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Toolkit for implementation and documentation of dual practice-integrated higher education programmes

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Abstract	The toolkit is designed as a resource for academic staff and industrial supervisors in the development, implementation, and evaluation of the dual education components. The toolkit contains checklists, guidelines, as well as standardized procedures and forms for the documentation of the communication process as a mean for assessment of students' performance and documentation for the quality assurance.

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DISCLAIMER

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1. Dual Higher Education (DHE)

1.1 Introduction of a dual study program

Dual Higher Education is an approach that formally integrates students' academic studies with work experience in enterprises/industry. There are several different types of DHE programmes. These have different advantages and disadvantages: for learners, for employers, for schools and colleges, and for governments. It can be used to achieve a number of different objectives, such as:

- to develop vocational skills that contribute to recognised vocational qualifications;
- to develop general work habits and job-readiness;
- to help students understand what is involved in jobs so that they can make better career choices;
- to give disadvantaged people and job seekers access to opportunities to work that they might not otherwise have.[1]

A key issue for policy makers and social partners is how to choose the right type of programme for the right purpose, while best meeting the needs of stakeholders'.

This approach to education relies upon a three-way partnership between the student, the Higher Education Institution (HEI) and the company.

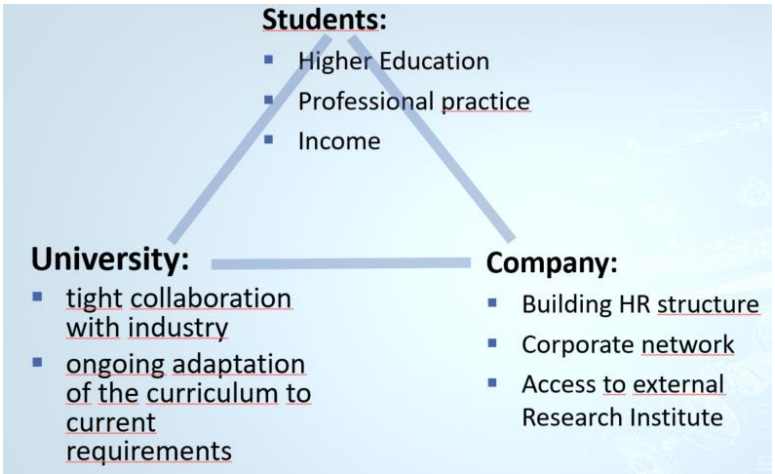

Figure 1:Dual education; source: Hagen Hochrinner, FH JOANNEUM, 20. 6. 2020

[1] ETF, A handbook for policy makers and social partners in ETF countries http://ec.europa.eu/dgs/education_culture/repository/education/library/publicatioens/etf-wbl-handbook_en.pdf, 2014, chapter 4 page 13).

The exact format of collaboration is usually established in specific agreements between the company and the HEI, outlining the number of students received by the company (e.g. 10 to 20[2]), whether students work for free or receive a salary, the number of hours per semester (e.g. 150-200[3]) and other rights and responsibilities of students and the company. Companies are also expected to find mentors for students who will be able to guide them during their practical work in the company and who assess their work at the end of the work term. There is no obligation to employ students after their graduation.

1.2 Learning models

The below outlined types of learning concepts or models are often used related to work-based learning[4]. These concepts have been developed for use in the tertiary educational level:

- **Curriculum-integrated learning:** Is a model of learning that describes the development of integrated lessons helping students make connections across subjects and disciplines.
- **Work-related learning**: Planned activity that uses the context of work to develop knowledge, skills and behaviours useful in the workplace, including learning through work experience, learning about work and working practices, and learning work skills.
- **Work-based learning:** Is an educational strategy that provides students with real-life work experiences where they can apply academic and technical skills and develop their employability skills.
- **Work-integrated learning:** Are forms of experiential learning where the site of learning either occurs in the workplace or where the learning is strongly associated with a workplace.
- **Cooperative education:** A term that is commonly used in North America to refer to programmes in which learners spend time in several workplaces (companies) and receive academic credit for the work experience, but in which there may be little connection between what the student does in the workplace and the curriculum of the school or college.

  In Europe mostly the term “Dual Education” is used. It is related to the system of apprenticeship in Germany, Austria and Switzerland. This system requires two learning venues (university and company) with a coordinated curriculum for both learning places.

[2] In Austria, approximately 1 to 5 students are received by each company; in Germany the ratio is between 10 to 60 students per company.
[3] This is depending on the number of ECTS granted for the practical part. In Austria, for example, a minimum of 125h of internship corresponding to 5 ECTS are required.
[4] These concepts have been defined and used also by the EU project ApprenticeshipQ (www.apprenticeshipq.eu).

1.3 Education system in Austria

In Austria, UASs are the main "owners" of DHE programs. Nevertheless, it is also possible and even not unusual for "classical" HEIs to assume a partner role in the development and implementation of DHE programs.

