Annexe A: New/Revised Course Content in OBTL+ Format

Course Overview

Expected Implementation in Academic Year	AY2025-26
Semester/Trimester/Others (specify approx. Start/End date)	Semester 2
Course Author * Faculty proposing/revising the course	So Cheuk Wai
Course Author Email	cwso@ntu.edu.sg
Course Title	CURRENT TOPICS IN INORGANIC CHEMISTRY
Course Code	CM4021
Academic Units	3
Contact Hours	39
Research Experience Components	Not Applicable

Course Requisites (if applicable)

Pre-requisites	CM3021 Organometallic Chemistry
Co-requisites	
Pre-requisite to	
Mutually exclusive to	
Replacement course to	
Remarks (if any)	

Course Aims

This course aims to introduce latest topics, findings and results in the field of inorganic and organometallic chemistry .

Course's Intended Learning Outcomes (ILOs)

Upon the successful completion of this course, you (student) would be able to:

ILO 1	Discuss the latest development in inorganic and organometallic chemistry.
ILO 2	Apply fundamental chemical knowledge as a basis for discussing and criticizing the chemistry behind new areas of inorganic and organometallic chemistry.
ILO 3	Propose new direction in current inorganic and organometallic chemistry.

Course Content

Course content will be selected from latest research literatures in inorganic and organometallic chemistry and will vary from year to year. Topics include, but not limited to, 1. Fundamental of current main-group element and transition metal chemistry 2. Organometallic chemistry of main-group elements and transition metals 3. Catalysis mediated by novel main-group element and transition metal complexes

Reading and References (if applicable)

Textbook: Inorganic Chemistry, 5/e by Gary L. Miessler, Paul J. Fischer, and Donald A. Tarr Literatures related to the above ILOs. They will be uploaded in NTULearn and will vary from year to year.

Planned Schedule

Week or Session	Topics or Themes	ILO	Readings	Delivery Mode	Activities
1	Current Topics in Inorganic and Organometallic Chemistry	1-3	Reading lecture notes, literatures and textbook		Answering questions based on scientific literatures.
2	Current Topics in Inorganic and Organometallic Chemistry	1-3	Reading lecture notes, literatures and textbook		Answering questions based on scientific literatures.
3	Current Topics in Inorganic and Organometallic Chemistry	1-3	Reading lecture notes, literatures and textbook		
4	Current Topics in Inorganic and Organometallic Chemistry	1-3	Reading lecture notes, literatures and textbook		Answering questions based on scientific literatures.
5	Current Topics in Inorganic and Organometallic Chemistry	1-3	Reading lecture notes, literatures and textbook		Answering questions based on scientific literatures.
6	Current Topics in Inorganic and Organometallic Chemistry	1-3	Reading lecture notes, literatures and textbook		Answering questions based on scientific literatures.
7	Current Topics in Inorganic and Organometallic Chemistry	1-3	Reading lecture notes, literatures and textbook		Answering questions based on scientific literatures.
8	Current Topics in Inorganic and Organometallic Chemistry	1-3	Reading lecture notes, literatures and textbook		Answering questions based on scientific literatures.
9	Current Topics in Inorganic and Organometallic Chemistry	1-3	Reading lecture notes, literatures and textbook		Answering questions based on scientific literatures.

Week or Session	Topics or Themes	ILO	Readings	Delivery Mode	Activities
10	Current Topics in Inorganic and Organometallic Chemistry	1-3	Reading lecture notes, literatures and textbook		Answering questions based on scientific literatures.
11	Current Topics in Inorganic and Organometallic Chemistry	1-3	Reading lecture notes, literatures and textbook		Answering questions based on scientific literatures.
12	Current Topics in Inorganic and Organometallic Chemistry	1-3	Reading lecture notes, literatures and textbook		Answering questions based on scientific literatures.
13	Current Topics in Inorganic and Organometallic Chemistry	1-3	Reading lecture notes, literatures and textbook		Answering questions based on scientific literatures.

Learning and Teaching Approach

Approach	How does this approach support you in achieving the learning outcomes?
Lecture with incomplete notes and handwritten	To encourage you to remain engaged in lectures by taking notes and working on in-class examples. The engagement facilitates you to understand the chemistry delivered in lectures. You are also less likely to sit back, relax, and watch a performance while understanding nothing.
Video clips relevant to the class	To help you visualize chemistry concepts and enhancing your understanding.
Lectures with in-class practice examples	To help you verify your understanding of lectures in real time as well as your ability to apply precise and correct chemistry concepts in problem-solving questions. Through practice, you learn to what extent you need to master and apply a particular knowledge point. To show you common mistake(s) you can make and difficult points to master.
Clickers	To provide instant feedback in lectures in real time about the level of understanding and the level of difficulty of the concept. To give you the opportunity to measure and compare your learning in class. To highlight common mistakes and tricky pointed related to lectures

