Medicinski fakultet je jedan od partnera u okviru Erasmus + projekta "BIOSINT" -"Strengthening capacities and digital competencies in biomedical education through internationalization at home", ERASMUS-EDU-2022-CBHE-STRAND-2, No. 101082863, koji je započet u januaru 2023.godine, zajedno sa biomedicinskim fakultetima univerziteta iz regiona – Univerzitet u Kragujevcu koji je koordinator projekta, Univerzitet KU Lueven iz Blegije i Univerzitet Medicine i Farmacije Victor Babes Timisoara iz Rumunije koji su EU partneri; Univerzitet iz Istočnog Sarajeva, Univerzitet u Tuzli, Univerzitet u Mostaru, Univerzitet "Luigj Gurakuqi" iz Skadra i Medicinski univerzitet u Tirani.

Projekat se tiče internacionalizacije kod kuće i svih njenih aspekata sa posebnim fokusom na internacionalizaciju kurikuluma koji predstavlja najobimniji i najkompleksiniji aspekt. Kroz niz sastanaka, radionica, predavanja i edukacije nastavnog osoblja formirana je strategija internacionalizacije pojedinačnih visokoobrazvnih biomedicinskih institucija, samim tim i Medicinskog fakulteta UCG, koja je u saglasnosti sa Strategijom internacionalizacije UCG i Strategijom razvoja Medicinskog fakulteta.

U okviru projektnog radnog zadatka WP4 (specifični zadarak T4.4 - razvoj novih internacionalnih virtuelnih predmeta) zajedničkim radom svih partnerskih institucija, a pod rukovodstvom EU partnera osmišljena su i tri nova kurikuluma za tri izborna /elektivna/ predmeta koja svojim sadržajem i načinom izvođenja nastave podržavaju koncept internacionalizacije kod kuće i internacionalizacije kurikuluma. Navedeni predmeti su:

- Medical nutritional therapy Medicinska nutritivna terapija
- Health care management in crisis Zdravstveni menadžment u krizi
- Personalized medicine Personalizovana medicina.

Predviđeno je da se nastava odvija na engleskom jeziku i da u okviru pojedinačnih predmeta nastavu organizuju i izvode profesori i saradnici iz više različitih visokoobrazovnih institucija obuhvaćenih projektom. Samim tim nastavu bi istovremeno pohađali studenti iz više različitih univerziteta, što im omogućava pristup internacionalizovanom sadržaju - "virtuelna studijska razmjena". Shodno tome su projektom bila obezbjeđenja sredstva za opremanje multifunkcionalne pametne virtuelne učionice gdje će pomenuta nastava odvijati i gdje će studenti našeg fakulteta slušati nastavu, ali i biti aktivno uključeni u diskusiju istovremeno sa studentima iz drugih zemalja. Osim toga projektom su predviđena sredstva da nastavno osoblje pohađa dodatne kurseve engleskog jezika u smislu unapređenja stručnog i kolokvijalnog govora, kao i finansijska sredstva za nastavno osoblje uključeno u nastavu predloženih kurikuluma.

U okviru pomenutog radnog zadatka WP4 predviđena je i "pilot" nastava - specifični zadatak T4.6 - "pilot" nastava u okviru internacionalizacije kurikuluma i COIL način predavanja . U ljetnjem semestru tekuće godine, nakon što se pomenuti predmeti uvrste u zvanične kurikulume visokoobrazovnih biomedicinskih institucija studenti dobrovoljci će pohađati nastavu kako bi se testirao osmišljeni koncept nastave i način evluacije (T4.7 – evaluacija "pilot"

aktivnosti), eventualno pojedini aspekti promijenili i prilagodili specifičnostima studijskih programa da bi od naredne školske godine – zimskog semestra mogli biti ponuđeni studentima prilikom izbora izbornih /elektivnih/ predmeta. Broj ECTS kredita svaka visokoobrazovna ustanova će uskladiti prema kurikulumu svojih studijskih programa.

U prilogu se dostavljaju formirani kurikulumi na engleskom jeziku.





Course Title: Health Management in Crisis

ECTS Credits: 6 Course Duration: Summer Semester (15 Weeks) Weekly Workload: 3 hours of lectures + 3 hours of independent study/work per week (approx. 180 hours total)

Course Overview:

This course focuses on equipping students with the essential skills, strategies, and knowledge needed to manage health systems effectively during crisis situations. Through the exploration of global and local health emergencies, students will understand the complexities of health management in times of crisis, focusing on disaster preparedness, emergency response, resource management, leadership, and crisis communication. Case studies will form an integral part of the curriculum, allowing students to engage with real-world scenarios.

