Course Coding(科目ナンバー)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-002-79-2	2026whole year	Graduate School of Medical Sciences (20030)	1, 2, 3, 4	2	others

Course Title(Theme)(科目名(講義題目))	Instructor(s)(担当教員)
Cell Biology(B2)	IWAMOTO Kazuya, TOMIZAWA Kazuhito, BUNDO Miki, ONO Yusuke, TATEISHI Satoshi, HINO Shinjirou, NOMURA Takushi, NAKACHI Yutaka, TAKAHASHI Yuta

Goals with their ratio(学修成果とその割合)
1.Advanced expert knowledge, skill and research capability ‥‥75% 2.Profound inter-disciplinary knowledge ‥‥20% 3.Global perspective and ability to take initiative action ‥‥5%

Type of Class(授業の形態)	Lecture
Teaching Method(授業の方法)	E-learning lecture
Course Goals(授業の目的)	The students understand the various biological phenomena such as development/regeneration, cancer, aging, psychiatric disorders, molecular genetics, and stem cells based on cellular functions.
Course Learning goals(学修目標)	【A level (A水準)】 The students can understand the various biological phenomena including development/regeneration, cancer, aging, psychiatric disorders, molecular genetics, and stem cells at the molecular level. In addition, they can understand and discuss the latest topics. 【C level (C水準)】 The students can understand the various biological phenomena including development/regeneration, cancer, aging, psychiatric disorders, molecular genetics, and stem cells at the molecular level.
Course Outline(授業の概要)	The topics of this course include development/regeneration, cancer, aging, psychiatric disorders, molecular genetics, and stem cells. The teachers give lectures on basic knowledge and current status of each topic, based on their specialty.

Details for Individual Classes(各回の授業内容)

No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)
1		Kazuhito Tomizawa【eE-0, eJ-0】	Regulation in physiology and pathophysiology
2		Kazuhito Tomizawa【eE-0, eJ-0】	Regulation by protein phosphorylation
3		Shinjiro Hino【eE-0, eJ-0】	Cross talk between metabolism and epigenome
4		Yusuke Ono【eE-0, eJ-0】	Stem cells and tissue regeneration/adaptation I
5		Yusuke Ono【eE-0, eJ-0】	Stem cells and tissue regeneration/adaptation II
6		Yutaka Nakachi【eE-0, eJ-0】	Osteoblasts and Osteoclasts I
7		Yutaka Nakachi【eE-0, eJ-0】	Osteoblasts and Osteoclasts II
8		Miki Bundo【eE-0, eJ-0】	Single cell analysis of brain functions
9		Yuta Takahashi【eEJ-O】	Epigenetic regulation in embryonic development
10		Takushi Nomura【eE-O】	Analysis of immune responses to viral infection using animal models
11		Kazuya Iwamoto【eE-０, eJ-0】	Neuroepigenetics I
12		Kazuya Iwamoto【eE-０, eJ-0】	Neuroepigenetics II
13		Satoshi Tateishi【eEJ-0】	Cell growth and cell cycle
14		Satoshi Tateishi【eEJ-0】	About Mitosis and Meiosis
15		Satoshi Tateishi【eEJ-0】	DNA repair and recombination

Estimated out-of-class study time	This course consists of content that requires 90 hours of study. Since the class is 30 hours, 60 hours of pre- and post-study (including assignments) is necessary to understand the class.
Required Textbook(テキスト)	Not specified.
Reading List(参考文献)	Not specified.
Enrollment Conditions(履修条件)	Should have the basic knowledge of cell biology.
Assessment Methods and Criteria(評価方法・基準)	Grading will be based on the understanding of the course subject matter. The understanding will be evaluated on the basis of papers and quizzes related to the topics dealt with in class to be scored from 0 to 100. Final grades will be based on the average score of the papers and quizzes as well as participation in class discussions.
Language Used in Instruction(使用言語)	Japanese and English
Textbook/Material Language(教科書・資料の言語)	Combination of Japanese and English
Course Based on Practical Work Experience(実務経験を活かした授業)	Not applicable