Pomeranian Medical University in Szczecin

SYLLABUS of the MODULE (SUBJECT)
General Information

Module title:	**Dental Prosthetics**
Module type	Obligatory
Faculty PMU	Faculty of Medicine and Dentistry
Major	Dentistry
Level of study	long-cycle (S2J)
Mode of study	full-time studies
Year of studies, semester	3 year (V semester and VI semester)
ECTS credits (incl. semester breakdown)	V semestre: 2 VI semestre: 3
Type/s of training	V semester: lectures (10h), seminars (6h), practical classes (45h) VI semestrer: seminars (6h), practical classes (45h)
Form of assessment*	☒graded assessment: ☒descriptive ☒test ☐practical ☐oral ☐non-graded assessment ☒final examination ☐descriptive ☐test ☐practical ☐oral
Head of the Department/ Clinic, Unit	prof. dr hab. n. med. Ewa Sobolewska
Tutor responsible for the module	tutor of the 3rd year dr n. med. Małgorzata Kozak, malgorzata.kozak@pum.edu.pl
Department's/ Clinic's/ Unit's website	https://www.pum.edu.pl/wydzialy/wydzial-medycyny-i-stomatologii/Katedra-i-Zaklad-Protetyki-Stomatologicznej
Language	English

Detailed information

* replace ☐ into ☒ where applicable

Module objectives		The aim of teaching prosthodontics is to acquire knowledge of prosthetic treatment based on material technologies and laboratory procedures. fixed restorations. Acquiring of the practical skills of selected clinical and laboratory stages and procedures of fixed and removable prosthetics restorations.
Prerequisite /essential Requirements	Knowledge	Knowledge resulting from the implementation of the educational content for the 1st and 2nd year of studies. Knowledge of the equipment of the dental practice and the instruments used in dental procedures. Definition and classification of dental materials.
	Skills	Knowledge of the principles of using dental units and equipment. Appropriate selection of dental materials and instruments for dental treatment.
	Competences	The habit of self-education and lifelong education. Understanding the sense of responsibility for the entrusted property, personal culture.

Description of the learning outcomes for the subject /module

No. of learning outcome	Student, who has passed the (subject) knows /is able to /can:	SYMBOL (referring the standards)	Method of verification of learning outcomes*
W01	knows basic clinical procedures for reconstruction of tooth hard tissue, endodontic treatment and methods and laboratory procedures for prosthetic restorations	C.W28	W, PM, K, ET
W02	knows mechanisms of degradation (corrosion) of dental biomaterials in oral cavity and influence thereof on biological properties of materials	C.W29	W, PM, K, ET
W03	characterizes the composition, properties and method of bonding primary and secondary materials used in the manufacture of prosthetic restorations	C.W29	W, PM, K, ET
W04	knows rules of prophylactic-therapeutic procedures in diseases of stomatognathic system in different phases of development	F.W2	W, PM, K, ET
W05	knows symptoms, course and procedures for certain diseases of oral cavity, head and neck with regard to age groups	F.W4	W, PM, K, ET
W06	knows occlusion norms in different phases of ontogenesis and deviations from norms	F.W1	W, PM, K, ET
U01	selects reconstructive, prosthetic and binding materials according to properties of materials and clinical conditions	C.U11	S
U02	designs prosthetic restorations and knows how to execute them in laboratory	C.U13	S
U03	prepares teeth for fixed prosthetic restorations on the phantom	C.U13	S
U04	finds indications and contraindications as to performance of certain dental procedure	F.U7	S
U05	performs prosthetic rehabilitation in easy cases with regard to clinical and laboratory procedure	F.U22	S

U06	is able to reproduce anatomic occlusion conditions and analyze occlusion	F.U12	S
K01	is ready to notice and recognize own limitations, make self-assessment of educational deficits and needs	K. 5	O
K02	is ready to draw conclusions from own measurements or observations	K. 8	O

