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# **Digital Internship Model for Higher Professional Studies**

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## **INTELLECTUAL OUTPUT 1**

# **METHODOLOGY FOR DIGITAL INTERNSHIP IN PROFESSIONAL HIGHER EDUCATION**

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## Background

Work-based learning is a substantial part of professional education. For a vast majority of study programs in Professional Higher Education Institutions (PHEIs), internship is mandatory for the program accomplishment, with defined learning outcomes and ECTS-expressed workload. The internship concept is based on a planned period of experience in the workplace to help students to develop particular skills, knowledge or understanding.

In addition to the classical internship, nowadays become obvious that the assignment of work-based tasks can be performed digitally and remotely, thus providing a more flexible, efficient, personalized, low-cost, and adapted internship solution. Virtual internships (VI) enable students to gain real-world experience in a remote online setting and offer several advantages over traditional internship programs. With the development of adequate monitoring of student progress, virtual internships can significantly facilitate and speed up student learning outcome achievement. Virtual internships may be a solution for the inclusion of students who cannot participate in traditional internships due to financial, geographical reasons, or disabilities etc. Importantly, virtual internships allow easy and low-cost student exchanges and thus gaining of international experiences

Virtual internships are a type of remote internship that involves primarily the use of online and cloud-based technologies for conducting assigned work activities. The following guidelines pertain to virtual internships and should be used in conjunction the general policies on academic internships at higher professional education institutions.

## Terminology used in this document

Within this document, several terms will be used as follows:

**Professional student internship** - a form of teaching activities during the study which implies the practical work of the student in the goal completing theoretical, academic knowledge and establishing links with the practical knowledge and experience necessary to perform future work. This form of teaching is, in various forms, compulsory in most graduate academic studies programs.

**Virtual internship** - the use of an information and communication technology (ICT) supported environment, where students interact with each other and companies independent of time and space and across traditional geographical boundaries. In this environment, effective communications are created between students, faculty and company representatives, in order to carry out a specific and meaningful work-based activity that fits within the student's compulsory educational curriculum." (The INTERN project, 2007)

**Student** - a person formally enrolled in a study program at university, higher school or college

**Employer** – enterprise, companies, organizations, societies, institutions, small, medium and large companies, shops, associations in public, state, private and mixed ownership, who has the needs, desire and ability to work on the preparation, organization and realization of student internships.

**Internship supervisor** - a person within the company with appropriate professional experience and personal qualities that are voluntarily included in the program of realization of professional student internships. This person performs a number of tasks and activities that are aimed at preparing, organizing and controlling the implementation of student internships, monitors and directs the work of students, evaluates their performance and achieved results and prepares appropriate reports.

**Internship mentor** - teaching worker at the university / faculty /school (professor, assistant, doctoral student) who, in cooperation with the supervisor of internship, performs all preparatory, organizational and control activities necessary for successful implementation of student internships. The internship mentor performs a final evaluation of the achieved internship results.

**Student exchange** - a (usually reciprocal) arrangement whereby a student at a university or school studies at another educational institution, typically abroad, for a fixed period.

**Virtual student exchange** - a practice that consists of sustained, technology-enabled, people-to-people education programmes or activities in which constructive communication and interaction takes place between individuals or groups who are geographically separated and/or from different cultural backgrounds, with the support of educators or facilitators. Virtual exchange combines the deep impact of intercultural dialogue and exchange with the broad reach of digital technology (Being Mobile project (2006)).

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## PROFESSIONAL STUDENT INTERNSHIP

Internship means to offer a work-based learning experience to students by putting applied learning outside the university to intensively integrate academic knowledge with practical experience at the centre, giving them the opportunity of finding their professional field(s) of interest(s) and enhancing their employability.

Work-based learning may be required as part of the curriculum or optional and they are common above all in the medical, engineering, arts, law and business fields. Differences exist between institutions and even degree programs.

There are three major actors involved in any internship scheme: student, Higher Education Institutions (HEIs) and employer.

Internships, therefore, can be initiated and driven by any of the three actors involved: student, HEI or employer (Q-Planet. 2009).

- In the HEI driven scheme, the process is initiated by the university typically as a result of specific requirements in the curriculum. In most cases, this means that work placements are compulsory.
- In the company driven scheme, the driver is typically the employer who wishes to enter into direct contact with students – potential future employees – and to contribute to their training.
- In the student driven scheme which is defined as a situation where the student is the main responsible for all actions regarding the placement process.

### Higher education institutions - legal regulations

At the level of Higher Education Institutions (HEIs) internship is organized to provide structured and applied learning through practical experience and leads to the recognition of learning outcomes, under the supervision of a professional(s) with a significant background in the field of the experience. For the majority of Professional Higher Education Institutions (PHEIs), internship is mandatory for the program accomplishment, with defined learning outcomes and ECTS-expressed workload

From the point of PHEIs, minimal internship duration and structure, as a mandatory part of higher professional studies curricula, is defined by the study program accreditation standards, in compliance with the national legislative.

