No.191/B/SE/2018 on the Strengthening of the Relevance of Higher Education 4.0 Through Cooperative Education (Co-Op), MoU between the State Ministry of State-Owned Enterprises and Ministry of Research and Technology, and Higher Education Internship Program for Higher Education Students Through Linkage and Matching-Up with the industry under the SOE, a Ministerial Decree of The Minister of Research and Technology, and Higher Education No.123/M/KPT/2019 on Industrial Internship

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and the Credit Hours given to the Industrial Internship for Academic and Vocational Undergraduate Students.

2.2 Roadmap of Internship

The roadmap of internship in Indonesia depends on the type of internship program that the students are applying for. As it has been mentioned previously, there are three types of internship programs:

- (1) the internship that are open to everyone (students and non-students) who are looking for an opportunity to learn the practical aspects of work in a real-life situation or on the job training under supervision; the maximum duration is one year and for non-student participants this may lead to an opportunity of being employed by the company in which they are doing the training,
- (2) the so-called Certified Internship Program for Higher Education Students (or PMMB), which was designed specifically by the FHCI for HEI students who are interested in learning the practical aspects of work in the business sectors of SOE's; the program is optional with a duration of six months.
- (3) the so-called field practical work or *praktek kerja lapangan* (PKL), which is a mandatory course in Indonesian universities designed to provide a learning experience for their students in the field of work that is relevant to their major; it is usually given in one of semesters 6, 7 or 8 with a duration of one to three months in the field.

For the internship model (1), students are required to apply directly to the company or organization that they are interested in with the letter of introduction from the university (or department of their major). Students and companies or organizations who are involved in this particular model of internship, which is called *magang* in Indonesian, are regulated by the Regulation of Minister of Manpower No. 36 Year 2016 in terms of responsibilities and obligations, contracts, and working conditions like working hours and payment for the interns. Students require a special approval for this kind of internship from the university because the scheme is intended specifically for job-seekers.

In the PMMB (*Program Magang Mahasiswa Bersertifikat* or Certified Internship Program for Higher Education Students), or internship model (2), students of participating universities can opt for an internship with certificate of competency or that with certificate of industrial internship. The certificate of competency is issued by the so-called Professional Certification Institution after the interns having passed a series of competency tests. The certificate of industrial industrial internship is issued by the industry in which the interns doing their internship for



having completed the program. The following is a depiction of the process of internship starting from the preparation through to the certification.

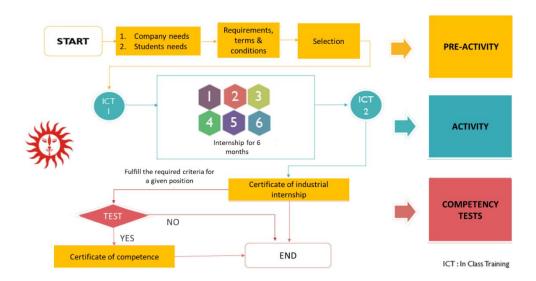


Figure The flow process of internship and stage in the internship program of PMMB from preparation through to completion and certification.

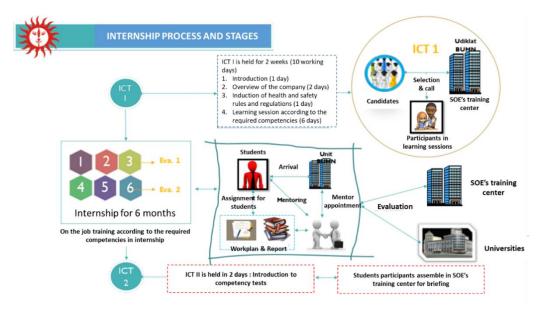
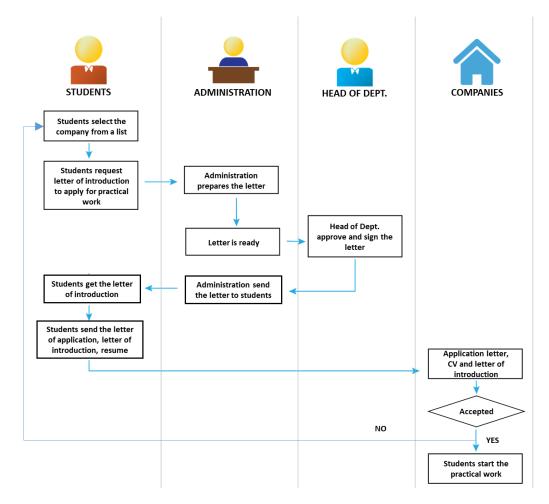


Figure The whole process of internship in the PMMB.

Despite the differences that exist among the universities in the implementation and details of operation, based on a quick survey on the procedure for internship model (3) in some of the universities, almost all follow a similar pattern or roadmap. We reported herewith the general



roadmap that is in operation in Politeknik STTT Bandung and Faculty of Art and Design, Bandung Institute of Technology. Three mandatory stages that the students should follow in the internship program are (1) the preparation and administration process, (2) the internship itself, (3) and writing an internship report by which the university evaluate and examine the internship. The roadmap of field practical work is depicted in the following figure.



2.3 Types of Internships (Paid/Unpaid Domestic/Foreign Internships)

Depending on the type of the internship model (1, 2 or 3 in 2.2), it can be paid or unpaid. In internship model 1, interns have the right to get a monthly payment the amount of which depends on the agreement between the interns and the companies and according to the regulations set forth by the Ministry of Manpower and Transmigration. In PMMB (internship model 2), students are paid according to the regional minimum wage depending on the scheme that the students opt in. For internship leading to the competency certificate, the students are



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[Context Analysis for IPs and Mobilities in Asian Universities - D1.3 and WP1]

paid Rp 1.955.000 per month (equivalent to EUR 112,00), whereas those doing the internship for industrial certificate are paid Rp 1.495.000 per month (equivalent to EUR 86,00).

In the internship model 3, a mandatory course of field practical work for HEI's students, companies are not required to provide allowances for the students, but there are cases where they are offering allowance or any other forms of support for the students like dormitories or meal voucher and transportation at pick up point. Some companies working closely with the university even go further by offering scholarship for the students to complete the rest of the semesters. This is done as a strategy to recruit and train potential candidates for new employees in the company. In cases where students are granted scholarship by the companies, they are bound by a contract with the company to work for a mutually agreed time (usually for a minimum of two years' time) right after the graduation.

Foreign internship is not regulated under specific regulations, but fall under the general regulation on foreign workers as stipulated by the Regulation of Minister of Manpower No. 15 Year 2016 and Regulation of Minister of Manpower No. 35 Year 2016. All foreigners must have the permit to work according to the regulation before he/she can come to Indonesia with a correct visa type to work, even for those who wants to have an internship only, which makes sense because the internship may lead to permanent employment.

This is the point where making the difference between the internship types/models and understanding the terminologies of *internship* and *field practical work* within Indonesian context is very important because it entails different legal consequences. Internship in Indonesian is called *magang* and it is a legal term that requires caution especially when it comes to foreign workers. Field practical work, on the other hand, is a course that falls within the autonomy of university and is only regulated in terms and within the context of learning activity according to the Ministerial Decree of The Minister of Research and Technology, and Higher Education No.123/M/KPT/2019 on Industrial Internship and the Credit Hours Given to the Industrial Internship for Academic and Vocational Undergraduate Students. Registered foreign students can take the field practical work as a course and participate in it just like any other registered students.

2.3.1 Internships entitled to credit hours

The PMMB internship (model 2 in 2.2) is worth 20 credit hours for one semester and 40 credit hours for two semesters accordingly. As it has been mentioned previously, the field practical work (internship model 3) may take a minimum duration of one month, which is equivalent to 4 credit hours, up to three months' work, which is worth 12 credit hours.





With the newly established curriculum called "dual-system curriculum 2019", Politeknik STTT Bandung requires its students to spend two semesters (Semester 6 and 7) in the industry, each is worth 12 credit hours making it a total of 24 credit hours. Faculty of Arts and Design, Bandung Institute of Technology, practices the normal field practical work in one semester with a duration of 1-3 months with 4 and 12 credit hours respectively.

2.3.2 Internships not entitled to credit hours

The general internship (model 1 in 2.2) regulated by the Regulation of Minister of Manpower is not entitled to credit hours for students because it is intended specifically for job seekers.

2.4 General regulations for internships in Indonesian Universities

2.4.1 Regulations for allowing the internship

The general regulations for the students to do the internship or practical work is related with the minimum numbers of credit that has been taken by the students, which reflects the breadth and depth of knowledge as well as skills acquired by the students before they can go to the industry. Some requires the students to finish a minimum credit of 110 hours, for example, with a minimum cumulative GPA 2.5/4.0. At Politeknik STTT Bandung, the field practical work must be done by the students in two semesters, i.e. Semester 6 and 7. Students can only do it in the semester that it is given, and not in any other semester, which implies and indicates that the students are required to finish at least 110 credit hours before they are allowed to do the program. Additionally, there are mandatory core courses that they have to pass and they cannot have Fail (or E) grade for those courses. For examples, students of Textile Chemistry at Politeknik STTT Bandung must pass the following courses:

- 1. Technology of Dyeing
- 2. Technology of Printing
- 3. Technology of Finishing
- 4. Chemistry of Dyes
- 5. Textile Auxiliaries
- 6. Textile Testing and Evaluation
- 7. Textile Fibres
- 8. Quality Control

The two semesters of practical work or "Industrial Practical Work" as it is formally called in the newly established "dual-system curriculum 2019" of Politeknik STTT Bandung was specifically put into practice to give the students more field experience and opportunity to acquire the skills,



both hard and soft ones, that are required of them to be successful later in their career in the industry. The following table shows the transformation that was made from the previous curriculum of 2015 to the dual-system curriculum of 2019. The semester in which the practical work is given is still the same, except for the number of the semester and the corresponding credit hours. At the Faculty of Arts and Design, Bandung Institute of Technology, the practical work is called "Professional Work".

 Table Internship practices based on the Curriculum 2015 and Dual-system 2019 in Politeknik

STTT Bandung

Criteria/requirements	Curriculum 2015	Curriculum 2019 (dual-system)
Length of the internship	64 working days	1 year (2 semesters)
Weight of credit	6 credit hours	15 credit hours (3 theory + 12 practical)
When	In semester 7	In semester 6 & 7

2.4.2 Charter between the intern and the supervisor

In order to guide and supervise the students, the Head of Department assigns 1-2 lecturers as supervisor and co-supervisor for the students during the whole activity of practical work through to the report writing and evaluation. Additionally, the students also have one mentor assigned by the company to supervise and guide them during the entire activity of the practical work. The mentor is also responsible for the fulfilment of the required competencies and the target set for the students. Before the start of the practical work, students and their supervisors usually sit together to discuss and elaborate the scope and subjects of their study during the practical work depending on the company they are working in and point of interests of the students. The results from the discussion is communicated and discussed with mentor in the company upon which the program during the practical work is formulated. It can be in the forms of project, field research, a survey to collect data, or short-range problems solving.

There is no formal contract between the students and supervisors or mentors. All rights and obligations are in principles set and regulated by the university who have made all the necessary arrangements and/or agreements with the company.

