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| Offered to students admitted to Year 1 in | 2024 |
| Major/Minor | ALL |
| Course Type | ALL |
| Offer in 2024 - 2025 | Y |
| Course Code | CHEM |
| Date | 2024/08/06 10:05 |

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Enquiry for Course Details

| No. | Course Code | Title | Credit | Pre-requisite | Available in | | Semester offered in 2024 - 2025 | Exam. held in 2024 - 2025 | Quota | Communication intensive | Course Coordinator | Major / Minor (The Major/Minor that this course appears in) | |
|--------------------------------|-------------|-----------------------------------|--------|--|--------------|-------------|---------------------------------|---------------------------|-------|-------------------------|---|--|--|
| | | | | | 2024 - 2025 | 2025 - 2026 | | | | | | Disciplinary Core Course | Disciplinary Elective |
| Department of Chemistry | | | | | | | | | | | | | |
| 1 | CHEM1041 | Foundations of chemistry | 6 | No pre-requisite. This is a bridging course for students without high school chemistry background but are keen to equip themselves with a foundation of chemistry. Students taking this course are expected to work hard by doing active self-reading in order to be able to cope with this course which should not be seen as an easy course (for those with no chemistry background). Not for students with Level 3 or above in HKDSE Chemistry or having taken any level 1 Chemistry course or above or any equivalent Chemistry course. | Y | Y | 1 | Dec | 70 | N | Prof A P L Tong, Chemistry | | Major in Ecology & Biodiversity (Intensive) (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) Major in Environmental Science (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) Minor in Environmental Science (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) |
| 2 | CHEM1042 | General chemistry I | 6 | Level 3 or above in HKDSE Chemistry or equivalent or a pass in CHEM1041. Not for students having taken any level 1 Chemistry course (except for CHEM1041) or above or any equivalent Chemistry course. | Y | Y | 1, 2 | Dec, May | 450 | N | Prof A P L Tong, Chemistry | Major in Biochemistry (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) Major in Biological Sciences (Intensive) (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) Major in Chemistry (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) Major in Chemistry (Intensive) (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) Major in Environmental Science (2021, 2020, 2019, 2018, 2017) Major in Molecular Biology & Biotechnology (Intensive) (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) Minor in Chemistry (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) | Major in Ecology & Biodiversity (Intensive) (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) Major in Environmental Science (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) Major in Food & Nutritional Science (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) Minor in Environmental Science (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) |
| 3 | CHEM1043 | General chemistry II | 6 | Pass in CHEM1042 | Y | Y | 1, 2 | Dec, May | 280 | N | Prof A P L Tong, Chemistry | Major in Biochemistry (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) Major in Biological Sciences (Intensive) (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) Major in Chemistry (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) Major in Chemistry (Intensive) (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) Major in Molecular Biology & Biotechnology (Intensive) (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) Minor in Chemistry (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) | |