For example, Serbian Regulations on Standards and Procedure for Accreditation of Study Programmes for the first and second level study programs (EQF 6 and EQF 7) defines minimal hours of internship hours, with specificities for each scientific field.

- Natural-mathematical sciences

In the last year of the first and second level, they have a vocational practice of 90 hours and 3 ECTS credits, and in integrated studies of 90 hours and 3 ECTS credits in the fourth and fifth year of study.

- Technical-technological sciences

An integral part of the curriculum of the study programs for basic and master studies in the field of technical and technological sciences the vocational practice and practical work for is least 90 hours, which is carried out in relevant scientific research institutions, in organizations for performing innovation activities, in organizations for providing infrastructure support to innovative activities, in companies and public institutions.

In the field of biotechnical sciences, in the field of agriculture and forestry, during the basic studies students have work practice of at least 90 hours, production practice lasting at least 90 hours and technology-organizational practice of at least 90 hours.

- Humanities

In the last year of the first and second level, the vocational practice is 90 hours and 3 ECTS credits, and in integrated studies it is 90 hours and 3 ECTS credits in the fourth and fifth year of study.

- Medical science

The Serbian requirements for the accreditation of the study programs in medical field concerning the practice are in compliance with the Directive 2005/36/EC, therefore regulated by this Directive.

- Pedagogical study programs

Higher education institutions that carry out pedagogical study programs must provide pedagogical practice in the second, third and fourth year of studies of at least 90 hours per year. In the fifth year of study, the pedagogical practice is 180 hours and 6 ECTS credits. Pedagogical practices are carried out in pedagogical institutions.

For higher education institutions that do not have pedagogical education within the study programs, and whose graduates would be teachers of vocational subjects in secondary schools, must, in accordance with the Law on the Foundations of the System of Education, have education in psychological, pedagogical and methodical disciplines acquired at a higher education institution during the course of studies or after graduation, of at least 30 ECTS credits and 6 ECTS credits of practice in pedagogical institutions.

The Bulgarian regulations are somewhat flexible and are allowing the individual HEI to define their own requirements to the internships for many Bachelor and Master programmes (EQF 6 and EQF 7). However, there are several national regulations, which are covering the minimal requirements for specific professional qualifications. The specific requirements are summarized below:

- Natural and mathematical sciences

In the last twenty years, there are no uniform Bulgarian state requirements for minimum number of hours for theoretical and practical trainings and practices for the Bachelor and Master programmes in the area of the natural and mathematical sciences. At many universities, including the University of Sofia, which is the most renowned for these subjects, the study programmes include a minimal practical training threshold of 150 hours, 5 ECTS.

- Technical-technological sciences

Again, there are no uniform state requirements for a minimum number of hours for both theoretical and practical trainings and practices for the engineering Bachelor and Master degrees. At the University of Ruse, all engineering study programs include a total of 210 hours of practices and internships, which are divided as follows:

- after the 4<sup>th</sup> semester – 90 hours, 3 ECTS and
- after the 6<sup>th</sup> semester – 120 hours, 4 ECTS.

- Humanities

In the last two decades, there are no uniform state requirements for a minimum number of hours for both theoretical and practical trainings in the humanitarian programmes. At

the University of Ruse there is one Undergraduate practice for 120 hours (4 weeks), 4 ECTS, which is to be taken after the 8<sup>th</sup> semester.

- Medical science

The requirements for acquisition of professional Master degrees in "Medicine" and "Dental Medicine" are adopted by a Decree of the Council of Ministers № 245/16.11.2005. The nationwide educational minimums for theoretical and practical trainings and practices are determined as follows:

1. The practical training is carried out as follows:

- Study practice (clinical internship) after the sixth semester with duration not less than 30 calendar days - 150 hours;
- Teaching practice (clinical internship) after the eighth semester with duration not less than 30 calendar days - 150 hours;
- Pre-diploma internship after the end of the tenth semester - 310 calendar days, or 1320 hours.

2. The practical training of the students is organized by the HEI and is carried out in medical institutions and establishments, which have received a positive accreditation assessment by the Law for the medical establishments.

The state requirements for acquisition of the professional Bachelor qualifications "Nurse" and "Midwife" are adopted by Decree of the Council of Ministers № 248 / 22.11.2005, which determines the educational minimum for theoretical and practical training, as follows:

- The practical preparation shall be organized and carried out in the faculties or the branches of the HEI in accordance with the curriculum.
- The practical training shall be carried out in medical institutions and establishments, which have received a positive accreditation assessment for training of students.

3. The practical training shall be conducted by lecturers, graduates of the specialty "Nurse", with Bachelor or Master educational qualification degrees in the subject "Health

Care Management" from the professional field "Public Health" with professional qualification "Head of health care and lecturer in practice".

