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Description and Concept of the proposed Specific DHEM at the State University of Novi Pazar

Prof.dr. Miladin Kostić
Prof.dr. Senad Ganić

Specific ‘MAS DHEM’ proposed at SUNP

- The specific study model will be proposed at the Department of Technical Sciences of the State University of Novi Pazar- the study program "Civil Engineering“.
- Study program in “Civil Engineering” and the experiences gained within this one-year master's program, which already envisages and applies student internship, served as the basis for proposing a dual model of one-year study master program.

Legal framework

Law on Higher Education („*Службени гласник РС)*“, бр. 18/17, 27/18, 73/18) adopted in September 2017.

This Law in article 39 defines the engagement of students through student internships that are realized with business entities.

Article 96 provides the higher education institution with the opportunity to organize a student internship **within the study program**, which carries a certain number of ECTS points.

Legal framework

- Article 60 of the Law on Higher Education establishes a new body - the Council of Employers, in order to achieve cooperation between universities and employers through their involvement in the work of this body, primarily in designing and approving study programs in accordance with labor market needs.
- Article 80 of the Law on Higher Education enables, under appropriate conditions, hiring ‘non-employed lecturers’ in professionally applicable subjects of the study program.

Legal framework

- With the adoption of the Law on the dual model of studies in higher education in September 2019, an appropriate legal framework was created, framework that defines the content and manner of implementation of the dual model of studies in higher education, mutual rights and obligations of students, higher education institutions and employers, as well as other issues of importance for the realization of studies according to the dual model.

Legal framework

- The law provides a legal framework that is sufficiently general, but at the same time flexible, and is applied depending on the needs of the higher education institution, the possibilities and needs of partner companies and the students' interest in acquiring knowledge in the process of learning through work.

The goal of the dual model

- The goal of the dual model of studies in higher education is reflected in overcoming the gap between theoretical and practical acquired knowledge, and quickly adapting students to changes in society and their efficient and effective inclusion in real work activities.

Elaborate

- The purpose of the elaborate is to provide the necessary informations, in accordance with the standards for accreditation in higher education, in order to obtain accreditation and permission to implement a study program according to the dual model at the Department of Technical Sciences SUNP, all in accordance with article 5 of the Law on dual model of studies in higher education in the Republic of Serbia.

An option proposed at State University of Novi Pazar

- We decided to propose accreditation of master studies as classic ones, which already include 90 hours of practice, and to provide possibility for a certain number of students to attend a dual model of study within the already existing number of students in the accredited study program.

Classic model of a one-year master's program at SUNP

Мастер - ГРАЂЕВИНАРСТВО								
Р.бр.	Назив предмета	Тип	Стат. Пред.	Часови активне наставе недељно				ЕСПБ
				П	В	ДОН	СИР	
ПРВИ СЕМЕСТАР								
1	Теорија пластичности и гранична стања	НС (SP)	ОБ	3	2	0	0	8
2	Одабрана поглавља Методе коначних елемената	НС (SP)	ОБ	3	2	0	0	8
3	Изборни предмет 1	СА (PA)	ИЗ	2	3	0	0	7
	Одабрана поглавља бетонских конструкција							
	Одабрана поглавља металних конструкција							
4	Изборни предмет 2	СА (PA)	ИЗ	2	3	0	0	7
	Поузданост и сигурност конструк.							
	Метални мостови							
ДРУГИ СЕМЕСТАР								
5	Изборни предмет 3	СА (PA)	ИЗ	2	2	0	0	6
	Енергетски инжењеринг и пратећа техника у грађевинарсту							
	Моделирање конструкција применом рачунара							
6	Стручна пракса			0	0	0	90	3
7	Студијски истраживачки рад			0	0	0	0	6
8	Мастер рад			0	0	0	0	15
Укупно часова наставе на класичом једногодишњем мастер програму				12	14	0	90	60

- The questionnaire that the students of the Department of Technical Sciences filled out, showed us that students do not have enough knowledge about the dual model of studies, but also a certain degree of interest for such model of studies, which prompted us to consider introducing such a possibility.

