

**Hochschule Ostwestfalen-Lippe**  
*University of Applied Sciences*

**Verkündungsblatt der  
Hochschule Ostwestfalen-Lippe**  
46. Jahrgang – 8. Mai 2018 – Nr. 20

Satzung zur Änderung der Bachelorprüfungsordnung  
für den Studiengang Elektrotechnik  
an der Hochschule Ostwestfalen-Lippe  
(BPO Elektrotechnik)

vom 8. Mai 2018

**Satzung zur Änderung der Bachelorprüfungsordnung  
für den Studiengang Elektrotechnik  
an der Hochschule Ostwestfalen-Lippe  
(BPO Elektrotechnik)**

**vom 8. Mai 2018**

Auf Grund des § 2 Abs. 4 und des § 64 Abs. 1 des Gesetzes über die Hochschulen des Landes Nordrhein-Westfalen (Hochschulgesetz - HG) vom 16. September 2014 (GV. NRW S. 543), zuletzt geändert durch das Gesetz vom 17. Oktober 2017 (GV.NRW S. 806) hat die Hochschule Ostwestfalen-Lippe die folgende Satzung erlassen:

**Artikel I**

Die Bachelorprüfungsordnung für den Studiengang Elektrotechnik an der Hochschule Ostwestfalen-Lippe vom 20. Juli 2016 (Verkündungsblatt der Hochschule Ostwestfalen-Lippe 2016/ Nr. 16) wird wie folgt geändert:

1. **§ 3** Absatz 2 bis 6 werden gestrichen. Absatz 7 erhält die neue Zählung Absatz 2.

2. **§ 8** erhält den folgenden neuen Absatz 3:

„(3) Auf Antrag können sonstige Kenntnisse und Qualifikationen auf der Grundlage vorgelegter Unterlagen anerkannt werden, wenn diese Kenntnisse und Qualifikationen den Prüfungsleistungen, die sie ersetzen sollen, nach Inhalt und Niveau gleichwertig sind.“

Die Absätze 3 – 10 erhalten die Zählung 4 -11.

3. **§ 14** Abs. 1 Nr. 2 wird gestrichen. Die Nummern 3 und 4 erhalten die Zählung 2 und 3.

4. **§ 14** Abs. 4 Nr. 1 wird wie folgt neu gefasst:

„1. die Nachweise über die in Absatz 1 genannten Zulassungsvoraussetzungen“

5. **Anlage 3** wird durch folgende Wahlpflichtfächer ergänzt:

5237 “Entrepreneurship”, Kürzel EP, 4 SWS, 5 Credits.

5253 “Tech Startup”, Kürzel TS, 4 SWS, 5 Credits.

6. Es wird die **neue Anlage 4** mit dem Titel „Englischen Übersetzung der Anlagen 1 bis 3“ angefügt.

## **Artikel II**

Die Satzung tritt mit Wirkung zum 01. März 2018 in Kraft. Sie wird im Verkündungsblatt der Hochschule Ostwestfalen-Lippe veröffentlicht.

Diese Satzung wird nach Überprüfung durch das Präsidium der Hochschule Ostwestfalen-Lippe und auf Grund der Beschlüsse des Fachbereichsrats des Fachbereichs Elektrotechnik und Technische Informatik vom 27. September 2017, vom 25. Oktober 2017 sowie vom 31. Januar 2018 ausgefertigt.