4. The practical training is with minimum duration as follows:

- Educational (clinical) practice - from the first to the sixth semester inclusive, with a duration of not less than 1140 academic hours;
  - Undergraduate internship – the internship is held in the seventh and eighth semester, with a duration of not less than 1600 astronomical hours.
- Pedagogical study programs  
The Bulgarian state requirements for acquisition of the professional qualification "Teacher" were adopted by Decree of the Council of Ministers № 289 / 07.11.2016 and they determine the educational minimum for the theoretical and practical trainings for the full-time and in distance-learning students, as well as for the part-time students, where at least 50% of the time is to be planned for internships and practical trainings. All trainings are conducted in kindergartens and schools of the system of preschool and school education and is carried out in the following forms of education with a minimum number of hours in academic hours:
    - hospitalization: 30 hours (in UR 30 hours – 2 ECTS)
    - pedagogical practice: 60 hours (in UR 75 hours– 6 ECTS)
    - internship: 90 hours

Hospitality is the observation and analysis of pedagogical situations, lessons and other organizational forms in kindergartens and schools, carried out under the direct supervision of a teacher from the higher school.

Before conducting the current pedagogical practice, the trainees must provide information in electronic form related to the place in which they wish to practice a profession on the basis of the acquired professional qualification "teacher".

The internship includes independent participation of the students in the educational process by conducting pedagogical situations or lessons, as well as in other organizational forms in kindergartens and schools, conducted under the guidance of a teacher-mentor and a teacher from the higher school.

## Enterprise - legal regulations

At the enterprise level, internships are regulated by the national labour legislative, in term of work health and safety.

The HEI should ask the student to check his/her health, accident and other coverages, such as:

- Health insurance
- Medical treatment
- Social security service
- Accidents including accidents at the workplace resulting in disabilities
- Sick leave, if relevant
- Civil liability

Enterprise should:

- Informs the student about the relevant regulations especially related to the working schedule, minimum weekly rest period and vacations;
- Provides a designated work station and accessibility to the workplace when the internship is face to face; for a distance internship, it is necessary to verify that the student has the technical means;
- Provides all materials needed during the internship;
- Provides access to a complaint channel to report abuses;
- Makes sure that the internship agreement can be prematurely terminated by any party in case of breach of the agreement (or any relevant regulation), misconduct or malevolence, repeated unjustified absence of the intern or endangerment of the physical and psychological health of the intern.

## TYPES OF PROFESSIONAL STUDENT INTERNSHIP

There are five basic overlapping dimensions that can apply for the internship categorization:

### **Mandatory (compulsory) internship versus voluntary internship (or credit versus no-credit internships)**

In professional higher education internships are typically part of program curricula, mandatory for the program accomplishment. However, student can start the internship as a part of an individual's extracurricular plan to gain experience.

When an internship is performed in exchange for PHEI credit, the assigning of credit is strictly between the student and his or her school. Mandatory internship must be strongly related to an academic discipline, usually with the requirements that students demonstrate what they learned from the internship (keep a journal, write an essay, or complete a presentation).

Voluntary internship does not add to the sum of credits required for the program accomplishment, but is described in Diploma Supplement as extra-curriculum activity.

### **Time of year**

Internships typically follows the duration of an academic quarter or semester, or over a summer or winter break.

Based on the time of year, the basic types of internships are semester internships, quarterly internships, summer internships, fall internships, spring internships, and holiday or winter internships (i.e., over a winter break).

### **Industry**

This internship dimension is in correlation with the scientific field of the study program, combined with the type of industry that engage students. Thus, internships can be categorized as technology internships, finance internships, marketing internships, advertising internships, fine or performing arts internships, legal internships, PR internships, and publishing internships.

## **Paid versus unpaid internships**

Whether internship will be paid or unpaid depends on national labour regulative bat even more on the primary beneficiary of the internship. The primary beneficiary of an unpaid internship must be the intern, and the intern's work cannot replace the work of an employee.

Criteria for unpaid internship include:

- Training resembles that which would occur in an academic setting or a vocational school, though the internship takes place in a working business facility.
- The training is for the benefit of the interns, not the employer.
- Internships do not displace regular employees. Instead, interns work in partnership with and under the supervision of regular employees.
- Employers receive no immediate benefit from interns' activities. In a true internship, program training will occasionally impede business operations.
- Interns are not promised or entitled to a regular position once they have completed the internship.
- Employers and interns have a mutual understanding that the internship does not qualify for pay before the internship begins.

If internship programs fall outside of these parameters, and employer benefits from student work, it has to be paid internship, and participants are considered employees for the duration of their internship.

## **On location versus virtual internships**

While typically internship is considered as an opportunity for the student to gain real world of work experience, another option is a "virtual internship," which can be completed remotely. This means that student can work from home rather than in the company. Virtual internship involves primarily the use of online and cloud-based technologies for conducting assigned work activities.

