

Course Coding(科目番号)	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)
RDM7-012-82-2	2024whole year	Graduate School of Medical Sciences (20130)	1, 2, 3, 4	2	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
Reproductive and Developmental Medicine(C4 Reproductive and Developmental Medicine)			NAKAMURA Kimitoshi, KONDO Eiji, Hibi Taizou, NAKAZATO Hitoshi, Ooba Takashi, Matsumoto Shirou, IWAI Masanori, YAMAGUCHI Munekage, KIDO Jun, Ozasa Shirou, SAITOU Fumitaka, SAWADA Takaaki, ISONO Kaori, ANAN Kotaro, MURAYAMA Kei		
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 ……30% 3.Global perspective and ability to take initiative action ……30% 4.Social leadership drive ……10%					
Type of Class(授業の形態)	Other				
Teaching Method(授業の方法)	-----				
Course Goals(授業の目的)	The lecture of “Reproductive and developmental medicine” aims to understand followings: (1) Basic knowledge for physiology and pathology of human fertilization and pregnancy. (2) Medical interventions before and during pregnancy, and social issues related to these interventions. (3) Basic knowledge for physiology and pathology of development and growth of man. (4) Basic knowledge for disorders which affects children including genetic and neuromuscular diseases, pediatric surgery and organ transplantation.				
Course Learning goals(学修目標)	[A level (A水準)] The participants will learn basic knowledge for developmental and growth medicine and issues of physiology, pathology, treatment, technology and ethical aspects in advanced medicine. They will also learn pregnancy, birth, newborn intensive care and assisted reproductive medicine, prenatal diagnosis and rare diseases, surgical diseases and organ transplantation. [C level (C水準)]				
Course Outline(授業の概要)	This class will introduce the most recent and important progress in the field of reproductive and developmental medicine. The lecture related to pregnancy and delivery will discuss medical and social issues in addition to the physiology of reproductive system. We will discuss biological and medical aspect of the reproductive system, and social and ethical problems. The ethical problems of assisted fertilization including in vitro fertilization, ICSI (Intra Cytoplasmic Sperm Injection), oocyte donation, cryopreservation of embryos, cryopreservation of sperm will be discussed. The class for neonatal medicine, we introduce principal physiology of newborn infants and various pathological conditions of this period. The participant will learn many different disorders. One of the important topics of this course is normal development of brain function during childhood. The normal development of young brain is supported by surrounding environment of children which included social conditions. The participant will also learn neonatal surgical disorders and abdominal organ transplantation for children. We will discuss the social problems which affect healthy development of children in recent years.				
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		Kimitoshi Nakamura [eE-0]	Inborn errors of metabolism		
2		Hitoshi Nakazato [eJ-0]	Hereditary Nephropathy		
3	10/17	Kei Murayama	Enzyme replacement therapy and gene therapy for inherited diseases during childhood		
4		Takaaki Sawada [eE-0]	Congenital abnormalities and genetic counseling		
5		Kotaro Anan [eE-0]	Molecular basis and therapeutic strategies for pediatric disorders in children		
6		Shiro Ozasa [eE-0]	The Molecular Pathogenesis and Therapeutic Strategies of Pediatric Neuromuscular disorders — Duchenne Muscular Dystrophy and Spinal Muscular Atrophy —		
7		Masanori Iwai [eEJ-0]	Recent advanced neonatal intensive care in Japan and new therapeutic strategies for neonatal hypoxic ischemic encephalopathy (HIE). The first topic is the introduction of the neonatal intensive care unit for vulnerable babies. The second topic is new therapeutic strategies for neonatal HIE by erythropoietin through neurogenesis, vasculogenesis, oligodendrogenesis and remyelination.		
8	11/21	Shiro Matsumoto	Amino acid metabolism and Disorders		
9		Jun Kido [eE-0]	New diagnostics and treatments for rare pediatric diseases		
10		Takashi Ohba [eE-0]	Prenatal diagnosis, current status and the ethics		
11		Eiji Kondoh [eE-0]	Management of preeclampsia		
12		Fumitaka Saito [eE-0]	Endometrial physiology, pathology and carcinogenesis		
13		Munekage Yamaguchi [eJ-0]	Villous macrophages in the human placenta: a variety of functions and perinatal complications		
14		Kaori Isono [eJ-0]	Relationship between macrophages and microbiota in maintaining intestinal homeostasis		
15		Taizo Hibi [eE-0]	Indications and outcomes of abdominal organ transplantation for children		

Estimated out-of-class study time	
Required Textbook(テキスト)	
Reading List(参考文献)	
Enrollment Conditions(履修条件)	
Assessment Methods and Criteria(評価方法・基準)	The participants should submit a report including what they learned through the contents of lecture, and will be evaluated by score.
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