Learning Outcomes:

By the end of this course, students will be able to:

- 1. **Understand** the key principles of health management in the context of crises (e.g., pandemics, natural disasters, conflict zones).
- 2. **Identify** vulnerabilities in healthcare systems and develop appropriate crisis preparedness and response strategies.
- 3. **Run** emergency medical and public health responses, ensuring the efficient allocation of resources.
- 4. Implement leadership skills to manage healthcare teams under crisis conditions.
- 5. Introduce ethical challenges and decision-making in health crisis management.
- 6. **Communicate** effectively with the public, healthcare professionals, and stakeholders during crises.

Course Content:

Topic 1: Introduction to Health Crisis Management

- Week 1: Introduction to Health Crises and Crisis Management
 - Definitions and types of crises: Pandemics, natural disasters, armed conflicts, and health system failures

Erasmus+ KA2 Capacity Building in the field of Higher Education

Strengthening capacities and digital competences in biomedical education through internationalization at home BIOSINT 101082863-BIOSINT-ERASMUS-EDU-2022-CBHE

- Key principles of crisis management in healthcare settings
- Impact of crises on healthcare systems and public health
- Week 2: Health System Vulnerabilities and Crisis Preparedness
 - Overview of healthcare systems: Organization and function
 - Crisis preparedness frameworks: Planning, risk assessment
 - Disaster management systems: National vs. local approaches and international frameworks (WHO, UN, Red Cross)

Topic 2: Emergency Response and Healthcare Delivery in Crisis

- Week 3: Emergency Medical Response
 - Triage and rapid response protocols
 - Managing mass casualties (medevac)
 - Setting up emergency medical units: Field hospitals, mobile clinics, and etc.
- Week 4: Public Health Interventions During Crises
 - Epidemiological surveillance and outbreak response
 - Disease and control measures: Quarantine, isolation, vaccination campaigns
 - Role of public health authorities

Topic 3: Leadership and Decision-Making During Crises

- Week 5: Leadership in Crisis Situations
 - Leadership competencies in critical situations
 - Role of healthcare managers in crisis response: Coordination, decision-making, and team management
- Week 6: Ethical Challenges in Crisis Management
 - Ethical decision-making: Prioritization, resource allocation, and triage
 - Ethical dilemmas in resource-limited environments
 - Case study: Ethical issues in the COVID-19 pandemic

Topic 4: Crisis Communication and Public Engagement

- Week 7: Crisis Communication Strategies
 - Principles of crisis communication: Transparency, accuracy, and empathy
 - Managing public perception and media relations
 - Risk communication: Addressing misinformation, rumors, and panic
 - Social media and digital health communication during crises
- Week 8: Community Engagement and Psychosocial Support
 - Psychosocial impact of crises on communities and healthcare workers
 - Supporting vulnerable populations: Children, elderly, refugees
 - Community-based disaster preparedness and response

Topic 5: Resource Management in Crisis

- Week 9: Managing Healthcare Resources During Crises
 - o Resource allocation in a crisis: Medical supplies and human resources,
 - Logistics of healthcare delivery in crisis situations
 - Expanding healthcare facilities, field hospitals, and mobile clinics
- Week 10: Technology and Innovation in Crisis Management
 - Role of telemedicine, digital health, and mobile apps in crisis response
 - Integrating technology into crisis management frameworks

Topic 6: Human resource management in crises

- Week 11: Human resources for health-sector emergency management
 - Does a human-resources plan for emergency
 - Development of database of staff trained in emergency management and maintaining
 - Integration of national and international volunteers into service delivery in emergency situations
- Week 12: Development of human resources
 - The roles, responsibilities and authority of each person identified as a responder in case of a crisis
 - Creating measures for identifying gaps vis-à-vis skilled staff
 - Developing and recruitment of staff in crises

Topic 7: Health financing in crises

- Week 13: National and subnational strategies for financing health-sector emergency management
 - Dedication of funds in the national budget for emergency- management and preparedness planning
 - Accessing contingency funds for health-sector emergency-response and recovery operations