one-year master program according to the dual model

Мастер - ГРАЂЕВИНАРСТВО								
Р.бр.	Назив предмета	Тип	Стат. Пред.	Теоријска настава		Учење код послодавца		ЕС ПБ
				П	В		СИР	
ПРВИ СЕМЕСТАР								
1	Теорија пластичности и гранична стања	НС	ОБ	45	30	0	0	8
2	Одабрана поглавља Методе коначних елемената	НС	ОБ	45	30	0	0	8
3	Изборни предмет 1	СА	ИЗ	20	15	90	0	4+3
	Одабрана поглавља бетонских конструкција							
	Одабрана поглавља металних конструкција							
4	Изборни предмет 2	СА	ИЗ	20	15	90	0	4+3
	Поузданост и сигурност конструк.							
	Метални мостови							
ДРУГИ СЕМЕСТАР								
5	Изборни предмет 3	СА	ИЗ	20	10	60	0	4+2
	Енергетски инжењеринг и пратећа техника у грађевинарсту							
	Моделирање конструкција применом рачунара							
6	Стручна пракса			0	0	0	90	3
7	Студијски истраживачки рад			0	0	0	0	6
8	Мастер рад			0	0	120	0	11+4
Укупно часова наставе на једногодишњем мастер програму по дуалном моделу студија				150	100	360	90	60

- The tables show the subjects that are studied during the studies in the master's academic study program Civil Engineering, the number of hours of lectures and exercises as well as the corresponding number of ECTS.
- By introducing a dual model of study in higher education, the legislator allows work-based learning, in a minimum time of 450 hours per year.

(120+150+450)

Structures of student engagement during learning through work

Study program	Month	II semester					
		II	III	IV	V	VI	Total
Civil Ingineering	Hours at the employer	60	60	80	100	150	450

- Learning by working on a one-year dual master program in Civil Engineering would be realized through the following activities:

1. through professional-applied subjects (elective subjects), (students choose 3 of the offered 9 professional-applicable courses) 240 hours = 8 ECTS
2. Professional practice 90 hours = 3 ECTS
3. Master thesis 120 hours = 4 ECTS

Study-research work

- The goal of the study-research work is the application of basic, theoretical-methodological, scientific and professional-applied knowledge and methods in solving specific problems within the selected area.
- The student studies the professional literature and performs analyzes in order to find a solution to a specific task that is defined by the task of the master's thesis. Within this part of the master's thesis, the student studies the problem, its structure and complexity and, based on the conducted analyzes, draws conclusions about possible ways of solving it.

Master thesis

- The content of the master's thesis is defined individually in accordance with the topic of the master's thesis.
- In agreement with his mentor, the student prepares a master's thesis in written form, according to the standards and rules at State University of Novi Pazar. (Department of Technical Sciences, study program "Civil Engineering") and general standards of independent professional –scientific work.

Master thesis

- Master thesis is based on theoretical and / or empirical analysis of a particular problem and is written in general form:

-Introductory terminological aspects,

-Subject of research

-Research methods

-The goal

- Starting hypotheses

-Results of application, discussion and concluding remarks, and aspects of possible application

-Literature and Contributions

-It is expected that the master thesis will help to improve the overall processes in companies

The procedure for introducing a dual model of studies at the State University of Novi Pazar

- The basis for the implementation of the dual model of study is the study program accredited in accordance with the accreditation standards established and with the laws governing higher education and qualification standards, established in accordance with the law governing the national qualifications framework.
- The proposal for accreditation of the study program have to be prepared at the level of the Department. The proposal of the study will be determined by the Council of the Department, and after that it will be adopted by the Senate of SUNP.

The procedure for introducing a dual model of studies at the State University of Novi Pazar

- SUNP may submit a request for giving consent for the organization of the module within the accredited study program for the realization of the study program according to the dual model, without increasing the number of students from the accreditation.
- The request for giving consent for the organization of a dual module within the accredited study program will be submitted to the National Accreditation Body.
- The form and content of the elaborate is determined by the National Council for Higher Education.

Contracts with partner companies and other entities

- In accordance with Article 12 of the Law on the Dual Model of Studies in Higher Education, the University signs agreements with companies that regulate their mutual rights and obligations.

Thanks you for your attention and time.