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)
RDM7-164-79-2	2025whole year	Graduate School of Medical Sciences (25790)	1, 2, 3, 4	2	others

Course Title(Theme)(科目名(講義題目))	Instructor(s)(担当教員)
Special Lecture I on CMHA(G1 Special Lecture I on CMHA)	ARIMA Yuichiro, MIURA Kyoko, YAMAGATA Kazuya, SENOKUCHI Takafumi, MIYAMOTO Hideaki, TAKIZAWA Hitoshi, KUROTAKI Daisuke, TOMIZAWA Kazuhito, Sou Bunketsu, IWAMOTO Kazuya, INOUE Toshihiro, ONO Yusuke

Goals with their ratio(学修成果とその割合)

1.Advanced expert knowledge, skill and research capability ・・・・30% 2.Profound inter-disciplinary knowledge ・・・・40% 3.Global perspective and ability to take initiative action ・・・・25% 4.Social leadership drive ・・・・5%

Type of Class(授業の形態)	Lecture
Teaching Method(授業の方法)	By taking advantage of repeated learning and attendance from remote locations, lectures will be conducted by e-learning. Students will take a video class, and ask questions they may have after the class. Students will check for comprehension by submitting a report related to the lecture, or by answering questions presented at the end of the lecture.
Course Goals(授業の目的)	With a rapidly aging global population due to increased life expectancy, it is medically and socially required to bring the healthy life expectancy (=the period during which one can live a healthy life without disturbing daily life) as close as possible to the limit life expectancy. In order to extend healthy life expectancy, we need to elucidate the basic mechanism of aging in humans and develop methods to prevent and treat aging-related diseases (e.g., diabetes, heart failure, cancer, dementia). By taking this class, students are encourage to gain a basic knowledge of aging and aging-related disorders in a wide range of research fields, including the physiology of aging, the pathogenic basis of aging-related diseases, epidemiology, therapeutic strategies, and social medicine.
Course Learning goals(学修目標)	【A level (A水準)】 The following aims have been excellently achieved. (1) To acquire a basic knowledge of aging and aging-related disorders, including the physiology of aging, the pathogenic basis of aging-related diseases, epidemiology, therapeutic strategies, and social medicine. (2) To discuss the latest academic research on aging and healthy longevity. 【C level (C水準)】 The following aims have been acceptably achieved. (1) To acquire a basic knowledge of aging and aging-related disorders, including the physiology of aging, the pathogenic basis of aging-related diseases, epidemiology, therapeutic strategies, and social medicine. (2) To discuss the latest academic research on aging and healthy longevity.
Course Outline(授業の概要)	Students will learn about the physiology of aging as well as aging-related diseases (including pathophysiology, prevention and treatment methods). In addition, students will deepen their understanding of latest academic research on aging and healthy longevity through omnibus-style lectures provided by the faculty members in CMHRA (including all research division: Metabolic and Cardiovascular Research / Cancer and Stem Cell Research / Nervous System, Sensory, and Locomotive Research / Animal Models of Aging Research / Epidemiological Research).

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		1st MIURA Kyoko【eE-0】	The biology of aging
2		2nd YAMAGATA Kazuya【eE-0】	Regulation of glucose metabolism by insulin
3		3rd YAMAGATA Kazuya【eE-0】	Molecular mechanism of type 2 diabetes
4		4th YAMAGATA Kazuya【eE-0】	Monogenic form of diabetes mellitus
5		5th SENOKUCHI Takafumi【eE-0】	To achieve healthy longevity -Learn about diabetic complications and their therapeutic approaches
6		6th MIYAMOTO Hideaki【eE-0】	The latest advances in gastrointestinal cancer treatment
7		7th KUROTAKI Daisuke【eE-0】	Overview of Chromatin Structure Analysis
8		8th TAKIZAWA Hitoshi【eE-0】	Inflamm-aging of blood system
9		9th KUROTAKI Daisuke【eE-0】	Overview of Chromatin Structure Analysist
10		10th SONG Wen-Jie【eE-0】	Learning and memory
11		11th IWAMOTO Kazuya【eE-0】	Aging-related epigenetic changes and psychiatric disorders
12		12th INOUE Toshihiro【eE-0】	Glaucoma that threatens heallthful longevity
13		13th ONO Yusuke【eE-0】	Age-related changes in skeletal muscle and sarcopenia
14		14th ARIMA Yuichiro【eE-0】	Cardiovascular diseases that increase with aging 1
15		15th ARIMA Yuichiro【eE-0】	Cardiovascular diseases that increase with aging 2

Estimated out-of-class study time	This course consists of content that requires 90 hours of study. Since the lesson is 30 hours (2 hours x 15 frames), 60 hours of pre- and post-study (including reports) is required to deepen the understanding of the lesson.
Required Textbook(テキスト)	No particular textbook. Materials summarizing the points of the lecture will be distributed.
Reading List(参考文献)	Biology of Aging (2nd Edition, by Roger B. McDonald) ISBN 9780815345671 The Biology of Senescence: A Translational Approach (by Bernard Swynghedauw) ISBN 9783030151102
Enrollment Conditions(履修	Have basic knowledge concerning what is taught in this course.

条件)	Have basic knowledge concerning what is taught in this course.
Assessment Methods and Criteria(評価方法・基準)	This class consisted of a series of omnibus lectures by 15 lecturers as listed in the schedule. Evaluation will be done based on active class participation, examination test and/or report for subjects by each lecturer. In order to get credits students have to take more than 2/3 lectures. Grading will be based on the average of top 10 scores among ones obtained by the student.
Language Used in Instruction(使用言語)	English
Textbook/Material Language(教科書・資料の言語)	English
Course Based on Practical Work Experience(実務経験を活かした授業)	Not applicable