2.4.3 How to look for an internship opportunity?

For the general internship model 1 regulated by the Ministry of Manpower, applicants in general, including students can check the service provided by the ministry at https://magang.kemnaker.go.id/. This is a platform created by the Ministry of Manpower to bridge and match the needs of internship seekers and internship providers in one place.





For the internship with PMMB model and participating universities/departments, students can easily find the potential internship opportunity by checking with their departments what kind of internship that are available and offered. They can also check the PMMB website at https://pmmb.fhcibumn.com/. Students can check the SOE's that are offering placement for internship and also if their university is participating in the program.

For internship model 3, the field practical work (or PKL in Indonesian), students can check with their respective departments that normally would keep a list of participating companies or industries that are providing internship in that sense. Additionally, students can also check with the Association of Alumni of ITT/STTT that is providing help and supports for students seeking for placement of PKL. For most of cases, the Politeknik established MoU with many partner companies for conducting the PKL practices, including appointing the supervisor or mentor from industry.

Regulations about reporting and evaluation of the internship 2.5

At the end of internship, except for internship model 1, students are required and obligated to write a report that reflects their study and achievements during the internship. This applies to internship model 2 with PMMB as well as field practical work (PKL). The regulations and format of reporting vary among the universities, but in general are quite similar. Students must write a comprehensive report that covers the organization and managerial aspects of the industry and most importantly the technical aspects that are relevant to their major and focus of study and also according to the program that has been mutually agreed among the student, supervisor and industrial mentor.

There are two kinds of report upon which an evaluation is made on the three key aspects of competency, i.e. skills, knowledge and attitude, of the student. First, the report that is prepared by the mentor based on his/her direct observation during the practical work and is submitted to the department and supervisors. The second report is from the student who must write a monthly and final report to the supervisors. The monthly report is a tool for both the students and their supervisors to communicate the progress of the work and discuss any problems that may arise. The final report must be submitted at the end of the practical work to the departments after having consulted the supervisors and obtaining their approval, as the supervisors have the obligation to guide and give feedback during the report writing.

Students must present their report in the front of two examiners (lecturers) appointed by the Head of Department to assess both the competency of the students and their report. During the discussion the examiners have the opportunity make an evaluation on the students and grades are given based on the presentation and discussion with the students.





2.6 The legislative and regulatory framework for internships defined by the Higher Education Commission of Indonesia

Higher education in Indonesia is legislated by the Commission of Education (Commission X) in the House of Representatives (*Dewan Perwakilan Rakyat*) of Indonesia. In the legislation on higher education (*Undang-Undang Republik Indonesia no. 12 Tahun 2012*, Legislations of the Republic of Indonesia number 12, Year 2012), members of the community at large are given the opportunity and are encouraged to **contribute for the betterment of higher education** by providing internship programs (Article 91 Clause 2). The community member here is defined as a non-government Indonesian community that has an interest and a role in the higher education (Article 1 Clause 16).

The Indonesian Ministry of Education and Culture provides a general guideline regarding the **National Standard for Higher Education** (*Permendikbud no. 3 Tahun 2020*, Regulations of the Ministry of Education and Culture number 3, Year 2020), which includes the mention of internships. Additionally, details regarding the practice of domestic internship itself is regulated by the Ministry of Labor (*Permen Ketenagakerjaan no. 36 Tahun 2016*, Regulations of the Ministry of Labor number 36, Year 2016), as a part of the **National Work Training System**.

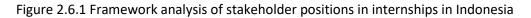
It should be noted that the term 'internship' can be translated into a couple of terms in Indonesian:

- *kerja praktek* (field practical work), and
- *magang* (internship)

both of which are referred to in the regulations above. However, *magang* is a broader term and also includes those in training but not under an educational institution, while *kerja praktek* more often specifically refers to students.







2.6.1 **Guidelines by the Ministry of Education and Culture**

Internships are mentioned as a part of a **working experience competency** that must be achieved by a higher education graduate (Article 6 Clause 4). Higher education in this sense includes diploma programs, bachelor programs, graduate programs, post-graduate programs, professional programs, and other specialist programs held by Higher Educational institutions in accordance to the nation's culture (Article 1 Clause 7).

A graduate competency standard is the minimum qualifications of attitude, knowledge, and skill that must be met by a graduate and should be stated in the learning outcomes of a program. A work experience is required to meet the qualifications of knowledge and skill. This work experience includes work training, internships, field practice, and/or other similar events (Article 6 Clause 4).

Internships (both *magang* and *kerja praktek*) are also officially acknowledged as a form of learning, alongside lectures, tutorial and responses, seminars, field practice, research, military practice, student exchange, entrepreneurship, and community service (Article 14 Clause 5).





2.6.2 Guidelines by the Ministry of Labor

The term used by the Ministry of Labor is *magang*. The Ministry of Labor requires every intern to be (Article 4 Clause 2):

- 1. At least 17 years old (those under 17 must provide permission from a parent or guardian),
- 2. Healthy, physically and mentally,
- 3. Passes the selection process held by the internship company.

A company that holds an internship program may be a commercial unit that employs workers with a return, or a social organization that employs workers with a return (Article 1 Clause 3). To hold an internship, the company must provide an internship program, the resources, and an internship supervisor (Article 5 and 6).

The internship program held by the company must consist of at most 25% theoretical knowledge and at least 75% practical work (Article 6 Clause 5 and 6).

An internship contract must be drafted and signed by the company and the intern (Article 10 Clause 1). Additionally, the internship must take place within a year of the signing of the internship contract (Article 6 Clause 7).

The following are the rights of the intern throughout the internship (Article 12):

- 1. To receive health and safety facilities
- 2. To receive pocket money (which may include transportation fees, lunch money, and internship incentives)
- 3. To receive work hazard protection and life insurance
- 4. To receive certificate of proof

The following are the obligations of the intern throughout the internship (Article 13):

- 1. To follow the internship contract
- 2. To participate in the internship to the very end
- 3. To observe the regulations within the internship company
- 4. To uphold the reputation of the internship company

The following are the rights of the internship company throughout the internship (Article 14):

- 1. To utilize the work of the intern
- 2. To implement regulations and the contents of the internship contract

The following are the obligations of the internship company (Article 15):



- 1. To supervise the intern, in accordance to the program
- 2. To fulfil the intern's right, in accordance to the internship contract
- 3. To provide safety equipment for the intern, in accordance to health and safety regulations
- 4. To provide work hazard protection and life insurance for the intern
- 5. To provide pocket money for the intern
- 6. To evaluate the intern's work
- 7. To provide certificate of proof of intern's work





3. Internship programs requirements in Universities of Malaysia, analysis of the legislative and regulatory framework for internships

3.1 Internship trends in Malaysia

Internship programs in Malaysia are designed to provide university student with an opportunity to complement their formal education associated with work experience. The internship programs are initiated as a formal part of the curriculum to ensure the graduates are well equipped with skills and experience related to their field of study. The internship can be done at the corporate sector, government sector, non-government organizations (NGOs), etc.

According to the Ministry of Higher Education Malaysia, internship refers to the placement of students in an organization under supervision in selected industries, whether abroad or within the country, within the stipulated time before they are awarded the Certificate, Diploma or Bachelor's Degree.

One of the aims of the internship is to increase the competitiveness of the graduates in the job market. With the added knowledge, experiences and skills obtained during internship, the students will be ready to face the world of work after graduation. It was mentioned that the internship program should not be limited to organizations in Malaysia. Internship abroad is highly recommended, with proper guidelines to be developed for Malaysian students doing internships abroad.

At present, there are several initiatives and practices, with regards to internships, employed by all HEIs in Malaysia. Apart from the conventional internship program where students attend 8 to 24 weeks of internship program, there are also a few other modes available for internships such as in the Work-Based Learning (WBL) and 2u2i modes of studies. These programs are generally aimed at HEIs offering Technical and Vocational Education and Training (TVET) based programs and any other programs in which the industry plays a major role in the curriculum.

3.2 Roadmap of Internship

The new modes of studies mentioned in 3.1 are part of the Malaysia Education Blueprint 2015-2025 (Higher Education). The Ministry recognized that there is a mismatch in the supply and demand of graduates, with employers reporting that graduates lack the requisite knowledge, skills, and attitudes. Thus, WBL and 2u2i hopes to enhance the student learning experience by expanding industry collaboration in the design and delivery of programmes; increasing the use of experiential and service learning to develop 21st century skills, and leveraging technology-



enabled models to enable more personalized learning to meet the objectives of holistic, talented, and balanced graduates.

In the 2u2i mode, the 'u' refers to University or the HEIs while the 'i' refers to the industry or host organization. In this case, 2u2i means that the students will spend 2 years in the University/HEIs and another 2 years in the industry. Nevertheless, '2u2i' is just the branding and there can be many combinations such as 3+1 (3u1i), 2+2 (2u2i), 2+1 (2u1i), and $1\frac{1}{2}+1$ ($1\frac{1}{2}u1i$).

In the context of WBL, the aims are on learning in and from workplaces and its relevance to students or learners in terms of enhanced skills, knowledge, understanding and increased critical self-awareness and personal potential. Specifically, the aim of WBL is for the students to develop industry specific skills and knowledge from the workplace environment that will help them to meet the learning outcomes of their program. Through WBL, students should be able to develop and enhance their employability skills and be provided with a range of opportunities relevant to employability and career development. WBL is also highly relevant for industry/employers in terms of enhanced employee and organizational performance, increased innovative capacity, employee contribution and output. Table 3.1 shows some of the generic models associated with WBL mode.

In general, the learning outcomes of WBL must be in line with the unit course outcomes and supportive to the overall learning outcomes of the specific program. These learning outcomes will be clearly identified within the program or unit specifications, either as part of or all of a course unit/module or separately within practice credits. Hence, WBL programs should be of sufficient length and quality to ensure that the identified set of learning outcomes can be met. As a general guideline, statement of WBL learning outcomes should also take into consideration the 8 main domains of learning outcomes as per stated in Malaysian Qualifications Framework (MQF). The 8 domains are:

- 1. knowledge;
- 2. practical skills;
- 3. social skills and responsibilities;
- 4. values, attitudes, and professionalism;
- 5. communication, leadership and team skills;
- 6. problem solving and scientific skills;
- 7. information management and lifelong learning; and
- 8. managerial and entrepreneurial skills.



Table 3.1 : Model and Typical Attributes of WBL	
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Model	Typical Attributes
Work-based study degree	Content negotiated with learner (which may have
	some industry input)
Degree with reflective assignments and thesis	Content designed with contribution of industry and
based on work projects	learner
1st year in HEP and subsequent years (2-3) in	Work-based content negotiated with industry and
workplace	individual
"Sandwich" year. Work-placement, Practicum. Work	Content designed with industry and temporary
experience, project-based, internship within	placed with industry (fixed and various duration)
programme of study	
In-work training/education	Short courses influenced by industry/professional
	standards
Enterprise/business start-up	Full-time students formulate a business plan and
	may go on to create and register a company
Change management partnership	Content largely negotiated with industry

Basically, internship programs allow students to acquire not just real work experience but also academic credit, which is compulsory for students to graduate. The amount of credits given depends on the duration of the internship. The recommended ranges for non-technical and general courses is from 3 to 8 months depending on the field and universities curriculum structure. Meanwhile, the duration of technical and professional courses varies depending on the requirements of the accreditation boards of professional body such as the 'Board of Engineers' and 'Malaysian Board of Technologies (MBOT)'.