Lemgo, den 8. Mai 2018

Der Präsident  
der Hochschule Ostwestfalen-Lippe

Prof. Dr. Jürgen Krahl

**Course Curriculum Electrical Engineering (Bachelor of Science)**  
**Field of Study: Automation Technology**

Subject No.	Subject	Code	CH	CR	Semester					
					1	2	3	4	5	6
<b>Compulsory Subjects <sup>1)</sup></b>										
5223	Project Week	PW		1	x					
5100	Mathematics 1	MA1	4	5	4					
5101	Mathematics 2	MA2	4	5	4					
5102	Mathematics 3	MA3	4	5		4				
5103	Mathematics 4	MA4	4	5		4				
5104	Fundamental Electrical Engineering 1	GE1	4	5	4					
5105	Fundamental Electrical Engineering 2	GE2	4	5	4					
5126	Advanced Electrical Engineering	VT	4	5		4				
5179	Programming Languages 1	PS1	4	5	4					
5180	Programming Languages 2	PS2	4	5		4				
5190	Computer Networks	RN	4	5		4				
5110	Programming of Embedded Systems	PE	4	5			4			
5198	Electronics 1	EL1	4	5	4					
5194	Electronics 2	EL2	4	5		4				
5114	Physics 1	PH1	4	5			4			
5200	Signals and Systems	SY	4	5			4			
5116	Digital Design	ED	4	5			4			
5214	Measurement Techniques	MT	4	5			4			
5225	Practical Course on Measurement Techniques	MP	2	2			2			
5118	In-Depth Practical Exercise	VP	2	2			2			
5152	Control Engineering 1	RT1	4	5				4		
5162	Communication Technologies 1	KT1	4	5				4		
	<b>Sum of compulsory subjects</b>		<b>80</b>	<b>100</b>	<b>24</b>	<b>24</b>	<b>24</b>	<b>8</b>		
<b>Compulsory Subjects within the Field of Study Automation Technology <sup>1)</sup></b>										
5193	Real Time Systems	EZ	4	5				4		
5199	Electrical Drives	AN	4	5				4		
5137	Industrial Communications	MV	4	5					4	
5153	Control Engineering 2	RT2	4	5					4	
	<b>Sum of compulsory subjects within the field of study Automation Technology</b>		<b>16</b>	<b>20</b>				<b>8</b>	<b>8</b>	
<b>Compulsory Optional Subjects of Catalog WAT <sup>2)</sup></b>										
	WPF 1		4	5				4		
	WPF 2		4	5				4		
	WPF 3		4	5					4	
	WPF 4		4	5					4	
	WPF 5		4	5					4	
	<b>Sum of compulsory optional subjects of catalog WAT</b>		<b>20</b>	<b>25</b>				<b>8</b>	<b>12</b>	
<b>Compulsory Optional Subjects of Catalog WS <sup>3)</sup></b>										
	WPF 1		4	5					4	
	WPF 2		4	5						4
	<b>Sum of compulsory optional subjects of catalog WS</b>		<b>8</b>	<b>10</b>					<b>4</b>	<b>4</b>
5210	Study Project	SA		10						x

Bachelor's Thesis	BA		12							x
Colloquium	KO		3							x
<b>Sum of CH</b>			<b>124</b>		<b>24</b>	<b>24</b>	<b>24</b>	<b>24</b>	<b>24</b>	<b>4</b>
<b>Sum of CR</b>			<b>180</b>		<b>31</b>	<b>30</b>	<b>29</b>	<b>30</b>	<b>30</b>	<b>30</b>

CR = credits (1 CR corresponds to 30 h)    CH = contact hours    WPF = compulsory optional subject

- 1) In each of the compulsory courses labeled with a subject number an exam must be taken.
- 2) At least 25 CR must be gained through examinations.
- 3) 10 CR must be gained through examinations.