## VIRTUAL INTERNSHIP

Virtual work placement is defined as follows: “a virtual work placement involves the use of an information and communication technology (ICT) supported environment, where students interact with each other and companies independent of time and space and across traditional geographical boundaries. In this environment, effective communications are created between students, faculty and company representatives, in order to carry out a specific and meaningful work-based activity that fits within the student’s compulsory educational curriculum.” (The INTERN project, 2007)

According to the Ulla Rintala (EU-VIP project), the benefit for HEIs and students to apply virtual internship scheme includes:

- Provide a way to integrate work placements in full-time study programs
- Provide flexibility in time and space (e.g., for students with a job/disabilities)
- Provide a way to combine studies, work and social life
- Ensure regional mobility without the need to move and provide the opportunity to learn something about regional cultural differences
- Provide a way to learn new competencies (e.g., students learning a new language and new ways of working such as teleworking)
- Are a professional way to build partnerships between business life and the educational system

For the employers, according to the Ulla Rintala (EU-VIP project) the list of benefits includes:

- Increase of profits (productivity is higher with remote than with traditional work placements)
- Overcome space limitations (space restrictions can cause decrease in the number of placements as space is one of the most expensive inputs for companies)
- Overcome geographical limitations (no geographical relocation of workers is needed; companies do not need to relocate the student, he/she can remain at home)
- Reduce dependency on the labor supply of a particular area
- Overcome time limitations
- Reduce x-inefficiency of workers (avoid free riders; the work of the trainee can be measured easily, also when part of a team)
- Short in duration and/or unpaid (the firm can save money)



- Easier than traditional ones (employers are experimenting with the idea because more HEI students have access to computers, virtual work has become more common, and companies want to tap from more affordable labor sources)

## General virtual internship requirements

The virtual internship position, just as in the case of in-place internship, must meet the following requirements:

- The internship position must offer the opportunity to participate in the work process
- The internship position must offer the opportunity to perform work at the level of the study program. The experience must be an extension of the classroom: a learning experience that provides for applying the knowledge gained in the classroom. It must not be simply to advance the operations of the employer or be the work that a regular employee would routinely perform.
- The internship position must offer the opportunity for the student to perform work related to the knowledge and/or skills acquired during his/her study.
- The skills or knowledge learned must be transferable to other employment settings.
- The experience has a defined beginning and end, and a job description with desired qualifications.
- There are clearly defined learning objectives/goals related to the professional goals of the student's academic coursework.
- There is supervision by a professional with expertise and educational and/or professional background in the field of the experience.
- There is routine feedback by the experienced supervisor.
- There are resources, equipment, and facilities provided by the host employer that support learning objectives/goals.
- The internship provider must give the student the opportunity to reflect on the internship and to write an internship report. This is an integral part of any internship.

## Virtual internships criteria for academic credit assignment:

In order to assign the ECTS to the student, the virtual internship description and communication from employer should clearly state:

- Description of intern responsibilities with clear expectations and deliverables
- The type of training provided and how training will be provided
- Supervision provided including the communication plan with preferred methods of communication:
- Number of hours the student will be working on projects
- Number of direct supervision hours the student will be provided
- Methods of communication: Specialized platform, e-mail, phone conferences, Skype, Google
- Hangouts, etc.
- Schedule/process for checking in with supervisor regarding progress reports (i.e., daily, weekly, etc.)
- Regular meetings with a potential for in person meeting or office visit
- Clear commitment of time and technology/tools required of student
- Opportunities to present work and/or collaborate with other employees

## ECTS academic credit assignment

If internship is required for completion of the program (or part of the program), it must be part of the learning outcomes and student workload assessment, and thus the distribution points. In that case, the number of points awarded to the professional practice should be included in the total number of credits of the corresponding academic year.

As with any other part of the program, internship points are awarded only when the student achieves the learning outcomes, after the knowledge test has been performed.

If the professional practice is part of organized mobility (e.g., Erasmus professional practice), the Learning Agreement for professional practice states the number of points that will be assigned to the student if he masters the expected learning outcomes.

The workload assessment and ECTS assignment should be done in accordance to the standards described in [https://ec.europa.eu/assets/eac/education/ects/users-guide/index\\_en.htm](https://ec.europa.eu/assets/eac/education/ects/users-guide/index_en.htm) .

In the case when internship takes place during the formal learning process, but is not considered as compulsory part of the program, it is advisable to determine learning outcomes and workload in the Learning Agreement. Learning outcomes achieved through internship that are not considered a mandatory part of the program should also be listed in the Diploma Supplement. In the same way these learning outcomes should be recognized by awarding the appropriate ECTS points, which are in that case additional in relation to the standard number for the academic year.

## Determination of learning outcomes

Internship learning outcomes are general and study program-specific. As well, they differ depending on the educational level and year of study.

- **Bachelor work internships**

The primary goal of a bachelor work internship is an orientation on possible future employment. Students are introduced to the work field and can gain some experience working in a professional organization.

- **Master internships**

Internships at master's level must have a clear academic or practice-based research component or it is directed to solve a practical problem. If the internship itself does not comprise a research component, student have to carry out an additional research project directly related to the internship. The employer offering the internship must be informed beforehand that student will carry out research, and must be asked emphatically to facilitate this research by allowing time, access to archives or data, granting interviews with employees, etc.