Topic 8: Post-Crisis Recovery and Evaluation

- Week 14: Recovery and Continuity of Care Post-Crisis
 - Rebuilding healthcare systems: Infrastructure, workforce, and supply chains
 - Long-term care needs and rehabilitation: Chronic diseases, mental health care
- Week 15: Evaluating Crisis Responses and Continuous Improvement
 - Post-crisis evaluations: Strengths, weaknesses, and lessons learned
 - Developing crisis management plans for future health emergencies
 - The role of after-action reviews and improving future preparedness

Teaching Methods:

- Lectures: Ex cathedra
- **Case Studies**: Analysis of past health crises (e.g., COVID-19, Ebola and etc.) and their management.
- **Simulations and Role-Playing**: Students will engage in crisis simulation scenarios to practice decision-making.
- **Group Projects**: Development of a comprehensive crisis management plan.
- **Guest Lectures**: Experts from WHO and public health agencies will offer practical insights and experiences.

Assessment and Grading:

- **Colloquium** (10%): Multiple-choice and short-answer questions on crisis management theories and frameworks.
- **Group Project** (30%): Develop a comprehensive crisis management plan for a hypothetical health emergency (pandemic, disaster, etc.).
- **Class Participation** (10%): Active involvement in discussions, simulations, and case study analyses.
- Final Exam (50%): written exam

Reading Materials:

- Primary Textbooks:
 - *Health Systems and Policy in Crisis* by R. Baum and J. S. Ainsworth
 - Public Health Emergency Management: A Practical Guide for the Practitioner by George D. Haddow & Jane A. Bullock
 - Crisis Management in Health Care: A Comprehensive Guide to Effective Health Systems Response by Martin J. Lister
- Additional Readings:
 - WHO and CDC Guidelines on Crisis Management and Health Emergencies
 - Case studies and research articles from recent health crises (COVID-19, Ebola, etc.)

This **Health Management in Crisis** course is structured to provide students with a thorough understanding of different crisis. By engaging with case studies and crisis simulations students will gain the critical skills needed to respond to complex healthcare emergencies effectively and with leadership.

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Medical nutritional therapy

Description of the course:

Subject:

The science of nutrition is important in the treatment of malnutrition, in the prevention of diseases, and in improving the outcome of the treatment of numerous pathological conditions. This course aims to improve students' knowledge of the physiology of macro and micronutrients, from daily needs - through absorption and metabolic pathways, to point out the necessity of diagnosing malnutrition, as well as the consequences of that condition. Students will master the basic methods of nutritional screening and assessment, and based on that, determine which patients require medical nutritional intervention. Also, they will be introduced to the main modalities of nutritional therapy, as well as the complications they entail. The latest research on genetic population differences will be accented, in the domain of metabolizing macronutrients, body composition, and the microbiome.

The subject is evaluated with 4 of the ECTS. In total, there are 3 hours of active teaching per week (1 hour of lectures and 2 hours of work in a small group).

Ν	Name and surname	Email address	Title
1.	Vladimir Jakovljevic	drvladakgbg@yahoo.com	Full professor
2.	Danijela Jovanovic	danijeladrjovanovic@gmail.com	Assistant professor
3.	Katarina Mihajlovic	katarina.mihajlovic@fmn.kg.ac.rs	Assistant professor
4.			
5.			

TEACHERS AND ASSOCIATES:

COURSE STRUCTURE:

Module	Name of the module	Week	Lectures weekly	Practical classes	Lecturer - head of the module
1	Physiology of nutrition	4	1	2	
2	Medical nutritional therapy - general principles	5	1	2	
3	Medical nutritional therapy in various pathological conditions	6	1	2	
					Σ15+30=45

GRADING:

Points are earned in the following way:

ACTIVITY DURING CLASSES: By attending all forms of classes, the student can earn up to 15 points.

SEMINAR: In this way, the student can earn up to 15 points. During the third module, each student receives a topic for a seminar that he presents during the practical classes. The presentation, content and form of the seminar are evaluated.

COLLOQUIUM: In this way, the student can earn up to 20 points.

FINAL EXAM: The student can earn up to 50 points by taking the written final exam.