3.3 Types of Internships (Paid/Unpaid Domestic/Foreign Internships)

There are two types of internship for diploma and bachelor degree students in Malaysia;

- i. Internships entitled to credit hours i.e. a compulsory internship in which it is part of the curriculum
- ii. Internships not entitled to credit hours voluntary internship

The duration for internship will vary according to the requirements of the programmes at the HEIs. Generally, it depends on the types of programs. While some suggest that students do their





internship in the final year of their studies, most agreed that it should be flexible and may vary according to HEIs and industry needs. The program may be aggregated or carried out in a single period, for example, during semester break or taking one semester off. There is a need to comply with the approval of professional bodies related to the programs and the senate.

There is no strict procedure to find an internship, nor is there a single list with internship positions to choose from. Some options to find an internship are;

- From the seniors of the programs who underwent the internships before
- The list of potential placements sorted by the internship coordinator of each program
- Through industrials talks which are often conducted at the HEIs
- Through social media page of the program which normally consist of alumni that are currently working in the industry
- Through the network of the lecturers with the stakeholders

As a normal practice, all programs undertake between 4-10 weeks for internship except for IT related programs where their duration is for one full semester. The credit allocation of each course also follows the general rule given by the MQA that stipulate one credit as two weeks of internship activity. An internship of 6 credits has a duration of minimum 12 weeks which is normally done in a single attempt or in few cases within a dispersed period of time that accumulates to 12 weeks.

There is no standardized approach on how the internship is carried in each place but it is often highly dependent upon the mutual understanding between the program and the industrial partner.

3.3.1 Internships entitled to credit hours

The Malaysia Qualification Agency (MQA) has outlined the industrial training as a requirement to obtain a degree or diploma for some programmes. These programmes are required to include industrial training as part of their curriculum or as one of the learning activities to achieve the learning outcomes. Such fields include business management, performance arts, computer science, IT, mass communication, hotel and tourism, agriculture etc. However, most programs now require the students to obtain some real-life experience through internships.

This compulsory training is applied to all students who intend to pursue the diploma or degree certificates of the designated programmes. Failure to attain the training would mean that they are not allowed to receive the certificates as their curriculum structures is not completed. International students undergoing the programs in Malaysia are also required to fulfil this internship requirement in order to obtain the certificates.



Students may choose to have their internship domestically or in foreign countries, whether it is paid or unpaid. Normally, the internship in foreign countries requires more paper work, hence it needs to be prepared 3-6 months prior the training. There is no advantage or disadvantage for earning the internship credits at domestic or foreign, nor any specified sponsorship available to support the training fee/ allowance, hence only few students would take this opportunity to grab this opportunity.

In 2016, MQA has introduced a work-based learning (WBL) programmes (later known as 2u2i learning mode in 2017), which is hoped to enhance the learning experience by expanding industry collaboration in the design and delivery of programmes. These have been mentioned in Section 3.1. Other than that, the purpose of the initiative is to increase the use of experiential and service learning to develop 21st century skills, and leverage technology-enabled models to enable more personalized learning to meet the objectives of holistic, talented, and balanced graduates. This mode is playing an increasingly important part in the development of an individual's lifelong learning through improved academic qualification by obtaining credits for negotiated learning in the workplace. It is also increasingly an important form of provision in which new relationships between higher education and the world of work can be established. Through this learning mode, for a four year bachelor degree, students can spend one or two years at the industry under structured curriculum, and another 2 years at the HEIs in the usual mode of learning. The years in the industry or working environment could also be considered as an internship, and it creates another mode of learning besides the common or traditional method.

3.3.2 Internships not entitled to credit hours

There are also some programs that decide to make internship as options. For this type of internship, prior consent should be received from the HEI and also the internship placement. Students who opt for the training should be aware that the training is merely to help them to gain some experience, without any credits contributed to their certificates.

This voluntary internship is mainly based on the initiatives from the lecturers who might have some grants or the students themselves. Since it is a voluntary internship, the duration of training is not a main concern. One can have a week of training or a year, following the consensus of the HEI and place of internship. It should be noted that although no credit hours are entitled, the procedures to apply for the placement must have followed the regulations stated by the HEIs.





3.4 General regulations for internships in Malaysian Universities

3.4.1 Regulations for allowing the internship

In Universiti Teknologi MARA (UiTM), each faculty is required to plan and provide the processes and procedures on internship which are generally based on the guidelines set by the Malaysian Qualifications Framework (MQF). For programs which are accredited by the Malaysia Board of Technologist (MBOT) or Board of Engineers or any other professional bodies, the guidelines set by those bodies are followed. Every academic program will appoint an internship coordinator who is responsible to coordinate and monitor student's development and performance during the internship.

Students from the BSc (Hons) Textile Science and Fashion Technology program need to undergo an internship program with a minimum of 8 weeks (equivalent to 4 credits).

Students who intend to attend the internship must fulfil a few requirements:

- i) Obtained a Cumulative Grade Point Average (CGPA) of at least 2.0, and
- ii) Have completed all the textile core subjects such as Textile Fibres, Chemistry of Dyes, Yarn Production, Woven Fabric Technology, Construction and Development, Knitting Technology and Knitted Structures, Non-Woven, Technical Textiles, Textile Colouration, Apparel Technology, Fashion Merchandising, Marketing and Retailing, Fashion Construction and CAD/CAM for Apparel.

Before the internship, these steps should be taken by the students:

- i) Submission of application letter and resume to the company/ host organization
- ii) Approval of internship placement by the Dean of the faculty
- iii) Request for an internship log book from the Academic Affairs Office to record all activities during the internship

During the internship, students are still subjected to the Universities and University Colleges Act 1971 (Amendment 2009); IPTS Act 1996 (Act 555); and the Education Act 1996 (Act 550). Students are also required to comply with the following rules during the internship program:

- i) comply with the working hours and all rules set by the host organization
- ii) not taking time off during internship except with the approval of the host organization
- iii) contacting the host organization immediately if unable to attend due to emergencies or sick leave
- iv) contacting the host organization if arrive late because of unavoidable grounds
- v) not divulging secrets or provide confidential information of the organizations to any other party during and after the internship program



- vi) making good use of any property belongs to the organization and
- vii) always dress neatly in accordance with the conditions and rules set by the host organization

Upon completion of the internship, students will be evaluated based on the report given by the supervisor from the host organization and visiting lecturer as well as from the presentation, log book and final report submissions. Details on the evaluations are discussed in Section 3.5.

The implementation of internship in Universiti Tun Hussein Onn (UTHM) is also dependent upon the guidelines stated in the Malaysian Qualifications Framework (MQF) or other professional bodies such as the Board of Engineers. An internship coordinator from each programme is responsible to coordinate activities related to the internship. UTHM students are required to earn a minimum amount of credit based on their programme as tabulated in Table 3.2.

Several procedures have to be fulfilled by the student before undergoing the internship. As with UiTM, during the internship, students remain to be subjected to the Universities and University Colleges Act 1971 (Amendment 2009); IPTS Act 1996 (Act 555); and the Education Act 1996 (Act 550). Students are also required to comply with the rules as discussed earlier in section 3.4.1. The students in UTHM will also be evaluated based on their final report, log book presentation and evaluation reports given by the supervisor from the host organization.

Programme	Credit *	Percentage of credits earned (%)
Engineering	4	60
Engineering Technology	4-12	60
Diploma **	4-9	60
Others	4-12	60

Table 3.2: Minimum Percentage of Credit Earned

^{**} In Malaysia, a Diploma is a programme. The conventional route after high school to enter a university is either a 1-year matriculation or a 2.5-3 years Diploma programme. After the Diploma, students may apply for Bachelor's degree programmes.

* For Internship, 1 credit is equivalent to 2 weeks. If the credit hours of the Internship course is 8, then students will spend 16 weeks in the industry/organization.

Charter between the intern and the supervisor

For both universities (UiTM and UTHM), an agreement between the student and the supervisor from the host organization is necessary to ensure the quality of the internship program. Therefore, the students and supervisor must agree and understand the scopes of task outlined by the Malaysian Higher Education.



The scopes of task for students during the internship are to:

- i) undergo the internship program with the host organization with interests and honesty
- ii) comply every instruction and rule enforced by the host organization offering the internship program
- iii) maintain the good name of the Institution of Higher Learning and host organization
- iv) inform the HEI supervisor (internship coordinator) pertaining to any problems that occur during internship;
- v) contact the HEI supervisor (internship coordinator) or host organization supervisor, if necessary; and
- vi) submit self-assessment forms and reports to the HEI supervisors within the stipulated time.

The scopes of task for supervisor from the host organization are to:

- i) supervise the student's assignments and provide feedback to the students; and
- ii) evaluate student's work performance throughout the internship program.

3.4.2 How to look for an internship opportunity?

The selection of industry/ host organization will be done by the internship coordinator in the programme. Students from the BSc (Hons) Textile Science and Fashion Technology, UiTM are required to follow the procedures stated in Figure 3.1, where the students need to identify potential company/industry/host organization from a list given by the internship coordinator. The student can also find any other company or industry that is not listed in the list. After identifying the potential company or industry, the internship coordinator will contact the company or industry. A letter of application and resume of the student will be emailed/ mailed/faxed to the company. The company/industry/host organization will give a reply on the acceptance (or decline) of the internship. Student who has successfully secured a place will attend the internship during the semester break for 8 weeks. If the application is unsuccessful, the internship coordinator will apply other host organizations.





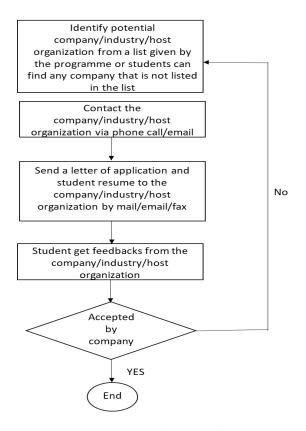


Figure 3.1: Process flow in selecting company/industry/host organization for students in the BSc (Hons) Textile Science and Fashion Technology Program, UiTM

The procedure of internship application for students in UTHM is illustrated in Figure 3.2. The student is required to register and apply the internship program via the e-LI system. The e-LI system will review the eligibility of student for internship. Any student who is eligible needs to validate with the system and select a potential company (student can choose not more than 3 companies in the system). If the company is not listed in the system, the student can add the new company in the e-LI system. A follow up will be conducted by student to ensure that the company has taken the necessary action and given feedback on the application of the internship. Students who have successfully secured a place will attend the internship not more than 24 weeks depending on the BSc programme.