The DHE programs in Austria are standardised in terms of their format and layout. The majority of DHE programs in Austria can be found in technical disciplines and follow the regular Bologna requirements (6 semesters for Bachelor programs (180 ECTS) and 4 semesters for Master Programs (120 ECTS)). DHE graduates have the right to continue education on Master or PhD level.

The EQF Level is also unified with EQF 6 for Bachelor and EQF 7 for Master Programmes.

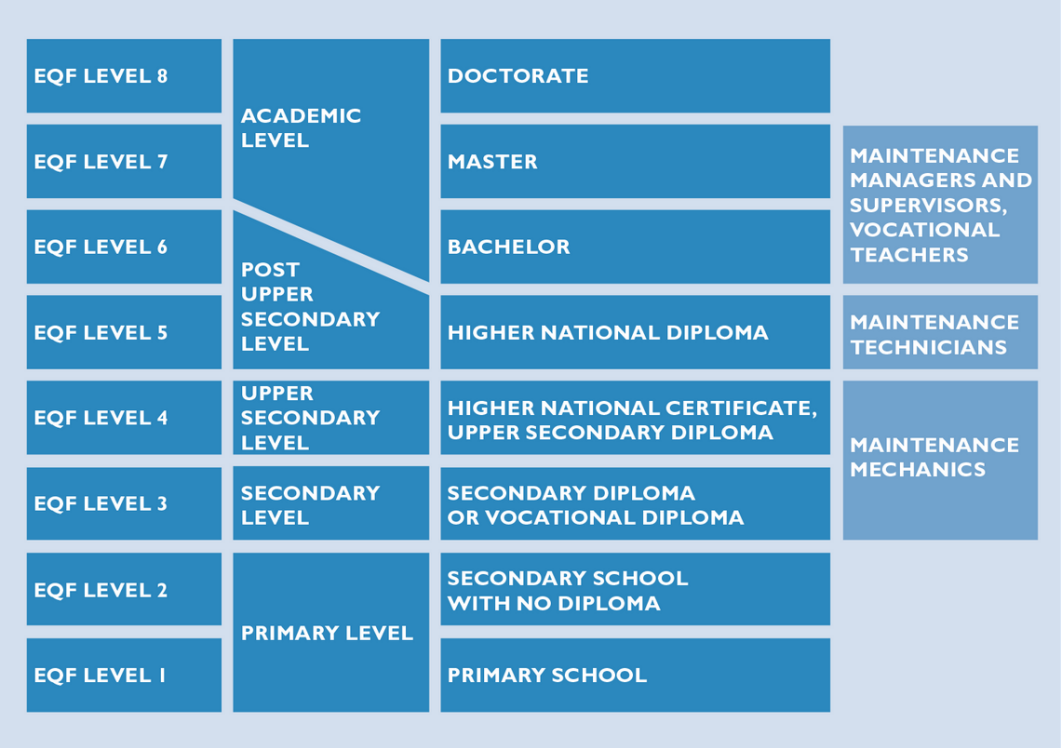

Figure 2: Education system in Austria

DHE programmes can also be in the format of Double or Joint Degrees. Accreditation is regulated by law and is carried out by the National Accreditation Agency. Curricula of DHE programmes are usually offered as "Curriculum Integrated models"[5]. Both, Bachelor and Master DHE Programmes are offered by UASs.[6]

[5] Curriculum-integrated learning is a model of learning that describes the development of integrated lessons helping students make connections across subjects and disciplines.
[6] Based on the existing law, UASs are not entitled to offer PhD programs.

All programmes are developed jointly from representatives of HEIs and industry partners (IP). HEIs have the lead in the development and implementation of the programmes which is also reflected in the ratio between teachers from HEIs (60%) and IPs (40%) being involved in the educational process.

Besides curriculum development and revision, IPs are also involved in mentoring the final thesis (co-mentoring together with HEI mentor).

HEIs have the overall responsibility for the conduction of student assessments. The involvement of the IP in the student assessments is related to the practical part of the education (work at companies) and is not unified. IP mentors are usually supporting HEI staff by issuing recommendations for student assessments, or drafting reports based on a standardised reporting form.

IPs have a direct working contract with all DHE students in line with the Austrian Labour Law. Usually Students have part time contracts (50% of the fulltime working contract).

The first two semesters are usually carried out only by HEIs. Starting from the 3rd semester, the educational process is divided between HEIs and IPs with a division of approximately 50:50 at Bachelor level. On the Master level, it is common for IPs to have even more responsibilities in the education of students (60:40%).

Teaching Staff must have at least 3 years of relevant Industry experience and an academic degree amounting to a minimum of 300 ECTS.

The employment rate after graduation is very high ranging from 90 and 100% while drop-out rates are between 15 and 30%.[7]

1.4 Key elements for future DHE models/programmes

Based on the inputs on study programmes in EU programme countries of the DUALSCI project and the analysis of the DHE framework in programme countries from the EU project ApprenticeshipQ, the following elements have been identified for consideration when developing future DHE models/programmes for Bosnia and Herzegovina:

- DHE programmes need to consider the **Bologna requirement**s and should be organised on two levels: BA and MA level. This is to enhance horizontal and vertical mobility as well as simplify recognition of degrees. Furthermore, this promotes trust by employers. The programmes should also clearly indicate the relevant EQF level (6 – BA, 7 – MA).