**The study program-specific internship learning outcomes** include:

- professional behavior and/or knowledge (i.e., learn employer expectations for workplace behaviors; gain knowledge of a specific company/industry; gain knowledge of a specific technological process, learn specific common job functions such as: marketing, management, customer service, accounting, security, PR, production, design, training, etc.; relate classroom learning to its application in the workplace.).
- Specific skill-building. (i.e., Improve skills, confidence, competency in specific areas related to study program or particular area of career interest.)
- Project-related skills. (i.e., develop skills in research, analysis, organization, time management, teamwork, multiple task coordination, initiative, adaptability, and project completion.)

In addition, internship learning outcomes include wide variety of **soft skills development**, including:

- Communication skills. (i.e., speaking, writing, presenting, persuasion (sales), customer service, interpersonal, teamwork, leadership, and listening — as practiced in the professional world.)
- Employability-enhancing activities. (i.e., gain experience to add to your resume; expand your network of company or industry contacts; earn a job reference to vouch for your performance.)

To be useful, learning objectives should be SMART:

Specific

Measurable

Attainable

Results-Focused

Time-Focused

Learning objectives focus learning on specific areas and can help student maximize time spent in an internship.

## Virtual internship expectations

For the successful implementation of the virtual internship, a list of expectations and requirements need to be met for each party involved (student, HEI, employer). The expectations are defined for each party for the period prior, during and after internship implementation and given in the table beyond:

	Prior the internship	During the internship	After the internship
<b>Student</b>	<ul style="list-style-type: none"> <li>Information on the duration, beginning and end of the program (learning activities and goals), working conditions, supervisors and mentors, assessment methods.</li> <li>Internship provides the opportunity to apply theoretical knowledge as well as gain relevant experience.</li> <li>Support in identifying a suitable virtual internship - including choosing between several options.</li> <li>Clear instruction how to apply for the specific virtual internship</li> </ul>	<ul style="list-style-type: none"> <li>Thorough onboarding and orientation</li> <li>Internship program in accordance to the study program</li> <li>Clear definition of tasks and deadlines</li> <li>Clear definition of communication pathways</li> <li>Timely Feedback</li> <li>Accomplishment of learning task and achieving of learning outcomes</li> <li>Continuous supervision through the whole duration of the virtual internship</li> <li>Regular contact with HEI mentor for the identification of putative problems</li> </ul>	<ul style="list-style-type: none"> <li>Certification (ECTS), diploma supplements and the opportunity to access the labor market (based on a combination of theoretical and practical work) are what that students expect after the training Internship assessment</li> </ul>
<b>HEI</b>	<ul style="list-style-type: none"> <li>Companies to clearly articulate positions, in terms of quality of supervision and activities, in line with ECTS.</li> <li>Certain level of flexibility is expected in</li> </ul>	<ul style="list-style-type: none"> <li>The company is expected to perform the agreed activities,</li> <li>students are expected to perform the assigned tasks.</li> </ul>	<ul style="list-style-type: none"> <li>Detailed report is expected from the students for the position, including an evaluation of the overall internship, satisfaction, and</li> </ul>

	<p>adapting the requirements of the internship and that certain jobs in the firm correspond to the internship program.</p> <ul style="list-style-type: none"> <li>• Quality supervision by company members is an important point for successful student internships.</li> <li>• Students are expected to have some level of initiative to find adequate internship</li> </ul>	<ul style="list-style-type: none"> <li>• Communication between all three parties - in writing or electronically is an important item for the realization of quality practice and satisfaction of both students and SMEs.</li> <li>• A degree of flexibility is expected in adapting the practice based on feedback from the school or student.</li> <li>• Learning is properly documented for ECTS awards.</li> <li>• a regular or periodic report from the university is required.</li> <li>• For a productive student internship, a proactive attitude, punctuality, readiness for the required work, and readiness for integration into the work environment are expected.</li> </ul>	<p>possible recommendations for improvement.</p> <ul style="list-style-type: none"> <li>• Along with the report, students are expected to submit a description of the acquired theoretical and practical knowledge, and a description of the possibilities of integrating the acquired knowledge into the work environment.</li> <li>• After completing the training, the university expects from the company an assessment of the student's activities and acquired skills, their report and evaluation of the entire practice, recommendations for improvement and assessment of the student's theoretical preparation to deliver quality work during the internship process.</li> <li>• Following the training process, cooperation with the enterprise is expected to expand</li> </ul>
<b>Employer</b>	<ul style="list-style-type: none"> <li>• Employers expect the HEI to select and obtain well-prepared students,</li> <li>• The opportunity to negotiate internship contracts.</li> <li>• Good communication with the HEI is needed, and thus the inclusion of</li> </ul>	<ul style="list-style-type: none"> <li>• The motivation of the student is expected,</li> <li>• The support of the university (preparation of the briefing / mini course and constant contact in order to solve the problem)</li> <li>• Providing quality and</li> </ul>	<ul style="list-style-type: none"> <li>• Obtaining a quality worker,</li> <li>• Awarding a certificate of completed training with an explanation of the acquired competencies and skills, obtained with the assistance of the HEI.</li> </ul>