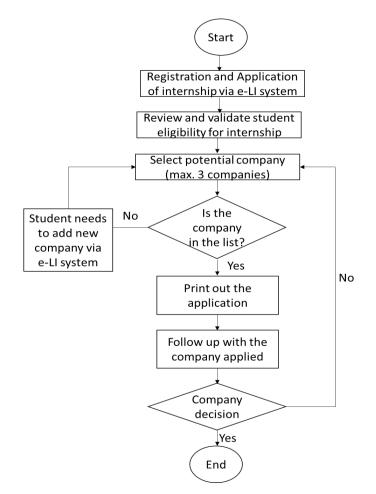


Figure 3.2: Procedure of selecting company/industry/host organization for UTHM students

3.5 Regulations about Reporting and evaluation of the internship

The BSc in Textile Science and Fashion Technology program is one of the programmes under the Faculty of Applied Sciences, UiTM and thus follow the specific internship assessment procedures determined by the Resource Person of the internship course code. The assessments are divided into five (5) parts:

- Evaluation report from the supervisor of the host organization. Students will be evaluated based on values, ethics, moral, teamwork, professionalism, information management and lifelong learning skills. The total percentage for the supervisor evaluation is 40%.
- ii) Evaluation report from the visiting lecturer. The evaluation is based on the theoretical and scientific knowledge of the student, the ability of student to relate theory learned to task given, the ability of student to express scientific idea



innovatively and creatively, the ability of study to response on scientific question effectively and the student realizes the importance of knowledge in career development. The percentage of the visiting lecturer evaluation is 10%.

- iii) Presentation by the student. The percentage for the presentation is 20%.
- iv) Final report. The percentage for the report is 20%.
- v) Log-book. The percentage for the log book is 10%.

From the evaluations, students will be graded as PASS or FAIL. Students who are unable to complete the internship will be graded as INCOMPLETE.

For UTHM students, the assessments are divided into four (4) parts:

- i) Log-book. The percentage for log book is 5%.
- ii) Final report. The percentage for the report is 15%.
- iii) Presentation. The percentage for the presentation is 20%.
- iv) Industry supervisor report. The percentage for the industry supervisor report is 60%.

Similar to UiTM, the UTHM students will be graded as PASS or FAIL. Students who are unable to complete the internship will be graded as INCOMPLETE.

3.6 The legislative and regulatory framework for internships defined by the Higher Education Commission of Malaysia

The Ministry of Higher Education Malaysia provides a general guideline for the implementation of internships. These are discussed next.

3.6.1 Policy Statement

The Malaysian Higher Education policy stated that internship or industrial training is a mandatory requirement for students at all levels of higher education of HEI including for Certificate, Diploma and Bachelor's programs. Internships are needed to meet the requirements for the award of Certificate, Diploma and Bachelor's Degrees, respectively.

3.6.2 **Objectives**

Among the objectives of the internship program are to:

- i) expose the students to the real working environment;
- ii) expose the students to the latest technology and latest knowledge in the market;
- iii) expose the students to specific practices in the respective field of specialization;
- iv) enhance student's knowledge, skills, and experiences with the industry;
- v) produce competent graduates;



- vi) enhance employment opportunities; and
- vii) strengthen the network between HEI with the industry.

3.6.3 Specific Objectives

Among the specific objectives of the internship program is to provide opportunities for students to:

- i) understand the responsibilities in the real working environment;
- ii) gain practical experience appropriate to the field of specialization;
- iii) apply academic knowledge and skills in the real working environment;
- iv) appreciate the value of professional ethics;
- v) hone soft skills appropriate to the working environment;
- vi) improve communication skills;
- vii) assess career abilities, knowledge, and self-confidence of the students;
- viii) enhance the marketability of the students so that they are more resilient
- ix) sow, cultivate and subsequently develop entrepreneurship characteristics through exposure to reality and career opportunity; and
- x) gain professional contacts and relationships with the industry.

3.6.4 Learning Outcomes

Upon completion of the internship program, students will be able to:

- i) enhance competencies and competitiveness in the field of specialization;
- ii) relate work experience with the knowledge from the university;
- iii) apply the theory and academic knowledge learned at the workplace under supervision;
- iv) improve interaction and effective communication skills; as well as
- v) gain experience and knowledge that can be utilized in the job after graduation later

3.6.5 Scope of Internship

Agreement between the HEIs and the host organization (organization which receive students for internship) is necessary to determine the specific tasks of students undergoing internship. The scope of the tasks should give the opportunity to students to apply their knowledge and skills learned as well as gaining exposure to work practices in the field specialization of each.

3.6.6 International Student

The internship programs also involve international students who are studying in HEI in Malaysia.





3.6.7 Internship Period

The duration of internship depends on the program of study as well as the respective HEI. It is recommended that the accumulated period for the internship is not less than three (3) months or any specified period set by the Professional Body having the power to award accreditation.

3.6.8 Internship Placement

- i) Students must undergo the internship programs in the organization certified by the faculty in the related field of studies;
- ii) Students must strive with their respective institutions to find an internship place based on the field of interests;
- iii) The list of internship venues must be provided by the respective HEI;
- iv) The HEI will coordinate all training placement matters with the industry;
- v) The internship placements can involve either the private sector or the public sector based on program suitability;
- vi) Students are not allowed to change the place and date of internship unless approval is given by the faculty's internship centre and the related host organization; and
- vii) Application for postponement must be made in writing to the Institution of Higher Learning through the faculty.

3.6.9 **Remuneration**

The industry or host organization is encouraged to provide allowances to students who undergo internship programs under the organization.

3.6.10 Insurance

All Institution of Higher Learnings are required to provide accident protection and disability protection insurance to students who undergo internship programs.

3.6.11 Roles and Responsibilities

(a) Institution of Higher Learning

Each Institution of Higher Learning is responsible for managing all matters related to the internship program based on the understanding with the industry / host of the organization. Some of the responsibilities are to:

- i) provide a database of organizations that offer placement for internships;
- ii) invite organizations to offer industry training placements to students;



- iii) coordinate the process and procedures related with the placement of overseas internship;
- iv) inform the offers for internship places and internship placement procedures to the party responsible and students;
- v) manage student placement for internships;
- vi) appoint supervisors at the faculty for the internship programs (it is recommended to involve all lecturers in the student supervision);
- vii) provide forms / documents / letters related to internship placement (e.g., Letter of Commitment, Format of Resume, Learning guidelines, Application Checklist, Organization Feedback Form, Student Personal Information, Training Program Self-Report Form Industry, Progress Report Form, Report Release Form Industrial Training, Organizational Supervisor Report, Evaluation Form, Internship Report, Health and Safety Questionnaire);
- viii) provide internship preparation training programs / briefings / workshops aimed at providing students with techniques formal communication; skills and work ethics; and preparation of internship reports;
- ix) store and monitor data related to internship programs;
- x) process industry training program questionnaire forms;
- xi) design and provide related monitoring affairs (including provision of allocations) of students at related organizations during industrial training;
- xii) managing matters related to student assessment; and
- xiii) evaluate and analyse data / information related to internship for the purpose of program improvement.

The HEI supervisor is responsible to:

- i) provide advisory services to students;
- ii) monitor and contact students according to the schedule;
- iii) visit students at least once (1) during the period of internship (except for students conducting internship training overseas);
- iv) foster good relations between HEI and the host organizations;
- v) evaluate student performances throughout the internship program;
- vi) assess the learning outcomes based on the internship objectives.

(b) The Host Organization Accepting Students for Internship

The organization is responsible to:

- i) provide learning guidelines;
- ii) appoint supervisors for students according to qualifications;
- iii) place students in the appropriate department / unit / section;
- iv) ensure the scope of student work is more focus on the field of student specialization;



- v) monitor student progress and provide guidance and appropriate feedback dynamically;
- vi) objectively assess the students throughout the internship period in accordance with the scope of duties and student's specialization;
- vii) provide feedback to HEI supervisors; and
- viii) inform the HEI in the event of any case of student discipline or misconduct.

The supervisor of the host organizational is responsible to:

- supervise the student's assignments and provide feedback to the students; and i)
- ii) evaluate student's work performance throughout the internship program.

(c) Students

Before Industrial Training

- i) secure internship placement in a suitable organization within the field of study;
- ii) sign up for an internship program;
- iii) attend briefings / seminars / workshops organized by the faculty;
- iv) inform the offer for internship placement from the industry to the respective person in charge of internships at the faculty; and
- manage matters related to the implementation of internships. v)

During Industrial Training

- undergo the internship program with the host organization with interests and i) honesty;
- ii) comply to every instructions and rules enforced by the host organization offering the internship program;
- iii) maintain the good name of the Institution of Higher Learning and host organization;
- iv) inform the HEI supervisor pertaining to any problems that occur during internship;
- contact the HEI supervisor or host organization supervisor, if necessary; and v)
- vi) submit self-assessment forms and reports to the HEI supervisors within the stipulated time.

After Industrial Training

Make sure that the supervisor at the host organization completes the training evaluation report and hands it over to the supervisor at HEI.

3.6.12 Credit Giving

For certain programs, internships are required for graduation purposes and subsequently required to be given credit hours credit in accordance with the standards of the Malaysian Qualifications Framework (MQF). It is recommended that the number of credit hours given should not be less than two (2) credit hours and not more than twelve (12) hours credit.



Based on the guidelines provided in the Guidelines for Academic Program Development in Public Universities, Ministry of Higher Education Malaysia, 2018, the calculation for internship credits is as follows:

- Effective Learning for a day is 4 hours.
- Effective Learning for a week is 4 hours X 5 days/week x 2 weeks = 40 hours
- 40 hours Effective Learning is equivalent to 1 credit hour

3.6.13 Rules While Undergoing Industrial Training

Throughout the internship period, students remain to be subjected to the Universities and University Colleges Act 1971 (Amendment 2009); IPTS Act 1996 (Act 555); and the Education Act 1996 (Act 550). Students are also required to comply with the following rules during the internship program:

- i) comply with the working hours and all rules in the host organization;
- ii) do not take time off during internship except with the approval of the host organization;
- iii) contact the host organization immediately if unable to attend due to emergencies or sick leave;
- iv) contact the host organization if arrive late because of unavoidable grounds;
- v) does not divulge secrets or provide confidential information of the organizations to any other party during and after the internship program;
- vi) make good use of any property belonging to the organization; and
- vii) always dress neatly in accordance with the conditions and rules used in internship venues.

3.6.14 Holiday

Students are not allowed to take leave while undergoing internships except with the approval of the host organization. Students who are unable to attend the internship for a period more than six (6) days due to emergency or sick leave will be deemed as ineligible and need to repeat the entire internship program.





4. Internship programs requirements in Universities of Pakistan, analysis of the legislative and regulatory framework for internships

In Pakistan, all higher education institutions (HEIs), particularly those engaged in engineering education, always prefer providing internship opportunities to their students. Due to limited available avenues; mainly the industries being based in few of the major cities, all students do not get such opportunities. The two Pakistani universities which are involved in this particular project viz. NED University of Engineering & Technology, Karachi & Bahauddin Zakaria University, and Multan are however, highly determined and are continuously engaged with the industry for arranging internships for their respective students.

4.1 Internship trends in Pakistan

Supervised internships at undergraduate level in a modified format is a compulsion from the Pakistan Engineering Council (PEC) to all of the Engineering universities/institutions. This is categorically mentioned in the syllabi of all engineering programmes as approved by the PEC as minimum guidelines/requirements for a degree, to be adopted by all institutions. There is however, no proper mechanism in place which may compel the industry for extending internships, neither the students are provided with any platform for getting a guaranteed opportunity of internships. Alumni of the institutions working in the industry and the universities at their own play a vital role in patching the interested student with the industry in getting internships.