[7] For more information on dual education in Austria, see also www.dualstudieren.at.

- DHE graduates need to have **full access to the next educational level** (e.g. MA, PhD) both at applied and scientific (non-dual) HE programmes.

- As and where feasible it can be also considered to award a **VET degree** together with the BA.

- In term of the dual approach chosen, it is recommended to opt for **curriculum integrated or work-based models** since these approaches provide best for a systematic integration of work experiences.

- In terms of contractual relations, it is recommended for the IP to have direct **working contracts** with the student for the period of their practical work.[8] As feasible, these contracts should be remunerated.

- **Relation theoretical and practical work**: It is recommended that on the BA level, the first 2 semesters focus on theoretical work with first work-based experiences from semester 3 to 6 (for example, 80:20/theoretical vs practical work). At the MA level, the focus should be on the practical experiences in R&D and can be designed in different ways, depending on the fields of study and institutional frameworks. As a minimum, students should be required to attend 60% of their study time at the IP for practical work.

- **Mentors in companies** should receive training in order to get prepared for their role. Regular meetings between company mentors and HEI teaching staff are recommended (at least once or twice a year). In general, obligations of companies and mentors should be openly discussed and clearly defined. This also includes questions such as the remuneration of mentors or the amount of time spent for mentoring.
- In terms of **curriculum development and revision**, teams should consist of representatives both from HEIs and from industry (suggestion: 50:50). It is also recommended that IPs have at least 5 years of experience in their respective field/discipline.

- Both academic staff and IP partners should be involved in the **teaching process**. It is recommended that both should have industry experience, but teachers from industry should have approximately 5 years of prior industry experience plus a relevant academic degree (at least MA).

[8] In Austria, there are usually employment contracts between students and the respective companies; in Germany student-company- university contracts are common. It is recommended to BiH partners to explore both approaches and to identify the most feasible solution in this regard.

- **Assessment**: The HEI should be primarily responsible for the assessment of students but should request inputs on students' performance from IPs in line with an established reporting and grading system.

- **Final thesis**: It is recommended for the final thesis to be co-mentored by HEI and IP representatives who were involved in the teaching process. The IPs should grade the applied part of the thesis while the university takes responsibility for the academic and theoretical part of the thesis. It is also recommended for the HEI mentor to visit the company before the student starts working on the thesis. Overall, it is considered very essential for HEI staff to get to know the respective companies, to meet mentors and to develop and maintain personal contacts.

- At the level of **Ministry** there should be a **clear catalogue of criteria** which outlines the requirements a study programme has to fulfil in order to be called "dual education in HE". Otherwise, the definition of what is DHE might get lost instead of branded. As an example, the Austrian Ministry of Education, Science and Research has set the **following criteria for characterizing the dual degree programmes in Austria:**

    - Repeated sequence of theoretical phases and internships with continuous reflection.
    - Internships out beyond the normal scope of an internship in a technical college degree program, both in terms of time and in terms of the specification of the content.
    - Acquisition curricular defined competencies takes place at two places of learning and is characterized by the combination of science and focus on implementation.
    - Admission process for college and company are in the responsibility of each partner and are coordinated.
    - Company must take a training commitment and be suitable to convey the intended course content.
    - Organization of the theoretical and practical phases, the conditions for an acceptable time overall burden (ECTS) for students.
    - Relationship of the three partners' students, universities and companies subject to mandatory regulations for quality assurance.
    - Continuous formation of association with appropriate compensation practice, phases within an adequate income, that is continuously lasts ideally over at least two thirds of the study period.

2. Description of the sub-processes in the university, the company and the involved participators

2.1 Selection of students for the programme

Prerequisites for admission procedure[9]

Academic prerequisites (§ 4 FHStG)[10]:

- High school certificate
- University entrance qualification exam
- Vocational matriculation exam
- Relevant professional qualification plus additional exams