## Course Curriculum Electrical Engineering (Bachelor of Science)

Field of Study: Information Technology

Sub- ject No.	Subject	Code	CH	CR	Semester					
					1	2	3	4	5	6
<b>Compulsory Subjects <sup>1)</sup></b>										
5223	Project Week	PW		1	x					
5100	Mathematics 1	MA1	4	5	4					
5101	Mathematics 2	MA2	4	5	4					
5102	Mathematics 3	MA3	4	5		4				
5103	Mathematics 4	MA4	4	5		4				
5104	Fundamental Electrical Engineering 1	GE1	4	5	4					
5105	Fundamental Electrical Engineering 2	GE2	4	5	4					
5126	Advanced Electrical Engineering	VT	4	5		4				
5179	Programming Languages 1	PS1	4	5	4					
5180	Programming Languages 2	PS2	4	5		4				
5190	Computer Networks	RN	4	5		4				
5110	Programming of Embedded Systems	PE	4	5			4			
5198	Electronics 1	EL1	4	5	4					
5194	Electronics 2	EL2	4	5		4				
5114	Physics 1	PH1	4	5			4			
5200	Signals and Systems	SY	4	5			4			
5116	Digital Design	ED	4	5			4			
5214	Measurement Techniques	MT	4	5			4			
5225	Practical Course on Measurement Techniques	MP	2	2			2			
5118	In-Depth Practical Exercise	VP	2	2			2			
5152	Control Engineering 1	RT1	4	5				4		
5162	Communication Technologies 1	KT1	4	5				4		
	<b>Sum of compulsory subjects</b>		<b>80</b>	<b>100</b>	<b>24</b>	<b>24</b>	<b>24</b>	<b>8</b>		
<b>Compulsory Subjects within the Field of Study Information Technology <sup>1)</sup></b>										
5161	High Frequency Engineering	HF	4	5				4		
5151	IT Security	DC	4	5				4		
5124	Discrete Signal Processing	DS	4	5					4	
5163	Communication Technologies 2	KT2	4	5					4	
	<b>Sum of compulsory subjects within the field of study Information Technology</b>		<b>16</b>	<b>20</b>				<b>8</b>	<b>8</b>	
<b>Compulsory Optional Subjects of Catalog WIT<sup>2)</sup></b>										
	WPF 1		4	5				4		
	WPF 2		4	5				4		
	WPF 3		4	5					4	
	WPF 4		4	5					4	
	WPF 5		4	5					4	
	<b>Sum of compulsory optional subjects of catalog WIT</b>		<b>20</b>	<b>25</b>				<b>8</b>	<b>12</b>	
<b>Compulsory Optional Subjects of Catalog WS <sup>3)</sup></b>										
	WPF 1		4	5					4	
	WPF 2		4	5						4
	<b>Sum of compulsory optional subjects of catalog WS</b>		<b>8</b>	<b>10</b>					<b>4</b>	<b>4</b>
5210	Study Project	SA		10						x
	Bachelor's Thesis	BA		12						x
	Colloquium	KO		3						x
	<b>Sum of CH</b>		<b>124</b>		<b>24</b>	<b>24</b>	<b>24</b>	<b>24</b>	<b>24</b>	<b>4</b>

<b>Sum of CR</b>			<b>180</b>	<b>31</b>	<b>30</b>	<b>29</b>	<b>30</b>	<b>30</b>	<b>30</b>
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CR = credits (1 CR corresponds to 30 h)      CH = contact hours      WPF = compulsory optional subject

- 1) In each of the compulsory courses labeled with a subject number an exam must be taken.
- 2) At least 25 CR must be gained through examinations.
- 3) 10 CR must be gained through examinations.

