

<b>Board Code and Name</b>	<b>TIP-103 - Development of Cell and Tissue Systems</b>
<b>Term of the Board</b>	1st Semester / Fall Semester
<b>Course Hours of the Board (Theoretical/Practical)</b>	96/26
<b>ECTS of the Board</b>	8
<b>Language of the Board</b>	Turkish
<b>Type of Board</b>	Imperative
<b>Board's Learning and Teaching Techniques</b>	1. Theoretical Lecture 2. Practice/ Exercise 3. Assignments/ Research 4. Q&A 5. Argument 6. Observation 7. Team/Group Work
<b>Measurement Techniques of the Board</b>	1. Written Exam 2. Practice Exam
<b>Responsible(s) of the Board</b>	Prof. Dr. Lütfi ÇAKAR, Chairman of the Course Board Assist. Prof. Dr. Elif PALA, Vice President of the Course Board Assist. Prof. Dr. Burçin ALTINBAŞ, Vice President of the Course Board
<b>Purpose of the Board</b>	At the end of this board, students will learn about the electrical properties of the structures that make up the body, their functions, and the general arrangement of the body. mechanisms, DNA structure, cell proliferation, DNA damage and repair mechanisms, cancer genetics and stem cell biology, formation of reproductive cells, fertilization, implantation and embryo developmental stages.
<b>Learning Outcome of the Board</b>	1. To be able to comprehend the structure and electrical properties of the cell membrane 2. To be able to explain the regulatory mechanisms of the body, the clinical importance of the structures and functions of cells and tissues 3. To be able to count the human genome structure, DNA structure, replication, damage and repair mechanisms 4. To be able to list cell proliferation, the stages from embryo formation to birth 5. To be able to explain the molecular basis of genetic diseases 6. To be able to explain electrolyte and fluid balance, distribution and regulation in the body
<b>Content of the Board</b>	In this course board, in Genetics courses; information about human genome structure, DNA replication, damage and repair mechanisms, cell cycle, chromosomal abnormalities, molecular basis of genetic diseases, cancer genetics and DNA technologies are presented. In General Embryology courses; formation of reproductive cells of the male and female genital tract, fertilization and implantation events, understanding of the developmental stages of the embryo, other stages up to birth and possible congenital anomalies are discussed. In biophysics courses, electrical properties of cell membrane, membrane potential and action Information is presented about the formation of potentials, membrane organization, and biophysical basis of muscle contraction. In biochemistry courses, the body's electrolyte and fluid balance, hemoglobin, which is responsible for the transport of oxygen to cells, and The structure and variants of myoglobin, coagulation chemistry and coagulation factors and blood clotting mechanism are explained. In physiology courses, the general regulation mechanisms of the body, the basic and clinical importance of the structures and functions of cells and tissues are explained.
<b>Resources</b>	1. Thompson & Thompson Medical Genetics, Solar Bookstore 2. Guyton and Hall Medical Physiology- John E. Hall Translation Editor: Berrak Ç. Yeğen, Güneş Medical Bookstores-13. Oppression 3. Clinical Aspects of Human Embryology- Keith L. Moore, T.V.N. Persaud, Mark G. Torchia Translation Editor: Hakkı Dalçık- 10. Print Nobel Medical Bookstore 4. Junqueira Basic Histology Topic and Atlas- Antony L. Mescher Translation Editors: Seyhun Solakoğlu, Aslı Erdoğan, Hasan Serdar Mutlu- 14. Printing Sun Medical Bookstores 5. Ismail Gunay. Basic Biophysics Volume 1: Biomechanics. Çukurova Nobel Medical Bookstore
<b>Weeks</b>	<b>Board Courses (Theoretical/Practical)</b>
1st Week	Biochemistry (T), Physiology (T), General Embryology (T), Genetics (T), Biophysics (T).
2nd Week	Genetics (T), Biophysics (T), General Embryology (T), Biochemistry (T), Physiology (T).
3rd Week	Biophysics (T), Physiology (T), Genetics (T), General Embryology (T), Biochemistry (T),
4th Week	Genetics (T), Biochemistry (T), General Embryology (T), Biophysics (T).
5th Week	Genetics (T/U), Biophysics (T/U), Physiology (T/U), Biochemistry (T), General Embryology (T).
6th Week	Biophysics (T/U), Genetics (T/U), Physiology (T/U), Biochemistry (T), General Embryology (T).
7th Week	Physiology (T/U), Genetics (T/U), Biochemistry (T).
<b>Explanation:</b> T: Theoretical U: Application	