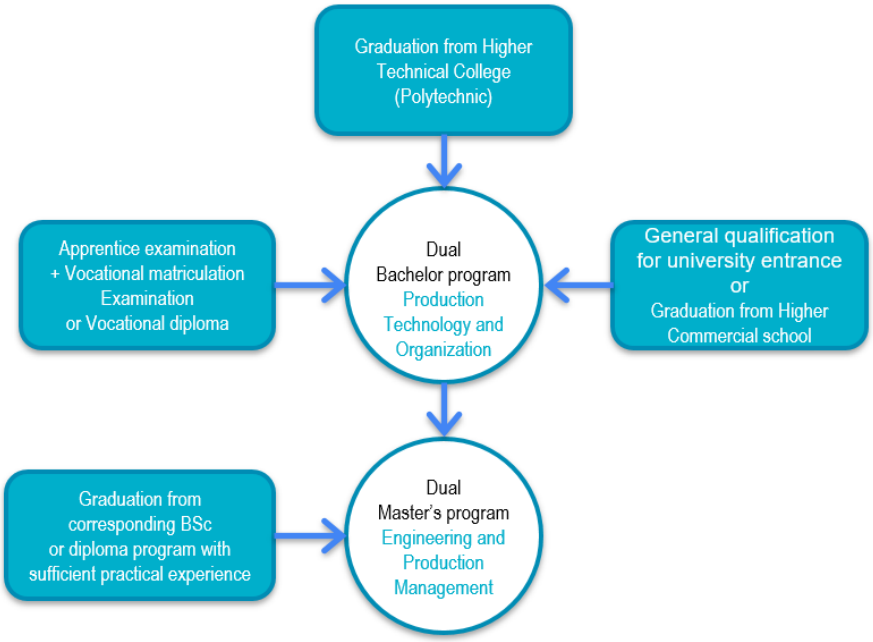

Figure 3: Admission procedure; Source: Hagen H. Hochrinner and Maja Dragan, 26.01.2022

[9] For more information, see also Application Requirements » Produktionstechnik und Organisation (fh-joanneum.at)

[10] FHStG – Fachhochschul-Studiengesetz (RIS - Fachhochschulgesetz § 4 - Bundesrecht konsolidiert, tagesaktuelle Fassung (bka.gv.at))

Application

A set of application documents must include:

- a copy of the school-leaving certificate and final school report (or proof of university entrance qualification)
- curriculum vitae (It is important to list and provide evidence of any relevant additional qualifications that may exist)
- letter of application
- FH JOANNEUM application form

Assessment procedure

- Written exam is divided in two parts: general and specific part.
- Face to face interview lasts about 20 minutes and provides an opportunity for students to introduce themselves to the lectures from the institutes.
- Average grades final year and
- Vocational experience

		(max. points)	[%]
1.	written exam		50
1.1.	general part 1	(0 to 63)	
	word analogies		
	quantitative problem solving		
	figure series		
1.2.	specific part	(0 to 36)	
	functional relations		
	technical understanding		
2.	face-to-face interview	(0 to 5)	35
3.	average grades final year	(0 to 4)	10
4.	vocational experience	(0 to 5)	5
			100 [%]

Figure 4: Assessment procedure; Source: Hagen H. Hochrinner and Maja Dragan, Procedure of admittance Program "Production Technology and Organisation PTO", 23.10.2020

Results

The result of the admissions process is available a few weeks after the interview. The applicant is then informed in writing about the result of his application. The overall score will determine whether the place is offered or not.

2.2 Prepare students for the application procedure.

The source of the following text: Christine Wöls, Tips and hints for PTO students

Search for interesting companies in the industry and region that suits you.

- List of partner companies (companies that are interested in this concept and already have experience with dual education)
- Circle of acquaintances
- Career portals

Application management

The application process is an organizational effort and should be documented from the start.

For example:

Company	Contact person	Position	Telephone number	E-mail	Notes

Table 1: Application management; Source: Christine Wöls, Tips and hints for PTO students

Documents:

All documents must have **formal correctness**, **true content** and **correct spelling**.

- **Cover letter** (motivation letter)

Observation of the formal guidelines (DIN letter), writing style with lots of verbs, precise and short sentences. Finding important arguments that speak for inclusion in the company. Prove or back up every argument about strengths and interests with facts. (Example: You can prove your ability to work in a team and commitment or a sense of responsibility by being a member of the local fire brigade.)

- **Curriculum vitae**

The structure is chronologically developed, and the contents should have personal data, school education, professional experience, skills, qualifications, interests, as well as a professional photo.

Tip: Application photo should be a professional photo from the photo studio.

- **Most important certificates** (maturity examination, apprenticeship certificate or semester report)

- **Important information's about study program** such as course overview, information brochure and training plan should be also presented to the company.

2.3 Select companies (define prerequisites of companies for coop)

Contractual arrangements with the training companies

Creation of a contract template for cooperation with companies is the final step before the implementation of the developed programme can start. The basis of the successful cooperation between the university and the company is - especially in the case of dual courses of initial training - a cooperation agreement. This can be done orally or in writing, whereby a written contract is the rule. The cooperation agreement defines the following aspects for a certain period:

- Name of the course,
- Type and number of study places
- Objectives and basic features of the cooperation
- Admission and selection process for the students
- Contractual obligations of the educational institution
- Contractual obligations of the company
- Information on the academic degree
- Contract period and the termination modalities
- Financial modalities (where applicable)

It is also important that all parties contractually name a contact person who will look after the student during the training. A precise definition of the training and study content should also be a fundamental component. The university is responsible for carrying out the courses, and the company undertakes to properly run the practical phases and deliver the content that must correspond to the theoretical training at the university. Furthermore, the cooperation agreement contains information on the examination regulations, whereby the examination authority for the academic training lies with the universities. The admission procedure includes the formal admission requirements of the university and regulates the requirements specific for the dual study programme. It is also recommended to define minimum requirements for the companies involved in dual higher education.

2.4 Match students with companies

There are three different possibilities to connect students with companies and they will be listed and described below.