| 4 | CHEM1044 | Mathematics in chemistry | 6 | Pass in CHEM1042 or already enrolled in this course; and Level 2 or above in Module 1 or Module 2 of HKDSE Mathematics or equivalent, or Pass in MATH1011 or SCNC1111 | Y | Y | 2 | May | 80 | N | Dr A M Y Yuen, Chemistry | | Major in Chemistry (Intensive) (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) |
| 5 | CHEM2241 | Analytical chemistry I | 6 | Pass in CHEM1042; and Pass in CHEM1043, or already enrolled in this course | Y | Y | 1, 2 | Dec, May | 120 | N | Prof. I K Chu (1st sem); Prof. E C M Tse (2nd sem), Chemistry | Major in Chemistry (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) Major in Chemistry (Intensive) (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) | Major in Environmental Science (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) Minor in Chemistry (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) Minor in Environmental Science (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) |
| 6 | CHEM2341 | Inorganic chemistry I | 6 | Pass in CHEM1042; and Pass in CHEM1043, or already enrolled in this course | Y | Y | 1, 2 | Dec, May | 120 | N | Prof. H Y Au Yeung, Chemistry | Major in Chemistry (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) Major in Chemistry (Intensive) (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) | Minor in Chemistry (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) |
| 7 | CHEM2441 | Organic chemistry I | 6 | Pass in CHEM1042; and Pass in CHEM1043, or already enrolled in this course | Y | Y | 1, 2 | Dec, May | 200 | N | Prof X Y Li (1st sem); Prof S K Lee (2nd sem), Chemistry | Major in Biochemistry (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) Major in Chemistry (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) Major in Chemistry (Intensive) (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) | Minor in Chemistry (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) |
| 8 | CHEM2442 | Fundamentals of organic chemistry | 6 | Pass in CHEM1042; and Not for students who have passed CHEM2441, or have already enrolled in this course. | Y | Y | 1 | Dec | 100 | N | Prof P H Toy, Chemistry | | Major in Environmental Science (2017) Major in Food & Nutritional Science (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) Minor in Chemistry (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) Minor in Environmental Science (2017) |

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| 9 | CHEM2541 | Introductory physical chemistry | 6 | Pass in CHEM1042 and CHEM1043 Student are recommended (but not required) to take CHEM1044 before (or along with) taking this course. | Y | Y | 2 | May | 100 | N | Prof J Y Tang, Chemistry | Major in Chemistry (2024,2023,2022,2021,2020,2019,2018,2017) Major in Chemistry (Intensive) (2024,2023,2022,2021,2020,2019,2018,2017) | Minor in Chemistry (2024,2023,2022,2021,2020,2019,2018,2017) |
| 10 | CHEM3141 | Environmental chemistry | 6 | Pass in CHEM2241 or CHEM2341 or CHEM2441 or CHEM2442 or CHEM2541 For those who have not got the above pre-requisite but with a pass in CHEM1042 and a pass in ENV2001, and will work hard to cope with the course, they are welcome to join the course. | Y | Y | 2 | May | 50 | N | Prof Y X Li, Chemistry | | Major in Environmental Science (2024,2023,2022,2021,2020,2019,2018,2017) Minor in Chemistry (2024,2023,2022,2021,2020,2019,2018,2017) Minor in Environmental Science (2024,2023,2022,2021,2020,2019,2018,2017) |
| 11 | CHEM3143 | Introduction to materials chemistry | 6 | Pass in CHEM2441; and Pass in CHEM2541 or CHEM2341 | Y | Y | 1 | Dec | 60 | N | Prof Y F Wang, Chemistry | Major in Chemistry (Intensive) (2024,2023,2022,2021,2020,2019,2018,2017) | Minor in Chemistry (2024,2023,2022,2021,2020,2019,2018,2017) |
| 12 | CHEM3144 | Fundamentals of Nuclear Magnetic Resonance | 6 | Pass in CHEM2241 or CHEM2341 or CHEM2441 or CHEM2541 | Y | Y | 2 | May | 40 | N | Dr K K H Ng, Chemistry | | Minor in Chemistry (2024,2023) |