	<p>the required knowledge (by company) in the curriculum.</p> <ul style="list-style-type: none"> <li>• Making a quality statement of the company or school about why the position in this and that company is good for the student (value proposition).</li> </ul>	<p>competent students,</p> <ul style="list-style-type: none"> <li>• Achieving students' work goals,</li> <li>• New ideas, approaches, investments.</li> <li>• Regular checking and monitoring of students is also required, as well as that the tasks are in accordance with the curriculum.</li> </ul>	<ul style="list-style-type: none"> <li>• It is also expected to establish long-term cooperation with the HEI,</li> <li>• To create additional value with a job well done (trainee / student in practice) and feedback from the HEI.</li> <li>• Successfully realized student internship creates a positive impact on social responsibility</li> </ul>
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## DIGITAL INTERNSHIP MODEL IN PROFESSIONAL HIGHER EDUCATION

The digital/virtual internship model for professional higher education is directed at finding solutions to the problem of transferring field-specific formal requirements and learning outcomes into the digital format. The focus is placed on the creation of the model suitable for the internship for different economy sectors, including technical sector and tourism.

The model supports the needs of the internship triangle: student-PHEI-world of work. It allows students to select and approach the digital internship position in the workplace; PHEIs to perform monitoring and validation of student progress, assessment of achieved learning outcomes, knowledge, skills and competences during the digital internship, support of companies in terms of training of internship mentors; and for the companies it will facilitate the internship implementation, which includes designing of complete or partial digital internship positions, selection and delegation of particular tasks to the students, monitoring of student progress and program accomplishment.

DIMPS model targets the PHEIs in emergency situations, but it also increases the responsiveness of PHEIs to the challenges of the Fourth Industrial Revolution.

Accordingly, it targets students, particularly those enrolled in economic sectors that are less directed towards the digital mode of work, providing them with more efficient work-based learning. A well, it widens the spectrum of internships that will be accessible to students with difficulties. The digital internship model also targets the world of work, perceived opportunities and challenges of representatives of key stakeholders for the development of digital internships.

By adjusting learning requirements and outcomes, this digital internship model can be adopted at other qualification levels, particularly those in dual education.

Using a specialized, secure and collaborative web software solution, DIMPS provides a more flexible, efficient, personalized, low-cost, and adapted solution for virtual internships.

The DIMPS virtual internships software solution architecture is based on open standards, so it can be connected or integrated in both directions with other specialized e-learning platforms that complement virtual internships user experience. Interactions through online platforms enables

early networking, direct contacts with employers, meeting new people with the same interests, and communication between peers within classes, schools, and cities.

Using DIMPS platform virtual internship may be conducted through live, virtual instruction from an internship supervisor (synchronous) or self-directed online assignments (asynchronous).

## **DIMPS PROCESSES GUIDELINES**

The implementation of the DIMPS requires a careful planning and envisioning of the whole virtual internship process. The DIMPS planning includes the necessary steps for each party involved (student, HEI, employer) during different stages of the internship implementation (prior, during and after internship).

The guidelines presented bellow reflect largely the virtual internship initiated and driven by HEI, where the process is initiated by the university typically as a result of specific requirements in the curriculum, thus being compulsory and ECTS awarded. Yet, it could be easily adapted for student-od employer-driven internship.

## **STEPS TO BE PERFORMED PRIOR TO THE DIMPS INTERNSHIP**

### **HIGHER EDUCATION INSTITUTION**

#### **Determine the profesional learning outcomes for the study program**

During the process of setting learning goals for the study program the HEI should include stakeholders, then define learning objectives for the internship. For professional higher education, learning outcomes should incorporate desired industry-related knowledge and skills, as well as the abilities required for successful career advancement. It is necessary that the learning objectives for internship can be translated into various learning activities and assessed. It is important that the learning objectives are also appropriate for the level of qualification. The HEI should also allow alignment between learning objectives and professional skills, and transparency of the process by publishing regulations to create course programs.

#### **Securing / regulating internship places (positions)**

HEI defines and publishes internship standards with the following specifications: necessary areas and learning objectives, employment conditions, mentoring and supervising, financial contract / conditions, which are the requirements necessary for the report, rights and obligations for each actor (students / HEI / employer). The HEI must have a person responsible for identifying the place of internship within the company, must have a procedure that allows the student to choose a place of internship, and must have a guide / training course for students to identify a suitable place for internship.

#### **Publish an available internship list on the DIMPS platform**

HEI should maintain a database of all possible places for internship, which include detailed information, skills that can be learned and the rating of those places from previous experiences. That database should be available to all students.

#### **Implement a training program for DIMPS virtual internship development for employers**

HEI should develop a training program with the aim of including companies unfamiliar with the virtual internship program, in order to offer its student wide variety of internship positions.

## **Negotiate learning agreement**

HEI should provide the following necessary information for the learning agreement: duration of the internship (duration, start and end period, periodicity), then learning objectives (internship program), information on employment conditions (salary, security, working hours), information on supervisors and mentors (their roles and responsibilities), information on the student's reporting method, communication regime and assessment methods. It is important that the HEI provides a contact and problem-solving mechanism, includes the terms and requirements of the employer in the contract, and provides a template for students and employer to document the internship.