- The student is already employed in the company and begins cooperative studies in an already agreed terms with the company.

- The company is already familiar with this concept of dual studies, has positive experiences and publishes an advertisement on various career portals in order to search for students. In this case, it would be recommended to create a list of all companies with positive cooperation with an aim of maintaining constant communication and contact with industry. In order to meet the company's expectations from students, it is sometimes necessary to adapt the curriculum to current requirements.

- The student decides to send an initiative application. A certain preparation of the application procedure is foreseen for this step. This concept of dual studies is then presented to the company with the help of various brochures and information materials.

3. Developing and describing the process of practical training

3.1 Development of schedule and content of practical training

3.1.1 Organisation of practice phases

In the dual Bachelor's degree students spend a total of 13 to 15 months in their training companies. At least one month and maximum three months as practice during holidays and trial period in the summer after the second semester, 12 months into three "practical training phases" as part of the training contract in the semesters three to six. In the final practice phase the second bachelor thesis is completed.

The working week in these "practical phase" corresponds to a full-time job. Over the entire duration of the training contract in bachelor study there is an average employment of 50%. The duration of practical training is twice three and once six months and follows a fixed schedule that is set out in a grid pattern and is concretized for each year to an individual schedule (taking into account the situation of the Easter holidays, which are used several times as a semester exchange).

Basis for the organization of the practical phases is:

- The schedule
- The yearly specific schedule that is created before the start of the course.
- The curriculum (including the prescribed practical projects).
- The content framework for the practical phases of the curriculum.
- The catalogue of learning objectives for the practical training throughout the study.
- A rough "road map" of skills development planned together by the company and the student for the duration of their studies at the beginning of the study.
- Content and organizational arrangements which take place twice a year between the training company and representative in the faculty are recorded in writing.

3.2 Quality assurance criteria for the practical phases

Practice diaries (7.2 template in attachments)

This description applies to the creation of practice diaries and practice assessments under the University of applied sciences degree program “Production Technology and Organization” and is based on the application for approval of the study program “Production Technology and Organization” at the FH JOANNEUM as a university of applied sciences degree program to achieve a bachelor's financial statements from January 15, 2011th.

Internship
The bachelor's program “Production Technology and Organisation” is a dual degree and is divided into the following phases:

1. Theory semester
2. Theory semester
   Vacation practice and introduction to the respective companies
3. Theory semester
   Practice I (Company portrait)
4. Theory semester
   Praxis II (Report and diary of the internship)
5. Theory semester
   Practice III (diary, bachelor thesis I and module report)
6. Theory semester
   Practice IV (Bachelor thesis)

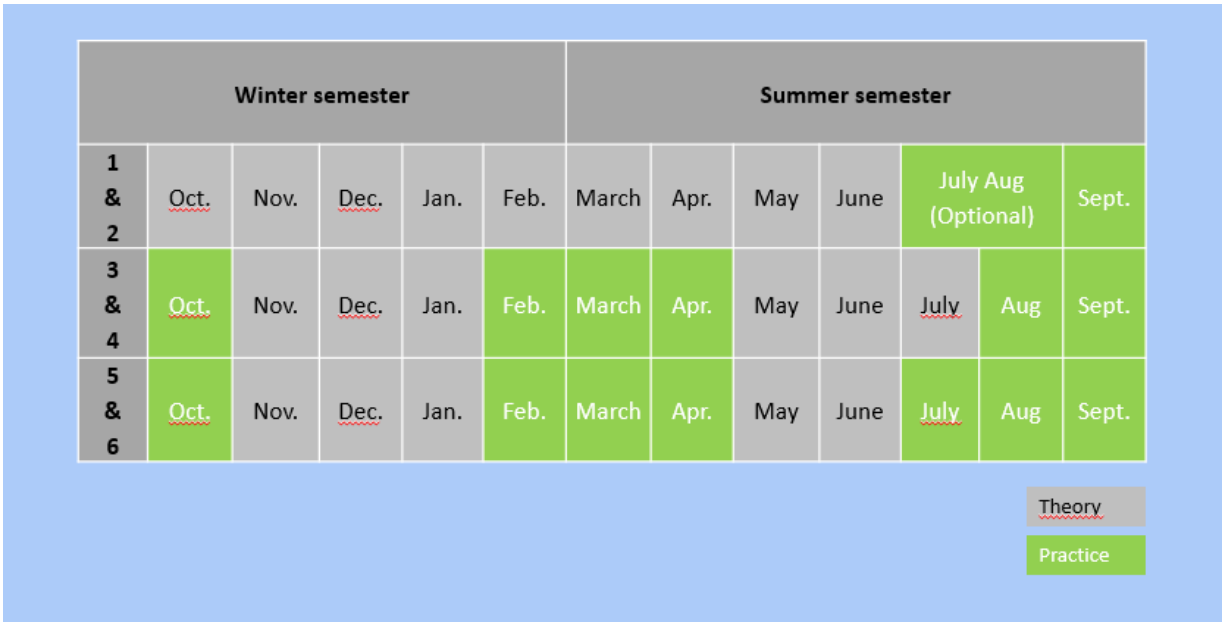

Figure 5: Academic calendar PTO; Source: Hagen H. Hochrinner and Maja Dragan, 19.06.2022

To support the mentors, we have provided a tool for the **procedure of the company visit** with all important steps (template in attachment).

