# General Education Requirement for International Students

For international students beginning their study in 2023, six required modules must be completed in the general education (GE) section, i.e., Chinese Language and Culture Module, Arts and Physical Education Module, Competence Development Module, Humanities and Social Sciences Module, Mathematics and Natural Sciences Module, and GE to Majors Bridging Module.

**General Education Curriculum**

Requirements: Total ≥ 79 credits

| Module | Category | Credits |
|---|---|---|
| Chinese Language and Culture Module<br>16 Credits | Chinese Language and Culture | 16 |
| Arts and Physical Education Module<br>6 Credits | Physical Education | 4 |
| | Arts | 2 |
| Competence Development Module<br>19 Credits | Computer Programming | 3 |
| | Writing | 2 |
| | Foreign Languages | 14 |
| Humanities and Social Sciences Module<br>8 Credits | Humanities | 6 |
| | Social Sciences | |
| | Chinese Studies | 2 |
| Mathematics and Natural Sciences Module<br>≥28 Credits | Mathematics | 12-14 |
| | Physics | 10-12 |
| | Chemistry | 3-4 |
| | Geoscience + Life Science | 3 |
| GE to Majors Bridging Module<br>2 Credits | Introduction to Majors | 2 |
| Note: A total of 10 credits in Arts, Chinese Studies, Humanities, and Social Sciences is sufficient. | | |

## 1. Chinese Language and Culture Module

Requirements: Students must complete a total of 16 credits. All courses are compulsory.

| Category | Course Code | Course Name | Requirement | Credits | Terms | Prerequisite | Dept. |
|---|---|---|---|---|---|---|---|
| Chinese Language and Culture | CLE008 | Elementary Chinese I | Required | 2 | 1/Fall | None | CLE |
| | CLE009 | Elementary Chinese II | Required | 2 | 1/Spr. | Elementary Chinese I | |
| | CLE027 | Intermediate Chinese I | Required | 2 | 2/Fall | Elementary Chinese II | |
| | CLE028 | Intermediate Chinese II | Required | 2 | 2/Spr. | Intermediate Chinese I | |
| | CLE031 | Advanced Chinese I | Required | 2 | 3/Fall | Intermediate Chinese II | |
| | CLE032 | Advanced Chinese II | Required | 2 | 3/Spr. | Advanced Chinese I | |
| | CLE033 | Chinese Culture | Required | 2 | 1-4 Fall | NA | |
| | CLE034 | Chinese History | Required | 2 | 1-4 Spr. | NA | |

## 2. Arts and Physical Education Module

Requirements: Students must complete a total of 6 credits, with 4 credits in Physical Education and 2 credits in Arts.

| Category | Course Code | Course Name | Requirement | Credits | Terms | Prerequisite | Dept. |
|---|---|---|---|---|---|---|---|
| Physical Education | GE131 | Physical Education I | Required | 1 | 1/Fall | NA | PE Center |
| | GE132 | Physical Education II | Required | 1 | 1/Spr. | NA | |
| | GE231 | Physical Education III | Required | 1 | 2/Fall | NA | |
| | GE232 | Physical Education IV | Required | 1 | 2/Spr. | NA | |
| | GE331 | Physical Education V | Required | 0 | 3/Fall | NA | |
| | GE332 | Physical Education VI | Required | 0 | 3/Spr. | NA | |
| Arts | GEM051 | Appreciation of the Chinese Vocal Music Works | Optional | 2 | 1-4 Spr. &Fall | NA | AC |
| | GEM066 | Appreciation of Chinese Instrumental Music Works | Optional | 2 | 1-4 Spr. &Fall | NA | AC |
| | GEM062 | Brief History and Appreciation of Chinese Operas | Optional | 2 | 1-4 Spr. &Fall | NA | AC |
| | GEM022 | Art of Elocution | Optional | 2 | 1-4 Spr. &Fall | NA | AC |
| | GEM026 | Appreciation of Art | Optional | 2 | 1-4 Spr. &Fall | NA | AC |
| | GEM028 | History of Foreign Art | Optional | 2 | 1-4 Spr. &Fall | NA | AC |
| | Other courses (subject to change) | | Optional | 2 | 1-4 Spr. &Fall | NA | AC |

**3. Competence Development Module**

Requirements: Students must complete a total of 19 credits, including 3 credits in Computer Programming, 2 credits in Writing (mandatory for international students), and 14 credits in Foreign Languages. In the Foreign Languages module, students are assigned to A/B/C 3 levels: Level-A students are exempt from *SUSTech English I* and *SUSTech English II*; Level-B students are exempt from *SUSTech English I*. Students of both Level-A and Level-B are required to take at least one 2-credit CLE elective course after completing the compulsory English courses.