Table presenting LEARNING OUTCOMES in relation to the form of classes								
No. of learning outcome	**Learning outcomes**	**Type of training**						
		Lecture	**Seminar**	**Practical -**	**Clinical classes**	**Simulations**	**E-learning**	**Other…**
W01	knows basic clinical procedures for reconstruction of tooth hard tissue, endodontic treatment and methods and laboratory procedures for prosthetic restorations	X	X			X		
W02	knows mechanisms of degradation (corrosion) of dental biomaterials in oral cavity and influence thereof on biological properties of materials	X	X			X		
W03	characterizes the composition, properties and method of bonding primary and secondary materials used in the manufacture of prosthetic restorations	X	X			X		
W04	knows rules of prophylactic-therapeutic procedures in diseases of stomatognathic system in different phases of development	X				X		
W05	knows symptoms, course and procedures for certain diseases of oral cavity, head and neck with regard to age groups	X				X		
W06	knows occlusion norms in different phases of ontogenesis and deviations from norms	X				X		
U01	selects reconstructive, prosthetic and binding materials according to properties of materials and clinical conditions					X		
U02	designs prosthetic restorations and knows how to execute them in laboratory					X		
U03	prepares teeth for fixed prosthetic restorations on the phantom					X		
U04	finds indications and contraindications as to performance of certain dental procedure					X		

U05	performs prosthetic rehabilitation in easy cases with regard to clinical and laboratory procedure					X		
U06	is able to reproduce anatomic occlusion conditions and analyze occlusion					X		
K01	is ready to notice and recognize own limitations, make self-assessment of					X		
K02	is ready to draw conclusions from own measurements or observations					X		

Table presenting TEACHING PROGRAMME			
No. of a teaching programme	**Teaching programme**	**No. of hours**	**References to learning outcomes**
Winter semester			
	Lectures		
TK 01	Patient examination. Characteristics of a masticatory system, treatment planning.	1hrs	W01, W04, W05, W06
TK 02	Preparation for prosthetic treatment. Pre-prosthetic treatments. Classifications of the prosthetic bearing area. Classifications of missing teeth. Types of prosthetic restorations.	1hrs	W01, W03, W05
TK 03	Edentulous patient – introduction, anatomy of edentulous ridges, clinical and laboratory stages.	1hrs	W01, W03, W04
TK 04	Edentulous patient – determining OVD, methods of teeth arrangement.	1hrs	W01, W03, W04
TK 05	Removable partial dentures – introduction and indications, biomechanics, treatment planning.	1hrs	W01, W02, W03
TK 06	Introduction to fixed dentures – diagnostics and treatment planning.	1hrs	W01, W02, W04, W06
TK 07	Dental crowns.	1hrs	W01, W02, W03, W04, W05
TK 08	Rules of designing prosthetic bridges.	1hrs	W01, W02, W03, W04, W05
TK 09	Post and core.	1hrs	W01, W02, W03, W04, W05
TK 10	Repairing a prosthetic restoration	1hrs	W01, W02, W03
	Seminars		

	TK 01	Primary dental materials used for prosthetic restorations.	3 hrs	W02, W03
	TK 02	Secondary dental materials used for prosthetic restorations.	3 hrs	W02, W03
		Simulation		
	TK 01	Complete dentures. Impressions and pouring casts. I clinical and laboratory stage. Fabrication of a shellac and acrylic custom tray.	3 hrs	W01, W04, W05, U02, U04, U05, U06, K01, K02
	TK 02	Complete dentures. Fabrication a custaom tray of a light-cured material. Functional impressions.	3 hrs	W01, W02, W03, U01, U02, U05, K01, K02
	TK 03	Complete dentures. II laboratory stage. Occlusal rims fabrication for upper jaw.	3 hrs	W01, U01, U02, U05, K01, K02
	TK 04	Complete dentures. II laboratory stage. Occlusal rims fabrication for lower jaw.	3 hrs	W01, U01, U02, U05, K01, K02
	TK 05	Complete dentures. III clinical stage. Bite registration, facebow transfer into articulator.	3 hrs	W01, W06, U02, U05, K01, K02
	TK 06	Complete dentures. III laboratory stage Teeth arrangement.	3 hrs	W01, W06, U01, U02, K01, K02
	TK 07	Complete dentures. IV and V clinical stage and IV laboratory stage. Flasking and boiling.	3 hrs	W01, W03, U01, U02, K01, K02
	TK 08	Dental crowns. I clinical stage. 16 or 26 tooth preparation for a full metal crown.	3 hrs	W01, W02, W03, W04, W05, U03, U04, U05, U06, K01, K02
	TK 09	Cosmetic dental crowns. I clinical stage. 14 or 24 tooth preparation for a PFM crown	3 hrs	W01, U03, U04, U05, K01, K02
	TK 10	Cosmetic dental crowns. I clinical stage. 15 or 25 tooth preparation for a PFM crown.	3 hrs	W01, U03, U04, U05, K01, K02
	TK 11	Cosmetic dental crowns. I clinical stage. 11 or 21 tooth preparation for a full ceramic crown. Impressions, bite registration, facebow transfer.	3 hrs	W01, W06, U03, U04, U05, K01, K02
	TK 12	Dental crowns. Casting a metal crown. Modeling of the wax pattern of the crown framework. Laboratory stage of casting a metal crown.	3 hrs	W01, U01, U02, U05, K01, K02

