

科目名	Course Title
物理化学1(Physical Chemistry I)	
学科・専攻	Department/Program
G30 Chemistry	
受講年次	Grade
2nd	
授業形態	Class style
必修・選択の別	Compulsory or Elective
講義	* See "Remarks"
時間割コード	Registration code
0681080	
開講期・曜日・時限	Semester,Day & Period
Fall semester Thu : 1	
単位数	Credit
2	
科目区分	Course type
担当教員	Instructor
BUTKO Peter(BUTKO Peter)	
所属研究室	Laboratory
連絡先	Contact
Phone: 789-2480 E-mail: pbutko@chem.nagoya-u.ac.jp	
居室	Room
B221 (Science Building B)	

講義の目的とねらい	Course purpose
The purpose of this course is to learn what physical chemistry is all about and to grasp important principles and facts about physical chemistry. The course begins with perfect gas law, proceeds to thermodynamics, and finishes with applications of thermodynamics to simple mixtures.	
履修要件	Prerequisite
Fundamentals of Chemistry I and II	
履修取り下げの方法について	How to Apply for Course Withdrawal
<p><「履修取り下げ届」提出の要・不要 Necessity/Unnecessity to submit "Course Withdrawal Request Form"> Necessary <条件等 Conditions> Students that do not intend to finish the course must submit a Course Withdrawal Request Form with the Instructor's signature. The last day to withdraw without academic penalty is the 6th lecture period.</p>	
成績評価	Grading
<p>Two exams: 100 points each, final exam (comprehensive): 200, homework: 50. TOTAL: 450. Grade "S": 100-90% (405 or more points), "A": 89-80% (404 - 360 pts), "B": 79-70% (359 - 315 pts), "C": 69-60% (314 - 270 pts), "F": 59-0% (fewer than 270 pts).</p>	
不可 (F) と欠席の基準	Criteria for "Absent" & "Fail" grades
The " Absent " grade is reserved for students that withdraw by the 6th lecture period. After that day, a letter grade will be awarded based on grades earned from all assignments during the semester.	
関連する科目	Related courses

教室	Class room
Check the Course Timetable. A-407	
授業内容	Content
1 The Properties of Gases 1 (Ch. 1) 2 The Properties of Gases 2 (Ch. 1) 3 The First Law 1 (Ch. 2) 4 The First Law 2 (Ch. 2) 5 Pre-exam Review & EXAM 1 (Chs. 1 & 2) 6 The Second and Third Laws 1 (Ch. 3) 7 The Second and Third Laws 2 (Ch. 3) 8 Physical Transformations of Pure Substances (Ch. 4) 9 Simple Mixtures 1 (Ch. 5) 10 Simple Mixtures 2 (Ch. 5) 11 Pre-exam Review & EXAM 2 (Chs. 3 – 5) 12 Chemical Equilibrium 1 (Ch. 6) 13 Chemical Equilibrium 2 (Ch. 6) 14 Pre-final Review 15 FINAL EXAM (Ch. 1 – 6)	
教科書	Textbook
P. Atkins and J. de Paula: Atkins ' Physical Chemistry, 11th Ed., Oxford University Press, 2018	
参考書	Recommended reading
連絡方法	Contact method
pbutko@chem.nagoya-u.ac.jp	
その他	Remarks
<p>*See Course List and Graduation Requirements for your program for your enrollment year.</p> <p>It is essential to sit in each exam during the scheduled class time. There will be NO make-up exam. In the event of a missed exam due to a serious illness, accident or family emergency, compelling written documentation of the reason for the absence will be required. If the reason is accepted, the final grade will be calculated from the appropriately weighted average from the rest of the exams. If the reason will be deemed insufficient, the absence will be unexcused, and zero points will be awarded for the missed exam. WARNING: Missing more than one exam (it does not matter whether excused or not) means automatically failing the course.</p> <p>Attendance is necessary for successful completion of this course. No points will be awarded for attending lectures, but attendance may be taken. Sleeping in the lecture hall will be actively discouraged.</p> <p>Homework is crucial for mastering new material and developing skills in applying concepts. Weekly homework will be either on paper or electronic. Homework is due at the beginning of class on the due date. A general guideline says an average of 2 to 3 hours of study time per week is necessary for each 1 credit hour.</p> <p>Exams focus on problem solving, and exam questions will be similar to the homework problems. Exam grades will be posted in the Gradebook on the Course website before next class period.</p> <p>Cell phones must be turned off during lecture.</p>	