Level A: Starts with *SUSTech English III*

Level B: Starts with *SUSTech English II*

Level C: Starts with *SUSTech English I*

| Category | Course Code | Course Name | Requirement | Credits | Terms | Prerequisite | Dept. |
|---|---|---|---|---|---|---|---|
| Computer Programming[1] | CS109 | Introduction to Computer Programming | Restricted | 3 | 1-2 Spr. &Fall | NA | CSE |
| | CS110 | Introduction to Java Programming | Restricted | 3 | 1-2 Spr. &Fall | NA | |
| | CS111 | Introduction to C Programming | Restricted | 3 | 1-2 Spr. &Fall | NA | |
| | CS112 | Introduction to Python Programming | Restricted | 3 | 1-2 Spr. &Fall | NA | |
| | CS113 | Introduction to Matlab Programming | Restricted | 3 | 1-2 Spr. &Fall | NA | |
| Writing | CLE026 | Scientific Writing | Required | 2 | 1-4 Spr. /Fall | EAP | CLE |
| Foreign Languages | CLE021 | SUSTech English I | Required | 4 | 1 Fall | NA | CLE |
| | CLE022 | SUSTech English II | Required | 4 | 1 Spr. /Fall | NA | CLE |
| | CLE023 | SUSTech English III | Required | 4 | 1-2 Spr. /Fall | NA | CLE |
| | CLE030 | English for Academic Purposes | Required | 2 | 1-2 Spr. /Fall | SUSTech English III | CLE |
| | GE2229 | Public Speaking | Elective | 2 | 1-4 Spr. /Fall | EAP | CLE |
| | GEL006 | Communication Skills | Elective | 2 | 1-4 Spr. /Fall | EAP | CLE |
| | CLE010 | English for Engineering | Elective | 2 | 1-4 Spr. /Fall | EAP | CLE |
| | CLE012 | Scientific and Technical | Elective | 2 | 1-4 Spr. | EAP | CLE |

[1] Computer programming courses in the Competence Development Module are GE Required Courses for Science and Engineering.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | Translation | | | /Fall | | |
| | CLE013 | English Pronunciation | Elective | 2 | 1-4 Spr. /Fall | EAP | CLE |
| | CLE019 | Critical Thinking / English Debate | Elective | 2 | 1-4 Spr. /Fall | EAP | CLE |
| | CLE039 | English for Career Development | Elective | 2 | 1-4 Spr. /Fall | EAP | CLE |
| | CLE041 | English for International Academic Conference | Elective | 2 | 1-4 Spr. /Fall | EAP | CLE |
| | CLE043 | Cambridge Business English (Vantage) | Elective | 2 | 1-4 Spr. /Fall | NA | CLE |
| | CLE044 | English for Innovators | Elective | 2 | 1-4 Spr. /Fall | NA | CLE |
| | CLE045 | Cambridge Business English (Higher) | Elective | 2 | 1-4 Spr. / Fall | NA | CLE |
| | CLE046 | Advanced Grammar in Use / Writing | Elective | 2 | 1-4 Spr. /Fall | NA | CLE |
| | CLE048 | Elementary Spanish | Elective | 2 | 1-4 Spr. /Fall | NA | CLE |
| | CLE049 | Elementary German | Elective | 2 | 1-4 Spr. /Fall | NA | CLE |
| | CLE050 | Elementary Japanese | Elective | 2 | 1-4 Spr. /Fall | NA | CLE |
| | CLE051 | Elementary French | Elective | 2 | 1-4 Spr. /Fall | NA | CLE |
| | CLE052 | Podcasting: English Listening and Speaking Through Culture | Elective | 2 | 1-4 Spr. /Fall | NA | CLE |
| | CLE053 | English for Professional Engineering Skills: Language in Project Design, Management and Communication | Elective | 2 | 1-4 Spr. /Fall | EAP | CLE |
| | CLE054 | Upper Elementary French | Elective | 2 | 1-4 Spr. /Fall | Elementary French | CLE |
| | CLE055 | Upper Elementary Spanish | Elective | 2 | 1-4 Spr. /Fall | Elementary Spanish | CLE |
| | CLE056 | Upper Elementary Japanese | Elective | 2 | 1-4 Spr. /Fall | Elementary Japanese | CLE |
| | CLE057 | Upper Elementary German | Elective | 2 | 1-4 Spr. /Fall | Elementary German | CLE |
| | CLE060 | English for Fluency | Elective | 2 | 1-4 Spr. /Fall | NA | CLE |
| | CLE061 | Study Abroad Language and Culture Development | Elective | 2 | 1-4 Spr. /Fall | NA | CLE |
| | CLE062 | Global English / Communication Skills | Elective | 2 | 1-4 Spr. /Fall | NA | CLE |
| | CLE063 | Writing for Publication | Elective | 2 | 1-4 Spr. /Fall | EAP | CLE |
| | CLE064 | Academic English for Research Methodologies and Referencing | Elective | 2 | 1-4 Spr. /Fall | EAP | CLE |
| | CLE065 | Reading / Writing for Understanding Science | Elective | 2 | 1-4 Spr. /Fall | NA | CLE |
| | CLE066 | English for Design | Elective | 2 | 1-4 Spr. /Fall | NA | CLE |
| | CLE067 | European Languages and | Elective | 2 | 1-4 Spr. | NA | CLE |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | Cultures | | | /Fall | | |
| | (The course list is subject to change; Please follow the placement results and take the required English courses in the designated semesters.) | | | | | | |