## **EMPLOYER**

### **Create the virtual internship position**

In order to successfully create the internship position, employer has to allow the approach to the HEI and to enable open communication (determine the contact person with the HEI) with the HEI. It is necessary to define future needs, i.e., necessary work skills and to participate in labor market research. Important steps for the creation of the internship position related to the employer include:

- To determine the capacity of the firm to receive additional employees (students) in accordance with the conditions of practice (do they have enough work for students of practical training?).
- To explicitly define the professional field of work with recommendations for learning objectives.
- To explicitly define the work skills that the place can offer (in order to learn them).
- To prepare a financial plan for the practice, identifying the necessary resources and expected benefits / revenues.
- To appoint supervisors with adequate experience who are able to perform possible trainings if necessary.
- To provide access to higher education with their needs.
- To provide suitable working conditions.

### **Negotiate learning agreement**

Specify (in cooperation with the HEI) the conditions that will be included in the learning agreement / contract:

- Financial,

- Student position within the company,
- Name of the supervisor and his / her duties,
- Student tasks within the company,
- Work goals for students

### **Prepare thorough onboarding and orientation material and publish it at DIMPS platform**

In order for the student to get oriented and established in their new working environment, supervisors should plan for the student's first day on the job to be focused on orientation and training. Therefore, the supervisor should prepare a material that consists of: learning about the organization, reviewing organization-wide communication standards and workplace expectations, and reviewing the student's defined learning goals. As this orientation will not be completed in-person, a synchronous meeting platform should be used for orientation, in addition to electronic written documentation. This will provide the student the chance to ask clarifying questions, as this might be their first professional work environment, and is likely their first virtually-based position.

### **Prepare the training material and upload it at DIMPS platform (if applicable)**

If the learning outcome includes the student training about particular work process, especially technological, it is advisable to prepare the material in advance, in form of video presentation, for example.

### **Prepare the tasks for the student in concordance with the learning agreement and publish it at DIMPS platform (if applicable)**

If possible, task description with expected outcome and time schedule could be uploaded at DIMPS platform in advance. It may facilitate the supervisor engagement during the internship.

## **STUDENT**

### **Plan and choose the internship**

Prior to the internship, students should identify 4-6 learning goals to be completed during the course of the internship. They could incorporate desired industry-related knowledge, skills, and abilities required for successful career advancement. With the mentor from HEI, student makes the choice from the virtual internship positions from the DIMPS database.

Student can suggest to the HEI to conduct the internship with the other employer that fulfil the requirements, in which case the preparation and negotiation of the virtual internship will occur as previously explained.

Supervisors from company will work with the student at the beginning of the internship to develop a plan to ensure that the established goals are met, and check in regularly throughout the internship to see if the student is on track to meet these goals.

## **STEPS TO BE PERFORMED AT THE BEGINING OF THE DIMPS INTERNSHIP**

### **Prepared and signed learning agreement**

Learning agreement should be signed by the all parties involved. The HEI mentor is a person responsible for signing the Learning Agreement, amending it if needed and recognizing the credits and associated learning outcomes on behalf of the responsible academic body as set out in the Learning Agreement. Supervisor at the Receiving Organisation is responsible for signing the Learning Agreement, amending it if needed, supervising the student during the internship and signing the Internship Certificate.

The learning agreement shall include:

1. Signatories of all the parties included
2. Identification of HEI mentor and employer supervisor who will guide them throughout the internship
3. Duration: the length of the internship
4. Schedule: expected working hours or presence hours and timetable
5. Description of the role and the tasks of both, the student and the host organization
6. Learning objectives and skills to be developed and which will be evaluated
7. Payment, if applicable
8. Credit points: ECTS (when relevant)

## **STEPS TO BE PERFORMED DURING THE DIMPS INTERNSHIP**

### **HIGHER EDUCATION INSTITUTION**

#### **Virtual internship monitoring**

The HEI should create a procedure for ensuring the quality of internship positions, taking into account random verification and creating a procedure for periodic examination of students and employer to monitor the progress of practical training. Internship monitoring also means that the HEI provides a contact and a problem-solving mechanism.

### **EMPLOYER**

#### **Virtual internship implementation**

Provide a periodic review (meeting) where students receive feedback on the implementation of the internship and where they can evaluate mentoring.

Provide adequate procedures that guarantee the fulfillment of all obligations under the contract.

Implement procedures that introduce the student to the company and its role.

Be flexible in adapting / changing feedback-based practices.

Document student progress in achieving learning goals, using templates provided by the HEI.

Create a safe and positive environment.

Provide appropriate resources for mentoring (time, financial compensation, training).

Provide contact and problem-solving mechanism.

#### **Timely Feedback**

Supervisors should review student deliverables and provide timely feedback to students on a regular basis. Supervisors are asked to schedule feedback meetings for a minimum of thirty minutes each week to engage in direct mentorship with the student regarding their progress towards learning outcomes and areas of professional development. Pre-planned training topics should also be discussed during these sessions. Synchronous meeting plugin at DIMPS platforms should be used for this portion of the internship.