NED University offers internships to the undergraduate students which, in most of the cases, is unpaid. An Internship is normally offered to the Third Year undergraduate students for 4 to 6 weeks (6 days/week, 8 hours/day). These internships are not entitled for any credit hour but are mandatory for all the students.

In Bahauddin Zakariya University College of Textile Engineering for B.Sc. Textile Engineering Programme, a similar model exists whereby an industrial Internship of at least 4 weeks (6 days/week, 8 hours/day during summer holidays) is mandatory for all students. The internship is again arranged here with the efforts of the concerned department through the Industrial Liaison Officer.

Although, the internship programme in Pakistan has remained in practice since last several years, it has not matured enough and has not been streamlined mainly due to the absence of any structured liaison between academic and industry especially towards this particular activity. The system can be established/well organised and then strengthened by following the well-established European partner's internship programmes.



4.2 Roadmap of Internship

4.2.1 Pre-Activity

At NED University, student group formation for internship begins at the beginning of 6th semester (maximum 4 students per group are assigned). The Directorate of Industrial Liaison which is responsible for arranging such internships come in contact with the industries at least three to four months prior to the expected commencement date of the internships. There is also a Departmental Internship Committee which is in coordination with the industry mainly through the alumni of the department working in these industries. After receiving the internship calls from the industry, the same are shared with the students through an announcement displayed on the website and on the departmental notice boards; and the activity is carried out during the middle of 6th semester. The next step are the interviews by the respective industry and after their confirmation, the internship of students is commenced. Internship plan is to be shared with the students by the Internship Coordinator of the company.

4.2.2 Post-Activity

After the completion of the internship, a report has to be submitted by the students both in the department and in the respective industry. The report is critically evaluated at both ends especially with respect to the work carried out during the internship and the level of learning attained by the student.

A similar procedure is also maintained Bahauddin Zakariya University whereby the internships are arranged and monitored by the respective Industrial Liaison Officer.

4.3 Types of Internships (Paid/Unpaid Domestic/Foreign Internships)

Mostly the internships offered by the industry are unpaid but some of the industries, specially the multi-nationals, do offer nominal remuneration to the students during their internships.

The internships are mainly arranged within the City but in certain cases some of the students also avail internships in their hometowns. As such no foreign internship (paid/unpaid) models exist here but at the NED University, in the past there were some cases whereby students availed overseas internships mainly due to the reasons that either their parents were citizens of the respective countries or they were engaged in fulltime jobs in these countries.





4.3.1 Internships entitled to credit hours

As such no internship is entitled to credit hours at both NED University of Engineering & Technology, Karachi and Bahauddin Zakaria University, Multan.

4.3.2 Internships not entitled to credit hours

All internships are conducted without having any credit hours.

4.4 General regulations for internships in Pakistan Universities

An internship is very much beneficial for gaining industrial training as well as for practical exposure and experience. This helps students develop new skills and apply knowledge in their professional life. The internship is essentially carried out in a company or organization of their respective area. Following mechanism is adopted to regulate this programme:

- NED University has a Directorate of Industrial Liaison. This Directorate is responsible for • arranging internships for the undergraduate students. It interacts with the industry and, if there is any internship opportunity exists, it posts the details to the website and also coordinates with the respective department to nominate students for the internship.
- BZU University has Industrial Liaison Officer who facilitates the students for getting internship in the relevant industry.
- Most of the faculty members also enjoy excellent relations with the industry and upon students request; they do also usually extend help and support the students to find suitable internships.
- In addition, students themselves may directly contact companies for internship placement as well
- This internship is monitored through the Departmental Internship Committee and a dedicated staff /member of the concerned company.
- It is ensured that the internship should be of high technical value where the student can learn the skills which could only be obtained while working at the industrial environment.
- This internship is usually offered at the end of 6th semester for 4-6 weeks.

4.4.1 Regulations for allowing the internship

An Internship is normally offered to the Third Year undergraduate textile students for 4-6 weeks after the completion of their 6th semester. These internships are not entitled for any credit hour but are mandatory for all the students.



Although the University Regulations do not explicitly spell out the details regarding internship the university did make it mandatory for all students. There was one option which was under consideration that the degree of the individual will be issued only after he/she had availed internship, but due to some legal constraints it could not get implemented. Similarly, at the regulatory bodies end i.e. Higher Education Commission and Pakistan Engineering Council, internship is highly encouraged but not made compulsory due to the fact that all universities within the country cannot afford to find internship opportunities for their respective students.

The University always prefer sending students to well established organizations for the purpose of internship. All these organizations are already following certain international standards. Therefore, based upon these standards the students are also taken within the scope of the industry and accordingly the working days i.e. five days per week and the health & Safety issues are also covered for the students.

4.4.2 Charter between the intern and the supervisor

At both NED University and Bahauddin Zakaria University, Multan, the internship is mandatory. All students are highly encouraged as well as fully facilitated for getting such opportunity; it is also ensured they avail it in the defined period. Moreover, there is no structured system available, therefore, no such provision of assigning a supervisor or having a charter between the intern and the supervisor for internship exists. The Departmental Internship Committee however, coordinates with the respective industry and gets the feedback so as to ensure that the student is attending the industry and is also gaining industrial experience.

4.4.3 How to look for an internship opportunity?

NED University has a full-fledged Directorate of Industrial Liaison (DIL). This directorate is responsible for arranging internships for the undergraduate students. This directorate interacts with the industry and, if there is any internship opportunity available, it posts the details to its website and also interacts with the respective department to nominate students for the internship.

However, in Bahauddin Zakaria University industrial contact is normally carried out by the respective Industrial Liaison Officer (ILO). ILO contacts the alumni and industry for potential internship opportunities and inform students about such opportunities. Students are also facilitated by ILO to contact alumni regarding internship opportunities.





4.5 Regulations about Reporting and evaluation of the internship

All students are required to write a report of their internship. This report is submitted to the Departmental Internship Committee with a copy provided to the Internship Coordinator of the industry.

- The report of the internship is expected to contain a technical description as well as a company description.
- The report is evaluated by the Internship Committee, followed by that, the students are required to present their major learnings in front of the Departmental Committee members along with the Internship Coordinator of the respective industry/company. This Committee comprises of 3-4 senior faculty members including the chairperson of the department along with the industrial representative who would evaluate the performance of the internee. This committee assembles within three days after the internee reports back to the department. In case of having poor performance during the internship, the individual is assigned to repeat the internship in any other industry during subsequent semester break.
- Formal feedback related to student conduct and technical approach is taken at the end of this training / internship.

4.6 The legislative and regulatory framework for internships defined by the Higher Education Commission of Pakistan

There is no framework defined by either the Higher Education Commission of Pakistan or Pakistan Engineering Council. It is expected that as an outcome of this study, a framework can be devised after setting the European universities framework as a benchmark. The framework thus devised will be converted in a manner so as it will become naturalized into Pakistani environment with specific to the limitations of the local industry and the university as well as any role that HEC could play for getting a strong internship programme launched.



PART II: Current practices in the Program Countries

5. Current practices and policies for internships in Europe

Each year, around 1,900 young participants are offered internships to increase their professional skills, develop their personal qualities, and enhance their EU knowledge through the EU trainee programmes. Most of the EU institutions organize traineeships for young university graduates, each lasting usually between 3 and 5 months.

Internships are available in a wide range of fields and offer a great insight into the work of the EU. The content of the job largely depends on the service you are assigned to. Opportunities are available in the fields of competition law, human resources, environmental policy, communication and many more. The selection procedures for internships are run individually by the EU institutions and agencies themselves.

This section is all about dealing with different EU policies surrounding quality internships. Several policymakers give their suggestions for quality internships as practices to be followed including the European Parliament, the council of the European Union, European Youth Forum (YFJ), and the European Commission. Although YFJ does not contribute to policy making for quality internships but is instead an NGO with youth organizations as members.

5.1 The European Parliament

The European Parliament is an elected body in the EU which operates together with the European Union Council, combined they form the legislative body of the EU. The legislative proposals first must come from the European Commission to the European Parliament to address. A report by the European Parliament in 2017 reports on 'Skills Development and Employment: Apprenticeships, Internships, and Volunteering' gives a comprehension of quality internships. According to the report,

- In the labour market characterized by weak Labour demand, young people need to do something that can mark them out in the recruitment market.
- Work-based learning at the European level which includes apprenticeships, internships, and volunteering, has been given importance to combat youth unemployment and future skills mismatches.
- To meet quality standards for apprenticeships, internships, and volunteering schemes, challenges need to be addressed through policy response accepted by all stakeholders including employers, organizations, and trade unions.





- Apprenticeships should be well governed compared to internships and volunteering, ensuring fair working and learning conditions that lead participants to enter the labour market.
- Internships and volunteering are less regulated and offer less secure working conditions for participants. Therefore, the outcome is less pronounced compared to apprenticeships.
- Introducing, establishing, and developing apprenticeships, internships, and volunteering includes the sharing of responsibilities, costs, and benefits between government, education providers, employers, and individuals.
- As there are societal risks associated with internships and volunteering, the concern is that they are not equally accessible to all. Meanwhile, there are indications that they can lead to replacing regular (paid) employment and the misuse of qualified young people. Finally, it hints at a re-thinking of who (m) bears the costs for skills development: the State, the employer, or –increasingly – the individual.

5.2 The European Commission

In the European Union, the tasks of legislation, implementation of decisions and to manage the day-to-day running of the European Union has to operate through the European Commission. Simply put, the European Commission is responsible for the follow-up of legislations, their implementation, and decisions related to a day-to-day tasks. The commission is also following up issues related to internships and has written several reports on it. The most recent document on internships came in 2016 titled '*Applying the quality framework for traineeships*' that includes another commission proposal, titled 'The youth guarantee and the youth employment initiative three years on'. The document adds eminence on quality internships framework for internships, focuses on how to look for an internship, and their legislation with regards to quality internships. This document further touches on the aspects related to internships like written agreements, working conditions, learning objectives, and many more. The document also adds on the challenges that need to be addressed including insufficient learning context, lack of transparency on hiring practices, the possibility of internship longer than six months, and lack of rules on proper recognition of internships.

5.3 The Council of the European Union

In 2013, the Council has adopted a very important document named '*Council Recommendation on a Quality Framework for Traineeships*' focusing on written agreements, learning objectives, working conditions, and recognition in line with internship schemes. Besides, the Council of the EU in March 2018 adopted the council recommendation on a European framework for quality



and effective apprenticeship. The document aims at "increasing the employability and personal development of apprentices and contributing towards a highly skilled and qualified workforce responsive to labour market needs". As the title indicates, this document focuses on apprenticeships, which is different than internships. It makes clear that apprenticeship is "formal vocational education and training schemes", which is different than the Higher Education internships.

5.4 The European Youth Forum

The European Youth Forum acts as an umbrella for all youth organizations across Europe and has worked extensively on quality internships. The most eminent contribution by this forum is *the European Quality Charter on Internships and Apprenticeships* which draws the list of recommendations used as a reference to evaluate the quality of internships.

The charter includes the following articles.