### 4. Humanities and Social Sciences Module

Requirements: Students must complete a total of 8 credits/4 courses.

| Category | Course Code | Course Name | Requirement | Credits | Terms | Prerequisite | Dept. |
|---|---|---|---|---|---|---|---|
| Humanities | HUM012 | Languages & Linguistics | Optional | 2 | 1-4 Spr. /Fall | NA | HUM |
| | HUM014 | Science Fiction: Fiction and Film | Optional | 2 | 1-4 Spr. /Fall | NA | HUM |
| | HUM018 | Science Fiction Writing | Optional | 2 | 1-4 Spr. /Fall | NA | HUM |
| | HUM029 | An Introduction on History of Science and Civilization | Optional | 2 | 1-4 Spr. /Fall | NA | HUM |
| | HUM037 | Appreciation of Science Fiction Literature | Optional | 2 | 1-4 Spr. /Fall | NA | HUM |
| | HUM052 | An Introduction to Western Philosophy | Optional | 2 | 1-4 Spr. /Fall | NA | HUM |
| | HUM056 | Films from the Perspective of Ecological Thoughts | Optional | 2 | 1-4 Spr. /Fall | NA | HUM |
| | HUM069 | An Introduction on Philosophy of Physics | Optional | 2 | 1-4 Spr. /Fall | General Physics I or College Physics I | HUM |
| | Other relevant courses (subject to change) | | Optional | | 1-4 Spr. /Fall | NA | |
| Social Sciences | SS016 | Memory Study of Sino-Foreign Culture | Optional | 2 | 1-4 Spr. /Fall | NA | SSC |
| | SS022 | Introduction to Culture Heritage | Optional | 2 | 1-4 Spr. /Fall | NA | SSC |
| | SS024 | Basic Skills of Video Shooting and Editing | Optional | 2 | 1-4 Spr. /Fall | NA | SSC |
| | SS058 | Hebrew Literature and Culture | Optional | 2 | 1-4 Spr. /Fall | NA | SSC |
| | SS082 | The City and Technology | Optional | 2 | 1-4 Spr. /Fall | NA | SSC |
| | SS092 | Foundation of Sustainable Development | Optional | 2 | 1-4 Spr. /Fall | NA | SSC |
| | SS133 | Chinese Physics and Physicists in the 20th Century | Optional | 2 | 1-4 Spr. /Fall | NA | SSC |
| | Other relevant courses (subject to change) | | Optional | | 1-4 Spr. /Fall | NA | |
| Chinese Studies | HUM017 | Poetry Metrical and Ancient Poetry Writing | Optional | 2 | 1-4 Spr. /Fall | NA | HUM |
| | HUM053 | An Introduction to Chinese Philosophy | Optional | 2 | 1-4 Spr. /Fall | NA | HUM |
| | HUM075 | An Introduction to the Classics of Chinese Literature | Optional | 2 | 1-4 Spr. /Fall | NA | HUM |
| | SS033 | A Chinese History in Archaeological Records | Optional | 2 | 1-4 Spr. /Fall | NA | SSC |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | SS074 | The History of China in Ancient Artifacts | Optional | 2 | 1-4 Spr. /Fall | NA | SSC |
| | SS143 | The Preservation and Utilization of Intangible Cultural Heritage | Optional | 2 | 1-4 Spr. /Fall | NA | SSC |
| | Other relevant courses (subject to change) | | Optional | | 1-4 Spr. /Fall | NA | |

