



УНИВЕРЗИТЕТ У КРАГУЈЕВЦУ, ТЕХНИЧКИ ФАКУЛТЕТ У ЧАЧКУ
32000 ЧАЧАК, СВЕТОГ САВЕ 65

АКРЕДИТАЦИЈА СТУДИЈСКОГ ПРОГРАМА
ЕЛЕКТРОТЕХНИЧКО И РАЧУНАРСКО ИНЖЕЊЕРСТВО–
МАСТЕР ЗА ДАЉИНСКО УПРАВЉАЊЕ
Дипломске академске студије

Прилог 6.4 Препоруке или усклађеност са одговарајућим добром праксом у европским институцијама

Евалуација развоја студијског програма у оквиру WUS пројекта

Master Studies Development Programme (MSDP)

Award Criteria – Employability Evaluation

Coordinator: Mag. Thomas Schmalzer

In collaboration with: Mag. Bernadette Frech, Mag. Rupert Beinhauer, and Mag. Karl H. Slabschi

Assessment Grid – MSDP Employability Evaluation

Name of the program:
Master of Science in Remote Control
Co-ordinating institution:
University of Kragujevac, Technical faculty of Čačak
Co-ordinator:
Radojka Kmeta

Criteria	Score
Each section is to be graded from 0 to 5 points. 0 is very weak and 5 is excellent.	
1. Labour Market Relevance	3,5
2. Labour Market Cooperation	4
3. Employability of Graduates	3,5
4. Practical Orientation & Hands-on Learning	4
Total Score of MSDP Employability Evaluation (Sum of all criteria 1-4)	15
	Between 0 and 20 pts



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Rating List for each Criterion – Employability Evaluation

Please rate each criterion on a scale ranging from 0 to 5, where 0 is the lowest 5 is the maximum score.

Criterion 1: Labour Market Relevance	Score (0-5 pts)
	3,5
Labour Market Relevance is fully given if: <ul style="list-style-type: none">➤ Sufficient evidence is provided that the Master's programme builds on a strong current or emerging demand from the labour market 3➤ Sufficient evidence is provided that the Master's programme is beneficial to the society at large 3➤ Sufficient evidence is provided that the Master's programme fills a current or projected gap of graduates in the addressed field 3➤ Relevant stakeholder perspectives (employers, professional bodies, recent graduates, etc.) have been encountered to define the study programme focus and contents 5➤ The Master's programme is differentiated from other study programmes offered in the region in terms of professional orientation after graduation 4➤ A thought out descriptions of possible employment fields after graduation is provided 4	

Sources of information:

- Aims
- Market research and coherence analysis
- List of groups consulted

Criterion 2: Labour Market Cooperation	Score (0-5 pts)
	4
Labour Market Network is fully given if: <ul style="list-style-type: none">➤ The programme intends to foster a strong labour market cooperation 4➤ Practitioners are involved in the curricula development process 5➤ The labour market partner/s selected fit to the field of study 4➤ A strong cooperation with the labour market partners is foreseen throughout the programme (curriculum planning to execution) 5➤ The strategy and measures (projects, Master's thesis, etc.) for collaboration with companies are adequate and likely to be successful 4	

Sources of information:

- Aims
- Market research and coherence analysis
- Labour market cooperation partner
- Description of cooperation with labour market partner
- Thesis



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Criterion 3: Employability of Graduates	Score (0-5 pts)
	3,5
Employability is fully given if: <ul style="list-style-type: none">➤ The programme intends to achieve a high employability of graduates 4➤ The curriculum foresees the development of crucial skills and competences required by the labour market (e.g. team working skills, communication skills, leadership skills, etc.) 2➤ The programme (courses) equip students with relevant knowledge and key competences to gain initial (or maintain) employment 4➤ The curriculum is planned rationally, beginning with statements of goals and learning outcomes 3,5➤ There are employability-related modules within the curriculum 3	

Sources of information:

- Aims
- Learning objectives
- Curriculum overview matrix
- Courses detailed descriptions

Criterion 4: Practical Orientation & Hands-on Learning	Score (0-5 pts)
	4
Practical Orientation and Hands-on Learning are fully given if: <ul style="list-style-type: none">➤ First labour-market experience (even of little relevance to the field of study) are part of the entry requirement 5➤ The students receive the opportunity to gain insights in the relevant working field 4➤ Practice-near didactical methods (e.g. case studies) are foreseen to be integrated in the lectures 4,5➤ Work-based or work-related learning is incorporated as one of the components within the curriculum (e.g. internships, placements, etc) and are credit-bearing in order to be valued by students 4,5➤ At least parts of the equipments purchased (e.g. laboratory equipment) are supporting the practical learning approach of the programme 4	

Sources of information:

- Curriculum overview matrix
- Courses detailed descriptions
- Entry requirements
- Equipment and offers of equipment
- Thesis



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Degree Development System (MSDP)

Award Criteria – Content Evaluation

Coordinator: Mag. Thomas Schmalzer, Bakk.

