**Program of undergrade student courses of Department of Chemistry**

For 104 school year

101.2.17 course committeemeeting

101.03.23 dept main meeting permitt

104.09.06 dept main meeting permitt

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| --- |
|  (一) common course of education ministry【28 credit points】 |
| Language common course (10 credit) | Core common course (12-16 credit) | others |
|  | Chinese(一) (2,half)、Chinese(二) (2,half) |  | 1.Art & Beauty2.philosophy & ethic thought3.citizen & social research4.History & Culture5.Mathematica & Science thought6.Science & Life | Each of the 6 field take 1 course at least。 |  | physical education (6 necessary, 2 optional) |
|  | English(一) (2,half)、English(二) (2,half) |  |  |
|  | English(三) (2,half) |
|  |
| Common courses (2-6 credit) |
| Not included in core common courses(take 3 courses) |
| (二) prescribed courses【57 credit】 |
| freshman | sophomore | junior | senior |
|  | General chemistry(3,3) |  | Organic Chemistry(4,4) |  | Inorganic Chemistry(3,3) |  |  |
|  | General Physics(3,3) |  | Organic Chemistry laboratory(1,1) |  | Physical Chemistry(3,3) |  |  |
|  | General Chemistry Laboratory(1,1) |  | Analytic Chemistry(3,3) |  | Physical Chemistry Laboratory(1,1) |  |  |
|  | General Physics Laboratory(1,1) |  | Analytic Chemistry Laboratory(1,1) |  |  |  |  |
|  | Calculus(3,3) |  | Physical Chemistry(0,3) |  |  |  |  |
| (三) optional courses【18 credit】(courses will change when it opens) |
| freshman | sophomore | junior | senior |
| C | Scientific & Technical Japanese(I)( 2) | I | Chemical Application of Group Theory(2) | A | Instrumental Analysis(2,2) | A | Instrumental Analysis Laboratory(1,1) |
| C | Scientific & Technical Japanese (II)( 2) | O | Organic Spectroscopy(2) | I | Inorganic Chemistry laboratory(2) | A | Special topics of analytical chemistry(3) |
|  |  | P | Mathematics for Chemistry(2) | O | Topics in organic chemistry(2) | A | Environmental Chemistry(3) |
|  |  |  |  | O | Biochemistry(3) | I | Topics of inorganic chemistry(2) |
|  |  |  |  | O | Topics in biochemistry(3) | I | Coordination chemistry(2) |
|  |  |  |  | C | Polymer chemistry(3) | I | Photochemistry(3) |
|  |  |  |  | C | Industrial chemistry(3) | O | Topic of organic chemistry(3) |
|  |  |  |  | C | Topics in industrial chemistry(3) | O | Organic synthesis(2) |
|  |  |  |  | C | Materials and Methods in teaching chemistry laboratory (1,1) | O | Organic reaction mechanism(2) |
|  |  |  |  |  |  | I+O | Organicmetallic chemistry(2) |
|  |  |  |  |  |  | O | Advanced biochemistry(I)(3) |
|  |  |  |  |  |  | O | Advanced biochemistry (II)(3) |
|  |  |  |  |  |  | P | Special Topics in Physical chemistry(3) |
|  |  |  |  |  |  | P | Chemical Kinetics(3) |
|  |  |  |  |  |  | P | Quantum Chemistry(3) |
|  |  |  |  |  |  | P | Molecular Modeling(3) |
|  |  |  |  |  |  | P | Material chemistry(3) |
|  |  |  |  |  |  | P | Atomic and Molecular spectroscopy(3) |
|  |  |  |  |  |  |  | Seminar(2,2) |
|  |  |  |  |  |  |  | Special topics in organic chemistry(2,2) |
|  |  |  |  |  |  |  | Special topics in inorganic chemistry( (2,2) |
|  |  |  |  |  |  |  | Special topics in physical chemistry( (2,2) |
|  |  |  |  |  |  |  | Special topics in analytical chemistry( (2,2) |
|  |  |  |  |  |  |  | Special topics in applied chemistry and science education(2,2) |

化學系必選修、教育學分及畢業學分一覽表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Common courses | Educational course | Prescribed courses | optional | Least credit for graduated | Least credit (included educational courses) | minor |
| Take chemistry | Free course |
| 28 | 26 | 57 | 18 | 25 | 128 | 154 | 35 |