<b>Number of Questions in the Board</b>		
<b>Exam Type</b>	<b>Theoretical</b>	<b>Application</b>
Board Exam	90	10
Finale	100	0
Integration	100	0

<b>Evaluation System</b>		
<b>Semester Studies</b>	<b>Number</b>	<b>Total Contribution(%)</b>
Continuation	0	0
Laboratory	0	0
Application	1	4
Fieldwork	0	0
Course-Specific Internship (If Available)	0	0
Assignments	0	0
Presentation	0	0
Projects	0	0
Seminar	0	0
Board Exam	1	36
Finale	1	60
	<b>Sum</b>	<b>100</b>
Contribution of Semester Studies to Success Grade	0	0
Contribution of Final Studies to Success Grade	0	0
	<b>Sum</b>	<b>0</b>

**Explanation:** While calculating the contribution rates of the evaluation system, SANKO University Associate Degree and Undergraduate Education and the Examination Regulation and the Faculty of Medicine Education and Measurement and Evaluation Directive are valid.

<b>Student Workload Table</b>			
<b>Events</b>	<b>Number (weeks)</b>	<b>Duration (class hours)</b>	<b>Sum</b>
Course Duration (Including Exam Week)	7	14	98
Laboratory	0	0	0
Application	4	7	26
Course-Specific Internship (If Available)	0	0	0
Fieldwork	0	0	0
Out-of-Class Study Time (Freelancing/ Group Study/ Pre-Study/ Reinforcement)	3	26	78
Presentation/Seminar Preparation	0	0	0
Project	0	0	0
Assignments	0	0	0
Board Exam	0	0	0
Final Exams	0	0	0
<b>Total Workload</b>	<b>14</b>	<b>47</b>	<b>202</b>

Associating the learning outcomes of the courses with the program competencies					
Program Qualifications	1	2	3	4	5
1. The basic structure, development and normal functioning of the human body molecules, cells, tissues, It explains at the organ and system level.					X
2. Questioning the abnormal structuring and functioning of the human body, qualified scientific Explains with research-based information, evaluates the causes of diseases, taking into account the interaction with the individual and his environment.				X	
3. Clinical decision-making and management processes of diseases and applications of evidence-based medicine evaluates under the guidance of.			X		
4. Define the concepts of health and disease in individual and social contexts, health seeking and health protection behaviors, national health service delivery and administrative processes Describes.		X			
5. Know the research processes that form the basis of medical knowledge, follow the developments in this field Has a level of foreign language knowledge.		X			
6. Takes medical history from the applicant/patient and their relatives.		X			
7. Performs physical examination of individuals, evaluates diagnostic tests, diagnosis and treatment It manages its processes by using appropriate process steps.	X				
8. Applies medical interventions for diagnosis, treatment or prevention of individuals.	X				
9. Medical and administrative data on health and disease obtained from individuals and society organizes and keeps records of context.	X				
10. For the protection and development of health in individual and social dimensions Plans and implements applications.		X			
11. Plans and implements a scientific research and evaluates its results.			X		
12. Scientific and technological developments for professional and social changes It shows lifelong learning behavior by making use of it.			X		
13. Physician within the framework of professional values, ethical principles and legal regulations, regardless of language, religion, race, gender, social and cultural discrimination in the individual and society he serves. fulfills its responsibilities as.		X			
14. Protection and development of health in individual and social dimensions, diseases Performs teamwork with colleagues and other healthcare professionals in the management processes.	X				
15. Protection and development of the health of the individual and society and the society of health care It strives to be realized for the benefit of the individuals who make it up.	X				
<b>Description: Level</b> of qualification: 1. Miscarriage 2. Low/medium 3. Middle 4. High 5. That's great					