In collaboration with: Mag. Bernadette Frech and Mag. Rupert Beinhauer

For further questions concerning the evaluation form please contact Mr. Schmalzer via E-Mail:

thomas.schmalzer@fh-joanneum.at

or phone +43 (0)316 – 5453 6811

or mobile +43 (0)664 – 80453 6811

APPLICATION: _____ (please insert name of application)

Assessment Grid – MSDP Content Evaluation

Criteria	Score
Each section is to be graded from 0 to 100 percentage points. 0% is very weak and 100% is excellent. The final score is calculated according to the instructions below and lies between 0 and 40 pts.	
<i>Market Linkage of Master's Programme Contents</i>	
1. Labour Market Linkage	Score (0-100%) 85%
2. International Orientation	Score (0-100%) 55%
<i>Academic Quality and Coherence of the Master's Programme</i>	
3. Quality of Curriculum	Score (0-100%) 90%
4. Quality of Modules and Syllabi	Score (0-100%) 90%
5. Quality of Staff	Score (0-100%) 85%
6. Overall Coherence of Master's Programme	Score (0-100%) 95%
<i>Total Score of MSDP Content Evaluation</i> Sum of percentage of all criteria divided by 6 multiplied by 40 points (maximum score)	33,333 Between 0 and 40 pts



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Example calculation:

1. Labour Market Linkage	85%	
2. International Orientation	73%	
3. Quality of Curriculum		91%
4. Quality of Modules and Syllabi	62%	
5. Quality of Staff	88%	
6. Overall Coherence of Master's Programme	53%	

Total Score calculation:

$[(85+73+91+62+88+53) / 6]$ is an average 75,33% multiplied with the maximum score of 40 = 30,132 points

Rating List for each Criterion – MSDP Content Evaluation

Please rate each criterion on a scale ranging from 0% to 100%, where 0% is the lowest 100% is the maximum score.

Criterion 1: Labour Market Linkage	Score (0-100%) 85
Labour Market Linkage is fully given if: <ul style="list-style-type: none">➤ The contents of the Master's programme are applied in nature (i.e. of relevance to the labour market)➤ The contents of the Master's programme are based on (emerging) labour market demands (i.e. based on a mid to long term need of the labour market)➤ Empirical evidence for reasonable demand for graduates of the Master's programme is provided➤ The competences developed in the programme are demanded by the targeted labour market segment (i.e. the education leads to higher employability)➤ The strategy and measures (projects, Master's thesis, etc.) for collaboration with companies are adequate and likely to be successful	

Please provide your comments and list concrete measures for improvement for the applicant on the labour market linkage:

The focus of the MSc programme is on applied sciences and targets a relevant business area within the electronics and IT branche. Demand from local companies is adequately shown – although there is a strong focus on one company (JKP Čačak)

Sources of information:

- Market Research
- Labour Market Partners
- Thesis



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Criterion 2: International Orientation	Score (0-100%) 55%
International Orientation is fully provided if: <ul style="list-style-type: none">➤ The partnership with a foreign institution (e.g. twinning, partnerships, joint degree etc.) of higher education is appropriately detailed and convincing➤ Course contents provide an international dimension to the programme➤ Contents of modules and courses are comparable to internationally offered courses or modules➤ Strategy for internationalization of the Master's programme is clear and convincing➤ Foreign language policy allows for courses to be taught in different languages	

Please provide your comments and list concrete measures for improvement for the applicant on the international orientation:

Although a twinning organisation from Maribor/Slovenia is named, the kind of collaboration between the universities as well as the relevance of the partner for the proposed programme stays unclear to some extent.
-> Define measureables
Language of the courses couldn't be identified. But the course content itself shows potential for internationalization.

Sources of information:

- Twinning/Cooperation Institutions
- Curriculum Overview Matrix
- Module/Course Descriptions

Criterion 3: Quality of Curriculum	Score (0-100%) 90%
Quality of the curriculum is fully provided if: <ul style="list-style-type: none">➤ Needs analysis shows the added value of the Master's programme compared with programmes that already exist in the same field at national and international level➤ Appropriateness of the timing of courses and modules within the overall curriculum➤ Feasible workload distribution over programme duration➤ Openness for adult learners in at least some parts of the curriculum➤ Academic demands on Master's thesis are according to international standards➤ Entry requirements of the programme are adequate➤ Teacher – student ratio is appropriate	

Please provide your comments and list concrete measures for improvement for the applicant on the quality of the curriculum:

Curriculum seems to be well defined. Master thesis is supported by theoretical background on scientific work. E-learning content seems to support adult learners.