#### **Consistent Communication**

Summative feedback should be provided consistently at least once per week. This includes an update on expected work activities for the week, outcomes from prior work

submissions, and other relevant announcements pertaining to the organization. A good practice is to schedule a regular email report around or on the same day each week.

### **Pre-arranged Schedules**

Although a key feature of remote internships is the flexibility of the work schedule, supervisors and students should agree upon a definitive time allotment per week and per day for internship activities.

### **Organizational involvement**

In addition to facilitating a remote or virtual internship, site supervisors should make a good faith effort to integrate the intern into the organization's work culture. After initial onboarding orientation, this may include client visits and attendance at select team meetings, use of company tools and resources, and any other forms of access to other staff members

## **STUDENT**

### **Virtual internship implementation**

Perform tasks using under supervision and write the digital internship journal.

### **Meet deadlines and manage time effectively**

When students are working from home, they have to build the work ethic. It is necessary for student to keep track of important dates and assignments and be sure to submit work in a timely fashion. Students should complete assignments on time and let supervisor know if they have time to take on more projects.

It is strongly suggested for student to create their own professional environment. Even if they are not in a traditional workspace, making an effort to dress professionally will help student stay motivated and get into a work mindset.

## **STEPS TO BE PERFORMED AFTER THE DIMPS INTERNSHIP**

### **HIGHER EDUCATION INSTITUTION**

#### **Internship assessment**

Require a written report (with oral explanation) on internship from the student and the uploaded at the DIMPS platform

Provide the student with a fair and transparent assessment with an explanation of the assessment, including the achieved level of internship learning goals

Certify completed training with a description of acquired skills and ECTS assignment.

Indicate the merits for the completed internship.

### **EMPLOYER**

#### **Internship assessment**

When viewed from the point of view of employer, the evaluation of internship involves feedback on student performance during training, and this includes: monitoring according to the format created by the HEI, a detailed description of the level of progress or achievements of students following goals set by the employer, then the documentation of the training, and the inclusion of student performance assessment. For the internship assessment process, the employer will also provide student satisfaction assessment / evaluation and seek feedback from the HEI.

### **STUDENT**

Continue toward his/her study program accomplishment and certification. Enjoy the benefits of accumulated knowledge and experiences.

## **DIMPS internship combined with the virtual student exchange**

Virtual internship platform provides a great opportunity to facilitate virtual internship mobility schemes. Since more and more organizations operate internationally, students are also encouraged to take on work placements abroad. However, a large number of students simply do not have the opportunity to take on work placements abroad for social, financial or other reasons. Using ICT tool such as DIMPS platform to support some form of virtual work placement with a foreign company is particularly suitable for these students. Virtual work placement enables students to take on work placements abroad without having to leave their home country. These virtual work placements are not only beneficial for students but also for HEIs and companies. (The INTERN project. 2007).

The virtual mobility internships combine aforementioned triangle HEI-student-employer at several schemes (The INTERN project. 2007):

- A company in one country contacts a HEI in the same country and looks for work to be done by students in another country as part of a virtual work placement and supported by the academic or teaching staff of their own HEI
- Students from two (or more) different countries work for a company located yet in another country
- A company in one country works with students from its own country along with another company already based in a second country

The basic features of the preparation, the implementation and the assessment stage of the virtual internship remain the same regardless of the student country of origin. Yet, the responsibilities of the sending and hosting HEIs have to be defined by the learning agreement. The best recommendation is to follow the Erasmus+ procedure for the student traineeships mobility [https://ec.europa.eu/programmes/erasmus-plus/opportunities/traineeships-students\\_en](https://ec.europa.eu/programmes/erasmus-plus/opportunities/traineeships-students_en) for the documentation and tracking as they can be easily applied to the DIMPS platform.

## List of references

1. BEING MOBILE project. <http://www.being-mobile.net/>
2. EU-VIP: Innovating International Placements Through Virtual Mobility: The EU-VIP Project
3. EU-VIP: State-of-the-art in support of virtual placements A study carried out in the framework of the EU-VIP project
4. INTERN. Virtual internships: real experience in a virtual world. A best practice handbook for those interested in the concept of virtual internships in business education. 2007.
5. Q-Planet project. <http://www.q-planet.org>

## **Necessary documentation for the implementation of virtual internship for higher professional studies**

Form 1: Rulebook on student virtual internship (made by a HEI)

Form 2: Cooperation agreement with the institution where the internship will be performed (signed by the HEI and the employer)

Form 3: Learning agreement on the realization of virtual student internship for each student (signed by the higher education institution, employer and student)

Form 4: Certificate of completed internship (signed and certified by the employer and the head of the internship in the institution where the internship was performed)

Form 5: Virtual internship diary (kept by the student and signed by the student and the supervisor in the institution where the internship was performed)

Form 6: Report on completed internship (compiled and signed by the student)

Form 7: Form for the assessment of virtual student internship (signed by the supervisor in the institution where the practice was performed and by the internship mentor in a HEI)

Form 8: Form for student satisfaction evaluation (to be filled in and signed by the student)

Form 9: Erasmus+ Learning Agreement - Student Mobility for Traineeships