Creating internship diaries

For the practical phases I, II and III a diary in tabular form must be created. One entry should be done every working day.
Is an activity used for a module report, a cross-reference must exist in the diary.

Language

The practice diaries must be written primarily in German, but it is also permitted to write this in English.

Submission of practice diaries

The practice diaries must be submitted no later than 14 calendar days after the start of each subsequent semester theory in charge of practical cooperation point of the program.

Creating practice reviews

For the practical phases, I, II and III a practice evaluation is required in each case.

This assessment must be made at the end of practice phase by the practice supervisor of the training company. The presence of the mentored student is appropriate, since feedback from the supervisor can take place immediately.

Submission of practice assessments

The practice assessments must be submitted 14 calendar days after the start of each subsequent theory semester.

3.3 Templates for documentation of placement in given standards (diary, reports, evaluation sheet, ...)

See appendix.

3.4 Evaluation of the student by industrial mentors in standardized form

See appendix. (7.3 Practical assessment in dual studies)

Evaluation of practice phases

The following elements provide an ongoing evaluation of the practical phases and try to quantify the learning success:

- The students must write a diary in all phases of practice that is submitted in the module "Professional Practice" and assessed.
- Students must submit a standardized report for leader of the course "practical guidance" which is assessed in the same module for each practice period.
- Students set for every practice phase five personal educational goals that are either taken directly from the educational goals or formulated individually. Achieving these goals is to comment on the practice report.
- After each practice stage there is a documented evaluation interview between student and practice supervisor using the educational goal catalogue.

4. Standard procedure for the meeting industrial mentors and faculty

Definition of the content (e.g. discussion of necessities in education, changes in curriculum…)

	Activity	
1	Contents of the meeting	
2	Invitation list	
3	Invitation	
4	Responsible person for organisation	
5	Responsible person for presentations	
6	Meeting room	

Table 2: Procedure for the meeting industrial mentors and faculty

4.1 Procedure of the visit in the company – a checklist

INFO FOLDER:

General study information

- IAP Folder
- Your company is now studying
- Course overview PTO and ENP
- Events
- Training plan (general)

Special education information:

- A Guide to Cooperative Practice
- Guide Practice Report (incl. Module report)
- Guide bachelor thesis
- Guide Master Thesis

Current information on companies and students:

- Short info on Company
- Internship report
- Current transcript of records (transcript)
- Module reports

Templates:

- Practice assessment
- Visit protocol (interview guide)

Specific information:

- Events (FH, PTO Club, etc.)
- PTO / ENP mentor meeting
- Erasmus and other programs

VISIT SCHEDULE:

Greeting

Operational and / or workplace visit

Conversation on the internship

(Document: protocol/minutes; use as conversation manual)

General:

(Documents: Internship Assessment)

- *Quality of work*
- *Working methods*
- *Engagement*
- *Teamwork*
- *Personal maturity*

Technical:

- *special technical skills*
- *special organizational skills*
- *special learning needs*

Internship Planning / Reporting

(Documents: training manual, module report, Manual internship report)

- Targeted training of the PTO students corresponding to medium-term individual planning (such as QM, production planning, maintenance, supply chain...)
  - creating job and skills profile
  - coordinating learning and teaching needs with curriculum
- Planning training stations (departments and / or projects)
- Set Training Mentor
- Opportunities for international practice / semester

Tips for students:

- writing a diary
- short 14-day meeting
- write short reports and go over them with internship in-company mentor
- presenting short reports / results in the company

5. Bachelor thesis

5.1 Template for the theme of the bac thesis

See the appendix. (7.5 Application for bachelor thesis)

5.2 Template for the documentation of the supervision of the thesis

See the appendix. (7.6 Protocol for mentor meeting in company)

5.2.1 Specialist supervision

- Supervisors are teachers in the degree program or external Instructors, in exceptional cases, or other experts. The in-company supervisor is nominated by the company. It can only be people who have got experience in scientific work and in publishing or can bring relevant practical achievements or leadership experience.
- The selection of supervisors is done by the head of the program based on objective criteria.
- Each bachelor thesis must have a German and an English summary / Abstract after the title page. Table of contents and bibliography shall be given. The affidavit that the thesis is written by the student him/herself and has not been presented in any other place for a similar purpose, shall be enclosed. If it is ensured that at least the supervisor knows the language in question, the work can be written in a foreign language, with the approval of the head of the study program.
- The resources that are available in the current study program, are also available for the preparation of the thesis. The claim to special resources does not exist.
- The procedure and the structuring of the thesis should be clarified with both tutors and constantly.
- The joint work on a topic by several students is permitted if the performance of individual students can be assessed.

5.3 Presentation of the thesis

The general examination regulations of FH JOANNEUM should be applied.