**Course Curriculum Electrical Engineering (Bachelor of Science)**  
**Field of Study: Energy and Drive Technology**

Sub- ject No.	Subject	Code	CH	CR	Semester					
					1	2	3	4	5	6
<b>Compulsory Subjects <sup>1)</sup></b>										
5223	Project Week	PW		1	x					
5100	Mathematics 1	MA1	4	5	4					
5101	Mathematics 2	MA2	4	5	4					
5102	Mathematics 3	MA3	4	5		4				
5103	Mathematics 4	MA4	4	5		4				
5104	Fundamental Electrical Engineering 1	GE1	4	5	4					
5105	Fundamental Electrical Engineering 2	GE2	4	5	4					
5126	Advanced Electrical Engineering	VT	4	5		4				
5179	Programming Languages 1	PS1	4	5	4					
5180	Programming Languages 2	PS2	4	5		4				
5190	Computer Networks	RN	4	5		4				
5110	Programming of Embedded Systems	PE	4	5			4			
5198	Electronics 1	EL1	4	5	4					
5194	Electronics 2	EL2	4	5		4				
5114	Physics 1	PH1	4	5			4			
5200	Signals and Systems	SY	4	5			4			
5116	Digital Design	ED	4	5			4			
5214	Measurement Techniques	MT	4	5			4			
5225	Practical Course on Measurement Techniques	MP	2	2			2			
5118	In-Depth Practical Exercise	VP	2	2			2			
5152	Control Engineering 1	RT1	4	5				4		
5162	Communication Technologies 1	KT1	4	5				4		
	<b>Sum of compulsory subjects</b>		<b>80</b>	<b>100</b>	<b>24</b>	<b>24</b>	<b>24</b>	<b>8</b>		
<b>Compulsory Subjects within the Field of Study Energy and Drive Technology <sup>1)</sup></b>										
5128	Electrical Machines	EM	4	5				4		
5224	Electrical Energy Technologies	EE	4	5					4	
5134	Power Electronics	LE	4	5					4	
5153	Control Engineering 2	RT2	4	5					4	
	<b>Sum of compulsory subjects within the field of study Energy and Drive Technology</b>		<b>16</b>	<b>20</b>				<b>4</b>	<b>12</b>	
<b>Compulsory Optional Subjects of Catalog WEA <sup>2)</sup></b>										
	WPF 1		4	5				4		
	WPF 2		4	5				4		
	WPF 3		4	5				4		
	WPF 4		4	5					4	
	WPF 5		4	5					4	
	<b>Sum of compulsory optional subjects of catalog WEA</b>		<b>20</b>	<b>25</b>				<b>12</b>	<b>8</b>	
<b>Compulsory Optional Subjects of Catalog WS <sup>3)</sup></b>										
	WPF 1		4	5					4	
	WPF 2		4	5						4
	<b>Sum of compulsory optional subjects of catalog WS</b>		<b>8</b>	<b>10</b>					<b>4</b>	<b>4</b>
5210	Study Project	SA		10						x
	Bachelor's Thesis	BA		12						x
	Colloquium	KO		3						x



<b>Sum of CH</b>		<b>124</b>		<b>24</b>	<b>24</b>	<b>24</b>	<b>24</b>	<b>24</b>	<b>4</b>
<b>Sum of CR</b>			<b>180</b>	<b>31</b>	<b>30</b>	<b>29</b>	<b>30</b>	<b>30</b>	<b>30</b>

CR = credits (1 CR corresponds to 30 h)      CH = contact hours      WPF = compulsory optional subject

1) In each of the compulsory courses labeled with a subject number an exam must be taken.

2) At least 25 CR must be gained through examinations.

3) 10 CR must be gained through examinations.

