

都立国際高校 年間授業計画 / Tokyo Metropolitan Kokusai High School Course Syllabus

科目基礎情報 / Course information

開講年度 / Academic year	令和5年度 / 2023年度
開講学科 / Department	国際学科国際バカロレアコース / IBDP(International Baccalaureate Diploma Programme)
教科 / Subject	Science
科目 / Course Title	Physics Higher Level (HL)
学年・クラス / Year・Class	3 (IBDP 2nd Year)
単位数 / credits	6

科目概要情報 / Course description

講座概要 / Course description	Physics is the most fundamental of the experimental sciences as it seeks to explain the universe itself, from the very smallest particles to the vast distances between galaxies. Despite the exciting and extraordinary development of ideas throughout the history of physics, observations remain essential to the very core of the subject. Models are developed to try to understand observations, and these themselves can become theories that attempt to explain the observations. By studying physics students should become aware of how scientists work and communicate with each other. While the scientific method may take on a wide variety of forms, it is the emphasis on a practical approach through experimental work that characterizes the subject. Teachers provide students with opportunities to develop manipulative skills, design investigations, collect data, analyse results and evaluate and communicate their findings.
到達目標 / Course objectives	Through the overarching theme of the nature of science, the aims of the DP physics course are to enable students to: <ul style="list-style-type: none"> * appreciate scientific study and creativity within a global context through stimulating and challenging opportunities * acquire a body of knowledge, methods and techniques that characterize science and technology * apply and use a body of knowledge, methods and techniques that characterize science and technology * develop an ability to analyse, evaluate and synthesize scientific information * develop a critical awareness of the need for, and the value of, effective collaboration and communication during scientific activities * develop experimental and investigative scientific skills including the use of current technologies * become critically aware, as global citizens, of the ethical implications of using science and technology
評価方法と評価基準 / Evaluation method and criteria	Students will be evaluated as follows: Paper 1: 40 multiple-choice questions, duration 1 hour, weighing 20%, marks 40 Paper 2: Short-answer and extended-response questions on core and AHL, duration 2 hours and 15 minutes, weighing 36%, marks 95 Paper 3: Questions on core and HL option material, duration 1 hour and 15 minutes, weighing 20%, marks 24 Internal assessment: Duration 10 hours, weighing 20%, 24 marks
教科書 / Textbooks	Physics (2014 Edition) by David Homer and Michael Bowen-Jones
校外学習 / Field trip	

授業計画 / Course schedule

		指導項目 / Topic	指導内容 / Contents	評価の方法・基準 / Evaluation method and criteria	予定時数 / Alotted hours
1学期 / 1st semester	4月	Internal Assessment	Internal Assessment	Paper 3 type data-based questions, practical work	20
	5月	Internal Assessment	Internal Assessment	Paper 1 and Paper 2 types of questions, practical work	25
	6月	Revision	Revision	Paper 1 and Paper 2 types of questions, practical work	30
	7月	Revision	Revision	Paper 1 and Paper 2 types of questions, practical work	15
2学期 / 2nd semester	9月	Revision	Revision	Paper 1 and Paper 2 types of questions, practical work	30
	10月	Revision	Revision	Paper 1 and Paper 2 types of questions, practical work	30
	11月	Final Examination	Final Examination	Paper 1 and Paper 2 types of questions, practical work	18
	12月	Reflection of the entire program	Reflection	Class activity, Homework	15
3学期 / 3rd semester	1月	Reflection of the entire program	Reflection	Class activity, Homework	15
	2月	Reflection of the entire program	Reflection	Class activity, Homework	15
	3月	Reflection of the entire program	Reflection	Class activity, Homework	15