The Bachelor examination consists of an oral examination in front of a subject-specific examination board.

The audit Senate for the commission and holding Bachelor exams are composed of the head of program as follows:

The examination board consists of three persons: The Chair, a teacher / r from the main content of production technology, a teacher from the main topic Production organization. An examiner is in each case, the supervisor of the second bachelor thesis.

- The head of the program shall appoint one member as chairman of the examination board.
- An examiner is to be named for each examination subject or its branch. Also, the Chairman may participate as an examiner when the subject in his/her field of activity.
- The board examination consists of the presentation of the bachelor's thesis and an oral examination of the measures on the bachelor theses and their interconnections with sub-areas of the curriculum.
- The presentation of the Bachelor work is done in English. On one hand the students acquire the competence in the course Professional Practice and Communication, on the other hand, all the practice reports and the first bachelor thesis must be written in English. Students are informed on this regulation at the start of the education in the third semester.
- The evaluation criteria for the bachelor examination are set out in a guideline and placed on an accessible drive and the students are informed of this fact at the beginning of the study.
- D. Courses with continuous performance assessment
- The proportion of courses with continuous performance assessment is approximately 83%, including internship and bachelor theses.

6. MAIN SOURCES

1. Dual education in Austria; www.dualstudieren.at

2. ETF, A handbook for policy makers and social partners in ETF countries http://ec.europa.eu/dgs/education_culture/repository/education/library/publicatioens/etf-wbl-handbook_en.pdf, 2014

3. EU project ApprenticeshipQ: www.apprenticeshipq.eu

4. Canadian Association for Co-operative Education, Co-operative Education Manual. A Guide to Planning and Implementing Co-operative Education Programs in Post-Secondary Institutions

5. *EU-COOP COOPERATIVE and WORK INTEGRATED HIGHER EDUCATION, A handbook for implementing Co-op education model, CWIHE Erasmus Project, 2017*

7. Attachments

7.1 Evaluation of student's reports by university mentor template

Internship report evaluation									
Cohorte	from	04.07.2022	[days]	Deductions					
Internship	to	23.10.2022	111	0	-5	-10	-15	-20	-25
Formal (Layout, Design, Structure)									
Spelling, grammar, expression, syntax, tenses, style...									
Quality of Content									
Reflection									
		Total deductions		[%]					
		max. reachable	100	[%]					
		Total reached	**100**	**[%]**					
		Grade							

Other remarks:

Grading scala

[%]	Grade
0	poor
50,6	sufficient
65	satisfactory
78	good
91	very good

The following deviations are evaluated with deductions:

Formale

Layout (according to template see guide)

Design (according to template see guide)

Font: Arial 12 dpi, line spacing 1.5 header, footer, …

Header: practice documentation

Footer: Creator, Year, Page

Structure

Cover sheet

Table of contents

(company presentation)

Organization chart

Personal training plan

Personal reflection

Practice diary

Internship evaluation

Appendix with list of figures, list of abbreviations, source index

Quality of content

Reflection it is NOT a report

7.2 Practice diary template

PRACTICE DIARY							
Name:							
Company:							
Period:							
Date	Department or area and/or mentor	Activitiy/Project/Task			suitable for lecture or module	Notes to learning reflection (not obligatory)	Notes on used literature, photos, tables (sources, links…)

7.3 Practical assessment in dual studies

PRACTICAL ASSESSMENT IN DUAL STUDIES

Period	
Company	
Location	
Student / Study year	
Mentor / Internship supervisor	

MAIN TASKS AND ACTIVITIES

SUMMARY ASSESSMENT

QUALITY OF WORK

		1	2	3	4
Analytical and conceptual skills	Developed meaningful solutions, using their own expertise	☐	☐	☐	☐
Willingness to learn	Assumes offered learning opportunities and uses this	☐	☐	☐	☐
Creativity	Brings a new thought patterns and / or working methods	☐	☐	☐	☐

WORKING METHOD

		1	2	3	4
Reliability	Performs tasks responsibly and carefully	☐	☐	☐	☐
Efficiency	Organizes the work makes sense and avoids unnecessary steps	☐	☐	☐	☐
Flexibility	If it turns easily to new / changing tasks a	☐	☐	☐	☐

MOTIVATION AND SELF-CONTROL

		1	2	3	4
Engagement	Shows interest and commitment	☐	☐	☐	☐
Goal orientation	Sets tasks in realistic goals and to pursue this	☐	☐	☐	☐
Load-bearing capacity	Dealt with difficult working conditions and / or maintains high working pressure was	☐	☐	☐	☐
Criticism / implementation ability	Can deal with negative feedback reflects own behaviour and can change this	☐	☐	☐	☐

TEAMWORK

		1	2	3	4
Integration	Integrated into the work environment and finds acceptance among colleagues and superiors	☐	☐	☐	☐
Interpersonal skills	Establish and maintain contacts automatically	☐	☐	☐	☐
Collaboration	Working properly and goal oriented, along with other	☐	☐	☐	☐
Intercultural competence	adjusts to different groups of people and other mentalities	☐	☐	☐	☐