**Field of Study Automation Technology**  
**Catalog of Compulsory Optional Subjects WAT**

Subject No.	Code	Subject	CH	CR
5183	AD	Algorithms and Data Structures	4	5
5157	AF	Alternative Propulsion Systems for Automobiles	4	5
5220	BB	Vocational Training and Education in School and Business	4	5
5125	BV	Image Processing	4	5
5150	CV	Coding	4	5
5188	DB	Data Bases	4	5
5151	DC	IT Security	4	5
5216	DF	Diagnostics and Learning Support	4	5
5124	DS	Discrete Signal Processing	4	5
5224	EE	Electrical Energy Technologies	4	5
5128	EM	Electrical Machines	4	5
5130	EV	Electromagnetic Compatibility	4	5
5155	FS	Radio Systems	4	5
5176	HE	Hardware of Embedded Systems	4	5
5132	HD1	Hardware Design 1	4	5
5133	HD2	Hardware Design 2	4	5
5161	HF	High Frequency Engineering	4	5
5227	IA	Intelligent Automation	4	5
5163	KT2	Communication Technologies 2	4	5
5134	LE	Power Electronics	4	5
5211	ML	Machine Learning	4	5
5144	MO	Mobile Systems	4	5
5187	NM	Numerical Analysis	4	5
5189	OA	Object-Oriented Analysis and Design	4	5
5212	OS	Optical Transmission and Sensor Technology	4	5
5115	PH2	Physics 2	4	5
5221	PL	Practical Experience for Vocational Teaching	4	5
5158	RS	Computer-Aided Numerical Mathematics and Simulation	4	5
5167	RO	Computer Architecture and Operating Systems	4	5
5141	RA	Control of Electrical Drives	4	5
5142	ST	Sensor Technique	4	5
5196	SL	Simulation of Electronic Circuits	4	5
5181	SD	Software Design	4	5
5169	SM	Software Lifecycle Management	4	5
5149	SQ	Software Quality Management	4	5
5208	SU	Special Fields of Automation Technology	4	5
5146	SE	Special Fields of Electronics	4	5
5195	SI	Special Fields of Computer Science	4	5
5143	SK	Special Fields of Communication Technologies	4	5
5147	SS	Special Fields of Software Design	4	5
5145	SP	System Programming of Embedded Systems	4	5
5217	TD	Technical Didactics	4	5
5215	UD	Teaching and General Didactics	4	5
5170	VN	Communication Technologies in Vehicles	4	5
5171	VS	Distributed Systems	4	5
5164	VH	Advanced High Frequency Engineering	4	5
5148	WV	Wide Area Networks	4	5
		N. N. 1 *		at least 5
		N. N. 2 *		at least 5

\* Compulsory optional subject from the range of subjects offered by OWL University of Applied Sciences or other universities, as approved by the examination board in accordance with § 24 (5)

**Field of Study Information Technology**  
**Catalog of Compulsory Optional Subjects WIT**

Subject No.	Code	Subject	SWS	
5183	AD	Algorithms and Data Structures	4	5
5157	AF	Alternative Propulsion Systems for Automobiles	4	5
5220	BB	Vocational Training and Education in School and Business	4	5
5125	BV	Image Processing	4	5
5150	CV	Coding	4	5
5188	DB	Data Bases	4	5
5216	DF	Diagnostics and Learning Support	4	5
5193	EZ	Real Time Systems	4	5
5199	AN	Electrical Drives	4	5
5224	EE	Electrical Energy Technologies	4	5
5128	EM	Electrical Machines	4	5
5130	EV	Electromagnetic Compatibility	4	5
5155	FS	Radio Systems	4	5
5176	HE	Hardware of Embedded Systems	4	5
5132	HD1	Hardware Design 1	4	5
5133	HD2	Hardware Design 2	4	5
5227	IA	Intelligent Automation	4	5
5134	LE	Power Electronics	4	5
5137	MV	Industrial Communications	4	5
5211	ML	Machine Learning	4	5
5144	MO	Mobile Systems	4	5
5187	NM	Numerical Analysis	4	5
5189	OA	Object-Oriented Analysis and Design	4	5
5212	OS	Optical Transmission and Sensor Technology	4	5
5115	PH2	Physics 2	4	5
5221	PL	Practical Experience for Vocational Teaching	4	5
5158	RS	Computer-Aided Numerical Mathematics and Simulation	4	5
5167	RO	Computer Architecture and Operating Systems	4	5
5141	RA	Control of Electrical Drives	4	5
5153	RT2	Control Engineering 2	4	5
5142	ST	Sensor Technique	4	5
5196	SL	Simulation of Electronic Circuits	4	5
5181	SD	Software Design	4	5
5169	SM	Software Lifecycle Management	4	5
5149	SQ	Software Quality Management	4	5
5208	SU	Special Fields of Automation Technology	4	5
5146	SE	Special Fields of Electronics	4	5
5195	SI	Special Fields of Computer Science	4	5
5143	SK	Special Fields of Communication Technologies	4	5
5147	SS	Special Fields of Software Design	4	5
5145	SP	System Programming of Embedded Systems	4	5
5217	TD	Technical Didactics	4	5
5215	UD	Teaching and General Didactics	4	5
5170	VN	Communication Technologies in Vehicles	4	5
5171	VS	Distributed Systems	4	5
5164	VH	Advanced High Frequency Engineering	4	5
5148	WV	Wide Area Networks	4	5
		N. N. 1 *		at least 5
		N. N. 2 *		At least 5

