科目ナンバリング	U-LAS12 10002 LE57						
授業科目名 <英訳>	Fundamental Physics A Fundamental Physics A			担当者所属 職名・氏名	工学研究科　准教授　QURESHI, Ali Gul 経営管理大学院 教授　市川　温		
群	自然科学科目群			分野(分類)	物理学(基礎)	使用言語	英語
旧群	B群	単位数	2単位	週コマ数	1コマ	授業形態	講義（対面授業科目）
開講年度・開講期	2026・前期	曜時限	木4	配当学年	主として1回生	対象学生	理系向

[授業の概要・目的]

Lectures on the topics of physics (classical mechanics) that are common and necessary to all students who study natural sciences.

[到達目標]

To acquire knowledge of basic concepts of physics such as motion, energy, gravitation, and the related laws of these topics.

[授業計画と内容]

1. Kinematics, velocity and acceleration, components of polar coordinates (3 weeks)
2. Laws of motion, equations of motion and application (3 weeks)
3. Law of conservation, work and energy, angular momentum, momentum (3 weeks)
4. Motion due to a central force, planetary motion under the gravitation of the sun (3 weeks)
5. Motion of a system of particles (2 weeks)
6. Feedback (1 week)

[履修要件]

This course is intended mainly for students who studied physics at high school. Those who did not study physics are recommended to take "Elementary Course of Physics A".

[成績評価の方法・観点]

Weekly submission of class examples, class participation and homework (20%), Snap quizzes (15%), Final examination(65%)

[教科書]

使用しない

[参考書等]

（参考書）

William Moebs et al. 『University Physics Vol.1』（OpenStax）（Book is available at https://openstax.org/details/books/university-physics-volume-1）

Raymond A. Serway, John W. Jewett jr., 『Physics for scientists and engineers with modern physics』（Brooks/Cole Cengage Learning）ISBN:978-1133947271

Marcelo Alonso, Edward Finn 『Physics』（Addison-Wesley）ISBN:0201565188

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Fundamental Physics A(2)

[授業外学修（予習・復習）等]

Students are advised to refer to the class handouts and readings provided in the classes. Homework is assigned to strengthen the learning of the topics covered in class, therefore, it is advised to students to do their homework regularly and carefully.

[その他（オフィスアワー等）]

Part of this course is scheduled to be held online. Please note that the schedule is subject to change depending on circumstances. Further details regarding the class format will be provided by the instructor during the course.

Office hours will be provided during the first lecture.

[主要授業科目（学部・学科名）]

理学部