COMMUNICATION SKILLS

		1	2	3	4
Personal appearance	Occurs reliably and appropriately to	☐	☐	☐	☐
Reasoning ability	Argues and speaks coherent and clear	☐	☐	☐	☐
Dialogue and conflict skills	Speaks problems openly, without prejudice to other opinions, has the courage to constructive debate	☐	☐	☐	☐

1 = very strong available; 2 = there is sufficient; 3 = is little present; 4 = too little available and is recommended as a learning field

7.4 Internship in the company – feedback questionnaire

INTERNSHIP IN THE COMPANY
Feedback questionnaire - STUDENTS

Dear student,
At the end of the internship in the company, you are kindly invited to answer the following questions. Questionnaires will be analysed for the needs of optimizing the organisation and the internship process. Your opinions and suggestions are of great importance to us!
Collected data will be processed anonymously.

Study programme:
Study year:
Company:

Choose the appropriate level of agreement: 1 – I fully agree to 6 – I fully disagree.
x – I don't know / not relevant

The university provided all the necessary information prior the beginning of the internship.	1	2	3	4	5	6	x
I was well accepted by employees.	1	2	3	4	5	6	x
I knew in advance what work tasks I will be doing.	1	2	3	4	5	6	x
I knew which skills and competences I will acquire with each task.	1	2	3	4	5	6	x
Mentor introduced me to the work environment.	1	2	3	4	5	6	x
Mentor has acquainted me with the company.	1	2	3	4	5	6	x
Mentor told me which work tasks to do and what should I learn by doing them.	1	2	3	4	5	6	x
Mentor was available for my questions.	1	2	3	4	5	6	x
Mentor has communicated openly with me and gave me feedback for my work.	1	2	3	4	5	6	x
I was able to express initiative / interest, if I wanted to do so.	1	2	3	4	5	6	x
Employees have responded to my questions.	1	2	3	4	5	6	x
Work tasks were relevant/suitable to my study programme.	1	2	3	4	5	6	x

Work plan comprised of tasks was helpful for my internship. *Please, add a comment – in what way it influenced acquisition of competences/skills, your expectations for WBL etc.:	1	2	3	4	5	6	x
* Clearly structured internship has increased my motivation for work tasks.	1	2	3	4	5	6	x
* Clearly structured internship has increased my responsibility for my professional career.	1	2	3	4	5	6	x
Sometimes I didn't really know what to do in the company.	1	2	3	4	5	6	x
Organiser of internship was available if required during my internship.	1	2	3	4	5	6	x
I got accustomed to the culture of the work environment and the rules of behaviour in the company.	1	2	3	4	5	6	x
I got accustomed to the working discipline and responsibility for performance of tasks.	1	2	3	4	5	6	x
Overall satisfaction with internship.	1	2	3	4	5	6	x
I would recommend this company for internship to a friend.	1	2	3	4	5	6	x
During internship I was most pleased with:							
During internship I was least pleased with:							
My suggestions for improvement of the quality of internship:							
Please, describe your experience regarding internship in comparison to the internship in the first year. How do you assess the planning of the internship? In what way did it influence your internship (work, orientation, expectations, acquisition of competences/skills/knowledge?							

Thank you!

7.5 Application for bachelor thesis[11]

DYNAMIC dual engineering curricula

FH JOANNEUM University of Applied Sciences

APPLICATION FOR BACHELOR THESIS Delivery date:

Student data

Surname:		Name:	
Address:			
Postcode:		Town:	
Telefon:		e-mail:	
		ID number:	

Data of the company

Company			
Delivery address			
Postcode:		Town:	

Working title of the bachelor theses

Short description/ contents

In-company mentor:			
Function:		e-mail:	
		Telephone:	
Received:		Signature:	

FH Betreuer(in):			
Function:		e-mail:	
		Telephone:	
Received:		Signature:	

The suggested working title of the bachelor thesis should be approved by the Head of the study program and by the representative of the internship company.

Date		Signature:	
			Head of study program
Date		Signature:	
			Representative of the internship company

11 Document developed in the Erasmus+ project DYNAMIC – Towards responsive engineering curricula through europeanisation of dual higher education 588378-EPP-1-2017-1-DE-EPPKA2-KA

7.6 Protocol for mentor meeting in company

PROTOCOL for MENTOR MEETING IN COMPANY

Datum	
Company	
Location	
Student	
In-company mentor	
Academic mentor	
Miscellaneous	

Short company tour: yes / no
Visit of the current working place: yes / no

FEEDBACK / DEVELOPMENT

General (Internship assessment)	
Technical	

INTERNSHIP PLANNING / REPORT

Internship overview (Training plan, module report)	
Internship planning (Training plan, module report)	
Idea for bachelor thesis / master thesis	

POINT OF CRITICISM AND SUGGESTIONS

Teaching content (overview of lectures)	
Organisation	
Miscellaneous	

TO-DO-LIST

What	Who	Till when

ADMISSION OF ADDITIONAL PTO STUDENTS PLANNED? yes / no

Contact person:	