5.4.1 Article 1.

Internships should be **primarily a learning experience** where:

- Internships should never lead to job replacement
- Well organized internships help young people acquire practical experience and add practical skills to the knowledge and qualifications that have been previously acquired through either formal or non-formal education
- Internships help to orientate oneself professionally and also widen one's perspectives of different sectors
- Internships provide a recognized working experience that develops the skills of young people and elevates their professional capacity
- Internships should be carried out under the guidance of a competent supervisor and have access to robust evaluative and complaints channels to monitor the progress and quality of the internship experience
- Interns should be informed at the beginning of their internship experience of their social and labour rights, workers representatives, their responsibilities to the organization, any health and safety risks posed to them through the position or at the workplace, and are provided the relevant social protection accordingly

5.4.2 Article 2

This article **includes a description of internships** as a part of higher education that should meet the following criteria:



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[Context Analysis for IPs and Mobilities in Asian Universities - D1.3 and WP1]

- Existence of a written and legally binding contract between the educational institution, intern and hosting organization outlining the main principles of the internship, including how many credit points this will contribute to the diploma of the intern; a description of learning objectives and tasks should be attached to the contract
- Duration and tasks of the internship correspond to specific learning objectives that are shared with the student at the beginning of the internship
- Guidance throughout the internship period by a supervisor(s)
- The right of the intern to receive reimbursement of costs incurred during the internship or right to receive food, housing, and public transportation tickets instead; decent remuneration for work carried out additional to the requirements outlined in the internship contract, including compensation for overtime, clear evaluation criteria of the internship period

5.4.3 Article 3

Internships taking place **outside/after formal education** should ideally **not exist** however where they exist they **should meet the following criteria**:

- Existence of a written and legally binding contract outlining the length, remuneration of the internship, a description of learning objectives and tasks should be attached to the contract
- Decent remuneration not below the EU poverty line of 60 % median income or national minimum wage, if more favourable, under the tasks which are performed by the intern and to working hours (overtime should be added all compensated). Internship remuneration should be regulated either in law or collective agreements under a national practice
- Use of internships should be limited to pupils, students and very recent graduates, length of internships period should be restricted to a reasonable and fixed number of months
- Reimbursement of costs incurred during the internship
- Inclusion of the intern in the social security system, especially those of health, unemployment, pension systems
- Mid-term evaluation, discussion of the possibilities to be hired as a permanent employee during the internship period and a final evaluation at the end of the internship period
- A limited number of interns per internship provider
- Transparent advertising that includes a detailed task description and working conditions

5.4.4 Article 4

The competent stakeholders to progressively develop the following **support and monitoring policies** for a better implementation of quality internships:



Legal framework and recognition of skills

- Internships should be given a place in the national legislation and employers should be assisted with any legal inquiries related to the implementation process;
- At the European level there should be mechanisms in place to promote the exchange of best practices in the area and the implication of the main criteria that define quality internships;
- National and European systems for certification and recognition of knowledge and skills acquired through internships should be in place to further support to smooth integration of young people in the labour market and support youth labour mobility.

Monitoring and statistics

- Statistics should be available on internships, nationally and at European level,
- with a special focus on the number of internships available, the average length of internships, the social benefits being made available for interns, the allowances paid to interns, the age groups of interns;
- An overview should be available, nationally and at the European level, on the different internship schemes and their place within the legal systems.

Partnerships

- National partnerships run between schools, universities, civil society organizations, and the social partners should be encouraged and supported;
- More career development loans and investment in training by employers should be encouraged and supported;
- Schools should assist the young people when they are looking for a suitable apprenticeship
- Student and pupil organizations trade unions should be available to assist interns throughout the internship period.

6. Internship programs requirements in Ghent University, analysis of the legislative and regulatory framework for internships

6.1 Introduction

Internship in Ghent University includes the following categories and their requirements depend upon the types. There are 3 types:



- 1- Domestic/ Foreign internship
- 2- Paid / Unpaid internship
- 3- An internship that entitles to 3 or 6 ECTS (European Credit Transfer and Accumulation System)

An internship valid for 3 ECTS has a duration of minimum 4 weeks in one company, in one year, while 6 ECTS has a minimum of 6 weeks in one company, in one year. There are two options to follow an internship:

- (In the summer) preceding the first master year
- (In the summer) between the first and second master year

There is no strict procedure to find an internship, nor is there a single list with internship positions to choose from. Some options to find an internship are

- Engineering students: VTK (*Vlaamse Technische Kring*, <u>https://vtk.ugent.be/</u>) publishes internship positions at its website, and internships may also be found at the yearly job fair.
- Other student organizations (aimed at veterinary, arts, law, ...) might do the same.
- IAESTE (International Association for the Exchange of Students for Technical Experience, <u>https://iaeste.be/</u>) coordinates internships abroad. IAESTE is an exchange programme matching top level, forward thinking employers with the best engineering, technology, science and architecture students from around the world. IAESTE host employers provide training experiences to top STEM students from across the globe, without having to deal with cumbersome administration. This gives employers the opportunity to diversify their workforce and develop new international business opportunities by hosting skilled university students through the IAESTE programme.
- Some masters organize dedicated industry-related events where opportunities for internships are announced.
- You can contact companies yourself, or activate your network!
- Most of your professors have excellent relations with industry and are, for sure, prepared to help you in finding an exciting internship.

6.2 General Regulations for internships

• The internship should preferably be practical and/or experience-driven. The intention is for the students to carry out the internship outside of their "trusted" academic environment. The internship is preferably carried out in a company, research institute,



or university either at home or abroad. An internship at a university will only be accepted if the university involved is not a Dutch-Belgian university.

- The internship should be of a sufficiently high technical-scientific level.
- The student should display sufficient technical and scientific maturity. In principle, an internship is carried out during the summer recess before the final year, but it can also be done a year earlier.
- The internship application has to be approved by the Internship Committee.

6.2.1 **Regulations for allowing the internship to earn credits**

The student has three options for allowing one or more internships to earn credits:

- If students carry out an internship of a minimum of 4 weeks, they can include this internship in their curriculum as "(International) Internship 1" for 3 credits.
- If students carry out a second internship of a minimum of 4 weeks each, they can include these either in the same year, either in the following year in their curriculum as "(International) Internship 1" and "(International) Internship 2", each for 3 credits.
- If, however, students carry out an internship of minimum 6 weeks in one establishment (company) and in one academic year, they can include this in their curriculum as "(International) Internship 3" for 6 credits.
- It is impossible to combine "(International) Internship 3" with "(International) Internship 1" or "(International) Internship 2" in the same, or different, academic years.

6.2.2 Supervisor

- Before the start of the internship, students are required to look for a supervisor among the tenured academic staff (professors), specializing in the discipline of the internship.
- The supervisor must ascertain, through personal contact with the establishment offering the internship and with the on-site internship coordinator, that the level of the internship on offer is technically and scientifically speaking sufficiently high.
- The supervisor must also accept the proposed internship agreement.
- The Study Programme Committee will decide whether or not the internship can be accepted as an elective module when the students include it in their curriculum.
- The Study Programme Committee will only refuse when the students were to take up more than 6 credits of internship.
- If the students cannot find a supervisor, or cannot find one in time, the internship cannot be taken into consideration as an optional course unit.





6.3 Regulations about Reporting and evaluation of the internship

- Upon completion of the internship and before submitting the internship report, the supervisor will call a meeting where it will be decided whether or not the internship is retained as an elective module.
- For the sake of uniformity of assessment, the internship coordinator of the company must complete a prescribed assessment form; this assessment form can be found for engineering students on the administrative platform of the faculty (PLATO).
- If the students want to include the internship for credits, they are required to list this as their elective module on the UGent course platform (called OASIS).
- This must be done before 15 October of the academic year in which the internship is included as an elective module, per the rules and regulations governing elective modules.
- Moreover, the students are required to write a report of their internship (min. 10 and max. 30 pages, font size 12, 4 lines per inch), possibly supplemented with technical annexes. This report must be made up of four sections, namely a description of the company and its activities, a description of the internship assignment, a technical report of the internship, and a personal assessment.
- This report, with any annexes, must be submitted, in a single copy, to the supervisor by 1 November at the latest. The students must also submit one copy to the internship coordinator of the company.
- Students of English taught Master's programs are allowed to write the report in English. All other students can choose whether they write the report in Dutch or in English, by the promotor and the internship supervisor.
- It is possible that students come in contact with confidential information, or gather new information that cannot be published, during their internship, because of a Non-Disclosure Agreements (NDA), signed by the student. In this case, rules apply that correspond to the rules for master's dissertations:
 - The student informs the promotor that the internship contains confidential information.
 - The promotor indicates the confidentiality of the report in PLATO and can also indicate an embargo date.
 - \circ $\;$ The student includes a clause about confidentiality in the report.
 - Note: It is the final decision of the promoter if he/she has sufficient information to evaluate the student's report. If necessary, the promoter can also sign an NDA with the internship provider to be able to get access to sufficient information, essential to the evaluation.





• For the assessment of the internship, the supervisor draws up a brief assessment report using PLATO. The final grading is done in consultation with all the supervisors, convened, and chaired, by the faculty coordinator, by 24 December at the latest. The latter will send the final grades to the faculty administration (FSA) and the chairmen of the Study Programme Committees. The assessment forms will be archived in PLATO and will remain accessible for the internship coordinator. The internship reports and any technical annexes will be kept by the supervisor and internship coordinator. The uploaded documents will be archived in PLATO.

6.4 General Requirements and Roadmap of Internship starting from searching and internship opportunity till its evaluation

The requirements that you must follow to register your internship depends on the type of internship:

- Unpaid domestic internship or foreign internship outside the IAESTE that entitles to credits
- Unpaid domestic internship or foreign internship outside the IAESTE that does NOT entitle to credits
- Paid domestic or foreign internship outside the IAESTE that entitles to credits
- IAESTE-internship that entitles to credits
- IAESTE-internship that does NOT entitle to credits

In Ghent University general roadmap that implies to internships that entitles to credits is given below



Roadmap for internships

Textiles is part of the Faculty of Engineering and Architecture, we hence present the steps from the viewpoint of a student at this Faculty.