| 13 | CHEM3241 | Analytical chemistry II: chemical instrumentation | 6 | Pass in CHEM2241 | Y | Y | 1 | Dec | 104 | N | Prof Y Li, Chemistry | Major in Chemistry (2024,2023,2022,2021,2020,2019,2018,2017) Major in Chemistry (Intensive) (2024,2023,2022,2021,2020,2019,2018,2017) | Major in Environmental Science (2024,2023,2022,2021,2020,2019,2018,2017) Minor in Chemistry (2024,2023,2022,2021,2020,2019,2018,2017) Minor in Environmental Science (2021,2020,2019,2018,2017) |
| 14 | CHEM3242 | Food and water analysis | 6 | Pass in CHEM2241 or CHEM2341 or CHEM2441 or CHEM2541. Please note that School of Biological Sciences stipulates that students who have passed CHEM3242 are not allowed to take BIOL3209 Food and nutrient analysis. | Y | Y | 2 | May | 50 | Y | Dr K K H Ng, Chemistry | | Major in Environmental Science (2017) Minor in Chemistry (2024,2023,2022,2021,2020,2019,2018,2017) Minor in Environmental Science (2017) |
| 15 | CHEM3341 | Inorganic chemistry II | 6 | Pass in CHEM2341 | Y | Y | 1 | Dec | 90 | N | Prof V W W Yam, Chemistry | Major in Chemistry (2024,2023,2022,2021,2020,2019,2018,2017) Major in Chemistry (Intensive) (2024,2023,2022,2021,2020,2019,2018,2017) | Minor in Chemistry (2024,2023,2022,2021,2020,2019,2018,2017) |
| 16 | CHEM3342 | Bioinorganic chemistry | 6 | Pass in CHEM2341 | Y | Y | 2 | May | 50 | N | Prof H Z Sun, Chemistry | | Minor in Chemistry (2024,2023,2022,2021,2020,2019,2018,2017) |
| 17 | CHEM3441 | Organic chemistry II | 6 | Pass in CHEM2441 [Remarks: CHEM3441 has been changed to lecture-based course from semester 2, 2015-16. For Chemistry students who admitted in 2014-15 or before, they must enroll also CHEM3443 for enrolling CHEM3441 (new version without lab component) to meet the Chemistry Major requirements.] | Y | Y | 1, 2 | Dec, May | 300 | N | Prof Z X Huang (1st sem); Prof X Y Li (2nd sem), Chemistry | Major in Chemistry (2024,2023,2022,2021,2020,2019,2018,2017) Major in Chemistry (Intensive) (2024,2023,2022,2021,2020,2019,2018,2017) | Major in Biochemistry (2024,2023,2022,2021,2020,2019,2018,2017) Minor in Chemistry (2024,2023,2022,2021,2020,2019,2018,2017) |
| 18 | CHEM3442 | Organic chemistry of biomolecules | 6 | Pass in CHEM2442 or CHEM3441 | Y | Y | 1 | Dec | 50 | N | Prof P H Toy, Chemistry | | Minor in Chemistry (2024,2023,2022,2021,2020,2019,2018,2017) |
| 19 | CHEM3443 | Organic chemistry laboratory | 6 | Pass in CHEM2441; and pass in CHEM3441, or already enrolled in this course; NOT for students who have passed CHEM3441A in semester 1, 2015-16, or CHEM3441 in or before 2014-2015 (for students admitted in 2014-15 or before) Pass in CHEM2441 or CHEM2442 or CHEM2443; and Pass in CHEM3441 or CHEM3442, or already enrolled in any of these two courses (for students admitted in 2015-16 or thereafter) | Y | Y | 1, 2 | Dec, May | 90 | N | Dr A M Y Yuen, Chemistry | Major in Chemistry (2024,2023,2022,2021,2020,2019,2018,2017) Major in Chemistry (Intensive) (2024,2023,2022,2021,2020,2019,2018,2017) | Minor in Chemistry (2024,2023,2022,2021,2020,2019,2018,2017) |
| 20 | CHEM3445 | Integrated laboratory | 6 | Pass in CHEM3443 or already enrolled in this course | Y | Y | S | No exam | 20 | N | Prof. J. He, Chemistry | Major in Chemistry (Intensive) (2024,2023,2022,2021,2020,2019,2018,2017) | Minor in Chemistry (2024,2023,2022,2021,2020,2019,2018,2017) |
| 21 | CHEM3541 | Physical chemistry: Introduction to quantum chemistry | 6 | Pass in CHEM2541 | Y | Y | 1 | Dec | 100 | N | Prof G H Chen, Chemistry | Major in Chemistry (2024,2023,2022,2021,2020,2019,2018,2017) Major in Chemistry (Intensive) (2024,2023,2022,2021,2020,2019,2018,2017) | Minor in Chemistry (2024,2023,2022,2021,2020,2019,2018,2017) |