T	TK 13	Temporary crowns. Demonstration of modeling a wax pattern of an acrylic crown. Making a temporary crown.	3 hrs	W01, U01, U02, K01, K02
	TK14	Dental crowns. Casting a metal crown, covered with ceramics. Modeling of the wax pattern of the crown framework.	3 hrs	W01, W02, W03, U01, U02, U05, K01, K02
	TK15	Dental crowns. I clinical stage. 11 or 21 tooth preparation for a PFM crown. Methods of impressions – repetition. Taking impressions using alginate material.	3 hrs	W01, W03,U03, U04, U05, K01, K02
		Summer Semestr		
		Seminars		
	TK 01	Dental materials used in complete and removable dentures-repetition	3 hrs	W02, W03
	TK 02	Mistakes in clinical and laboratory stages of fixed and removable restorations.	3 hrs	W01, W02
		Simulation		
	TK 01	Dental bridges. I clinical stage. 13 and 15 or 23 and 25 teeth preparation for a dental bridge.	3 hrs	W01, W04, W05, U03, U04, U05, U06, K01, K02
	TK 02	Dental bridges. I clinical stage. 13 and 15 or 23 and 25 teeth preparation for a dental bridge – continuation.	3 hrs	W01, U03, U05, K01, K02
	TK 03	Dental bridges. I clinical stage. 13 and 23 teeth preparation for a dental bridge.	3 hrs	W01, W06, U02, U05, K01, K02
	TK 04	Dental bridges. I clinical stage. 13 and 23 teeth preparation for a dental bridge – continuation. Impressions, bite registration, facebow transfer. Methods of tooth protection after preparation. Provisional bridges.	3 hrs	W01, W06, U02, U05, K01, K02
	TK 05	Dental bridges. I, II laboratory stage, II, III clinical stage. Modelling a bridge, casting.	3 hrs	W01, W03, K01, K02
	TK 06	Removable partial dentures. I, II clinical stage, I laboratory stage. Occlusal rims fabrication in the case of extensive missing teeth and difficult conditions.	3 hrs	W01, W02, W03,W04, W05, U01, U02, U04, U05, U06, K01, K02

TK 07	Removable partial dentures. II laboratory stage.Wax rim fabrication for upper jaw.	3 hrs	W01, W06, U01, U02, U05, K01, K02
TK 08	Removable partial dentures. II laboratory stage, III clinical stage. Wax rim fabrication for lower jaw. Working casts and wax rim mounting on the articulator.	3 hrs	W01, W06, U01, U02, U05, K01, K02
TK 09	Removable dentures. III laboratory stage, Clasps bending.	3 hrs	W01, U02, U05, K01, K02
TK 10	Removable partial dentures. IV, V clinical stage, III laboratory stage continuation and IV laboratory stage. Teeth arrangement and demonstration of flasking of partial dentures.	3 hrs	W01, W03, U01, U02, U05, K01, K02
TK 11	Post and core. Methods of making post and core in single-rooted and multi-rooted teeth. Practicing impression methods. Direct and indirect methods of individual post and core preparation. Clinical stage. Teeth preparation for a metal post and core.	3 hrs	W01, U03, U05, K01, K02
TK 12	Post and core. Indirect methods of making metal post and core. Clinical stage. Practicing of impression methods.	3 hrs	W01, W02, W03, W04, W05, U02, U04, U05, U06, K01, K02
TK 13	Post and core. Indirect methods of making metal post and core. Laboratory stage. Modelling of a wax pattern for casting post and core.	3 hrs	W01, W02, W03, U01, U02, U05, K01, K
TK 14	Dental and prosthetic education of the patient. Adaptation to prosthetic restorations, factors influencing to the adaptation process. Clinical aspects of the technical fabrication of fixed and removable restorations. Preparation of oral hygiene instructions and follow-up visit plan.	3 hrs	W01, W03, W04, W05, U05, U06, K01, K02
TK 15	Tooth preparation for a PFM crown – repetition. Stages, instrumentation. 16 or 26 tooth preparation for a PFM crown.	3 hrs	W01, U03, U04, U05, K01, K02