6.4.1 Step 1: Finding an Internship

To find an internship one of the following resources can be used

• VTK database



- Job/internship fairs
- Contacting a company
- Using the network of your professors

STEP 1: FINDING AN INTERNSHIP - PLATO

IAESTE

Î

• The faculty platform PLATO: an overview of internships previously chosen within your study program

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ges			
Toon recente stagepla	atsen procedure stageaanvraag		
pegevens			
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	Fitter	filter	Filter
	A8 InBev		EI-Houssaine Aghezzaf
	AGH University of science and technology	Development of control system for mobile robot.	Guiltaume Creveroeur
	Actemium	Estimation of the volume of a storage tank in a heat network	Frederik De Belle
	Addax Motors NV	Elektrisch Test- en Development Ingenieur	Jan Melkebeek
	Arcelor Mittal Gent	Modeling the heat transfer in two phase water-steam flow in the internally cooled structure of a walking beam furnace	Michel De Paepe
	Association Sportive de Vol à Volle d'Angers	Internship in exploitation and maintenance of glider winch equipment	Jan Vierendeels
	Atlas Copco Airpower	State	Patrick Segers
	Atlas Copco Airpower	Opstellen en analyse van een dimensie-loos diagram van verschillende type compressoren	Michel De Paepe
	BASE	Opstellen werkplanning uitwisseling kraakgastleppen	Wim De Waele
	BASE	bad-actor onderzoek in de cyclohexanon-instaliatie	Marie-Francoise Revniers
	BASE Antwerpen N.V.	Implementatie van geavancerde regelconcepten op een installatie	Gert De Cooman
	BASE Antwerpen N.V.	Mechanische engineering van een chemische productie-installatie	Michel De Paepe
	Basi Antwerpen NV	Data-driven quality control modeling	Patrick Segers
	Bekaert Engineering	Sturing van een SCAPA robotarm	Alex Van den Bossche
	CNH Industrial	availing ner con administrativenin	Patrick De Baets
	CNH Industrial Belgium	Durable lightweight design of a combine grainpan by innovative material selection and joining technique	Stijn Hertelé
	CNH Industrial Belgium N.V.	Testen van nieuwe technologieën combines	Wim De Waele
	CNH Industrial Belgium NV.	zomer stage 2016 bij (NH	Guillaume Crevecoeur
	CNH Industrial Belgium NV.	Stage bij bigbaler invration afdeling CNHI Zedelgern	Patrick De Baets
	CNH Industrial Belgium nv	stage CNH	Wim De Waele
	Cochlear	ThinMic/TubeMic	Patrick Segers
	DENE	Stage DEME bij GeoSea (Rentel windfarm)	Wim Van Paepegem
	Dana Belgium NV	Reverse Engineering of a High Speed Electric Motor	Lieven Vandevelde
~	Dana Belgium NV	Safety valve control unit for use on a gearbox in an Off-highway vehicle	Wim De Waele
	Deceuninck NV	Sterkteberekeningen binnen de vormmatrijs	Wim De Waele
	Delaware Consulting	Stage rond APOC en een data-analyse studie	El-Houssaine Aghezzaf
	Detailte	Engineering and Asset Management Consultant	El-Houssaine Aghezzaf
UNIVERSITEIT GENT	Exmar	Internship on Exmark Excellence: a LNG regas vessel pumping NG to the shore of Israel	Marc Vantorre
	Exmar	State aan boord van een FSRU (EXPLORER)	Marc Vantorre
	Exmar Marine	Constructieproces van een LNG/LPG tanker op een scheepswerf	Marc Vantorre
	ExonMobil	Het verbeteren VOC emissie-berekening van storage facilities	THE PRIME

Finding an internship- PLATO

6.4.2 Step 2: Find a supervisor at UGent

The second step is to find a supervisor at UGENT that specialized in the discipline of the internship. He is responsible for quality control and evaluation and also the contact person for both student and company

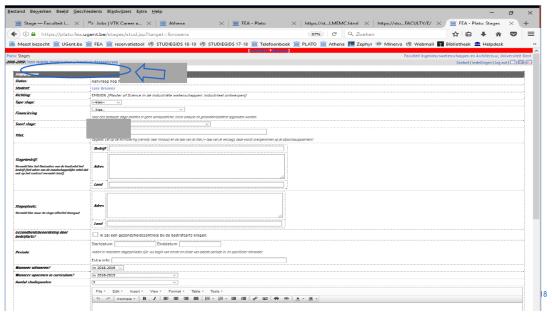


6.4.3 Step 3: Submit application in PLATO

The student needs to make an application for internship in the online platform (PLATO)

- Go to 'my internship' in PLATO
- Fill out all categories until 'internship promotor'
- Click on 'submit request to promotor'
- Pay attention to the title, it will be mentioned on the diploma supplement
- Make sure that the information is correct
- You cannot go back after having submitted!
- mail exceptional changes to stages.ea@ugent.be

STEP 3: APPLICATION IN PLATO



Application in PLATO

6.4.4 Step 4: Internship contract

- Draw up an internship contract depending on the type.
 - 1- IAESTE-INTERNSHIPS
 - 2- IAESTE-internship that entitles to credits
 - 3- OTHER INTERNSHIPS
 - 4- Unpaid domestic internship or foreign internship outside the IAESTE that entitles to credits





- Internship contract is created via the web application UGent, supervisor signs for UGent if needed.
- Contract of employment is between student and company, UGent is no party, so the supervisor doesn't sign
- Note that judicial review is obligatory when using a company contract instead of the UGent suggested contract
- Upload the SIGNED contract (by all relevant parties) in PLATO

6.4.5 Step 5: Health check: Risk analysis

The aim is to overview all risks. This is an Obligatory document that has to be filled out by the company. The company declares in the risk analysis if a health check is necessary. It has to be uploaded by the student in PLATO: the student has to report in PLATO if a health check is necessary.

If a health check is necessary, the student has to make an appointment in the online agenda of DMT (Dienst Medisch Toezicht - Department Medical Control) on PLATO. A health check by DMT is free.

The risk analysis document:

- Has to be filled out ONLY if a health assessment is necessary.
- Has to be filled out by the company/student
- Has to be uploaded by the student in PLATO

6.4.6 Step 6: Only for foreign internship

- The student needs to register an exchange application in the course platform OASIS ٠ Foreign internships have to be registered in OASIS by an exchange application (without filling in the curriculum in exchange)
- Risk management document must be filled in (to find all students in other countries by the central database in case of political unrest or travel warnings or natural disaster).
- The international internship will be registered on the diploma supplement

6.4.7 Step 7: After the Internship

- Debriefing with the supervisor
- The supervisor adds the course 'internship' into the curriculum at the start of the new academic year
- Choose the correct course (domestic internship / foreign internship / 3ECTS / 6 ECTS).



6.4.8 Step 8: Report

The student has to contact the UGent supervisor before submission of the internship report to define the expectations about the report. Minimal requirements as mentioned in the internship rules:

- The report must consist of 4 sections :
 - 1. The company and its activities,
 - 2. A description of the internship assignment,
 - 3. A technical report of the internship
 - 4. A personal assessment
- Practicalities: Min. 10 and max. 30 pages (font size 12, 4 lines per inch), possibly supplemented with technical annexes
- Language: Dutch or English
- Deadline: 1/11 (semester 1) or 15/05 (semester 2)

6.4.9 Step 9: Evaluation

The evaluation process starts automatically after the student uploads his report on PLATO

- PLATO sends an email to the internship coordinator of the company
- The internship coordinator must complete a prescribed assessment form on PLATO
- PLATO sends an email to the UGent supervisor
- The results will be registered in Oasis and are official on the transcript of records of the first semester

6.5 Requirements and regulations for unpaid domestic or foreign internships outside the IAESTE that entitle to credits

Following are the roadmap and requirements for unpaid domestic or foreign internships outside the IAESTE that entitle to credits

- Find a supervisor.
- Enter the details of your internship in PLATO under "my internship".
- Your supervisor will receive an e-mail as soon as you click "submit request and send to supervisor" and can approve the internship for credits in PLATO.
- In consultation with the company, draw up an internship contract via the internship web application. Once all the sections have been completed, print two copies.
- Sign your contract and ask your supervisor and internship coordinator to do the same.



- Upload a copy of the contract onto PLATO.
- Distribute the signed contracts as follows: 1 copy for yourself; 1 copy for the company.
- Ask the company to complete the risk analysis (RA) and work station file (WPF) and upload these onto PLATO. The work station file only has to be filled if a health assessment is necessary.
- The Health and Safety Department will check if a health check is necessary and if so, you will be invited through PLATO to make an appointment with the Health and Safety Department. If the health check is necessary:
 - Make an appointment in the online agenda on PLATO. Only if there are no free spots left, you have to contact the Health and Safety Department yourself.
 - The appointment has to be made at least 6 weeks prior to the start of the internship. Please take your internship contract, filled risk analysis and work station file, and vaccination card.
 - After the health check, you will receive a "health assessment form ". Please upload this certificate onto PLATO.
- International internships also have to be registered into Oasis prior to departure. Choose the academic year in which you want to add the internship to your curriculum. Then choose "Exchange" under "Curriculum". Fill out all the requested info.
- Upon completion of the internship, please contact your supervisor for an evaluation meeting to determine if the internship met everyone's expectations.
- If the internship can still warrant credits, draw up an internship report and upload it onto PLATO before 1 November.
- Both your supervisor and internship coordinator in the company will receive an e-mail via PLATO to assess the internship there.

6.6 Requirements and regulations for unpaid domestic internship or foreign internship outside of IAESTE which does NOT entitle to credits

Following are the roadmap and requirements for unpaid domestic internship or foreign internship outside of IAESTE which does NOT entitle to credits

- Enter the details of your internship in PLATO under "my internship".
- In consultation with the company, draw up an internship contract. You can add the assigned responsible for the faculty (in 2020 this is prof. Patrick Segers) as UGent supervisor. Once all the sections have been completed, print two copies.
- Sign your contract and ask your internship coordinator to do the same.
- Upload a copy of the contract onto PLATO.
- Distribute the signed contracts as follows: 1 copy for yourself; 1 copy for the company.





- Ask the company to complete the risk analysis and work station file and upload these onto PLATO. The work station file only has to be filled if a health assessment is necessary.
- The Health and Safety Department will check if a health check is necessary and if so, you will be invited through PLATO to make an appointment with the Health and Safety Department. See previous section for the details
- Nothing else is required, as no credits can be given.

6.7 Requirements and regulations for a Paid domestic or foreign internship outside of IAESTE which entitles to credits

Following are the roadmap and requirements for <u>Paid</u> domestic or foreign internship outside of IAESTE which entitles to credits

- Look for a supervisor.
- Enter the details of your internship in PLATO under "my internship".
- Your supervisor will receive an e-mail as soon as you click "submit request and send to supervisor" and can approve the internship for credits in PLATO.
- In consultation with the company, draw up a contract of employment in duplicate.
- Sign the contract and ask your supervisor and the company to do the same.
- Upload a copy of the contract onto PLATO.
- Distribute the signed contracts as follows 1 copy for yourself; 1 copy for the company.
- International internships also have to be registered into Oasis prior to departure. Choose the academic year in which you want to add the internship to your curriculum. Then choose "Exchange" under "Curriculum". Fill out all the requested info.
- Upon completion of the internship, please contact your supervisor for an evaluation meeting to determine if the internship met everyone's expectations.
- If the internship can still warrant credits, draw up an internship report and upload it onto PLATO before 15 October.
- Both your supervisor and internship coordinator in the company will receive an e-mail via PLATO to assess the internship there.
- All the above applies under the terms of the internship rules.