| 22 | CHEM3542 | Physical chemistry: statistical thermodynamics and kinetics theory | 6 | Pass in CHEM2541 and CHEM3541 | Y | Y | 2 | May | 50 | N | Prof. J Yang, Chemistry | Major in Chemistry (Intensive) (2024,2023,2022,2021,2020,2019,2018,2017) | Minor in Chemistry (2024,2023,2022,2021,2020,2019,2018,2017) |
| 23 | CHEM3999 | Directed studies in chemistry | 6 | Pass in at least 24 credits of advanced level disciplinary core/elective chemistry courses (CHEM3XXX or CHEM4XXX) in the Chemistry Major including a pass in CHEM2341 or CHEM2441 or CHEM2442 or CHEM2541. This capstone course is for Chemistry Major/ Chemistry Major (Intensive) students only. This course is designed for third year students who would like to take an early experience on research. The earliest that a student is allowed to take this capstone course is their year 3 study. | Y | Y | 1, 2 | No exam | --- | N | Prof D L Phillips, Chemistry | | Minor in Chemistry (2024,2023,2022,2021,2020,2019,2018,2017) |
| 24 | CHEM4142 | Symmetry, group theory and applications | 6 | Pass in CHEM3341 | Y | Y | 1 | Dec | 60 | N | Prof E C M Tse, Chemistry | Major in Chemistry (Intensive) (2024,2023,2022,2021,2020,2019,2018,2017) | Major in Chemistry (2024,2023,2022,2021,2020,2019,2018,2017) Minor in Chemistry (2024,2023,2022,2021,2020,2019,2018,2017) |
| 25 | CHEM4144 | Advanced materials | 6 | Pass in CHEM3143 | Y | Y | 2 | May | 30 | N | Prof. E C M Tse, Chemistry | Major in Chemistry (Intensive) (2024,2023,2022,2021,2020,2019,2018,2017) | Major in Chemistry (2024,2023,2022,2021,2020,2019,2018,2017) Minor in Chemistry (2024,2023,2022,2021,2020,2019,2018,2017) |
| 26 | CHEM4145 | Medicinal chemistry | 6 | Pass in CHEM3441 or CHEM3442; and Not for students who have passed in BPHM3133, or already enrolled in this course. | Y | Y | 2 | May | 40 | N | Prof. Y Li, Chemistry | | Major in Biochemistry (2024,2023,2022,2021,2020,2019,2018,2017) Major in Chemistry (2024,2023,2022,2021,2020,2019,2018,2017) Major in Chemistry (Intensive) (2024,2023,2022,2021,2020,2019,2018,2017) Minor in Chemistry (2024,2023,2022,2021,2020,2019,2018,2017) |

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| 27 | CHEM4147 | Supramolecular chemistry | 6 | Pass in CHEM3341 and CHEM3441 | Y | Y | 2 | May | 40 | N | Prof. H Y Au-Yeung, Chemistry | | Major in Chemistry (2024, 2023, 2020, 2019, 2017) Major in Chemistry (Intensive) (2024, 2023, 2020, 2019, 2017) Minor in Chemistry (2024, 2023, 2020, 2019, 2017) |
| 28 | CHEM4148 | Frontiers in Modern Chemical Science | 6 | Pass in CHEM3341 and CHEM3441. | Y | Y | 2 | No exam | 60 | N | Prof X D Li, Chemistry | | Major in Chemistry (2024, 2023, 2020, 2019, 2017) Major in Chemistry (Intensive) (2024, 2023, 2020, 2019, 2017) Minor in Chemistry (2024, 2023, 2020, 2019, 2017) |
| 29 | CHEM4241 | Modern chemical instrumentation and applications | 6 | Pass in CHEM3241 | Y | Y | 1 | Dec | 50 | N | Prof. I K Chu, Chemistry | Major in Chemistry (Intensive) (2024, 2023, 2022, 2021, 2020, 2019, 2018, 2017) | Major in Chemistry (2024, 2023, 2020, 2019, 2017) Minor in Chemistry (2024, 2023, 2020, 2019, 2017) |
| 30 | CHEM4242 | Advanced analytical chemistry | 6 | Pass in CHEM3241 or CHEM3242 | Y | Y | 2 | May | 50 | N | Prof. H B Jiang, Chemistry | | Major in Chemistry (2024, 2023, 2020, 2019, 2017) Major in Chemistry (Intensive) (2024, 2023, 2020, 2019, 2017) Minor in Chemistry (2024, 2023, 2020, 2019, 2017) |
| 31 | CHEM4341 | Advanced inorganic chemistry | 6 | Pass in CHEM3341 | Y | Y | 1 | Dec | 50 | N | Prof C M Che, Chemistry | | Major in Chemistry (2024, 2023, 2020, 2019, 2017) Major in Chemistry (Intensive) (2024, 2023, 2020, 2019, 2017) Minor in Chemistry (2024, 2023, 2020, 2019, 2017) |
| 32 | CHEM4342 | Organometallic chemistry | 6 | Pass in CHEM3341 | Y | Y | 1 | Dec | 32 | N | Prof. J Z Liu, Chemistry | | Major in Chemistry (2024, 2023, 2020, 2019, 2017) Major in Chemistry (Intensive) (2024, 2023, 2020, 2019, 2017) Minor in Chemistry (2024, 2023, 2020, 2019, 2017) |
