

授業科目名 Title of Course	Radiation Biology		
対象学年 Eligible Students	Sophomore students of School of Medicine	単位 Credits	2
科目責任者 Responsible Instructor	KAMIYA KENJI	所属 Affiliation	Research Institute for Radiation Biology and Medicine (内線 Ext. Number 5842)
		メール E-mail	
科目コーディネー ター Course Coordinator	KAMIYA KENJI	所属 Affiliation	Research Institute for Radiation Biology and Medicine (内線 Ext. Number 5842)
		メール E-mail	
授業方法 Lesson Style	Lectures with handouts and PowerPoint presentation		
概要 Overview	<p>The objective is to understand the basic concepts of radiation biology.</p> <p>To help achieve this objective, the focus will be on; 1) the characteristics of biological effects of radiation, 2) effects of radiation on genomes, cells, and individuals, 3) occurrence of diseases caused by radiation exposure, 4) radiation emergency medicine, and 5) genetic effects of radiation.</p> <p>Your attendance in all classes is expected because all classes are systematically connected and, if you are absent from any class, you will have difficulty understanding the content of the lecture.</p>		
到達目標 Academic Goals	<p>Explain types, properties, measurement methods, and units of radiation and radioactivity.</p> <p>Explain characteristics of the impact (acute impact, late impact, etc.) of radiation on the human body (including the fetus).</p> <p>Explain differences in radiosensitivity of various normal tissues.</p> <p>Explain effects of radiation on genes and cells, mechanism of action of cell death caused by radiation, and local and systemic radiation injuries.</p> <p>Briefly explain causes of radiation injury and their treatment.</p>		
講義日程 Class Schedule	See the attached schedule.		
出席の取り扱い Class Attendance Policy	<p>Attendance is taken every lecture using the Student Attendance Management System.</p> <p>A student whose attendance is less than two-thirds of all the classes is not eligible to take the final examination.</p>		

<p>評価項目</p> <p>Evaluation Item</p>	<p>Achievement of the academic goals</p> <p>(basic understanding and application of knowledge)</p>
<p>評価法</p> <p>Evaluation Method</p>	<p>Examination. Written reports, as required. Grading will be based on class attendance, written examinations, and other criteria.</p>
<p>履修上の注意アドバイス</p> <p>Suggestions/Advice for Taking the Course</p>	<p>Students are required to have basic knowledge of biology and molecular biology to take this course. While as many explanations as possible of the basics in these fields will be provided in the class, if you are not fully familiar with the subjects, you are advised to prepare for the course by reading relevant educational books. Copies of lecture materials, such as PowerPoint slides, will generally be distributed and you are encouraged to review these materials after class. To review the class, it is also recommended to read relevant chapters and sections of the listed reference books after each lecture. This will help you better understand what you have learned. Hiroshima is the first city in the world that experienced an atomic bomb disaster and I encourage you, a student of Hiroshima University located in Hiroshima, to learn about and deepen your understanding of the effects of radiation on the human body.</p>
<p>成績評価の基準</p> <p>Basis of Performance Evaluation</p>	
<p>推奨参考書</p> <p>Recommended Reference Books</p>	<p>While no textbooks will be used, the following books will be used as references during the course.</p> <ul style="list-style-type: none"> <li>- Radiobiology for the radiologist (Harper&amp;Row)</li> <li>- <i>Hoshasen Kiso Igaku</i> (Fundamentals of radiology) (Kinpodo)</li> <li>- <i>Hito-wa Hoshasen-ni Naze Yowaika</i> (Kodansha)</li> </ul>