Assessment Structure

Assessment Components (includes both continuous and summative assessment)

No.	Component	ILO	Related PLO or Accreditation	Weightage	Description of Assessment Component	Team/Individual	Rubrics	Level of Understanding
1	Continuous Assessment (CA): Test/Quiz(CA-1)	1,2,3	Competence, Creativity	25		Individual	Holistic	Not Applicable
2	Continuous Assessment (CA): Test/Quiz(CA-2)			25		Individual	Holistic	Not Applicable
3	Continuous Assessment (CA): Test/Quiz(CA-3)			25			Holistic	Not Applicable
4	Continuous Assessment (CA): Test/Quiz(CA-4)			25			Holistic	Not Applicable

Description of Assessment Components (if applicable)

Continuous Assessment during the lecture

Formative Feedback

Formative feedback: Lecturers will be closely working with you to monitor your learning progress. They will provide you with timely feedback to improve your understanding of concepts. Furthermore, you will be given opportunities to express your ideas and discuss them with lecturers.

Summative Feedback: Summative feedback on continuous assessment will be given. This will help you to achieve the intended learning outcomes 1 to 3 above.

NTU Graduate Attributes/Competency Mapping

This course intends to develop the following graduate attributes and competencies (maximum 5 most relevant)

Attributes/Competency	Level
Creative Thinking	Intermediate
Problem Solving	Intermediate
Transdisciplinarity	Intermediate

Course Policy

Policy (Academic Integrity)

Good academic work depends on honesty and ethical behaviour. The quality of your work as a student relies on adhering to the principles of academic integrity and to the NTU Honour Code, a set of values shared by the whole university community. Truth, Trust and Justice are at the core of NTU's shared values. As a student, it is important that you recognize your responsibilities in understanding and applying the principles of academic integrity in all the work you do at NTU. Not knowing what is involved in maintaining academic integrity does not excuse academic dishonesty. You need to actively equip yourself with strategies to avoid all forms of academic dishonesty, including plagiarism, academic fraud, collusion and cheating. If you are uncertain of the definitions of any of these terms, you should go to the academic integrity website for more information. On the use of technological tools (such as Generative AI tools), different courses / assignments have different intended learning outcomes. Students should refer to the specific assignment instructions on their use and requirements and/or consult your instructors on how you can use these tools to help your learning. Consult your instructor(s) if you need any clarification about the requirements of academic integrity in the course.

Policy (General)

(1) General

Students are expected to complete all assigned pre-class readings and activities, attend all seminar classes punctually and take all scheduled assignments and tests by due dates. Students are expected to take responsibility to follow up with course notes, assignments and course related announcements for seminar sessions they have missed. Students are expected to participate in all seminar discussions and activities.

Policy (Absenteeism)

(2) Absenteeism

Attendance of classes is strongly encouraged for the discussion with lecturers as well as for participation in clicker and in-class practice.

If you are absent due to medical or other valid reasons, you must catch up each week by watching recorded lectures.

If you are absent in any continuous assessment due to medical and other valid reasons, you have to
1. Send an email to the instructor regarding the absence and request for a make-up continuous assessment.
2. Submit the original Medical Certificate‖ to administrator
‖ The medical certificate mentioned above should be issued in Singapore by a medical practitioner registered with the Singapore Medical Association

Policy (Others, if applicable)

Diversity and Inclusion Policy

Integrating a diverse set of experiences is important for a more comprehensive understanding of science and engineering.

It is our goal to create an inclusive and collaborative learning environment that supports a diversity of perspectives and learning experiences. That honours your identities; including ethnicity, gender, socioeconomic status, sexual orientation, religion or ability.

To help accomplish this:

- If you are neuroatypical or neurodiverse, have dyslexia or ADHD (for example), or have a social anxiety disorder or social phobia;
- If you feel your performance in the course is being impacted by your experiences outside of class;
- If something was said in the course (by anyone, including instructor/supervisor) that made you uncomfortable.

Please e-mail to your Associate Chair (Students & Continuing Education) at ac-cceb-stud@ntu.edu.sg about how we can help facilitate your learning experience.

As a participant in course discussions you should also strive to honour the diversity of your classmates. You can do this by; using preferred pronouns and names; being respectful of others opinions and actively making sure all voices are being heard; and refraining from the use of derogatory or demeaning speech or actions.

All members of the course are expected to strictly adhere to the student code of conduct (https://www.ntu.edu.sg/life-at-ntu/student-life/student-conduct) . If you witness something that goes against this or have any other concerns, please speak to your instructors or a faculty member.

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Last Updated By: Koh Hong Giap