| 33 | CHEM4441 | Advanced organic chemistry | 6 | Pass in CHEM3441 | Y | Y | 1 | Dec | 40 | N | Prof. J He, Chemistry | | Major in Chemistry (2024, 2023, 2020, 2019, 2017) Major in Chemistry (Intensive) (2024, 2023, 2020, 2019, 2017) Minor in Chemistry (2024, 2023, 2020, 2019, 2017) |
| 34 | CHEM4443 | Integrated organic synthesis | 6 | Pass in CHEM3441; or Pass in CHEM3441 (without lab component) and CHEM3443 | Y | Y | 2 | May | 50 | N | Prof. Z X Huang, Chemistry | | Major in Chemistry (2024, 2023, 2020, 2019, 2017) Major in Chemistry (Intensive) (2024, 2023, 2020, 2019, 2017) Minor in Chemistry (2024, 2023, 2020, 2019, 2017) |
| 35 | CHEM4444 | Chemical biology | 6 | Pass in BIOC3601 or CHEM3441 | Y | Y | 2 | May | 50 | N | Prof X C Li, Chemistry | | Major in Biochemistry (2024, 2023, 2020, 2019, 2017) Major in Chemistry (2024, 2023, 2020, 2019, 2017) Major in Chemistry (Intensive) (2024, 2023, 2020, 2019, 2017) Minor in Biochemistry (2024, 2023, 2020, 2019, 2017) Minor in Chemistry (2024, 2023, 2020, 2019, 2017) |
| 36 | CHEM4542 | Computational chemistry | 6 | Pass in CHEM3541 and CHEM1044 | Y | N | 1 | Dec | 50 | N | Prof. J Yang, Chemistry | | Major in Chemistry (2024, 2023, 2020, 2019, 2017) Major in Chemistry (Intensive) (2024, 2023, 2020, 2019, 2017) Minor in Chemistry (2024, 2023, 2020, 2019, 2017) |
| 37 | CHEM4543 | Advanced physical chemistry | 6 | Pass in CHEM3541 | Y | Y | 2 | May | 40 | N | Prof G H Chen, Chemistry | | Major in Chemistry (2024, 2023, 2020, 2019, 2017) Major in Chemistry (Intensive) (2024, 2023, 2020, 2019, 2017) Minor in Chemistry (2024, 2023, 2020, 2019, 2017) |
| 38 | CHEM4910 | Chemistry literacy and research | 6 | Pass in at least 24 credits of advanced level disciplinary core/elective chemistry courses (CHEM3XXX or CHEM4XXX) in the Chemistry Major including CHEM3241, and CHEM3341, and CHEM3441, and CHEM3541. This capstone course is for Chemistry Major students only. The earliest that a student is allowed to take this capstone course is their year 3 study. | Y | Y | 2 | No exam | --- | N | Prof X D Li, Chemistry | | Minor in Chemistry (2024, 2023, 2020, 2019, 2017) |

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| 39 | CHEM4911 | Capstone experience for chemistry undergraduates: HKUUtopia | 6 | Students are expected to have satisfactorily completed all introductory chemistry disciplinary core courses and at least 24 credits of advanced level disciplinary core/elective chemistry courses in the Chemistry Major. Students who are interested in taking the course should contact the course coordinator for application in April - May. Late application may not be considered. This capstone course is for Chemistry Major students only. The earliest that a student is allowed to take this capstone course is their year 3 study. | Y | Y | S | No exam | --- | Y | Prof A P L Tong, Chemistry | Minor in Chemi (2024,2023,2020,2019,201 |
| 40 | CHEM4966 | Chemistry internship | 6 | Pass in at least 24 credits of advanced level disciplinary core/elective chemistry courses (CHEM3XXX or CHEM4XXX) in the Chemistry Major. This capstone course is for Chemistry Major/ Chemistry Major (Intensive) students only. The earliest that a student is allowed to take this capstone course is their year 3 study. | Y | Y | 1, 2, S | No exam | --- | N | Dr K K H Ng, Chemistry | Minor in Chemi (2024,2023,2020,2019,201 |
| 41 | CHEM4999 | Chemistry project | 12 | Pass in at least 24 credits of advanced level disciplinary core/elective chemistry courses (CHEM3XXX or CHEM4XXX) in the Chemistry Major including CHEM3241, and CHEM3341, and CHEM3441, and CHEM3541. This capstone course is for Chemistry Major/ Chemistry Major (Intensive) students only. The earliest that a student is allowed to take this capstone course is their year 3 study. | Y | Y | 0 | No exam | --- | N | Prof J Y Tang, Chemistry | Minor in Chemi (2024,2023,2020,2019,201 |