\* Compulsory optional subject from the range of subjects offered by OWL University of Applied Sciences or other universities, as approved by the examination board in accordance with § 24 (5)

**Field of Study Energy and Drive Technology  
Catalog of Compulsory Optional Subjects WEA**

Subject No.	Code	Subject	SWS	CR
5183	AD	Algorithms and Data Structures	4	5
5157	AF	Alternative Propulsion Systems for Automobiles	4	5
5220	BB	Vocational Training and Education in School and Business	4	5
5125	BV	Image Processing	4	5
5150	CV	Coding	4	5
5188	DB	Data Bases	4	5
5151	DC	IT Security	4	5
5216	DF	Diagnostics and Learning Support	4	5
5124	DS	Discrete Signal Processing	4	5
5193	EZ	Real Time Systems	4	5
5199	AN	Electrical Drives	4	5
5130	EV	Electromagnetic Compatibility	4	5
5155	FS	Radio Systems	4	5
5176	HE	Hardware of Embedded Systems	4	5
5132	HD1	Hardware Design 1	4	5
5133	HD2	Hardware Design 2	4	5
5161	HF	High Frequency Engineering	4	5
5227	IA	Intelligent Automation	4	5
5163	KT2	Communication Technologies 2	4	5
5211	ML	Machine Learning	4	5
5137	MV	Industrial Communications	4	5
5144	MO	Mobile Systems	4	5
5187	NM	Numerical Analysis	4	5
5189	OA	Object-Oriented Analysis and Design	4	5
5212	OS	Optical Transmission and Sensor Technology	4	5
5115	PH2	Physics 2	4	5
5221	PL	Practical Experience for Vocational Teaching	4	5
5158	RS	Computer-Aided Numerical Mathematics and Simulation	4	5
5167	RO	Computer Architecture and Operating Systems	4	5
5141	RA	Control of Electrical Drives	4	5
5142	ST	Sensor Technique	4	5
5196	SL	Simulation of Electronic Circuits	4	5
5181	SD	Software Design	4	5
5169	SM	Software Lifecycle Management	4	5
5149	SQ	Software Quality Management	4	5
5208	SU	Special Fields of Automation Technology	4	5
5146	SE	Special Fields of Electronics	4	5
5195	SI	Special Fields of Computer Science	4	5
5143	SK	Special Fields of Communication Technologies	4	5
5147	SS	Special Fields of Software Design	4	5
5145	SP	System Programming of Embedded Systems	4	5
5217	TD	Technical Didactics	4	5
5215	UD	Teaching and General Didactics	4	5
5170	VN	Communication Technologies in Vehicles	4	5
5171	VS	Distributed Systems	4	5
5164	VH	Advanced High Frequency Engineering	4	5
5148	WV	Wide Area Networks	4	5
		N. N. 1 *		mind. 5
		N. N. 2 *		mind. 5

\* Compulsory optional subject from the range of subjects offered by OWL University of Applied Sciences or other universities, as approved by the examination board in accordance with § 24 (5)

**Fields of Study Automation Technology, Information Technology and  
Energy and Drive Technology:  
Catalog of Compulsory Optional Subjects WS**

<b>Sub- ject No.</b>	<b>Code</b>	<b>Subject</b>	<b>SWS</b>	<b>CR</b>
5174	BW	Business Studies	4	5
5205	GD	Gender Diversity	4	5
5207	IM	Innovation and Technology Management	4	5
5175	MK	Management Skills	4	5
5204	MI	STEM in Practice and Teaching	4	5
5173	TE	Technical English	4	5
5237	EP	Entrepreneurship	4	5
5253	TS	Tech Startup	4	5
		N. N. *		at least 5

\* Compulsory optional subject from the range of subjects offered by OWL University of Applied Sciences or other universities, as approved by the examination board in accordance with § 24 (5)