		MAXIMUM POINTS				
Module	Name of the module	Activity during classes	Seminar	Colloquium	Final exam	Σ
1.	Physiology of nutrition	4	/			
2.	Medical nutritional therapy - general principles	5	/			
3.	Medical nutritional therapy in various pathological conditions	6	15			
Σ		30		20	50	100

The final grade is formed as follows:

In order to pass the course, the student must obtain a minimum of 51 points according to the following table.

the number of earned points	final grade
0 - 50	5
51-60	6
61-70	7
71-80	8
81 - 90	9
91 - 100	10

LITERATURE:

- 1. Mahan, L. K., Raymond, J. L., & Escott-Stump, S. (2022). *Krause's Food & the Nutrition Care Process* (16th ed.). St. Louis, MO: Elsevier.
- 2. Frates, E., Hivert, M.-F., & Duggan, C. (2024). *Essentials of Clinical Nutrition in Healthcare*. New York, NY: Cengage Learning.
- 3. Ross, A. C., Caballero, B., Cousins, R. J., Tucker, K. L., & Ziegler, T. R. (2020). *Modern Nutrition in Health and Disease* (12th ed.). Philadelphia, PA: Wolters Kluwer Health.

SHEDULE:

FIRST MODULE: PHYSIOLOGY OF NUTRITION

TEACHING UNIT 1 (FIRST WEEK):				
PHYSIOLOGY OF NUTRIENTS				
Practical classes - 2 hours				
 Proportion of proteins, lipids and carbohydrates in the diet in different genetic populations 				
-				

TEACHING UNIT 2 (SECOND WEEK):			
NUTRITIONAL NEEDS			
Lectures - 1 hour	Practical classes - 2 hours		
 Nutritional needs for energy and macronutrients Water and electrolyte needs Nutritional needs and frequent deficiencies of vitamins and trace elements 	 Determination of nutritional needs (for energy and macronutrients) Examples from clinical practice and interpretation 		

TEACHING UNIT 3 (THIRD WEEK):			
MALNUTRITION AND NUTRITIONAL SCREENING/ MALNUTRITION IN DENTAL			
Lectures - 1 hour	Practical classes - 2 hours		
 Malnutrition (definition, diagnosis and importance) Anthropometry and variations in relation to genetic population affiliation	 Determination of nutritional risk (nutritional scores: NRS, NUTRIC score) Nutritional screening and assessment (anthropometry, function assessment) Assessment of body composition (using the bioimpedance method) in relation to genetic population affiliation		
	• Case examples of nutritional deficiencies affecting oral health		

TEACHING UNIT 4 (FOURTH WEEK):			
Lectures - 1 hour	Practical classes - 2 hours		
MICROBIOM AND GENETIC VARIABILITY/ MICROBIOME, GENETICS AND ORAL HEALTH			
• Human microbiome and variation in relation to genetic population affiliation	• Examples from clinical practice and interpretation		

SECOND MODULE: MEDICAL NUTRITIONAL THERAPY - GENERAL PRINCIPLES

TEACHING UNIT 5 (FIFTH WEEK):			
Lectures - 1 hour	Practical classes - 2 hours		
MEDICAL NUTRITIONAL INTERVENTION/ NUTRITIONAL INTERVENTIONS FOR ORAL DISEASES			
 Medical nutritional intervention - indications Oral nutritional supplements Methods of administration (enteral, parenteral nutrition)	 Examples from clinical practice and interpretation Calculation of nutritional needs and gradual caloric intake (refeeding) Patient monitoring and complications 		

TEACHING UNIT 6 (SIXTH WEEK):			
Lectures - 1 hour	Practical classes - 2 hours		
METABOLIC RESPONSE TO STARVATION, SURGERY AND ACUTE DISEASE			
 Metabolic changes during starvation Effects of major surgery and critical illness on metabolism Perioperative nutrition 	 Determining nutritional needs depending on the stress phase Calculation of nutritional needs ERAS protocols (prehabilitation) 		

TEACHING UNIT 7 (SEVENTH WEEK):				
FOOD INTOLERANCES AND ALLERGIES				
Lectures - 1 hour	Practical classes - 2 hours			
 Food intolerances and allergies. Genetic specificities of members of different <i>population groups</i> Disorders caused by enzyme deficiency 	• Examples from clinical practice and interpretation			

TEACHING UNIT 8 (EIGHTH WEEK):		
DIETARY PATTERNS AS A CAUSE OF DISEASE		
Lectures - 1 hour	Practical classes - 2 hours	
• Dietary patterns as a cause of disease	• Examples from clinical practice and	

• Intercultural and religious aspects of dietary patterns and their influence on disease development