6.8 Requirements and regulations for IAESTE internship which entitles to credits

Following are the roadmap and requirements for IAESTE internship which entitles to credits



- Find a supervisor.
- Enter the details of your internship in PLATO under "my internship". Discuss the content of your internship and the internship report.
- Your supervisor will receive an e-mail as soon as you click "submit request and send to supervisor" and can approve the internship for credits in PLATO.
- Upload a copy of the IAESTE acceptance note (N5a) onto PLATO as internship contract. It is not necessary to make a separate internship contract.
- Ask the company to complete the risk analysis (RA) and work station file (WPF) and upload this onto PLATO. The work station file only has to be filled if a health assessment is necessary.
- The Health and Safety Department will check if a health check is necessary and if so, you will be invited through PLATO to make an appointment with the Health and Safety Department. If the health check is necessary:
 - o Make an appointment in the online agenda on PLATO. Only if there are no free spots left, you have to contact the Health and Safety Department yourself.
 - The appointment has to be made at least 6 weeks prior to the start of the internship. Please take your internship contract, filled risk analysis and work station file, and vaccination card.
 - After the health check, you will receive a "health assessment form ". Please 0 upload this certificate onto PLATO.
- International internships also have to be registered into Oasis prior to departure. Choose the academic year in which you want to add the internship to your curriculum. Then choose "Exchange" under "Curriculum". Fill out all the requested info
- Upon completion of the internship, please contact your supervisor for an evaluation meeting to determine if the internship met everyone's expectations.
- If the internship can still warrant credits, draw up an internship report and upload it onto PLATO before 1 November.
- Both your supervisor and internship coordinator in the company will receive an e-mail via PLATO to assess the internship there.

6.9 Requirements and regulations for IAESTE internship which does NOT entitle to credits

Following are the roadmap and requirements for IAESTE internship which does NOT entitle to credits

Enter the details of your internship in PLATO under "my internship". •



- Upload a copy of the IAESTE acceptance note (N5a) onto PLATO as internship contract. It is not necessary to make a separate internship contract.
- Ask the company to complete the risk analysis (RA) and work station file (WPF) and upload this onto PLATO. The work station file only has to be filled if a health assessment is necessary. The rules for this are as in the previous section.
- Nothing else is required, as no credits can be given.

6.10 Risk analysis of a workstation in a company or institution

It is necessary to perform a risk analysis of workstation in a company or institution before going there for internship. There is a document that is filled out after consulting the traineeship provider, the trainee mentor and the trainee supervisor.

It includes

- General data of the traineeship
- Traineeship mentor (optional)
- Name work station or general description of the function
- Nature of the traineeship activities

6.10.1 Risks analysis

Risk analysis is done on the following basis

- Places of activity that can cause severe fires or explosions
- Rooms for post-mortem examination services
- Rooms where animals are slaughtered or carcasses processed
- Places of activity where there is a risk of contact with hydrocyanic acid or any substance that can create this acid
- Rooms or construction sites where asbestos fibres can be remobilized

6.10.2 Analysis of Procedures and activities

Analysis of procedures and activities includes the following

- Production, use, distribution with the intend to use, storage and transportation of explosives or projectiles, detonators or objects that contain explosives.
- Labour in a pneumatic caisson and in overpressure





- Working with machinery meant for the production, storage or filling of reservoirs with inflammable liquids and compressed gases, liquefied or dissolved gases; activities which can cause serious fire or heavy explosions.
- Ground and buttress works at excavations of more than two meters deep where the width at half depth is smaller than the depth; activities with a risk of collapse.
- Operating excavators
- Operating machinery for driving piles.
- Operating cranes and guiding their drivers with signals.
- Demolishing buildings
- Constructing and taking down scaffolds
- Welding and cutting with an electric arc or a burner within tanks
- Using a nail gun.
- Maintaining, cleaning and repairing high-voltage installations. Labour with risks concerning high-voltage
- Loading and unloading ships
- Pruning and cutting down trees and treating spars.
- Labour with dangerous machinery except for machinery that has sufficient, independent working, security measures. Considered dangerous are:
 - Machinery for woodworks: circular saws, band saws, planning machines, thickness planning machines, milling cutters, tenoning machines, combined machinery.
 - Machinery for leather tanning: rolling machines, bale-pressers, scraping machines, staking machines and vacuum dryers.
 - Metal presses: screw presses with a friction clutch, excentre presses with a mechanical, pneumatic or hydraulic clutch, hydraulic presses.
 - Presses for shaping plastics.
 - Mechanically driven metal cutters.
 - Drop-board hammers.
- Procedures and activities as intended in annex II of the Royal Decree of 2 December 1993 on the protection of employees against the risk of contact with carcinogenic agents at work.
- Activities with wild or poisonous animals
- Painting with paint that contains white lead, lead sulphate or any product that includes those substances, when the lead content is higher than two weight by weight in metallic state.
- Working at or with tubs, basins, reservoirs or flasks that contain chemical agents.
- Activities at a machine-controlled work rhythm





- Operating cranes •
- Contact with chemical agents (dust, gases, vapours) •
- Contact with biological agents
- Contact with physical agents
- Contact with physical agents •
- Falling of heights or ground floor •
- Falling objects •
- Noise >80dB(A) •
- Sharp objects •
- Working in an environment that is over-pressured/under-pressured •
- Ionizing or radioactive rays
- Non-ionizing rays, such as radio waves, microwaves, IR, UV and laser radiation •
- **Electrical risks** •
- Humidity •
- Warmth (climate) •
- Cold (climate) •
- Heat (burns) •
- Foodstuff-related activities

6.10.3 Increased risk activities

- B-VCA-training required (basic safety training VCA) •
- Activities requiring specific training
- Activities requiring permits: 1. Permit for entering enclosed space 2. Fire permit 3. Cold permit 4. Digging permit 5. Working on electric installation 6. Others
- Activities with heightened vigilance •

6.10.4 Work station file for trainees

This document is required to be filled up as implementation of the Royal Decree of 21 September 2004 on the protection of trainees and the Royal Decree of 3 May 1999 on the protection of youngsters at work.

The document looks as follows, and allows to identify the risks as given in the previous sections





In in	Work station file for t	protection of trainees and the Royal	
Part	 of the work station file (A and B) must be filled out in advantanceships, a copy of part 1 can be used, the work station all parties concerned sign the file. of the work station file is filled out at the beginning of each ing occurs at the beginning of each traineeship. 	nce for each traineeship (not for each trainee). For similar n file can be personalized by filling out part 2 and having	
Α	TO BE FILLED OUT BY THE TRAINEESHIP PROVIDER Name company: Address:	Company number: Telephone:	
<u>+</u>	Name department head: Name external department for prevention and protection at vecompany: Tel. EDPPW: Educational institution: Universiteit Gent Study programme offering the traineeship: Description work station / activity Work station: Required training for safe completion of the traineeship: Task description: Prevention measures to be applied:	work (EDPPW) or the industrial medicine department of the	
	Risk-potential activities poisonous carcinogenous mutagenous teratogenous others: biological agents, deliberate exposure: class 2 class 3 specify: contact with blood, bodily fluids or other biological material of human origin activities around animals	 psychological infrared-rays ultraviolet-rays operating dangerous machinery lasers noise shift work isolated work 	
	activities around animals ionizing rays:isotopesX-rays contact with dust or powder object lifting physical Risk function	jounger than 18 night work operating computers other:	

Work station file for trainees





PART III: BEST PRACTICES AND RECOMMENDATIONS

7. Transfer of good practices in Europe

The different partner countries are in different stages of development of a robust internship program. Several lessons can still be learned from the European context, specifically in raising the quality of the internships. Specifically, the objectives of an internship program must be closely monitored:

- 1. Tasks that provide a learning experience
- 2. Clear written agreement between intern and employer with the outline
- 3. Well defined duration dependent on the goals of the program, allowing for sufficient classroom learning
- 4. Proper working conditions

The practices in Europe to monitor and guarantee these 4 objectives should be studied by the partner programs to adapt them to their local situation.

In Indonesia there is a trend for longer internship programs up to 18 months, however, long internship programs of high quality are difficult to organize for all students, with very varied learning experiences as a consequence, which increases differences in status between students. In Europe shorter programs are the norm, of 1 to 6 months. Extra internships are possible for job seekers, after finishing their degree, should they not succeed in finding a job. The internships aimed at in SMARTEX should probably be situated in the third type of Indonesian internship, the field practical work.

Motivating SMEs to allow internships should be another important means of providing sufficient high quality internships, and lessons to reach the SMEs should be exchanged.

Concerning Malaysia, a charter between the student and the supervisor from the host organization is already necessary. The situation in Malaysia most closely resembles the state in the EU, and can aid the other partners in making their internship programs more robust.

Concerning Indonesia, there is no formal charter between the student and supervisor, and no fixed contract for the companies. Several improvements to the program should be considered.

Concerning Pakistan, the internship program has not matured yet. No credits are awarded to internships, and no charter is made at the moment, though both partner universities in Pakistan



have mandatory internships for their students. The SMARTEX project should help transfer the best practices in Europe.

The EU is a very linked economy, with possibilities for mobility between countries. In the partner countries, this is less the case, nevertheless, a robust support for foreign students that follow internships, would be a great boon, and the approach of the EU can be a benchmark for this.

Recommendations and Conclusions 8.

We can conclude that the best approach is an approach adapted to the different partner countries.

For Malaysia, an in depth audit of the system to identify weak points and areas of improvement, is best suited. How is the quality of the internships guarded? Are statistics kept to identify problem companies, or weak points? Are the internships not used as job replacements? Does the contract between the educational institution and the hosting organization offer sufficient guarantees when compared to the European version?

For Indonesia, the internship should not be so long as to hinder the formal education. In the EU, an internship corresponds to a single course, and a maximum of two internships during the master is an option. A formal charter between the university, the student and the host company/supervisor should be created, leaving room for adequate quality assurance.

For Pakistan, a formal internship program for students, where this internship counts as credits, should be worked out.

Further points of recommendation are:

- 1. Construct different ways to promote internships with companies:
 - a. Invite companies to be part of the programme board
 - b. Organize different activities and events to raise global awareness of internships
 - c. As a faculty: establish an industry advisory board
 - d. As faculty members: establish and nurture alumni associations
- 2. Establish templates for good practices for internships
- 3. Award credits for internships (for example, the official *courses* for internship at UGent are https://studiegids.ugent.be/2020/EN/studiefiches/E099970.pdf and https://studiegids.ugent.be/2020/EN/studiefiches/E099920.pdf), however, these credits and the time spent, should be in accordance with the other courses in the semester
- 4. Allow for NDA's with the companies to protect their IP



- 5. Set up an organisation that promotes internships among students, where this organisation is not limited to a single university
- 6. Allow to link the master/bachelor thesis of a student with the internship work done for a company
- 7. Set up robust reporting, and collect statistics to allow for monitoring of the internship program, and perform regular audits of the systems by external people. This should for example guarantee that internship does not replace regular jobs.
- 8. Make use of fixed contracts between the student and the company.
- 9. Make use of an obligatory *Health check* and *Risk analysis* document, where the company must indicate if there are health considerations for the internship, and the university covers costs of the health check of the student. The university should create a document of which substances at the workplace require a risk analysis to guarantee the safety of the student, as well as when a health check is mandatory. The university should make sure the company follows regulations concerning a safe work place.
- 10. Create a robust system to support outgoing international internships, as well as promoting with the partnering companies of incoming international internships.
- 11. Create a clear document on how the evaluation of the internships will be done, and how the supervisors need to grade the internship.
- 12. Allow for a mandatory registration system for students doing internships outside of the university program. Although this does not give right to credits, it allows to ensure for the university that the basic rights of the students are guaranteed, even if they do an internship outside of the standard curriculum.

We believe steps toward implementing these conclusions and recommendations can be taken within the SMARTEX project.

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