COURSE DESCRIPTION FORM	
Course Code and Name	DHF 2260 Materials Science
Course Semester	3-4
Catalogue Data of the Course (*Course Content*)	Learning the types, structures, properties and application principles of materials and instruments used in dentistry.
Course Textbooks	1. Sakaguchi RL, Powers JM. Craig's restorative dental materials.13th ed., Elsevier,2012. 2. O'Brien WJ. Dental materials and their selection.4th ed., QuintessencePub. Co. Inc. 2008. 3. John Mc Cabe, AngudWG wALLS. Applied Dental Materials.9th Edition, Wiley Blackwell,2008.
Supplementary Textbooks	Can G., Ersoy E., Aksu L.Diş Hekimliğinde Maddeler Bilgisi.Yurtmim yayıncılık, 2014.
Credit (*ECTS*)	2
Prerequisites for the Course (*Attendance Requirements*)	1) It is obligatory to attend 70% theoretical course. 2) It is obligatory to successfully pass the DHF100-Dental Anatomy and Physiology, HST 100- Histology I, BYF 100- Biophysics courses.
Course Type	Compulsory Course
Language of Instruction	Turkish
Course Objectives	Teach comprehensive information about the types, contents, properties and usage techniques of materials and instruments used in dentistry.
Course Learning Outcomes	1.Knows the classification, properties, disinfection and retraction materials of impression materials. 2. Knows convertible and non-transformable hydrocolloid and elastomeric impression materials. 3. Knows protection, disinfection and sterilization in dentistry. 4. Knows dentin binders, cements, acrylic and porcelain teeth. 5. Knows composite resins, implant materials and alloys used in dentistry. 6. Knows dental porcelain, metal-supported porcelain, full ceramic systems, tissue modifiers, soft lining materials. 7. Knows the tools and machines used in dentistry.
Instruction Method *(Face-to-face, Distance education etc.)*	Face to face
Weekly Schedule of the Course	Week 1: Classification of impression materials, their properties, measuring spoons Week 2: Retraction agents Week 3: Convertible and non-transformable hydrocolloids Week 4: Protection, sterilization, disinfection agents in dentistry Week 5: Disinfection of impression materials Week 6: Dentin bonds Week 7: Cavity insulation Week 8: Cements (I) Week 9: Cements (II) Week 10: Cements (III) Week 11: Seminar Week 12: Acrylic and porcelain teeth Week 13: Elastomeric impression materials (I) Week 14: Elastomeric impression materials (II) Week 15: Composite resins Week 16: Implant materials Week 17: Alloys used in dentistry Week 18: Corrosion and staining Week 19: Thermoplastic impression materials, zoe-based impression materials

Week 20: Dental porcelain (description, history, content)
Week 21: Metal supported porcelains
Week 22: All-ceramic systems
Week 23: Varnish, cavity coaters
Week 24: Seminar
Week 25: Texture modifiers
Week 26: Soft base materials
Week 27: Tools and machines in dentistry
Week 28: Biological compatibility in dental materials

Teaching Activities
(The time spent for the activities listed here will determine the amount of credit required)

Weekly theoretical course hours 28 week/1 hour
Weekly practical course hours
Reading activities 5 week / 2 hours
Internet search and library work 5 week / 2 hours
Designing and implementing materials
Making a report
Preparing and making presentations
Midterm and revision for midterm 2 week/ 1 hour
Final exam and revision for final exam 1 week / 1 hour

Assessment Criteria

	Number(s)	Weight (%)
Midterm exam	2	42
Assignment	1	9
Application		
Project		
Practice		
Quiz	1	9
Final exam		40
Total		100

Workload of the Course

Activity	Number of Weeks	Duration (Weekly Hour)	End of Semester Total Workload
Weekly theoretical course hours	28	1	28
Weekly practical course hours			
Reading activities	5	2	10
Internet search and library work	5	2	10
Designing and implementing materials			
Making a report			
Preparing and making presentations			
Midterm and revision for midterm	2	1	2
Final exam and revision for final exam	1	1	1
Total workload			51
Total workload/ 25			2,04
Course Credit (ECTS)			2

Contribution Level between Course Outcomes and Program Outcomes

No	Program Outcomes	1	2	3	4	5
1	Knows the normal structure and functions of the human body and specifically the structures and teeth in the mouth area on the basis of cells, tissues, organs and systems, and their interactions with each other.			**x**		
2	Defines the causes and formation mechanisms of oral, dental and jaw diseases, the findings they cause, structure and function disorders and how they affect the organism.			**x**		

	3	Knows, comprehends, relates and evaluates the symptoms and findings, diseases and conditions and professional practices in the national core education program of dentistry and Gazi University Faculty of Dentistry Extended Education Program at a determined level.			**x**		
	4	Knows how to reach the best current scientific evidence, evaluate its reliability and validity in line with personal learning needs.			**x**		
	5	Knows the legislation on professional legal responsibilities, deontology and ethical principles.			**x**		
	6	Knows and makes professional practices in the national core education program of dentistry and Gazi University Faculty of Dentistry Extended Education Program at the specified level.			**x**		
	7	It carries out diagnosis, treatment and follow-up processes by prioritizing evidence-based practice, critical thinking and ethical principles.			**x**		
	8					**x**	
	9	She/He is aware of her limitations, sets personal learning goals to support her professional development, and directs the patient to the appropriate center when necessary.			**x**		
	10	Knows the incidence of diseases in the mouth, teeth and jaws in society, contributes to the prevention and reduction.			**x**		
	11	Has teamwork and leadership skills, becomes a role model to colleagues and society.			**x**		
	12	Plans personal professional development, realizes it with the principle of lifelong learning				**x**	
	13	Establishes effective written and verbal communication with patient relatives, other health personnel, society, relevant sectors and the media.			**x**		
	14	Follows the innovations in the profession by using foreign language and information communication technologies.			**x**		
Lecturer(s) and Contact Information	Lecturer's First/Last Name: 1. Prof. Dr. Arife Doğan (adogan@gazi.edu.tr) (Sınıf Sorumlu Öğr. Üyesi) 2. Prof. Dr. Asude Dilek Nalbant (asudedilek@gmail.com) 3. Prof. Dr. Evşen Tamam (ewsen@gazi.edu.tr) 4. Prof. Dr. Duygu Karakış (duygukoc@gazi.edu.tr)							