Sources of information:

- Aims



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- Learning Objectives
- Entry Requirements
- Student Intake
- Curriculum Overview Matrix
- Thesis
- Market Research

Criterion 4: Quality of Modules and Syllabi	Score (0-100%) 90%
<p>Quality of the modules and syllabi is fully provided if:</p> <ul style="list-style-type: none">➤ The overall didactic approach in face to face and e-learning modules and courses is suitable to achieve learning objectives➤ Various methods are used face to face and online (project work, case studies, lectures, etc➤ E-learning is integrated in the curriculum forming a blended learning approach and complies with international standards.)➤ Literature used is according to international standards➤ Learning objectives are defined and appropriate for the Master's programme➤ Central competences are defined and in line with labour market needs➤ Module and syllabi descriptions convincingly outline how learning objectives and competences are reached➤ Examination modes are appropriate for the contents proposed	

Please provide your comments and list concrete measures for improvement for the applicant on the quality of the modules and syllabi:

Modules and Syllabi are described well. Descriptions include detailed literate sections; the programme of the courses is also given in an extensive way.

Sources of information:

- Curriculum Overview Matrix
- Modules and Course Descriptions
- Learning Objectives



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Criterion 5: Quality of Staff	Score (0-100%) 85%
Quality of the staff is fully provided if: <ul style="list-style-type: none">➤ Relevant teaching experience (if applicable including e-learning experience) of academic staff involved➤ Private sector or industry experience of academic staff involved➤ Research experience of academic staff involved➤ Foreign language proficiency of staff involved➤ Adequate selection and integration of international lecturers (e.g. connection to BGP+, twinning lecturers)➤ Brain Gain effect achieved through staff involved	

Please provide your comments and list concrete measures for improvement for the applicant on the quality of staff:

Staff seems to have extensive teaching experience. Integration of twinning organization lecturers keeps unclear. Research experience cannot be judged adequately.

Sources of information:

- Brain Gain
- Twinning
- CVs of involved Staff
- Optional Components and E-Learning

Criterion 6: Overall Coherence of Master's Programme	Score (0-100%) 95%
Quality of the staff is fully provided if: <ul style="list-style-type: none">➤ The courses proposed form coherent modules➤ The modules are coherently forming the complete curriculum➤ Prerequisite relations are clearly defined and coherent➤ The relation of the Master's thesis to relevant modules is clearly defined and appropriate for the programme➤ The curriculum is suitable to achieve the overall learning objectives and goals of the action➤ The curriculum contributes towards fulfilling needs of the labour market➤ Objectives and contribution towards university excellence and European competitiveness are clear and convincing➤ Proposed action in general is coherent➤ Student intake is feasible	

Please provide your comments and list concrete measures for improvement for the applicant on your overall impression and coherence of the proposed action:

Coherence of the programme and its module is given. Additional elective courses like Project Management, Intellectual Property Right(s) Management would give additional added-value. Number of student intake looks realistic and should fit with demand of local industry.



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Sources of information:

- Curriculum Overview Matrix
- Aims
- Learning Objectives
- Market Research and Coherence Analysis
- Student Intake
- Guideline for Applicants

Conclusions and measures for improvement

Please draw your conclusions and list relevant measures for improvement that shall be realized by the applicant **before the project start (update of proposal)**:

- Specify language of individual courses (Serbian? English?)

Please draw your conclusions and list relevant measures for improvement that shall be realized by the applicant **during the project duration (recommendations for project execution)**:

- Set up a proposal for further deepening of the cooperation with the twinning institution
- Create a position paper describing the research and development tasks planned. This would strengthen the research experience (criterion 5).



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Score Sheet and Criteria for Assessment
Bologna standards

Name of the program:
MSc. In Remote Control
Co-ordinating institution:
University of Kragujevac, Technical faculty Čačak
Co-ordinator:
Radojka Krneta

Award criteria

1. Length/Structure of the study program and internationally recognized degree (0-4pts)

It is a Bologna-compliant master program with a duration of 60 (2 semesters), 90 (3 semesters) or 120 (4 semesters) credits. The structure of the program is clearly defined and allows a consistent distribution of workload. Entry requirements and academic prerequisites are described. The academic degree is equivalent to European standards and is internationally comparable.	
Points to be addressed in the assessment:	
<ul style="list-style-type: none">• Section 1: Academic Statement:<ul style="list-style-type: none">➤ Title of the Master program➤ Academic degree obtained➤ Entry requirements➤ Student intake• Section 1: Curriculum Overview Matrix<ul style="list-style-type: none">➤ Total number of ECTS credits➤ Structure of the programme	
Score	4