Booklist

Obligatory literature:
1. Rosenstiel SF, Land MF, Fujimoto J. "Contemporary Fixed Prosthodontics", 4th Edition, Mosby Elsevier, 2006
2. Powers J, Sakaguchi R. "Craig's Restorative Dental Materials" 12th Edition, Mosby Elsevier, 2006
3. Basker R, Davenport J. "Prosthetic Treatment of the Edentulous Patient" 4th Edition, Wiley-Blackwell, 2002
4. Carr AB, Brown "McCracken's removable partial prosthodontics" Mosby St.Louis, 2005
Supplementary literature:
1. Craig, John M. Powers, John C. Wataha, "Dental Materials, Properties and Manipulation", 9th edition, Mosby 2007
2. Shillingburg, Herbert T., Jr.: Fundamentals of Fixed Prosthodontics, 3rd edition Chicago: Quintessence Pub., c1997. ISBN: 086715201X
3. Zarb G.A., Bolender C.L., Eckert S., Jacob R., Mericske-Stern F, "Prosthodontic Treatment for Edentulous Patients: Complete Dentures and Implant-Supported Prostheses", 12th edition, Mosby Co.
4. Okeson J., "Management of Temporomandibular Disorders and Occlusion, Mosby Elsevier 2008

Standards of procedures required to obtain credit:
1. Fabrication of a custom tray in edentulous condition. 2. Preparation of the wax rim in edentulousness. 3. Facebow transfer on the phantom. 4. Teeth arrangement in complete dentures. 5. Flasking of complete denture. 6. Tooth preparation for a metal crown on a phantom. 7. Tooth preparation for a PFM crown on a phantom. 8. Tooth preparation for a full porcelain crown on a phantom. 9. Fabrication of an individual temporary crown (impression method). 10. Modeling of a wax pattern of an acrylic temporary crown. 11. Modeling of a wax pattern for a metal crown. 12. Modeling of a wax pattern of a veneered crown framework. 13. Teeth preparation for a bridge on a phantom. 14. Fabrication of a custom tray in the case of partial missing teeth. 15. Preparation of a wax rim in the case of extensive missing teeth. 16. Bending of the steel wire clasp. 17. Teeth arrangement in partial denture. 18. Flasking of partial denture. 19. Tooth preparation for a post and core on a phantom. 20. Modeling of a wax pattern for a metal post and core.

Student's workload	
Form of student's activity (in-class participation; activeness, produce a report, etc.)	Student's workload [h] Tutor
Contact hours with the tutor	112
Time spent on preparation to seminars/ practical classess	20

Time spent on reading recommended literature	10
Time spent on writing report/making project	3
Time spent on preparing to colloqium/ entry test	6
Time spent on preparing to exam	4
Student's workload in total	155
ECTS credits for the subject (in total)	5
Remarks	
winter semester - credit: on the basis of credit for classes and seminars and attendance at lectures; summer semester - graded credit: on the basis of final test credit and tutorial grade; the condition for admission to the final test is passing the classes and seminars;	

* Selected examples of methods of assessment:
EP – written examination
EU – oral examination
ET – test examination
EPR – practical examination
K – colloqium
R – report
S – practical skills assessment
RZC – practical classes report, incl. discussion on results
O – student's active participation and attitude assessment
SL – lab report
SP – case study
PS - assessment of student's ability to work independently
W – entry test
PM – multimedial presentation
other…