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学部・大学院区分 Undergraduate / Graduate	理学部
時間割コード Registration Code	0681110
科目区分 Course Category	専門基礎科目 Basic Specialized Courses
科目名 【日本語】 Course Title	無機化学 1
科目名 【英語】 Course Title	Inorganic Chemistry I
コースナンバリングコード Course Numbering Code	
担当教員 【日本語】 Instructor	SAMJESKE Gabor Arwed ○
担当教員 【英語】 Instructor	SAMJESKE Gabor Arwed ○
単位数 Credits	2
開講期・開講時間帯 Term / Day / Period	春 火曜日 1 時限 Spring Tue 1
授業形態 Course style	講義 Lecture
学科・専攻 Department / Program	G30 Chemistry
必修・選択 Compulsory / Selected	See the "Course List and Graduation Requirements for your program for your enrollment year."

授業の目的 【日本語】 Goals of the Course(JPN)	
授業の目的 【英語】 Goals of the Course	Inorganic chemistry I is the first part of a three-semester course in inorganic chemistry consisting of parts I, II, and III. Aim of the three-semester course is to present principles and fundamentals of inorganic chemistry, to introduce chemical reactions and to show examples of the role of inorganic chemistry in the industry, environment and every day lives.
到達目標 【日本語】 Objectives of the Course(JPN)	
到達目標 【英語】 Objectives of the Course	At the end of the complete course (Inorganic Chemistry I, II, III), students should have learned a robust foundation in physical inorganic principles and also applications of the subject to catalysis and industrial processes.
授業の内容や構成 Course Content / Plan	<p>The course Inorganic Chemistry I will be structured as follows:</p> <p>Class 1: Introduction to Inorganic Chemistry & Structure of the atom Class 2: Build-up principle & Introduction to bonding models Class 3: Octet rule, electronegativity & dipole moments Class 4: Introduction to MO theory and VSEPR Class 5: Introduction to molecular symmetry Class 6: Point groups & character tables Intermediate exam Class 7: Introduction to vibrational spectroscopy Class 8: Chirality and chiral molecules Class 9: Introduction to bonding in polyatomic molecules & ligand group orbitals (LGO) Class 10: MO applied to polyatomic molecules Class 12: Aqueous solutions, oxoacids & aquated cations Class 13: Introduction to experimental techniques Final exam (comprehensive)</p> <p>Depending on the situation a shift of topics between classes might happen</p>
履修条件 Course Prerequisites	Fundamentals of Chemistry I and II, (Laboratory in Chemistry), Analytical Chemistry
関連する科目 Related Courses	Fundamentals of Chemistry I and II, Analytical Chemistry, Inorganic Chemistry II & III, Inorganic Materials I & II
成績評価の方法と基準 Course Evaluation Method and Criteria	<p>Grading will follow the rules for G30 students who have entered NU before AY2020 (5 letter system) or since AY2020 (6 letter system):</p> <p>maximum TOTAL 100% (= 100 pts)</p> <p>Homework submission: 10% (= 10 points) Intermediate exam: 40% (= 40 pts) Final exam (comprehensive): 50% (= 50 pts) The intermediate and final exam are mandatory!</p> <p>Grades are final and calculated on the basis of the performances during class (homework submission) and in the two exams only. There will be no possibility to improve a grade after the final exam. Students who miss the final exam due to a (documented) illness, injury or other unavoidable reasons can ask the instructor.</p>
不可(F)と欠席(W)の基準 Criteria for "Fail (F)" & "Absent (W)" grades	The course will be graded "F" (failed) if less than 60% of the total points were obtained. The course will be graded as "absent" ("A" or "W") if withdrawal was applied before the intermediate exam, as stated in "course withdrawal"
参考書 Reference Book	Pfennig, Brian William: "Principles of Inorganic Chemistry", 2015, John Wiley & Sons, Inc., ISBN 978-1-118-85910-0
教科書・テキスト Textbook	Catherine E. Housecroft, Alan G. Sharpe; INORGANIC CHEMISTRY, 5TH EDITION; PEARSON - PRENTICE HALL
課外学習等 (授業時間外学習の指示) Study Load(Self-directed Learning Outside Course Hours)	Additional to lecture time, students are expected to spend 1 - 2 hours per week for homework and preparing for lectures and quizzes.
注意事項 Notice for Students	Grade evaluation will be based on your year of enrollment in Nagoya University
他学科聴講の可否 Propriety of Other department student's attendance	
他学科聴講の条件 Conditions for Other department student's attendance	
レベル Level	
キーワード Keyword	
履修の際のアドバイス Advice	
授業開講形態等 Lecture format, etc.	Face-to-Face class and if required remote class (MS-Teams, recorded) combined.
遠隔授業(オンデマンド型)で行う場合の追加措置 Additional measures for remote class (on-demand class)	Questions should be asked by email or by making an appointment for a ZOOM or MS Teams meeting

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