2. Use of European Credits Transfer & Accumulation System (ECTS) (0-4pts)

The use of ECTS as a student centered accumulation system is clearly stated, the calculation of workload is made clear and the distribution of workload between teaching hours and self study is explained. The modules are structured in an appropriate way. Transparency, comparability and mutual recognition of modules and/or courses are secured.	
Points to be addressed in the assessment:	
<ul style="list-style-type: none">• Section 1: Curriculum Overview matrix:<ul style="list-style-type: none">➤ Allocation of ECTS credits per semester does not exceed 30 credits➤ Allocation of ECTS credits for all assessed components of the curriculum is fixed• Section 6.2. Modules and courses/ List and Course Syllabi:<ul style="list-style-type: none">➤ Definition of credits➤ Calculation of workload➤ Distribution between teaching hours and self study➤ Teaching methods➤ Assessment methods➤ Structure of modules	



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- Course types
- Forms of assessment
- Additional asset: Methods of evaluation of workload

Score 4

3. Learning Outcomes (0-4pts)

A qualification profile clearly defines the competences and skills of the entire study program according to the Dublin Descriptors for second cycle programs. The sum of all learning outcomes and competences are in line with the general objectives of the program. Professional competences as well as soft skills are defined in each module and course description.

Points to be addressed in the assessment:

- Section 1: Learning Outcomes
- Section 6.2. Modules and courses/ List and Course Syllabi:
 - Learning Outcomes
 - Teaching methods
 - Assessment methods
 - Structure of modules
 - Course types
 - Forms of assessment
- Additional asset: Referring to Dublin Descriptors

Score 4

4.a Internationalization of the study program / co-operations with EU institution (0-4pts) – co-operation

A clear and convincing description of the co-operation and its activities according to the guide for applicants is provided.

Points to be addressed in the assessment:

- Section 3.2 Specification of Austrian cooperation
 - share of knowledge and experience, e.g. through putting relevant curricula at the disposal of the SEE partner institution
 - advising of the process of curriculum development
 - obligatory: study visits
 - obligatory: peer reviews (evaluation of syllabi and script of each course)
 - guest lecturers
 - supervision of final thesis
 - exchange modules or courses with automatically recognition
- additional asset: student mobility activities; sustainability of co-operation

Score 2

Scores:

0: very weak
1: weak
2: acceptable
3: good
4: very good



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TOTAL

Criterion 1	Length/Structure of the study program and internationally recognized degree 0-4pts	4
Criterion 2	Use of European Credit Transfer System 0-4 pts + 1 asset point	4
Criterion 3	Learning Outcomes 0-4 pts +1 asset point	4
Criterion 4	Internationalization of the program 0-4 pts +2 asset pts	2
	TOTAL Threshold = 8 pts	14

Overall comments & recommendations:

Academic degree:

Even though it was not possible to compare the academic programme resp. degree with equivalent programmes, the granting of a Master of Science seems appropriate.

Structure of the programme:

The structure of the programme is very clear; the division of workload and credits are comprehensible. The explanations in Annexe 2 are very much appreciated.

Entry requirements:

Entry requirements are formulated in a very detailed way; however, some information about the selection procedures would be quite useful.

Learning Objectives:

The qualification profile clearly defines the competences and skills of the entire study program. Nevertheless it is highly recommended to include some references to the “Level Descriptors” as stated in the European Qualification Framework.

The learning outcomes of each module and each course are defined in student centered and comprehensible way.

ECTS:

The calculation of ECTS credits in the course descriptions is clearly defined; one ECTS credit equals 30 hours of student’s workload. I would like to point out that there are different specifications about the hours of workload that reflect one ECTS credit. Some of the other MSDP applications calculate 1 ECTS credit with 25, others with 30 hours of student’s workload. However, referring to the ECTS guidelines, a range between 25 and 30 hours per credit is acceptable.

Although it is stated in Annexe 2 of the application, I nevertheless wanted to point out that ECTS credits have to be allocated to all academic components of a study programme that will be assessed. Therefore, credits have to be calculated and stated in the curriculum for the Master thesis and the final exam.

Tips:

- The curriculum should allow an even distribution of workload throughout the semester. Thus, all forms of assessment should avoid peaks at the end of the semester.
- The principles of the ECTS System should be explained in the curriculum in a short paragraph.

Internationalisation:

The description only gives a very vague overview on the form of cooperation between the two institutions, although all necessary activities are mentioned.

YES

NO