TEACHING UNIT 9 (NINTH WEEK):			
MEDICAL NUTRITIONAL THERAPY IN CHILDREN AND ELDERLY			
Lectures - 1 hour		Practical classes - 2 hours	
•	Nutritional needs and nutrition of infants - the importance of breastfeeding Growth monitoring and nutritional risk screening in children	 Formulas of complementary nutrition for children Spectrum of nutritional support in children 	
•	Causes and consequences of malnutrition in the elderly Senile sarcopenia and nutritional screening of the elderly	 The most common deficiencies of micronutrients in the elderly Treatment of geriatric malnutrition 	

THIRD MODULE: MEDICAL NUTRITIONAL THERAPY IN VARIOUS PATHOLOGICAL CONDITIONS

TEACHING UNIT 10 (TENTH WEEK):			
MEDICAL NUTRITIONAL THERAPY OF OBESITY			
	Lectures - 1 hour		Practical classes - 2 hours
•	Recognize obesity as a serious and difficult disease Definition and classification of obesity based on body mass index	•	Clinical example of a patient with obesity and current associated pathological conditions with inability to enteral feed Thematic student seminar
•	Obesity and variations in the relation to nutrigenetic and intercultural specificities Medical nutritional therapy of obesity		

TE	TEACHING UNIT 11 (ELEVENTH WEEK):			
MEDICAL NUTRITIONAL THERAPY IN GASTROINTESTINAL TRACT DISEASES				
	Lectures - 1 hour		Practical classes - 2 hours	
•	Pathophysiology and consequences of malnutrition in gastrointestinal tract diseases (celiac disease)	•	Nutrition in inflammatory bowel diseases Nutrition in short bowel syndrome - case report	
•	Diagnosis and medical nutritional therapy of malnutrition in gastrointestinal tract diseases	•	Thematic student seminar	
•	Nutrigenetic and intercultural specificities of celiac disease			

TEACHING UNIT 12 (TWELFTH WEEK):

MEDICAL NUTRITIONAL THERAPY IN MALIGNANT DISEASES

	Lectures - 1 hour		Practical classes - 2 hours
•	Significance of cachexia caused by cancer on clinical outcome	•	Perioperative nutritional support in patients with malignant diseases
•	Specificities (clinical and nutritional) of cachexia in cancer	•	Immunonutritive formulas The concept of prehabilitation
•	Benefits and limitations of available therapies for cancer cachexia	•	Thematic student seminar
٠	Potential anticancer effects of certain nutrients		
•	Nutrigenetic and intercultural specificities of malignant diseases		

TEACHING UNIT 13 (THIRTEENTH WEEK): MEDICAL NUTRITIONAL THERAPY IN KIDNEY DISEASES Lectures - 1 hour Practical classes - 2 hours • Medical nutritional therapy and prevention of kidney diseases • Examples from clinical practice and interpretation • Nutrigenetic and intercultural specificities of kidney diseases • Thematic student seminar

TEACHING UNIT 14 (FOURTEENTH WEEK):			
MEDICAL NUTRITIONAL THERAPY IN DIABETES AND METABOLIC SYNDROME			
Lectures - 1 hour	Practical classes - 2 hours		
 Diagnosis of diabetes Optimal composition of macronutrients (glycemic index, fibers, proteins, lipids) Physical activity Diagnostic criteria of metabolic syndrome Medical nutritional therapy of diabetes and metabolic syndrome Nutrigenetic and intercultural specificities of diabetes and metabolic syndrome 	 Clinical presentation of a patient with diabetes in clinical deterioration: genetic population affiliation - nutrition and hyperglycemia Thematic student seminar 		

TEACHING UNIT 15 (FIFTEENTH WEEK):

MEDICAL NUTRITIONAL THERAPY IN CARDIOVASCULAR AND REUMATIC DISEASES

Lectures - 1 hour	Practical classes - 2 hours
 Medical nutritional therapy and prevention of cardiovascular diseases <i>Nutrigenetic and intercultural specificities of cardiovascular diseases</i> Diagnosing and medical nutritional therapy of rheumatic diseases <i>Nutrigenetic and intercultural specificities of rheumatic diseases</i> 	 Examples from clinical practice and interpretation Thematic student seminar



PERSONALISED MEDICINE - CURRICULUM OF THE LECTURES –

"Victor Babeş" University of Medicine and Pharmacy, Timisoara, Romania

COURSE COORDINATORS:

Prof. Dr. Claudia Borza Assoc. Prof. Dr. Adrian Sturza

1. Introduction To Personalised Medicine (2 hours)

- a. Health Information Used in Personalised Medicine
- b. Biomarkers and Genetics
- c. Evidence and Documentation for Clinical Efficacy of

Personalised Medicine

Page

- d. Communication in Personalised Medicine
- e. Ethical, Legal and Social Aspects of Personalized Medicine



2. Personalized Medicine for Patients with Chronic Pain and Chronic Inflammation (2 hours)

- a. Precision Medicine in Chronic Inflammation
- b. Biomarkers in Chronic Inflammation
- c. Understanding the Mechanisms of Pain
- d. Personalized Treatment for Chronic Pain Relief?
- e. Pharmacogenetics of Chronic Pain And Its Treatment
- 3. Personalized Medicine for Pulmonary Rehabilitation in Patients

With Obstructive and Restrictive Pulmonary Diseases (2 hours)

- a. Impact of Pulmonary Rehabilitation Programs in Patients Pulmonary Diseases
- b. Outcomes and Measures of Pulmonary Rehabilitation
- c. Personalised Pulmonary Rehabilitation in COPD
- d. Personalised Pulmonary Rehabilitation in Asthma
- e. Personalised Pulmonary Rehabilitation in Pulmonary Fibrosis

4. Personalized Medicine for the Treatment of Hypertension (2

hours)



- a. A Framework for Understanding Personalized Treatment of Hypertension
- b. Personalization Approach for Hypertension Treatment
- c. Pharmacogenomics-Guided Personalized Treatment of Hypertensive Patients
- d. Heterogeneity in Response to Hypertension Treatment
- e. Personalised Blood Pressure Goals

5. Personalized Medicine in Coronary Artery Disease (2 hours)

- a. Diagnostic Pathways
- b. Biomarkers
- c. Treatment
- d. Indications for Endovascular Interventions or Bypass Surgery
- e. Prevention

6. Personalized Management for Heart Failure (2 hours)

- a. Diagnostic Challenges
- b. Clinical phenotyping
- c. Personalized Therapy



- d. Clinical Outcomes
- e. Technology and Care

7. Personalized Medicine in The Management of Diabetes Mellitus

(2 hours)

⊃age4

- a. Diabetes Pathogenesis and Genetics
- b. Challenges in Diabetes Care
- c. Personalized Medicine in Diabetes Treatment
- d. Algorithms and Guidelines on Personalized Diabetes Therapy
- e. Effect of Pharmacogenetics on Antidiabetic Medications

8. Personalised Medicine in Lipid Disorders

- a. Genetics of Lipid Disorders
- b. Personalisation Lipid Disorders Treatment
- c. Novel LDL-cholesterol-lowering Therapies

9. Personalised Medicine for Obesity (2 hours)

- a. Genetic and Metabolic Pathways Associated with Obesity
- b. Role of Environment Interactions
- c. Personalised Therapeutic Challenges



d. Pharmacogenomics

10. Personalised Medicine in Haematology (2 hours)

- a. Diagnostic PCR-Based Technologies and Sequencing
- b. Genome Profiling Techniques
- c. Targeted Therapies in the Treatment of Haematologic Malignancies
- d. Pharmacogenomics and Drug Response
- e. Future Directions

11. Personalized Medicine in Chronic Kidney Disease (2 hours)

- a. Epigenetics
- b. Pathophysiologic Pathways
- c. Predictive Biomarkers
- d. Individual Variability
- e. Treatment Challenges

12. Personalized Medicine for Liver Disease (2 hours)

- a. Molecular Mechanisms and Potential Targeted Therapies
- b. Genetics And Liver Diseases



c. Management of Metabolic-Associated Liver Disease

13. Introduction to Personalized Medicine in Dentistry (2 *hours*)

- a. Definition and principles of personalized medicine.
- b. Historical evolution and current trends in dentistry.

14. Role of Genetics and Epigenetics in Oral Health (2)

hours)

- a. Genetic predisposition to oral diseases (e.g., periodontitis, caries).
- b. Role of epigenetics in dental tissue regeneration and disease progression.
- c. Applications of genetic testing in dental practice.

15. Microbiome and Oral Health (2 hours)

- a. Overview of oral and gut microbiomes.
- b. Influence of microbiome diversity on oral diseases.



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