**5. Mathematics and Natural Sciences Module**[2]

Requirements: Students must complete a minimum of 28 credits. For Mathematics, students must select one of the A, B, or C course categories (at least 8 credits) and complete either the *Advanced Linear Algebra I* or *Linear Algebra* for 4 credits. For Physics, students are required to choose either course category A or B (at least 8 credits) and complete the course *Experiments of Fundamental Physics* for 2 credits. For Chemistry, students must complete at least one of the listed courses to receive a minimum of 3 credits. For Biology and Life Sciences, students must select one of the listed courses to receive 3 credits.

| Category | Course Code | Course Name | | Requirement | Credits | Terms | Prerequisite | Dept. |
|---|---|---|---|---|---|---|---|---|
| Mathematics | MA101a | Mathematical Analysis I | Category A | Restricted | 5 | 1 Fall | NA | MATH |
| | MA102a | Mathematical Analysis II | | Restricted | 5 | 1 Spr. | Mathematical Analysis I | |
| | MA117 | Calculus I | Category B | Restricted | 4 | 1 Fall | NA | |
| | MA127 | Calculus II | | Restricted | 4 | 1 Spr. | Calculus I | |
| | MA118 | Single-variable Calculus | Category C | Restricted | 4 | 1 Fall | NA | |
| | MA128 | Multivariable Calculus | | Restricted | 4 | 1 Spr. | Single-variable Calculus | |
| | MA107 | Advanced Linear Algebra I | | Restricted | 4 | 1 Fall | NA | |
| | MA113 | Linear Algebra | | Restricted | 4 | 1 Spr. &Fall | NA | |
| Physics | PHY101 | General Physics I | Category A | Restricted | 5 | 1 Fall | NA | PHY |
| | PHY102 | General Physics II | | Restricted | 5 | 1 Spr. | General Physics I | |
| | PHY105 | College Physics I | Category B | Restricted | 4 | 1 Fall | NA | |
| | PHY106 | College Physics II | | Restricted | 4 | 1 Spr. | College Physics I | |
| | PHY104B | Experiments of Fundamental Physics | | Required | 2 | 1-2 Spr. &Fall | NA | |
| Chemistry | CH103 | General Chemistry | | Restricted | 4 | 1-2 Spr. &Fall | NA | CHEM |
| | CH105 | Chemistry: The Central Science | | Restricted | 3 | 1-2 Spr. &Fall | NA | |
| Geoscience + Life Science | BIO103 | Principles of Biology | | Restricted | 3 | 1-2 Spr. &Fall | NA | BIO |
| | BIO102B | Introduction to Life Science | | Restricted | 3 | 1-2 Spr. &Fall | NA | |
| | EOE100 | Introduction to Earth Sciences | | Restricted | 3 | 1-2 Spr. &Fall | NA | ESS, OCE, ESE |

[2] Mathematics, Physics, Chemistry, and Geoscience + Life science courses in the Mathematics and Natural Sciences Module are GE Required Courses for Science and Engineering.

## 6. GE to Majors Bridging Module

Requirements: Students must complete a total of 2 credits.

| Category | Course Code | Course Name | Requirement | Credits | Terms | Prerequisite | Dept. |
|---|---|---|---|---|---|---|---|
| Introduction to Majors | COE100 | Introduction to Engineering | Optional | 2 | 1-2 Spr. /Fall | NA | COE |
| | OCE107 | Introduction to Ocean Engineering | Optional | 3 | 1-2 Spr. | NA | OCE |
| | MSE460 | Orientation Program of Dept. of Materials Science and Engineering | Optional | 1 | 1-2 Spr. | NA | MSE |
| | MSE102 | Frontier Seminars in Materials Science and Engineering | Optional | 1 | 1-2 Fall | NA | MSE |
| | EE101 | Electronic and Information Technology for Metaverse | Optional | 1 | 1-2 Spr. &Fall | NA | EE |
| | SME101 | Introduction to Integrated Circuit | Optional | 1 | 1-2 Spr. &Fall | NA | SME |
| | SME102 | Fundamentals of Microelectronics and Integrated Circuit | Optional | 2 | 1-2 Spr. &Fall | NA | SME |
| | FIN102 | Finance | Optional | 3 | 1-2 Spr. /Fall | NA | FIN |
| | EBA107 | Economics | Optional | 3 | 1-2 Spr. /Fall | NA | FIN |
| | FET205 | Introduction to Accounting | Optional | 3 | 1-2 Spr. /Fall | NA | FIN |
| | STA101 | Fascinating Statistics | Optional | 2 | 1-2 Spr. /Fall | NA | STA |
| | ME232 | Prolegomenon to Robotics | Optional | 3 | 1-2 Spr. /Fall | NA | MEE |
| | ME113 | Introduction to Modern Mechanical Engineering | Optional | 2 | 1-2 Spr. /Fall | NA | MEE |
| | ME171 | Introduction to Carbon Neutrality and Renewable Energy | Optional | 2 | 1-2 Spr. /Fall | NA | MEE |
| | BMEB131 | Introduction to Biomedical Engineering | Optional | 2 | 1-2 Spr. /Fall | NA | BME |
| | MAE101 | Experimental DIY: Discover the beauty of mechanics | Optional | 2 | 1-2 Spr. | NA | MAE |
| | MAE102 | Flight Simulating Experiment | Optional | 1 | 1-2 Spr. &Fall | NA | MAE |
| | MAE205 | Introduction to Aeronautics and Mechanics | Optional | 2 | 1-2 Fall | NA | MAE |
| | MED108 | Introduction to Global Health | Optional | 2 | 1-2 Spr. /Fall | NA | MED |
| | MED104 | Fundamentals in Biomedical Sciences | Optional | 3 | 1-2 Spr. /Fall | NA | MED |
| | MED106 | Immunity and Health | Optional | 2 | 1-2 Spr. | NA | MED |
| | MED303 | Introduction to Anatomy | Optional | 3 | 1-2 Spr. /Fall | NA | MED |
| | MED110 | Social Medicine | Optional | 2 | 1-2 Spr. /Fall | NA | MED |
| | MED115 | Introduction to Drug Development | Optional | 3 | 1-2 Spr. | NA | MED |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | MED117 | Global Health in Big Data | Optional | 2 | 1-2 Spr. &Fall | NA | MED |
| | SDM114 | Product Design Visualization | Optional | 3 | 1-2 Spr. &Fall | NA | SDIM |
| | EBA106 | Management | Optional | 3 | 1-2 Spr. &Fall | NA | ISME |
| | MIS110 | Introduction to Machine Learning and Big Data Analytics | Optional | 3 | 1-2 Spr. | NA | ISME |
| | EBA108 | Introduction to Business Intelligence and Analysis | Optional | 3 | 1-2 Spr. /Fall | NA | ISME |
| | CS103 | Introduction to Artificial Intelligence | Optional | 2 | 1-2 Fall | NA | CSE |
| | HUM040 | Introduction to Chinese Information Processing | Optional | 2 | 1-2 Spr. /Fall | NA | HUM |
| | CH104 | Chemistry and Discovery | Optional | 1 | 1-2 Spr. &Fall | NA | CHEM |
| | (The course list is subject to change) | | | | | | |

**7. Course Introduction to the Mathematics and Natural Sciences Module and Computer Programming Courses in the Competence Development Module（Course requirements for the following categories are detailed in the major curriculum of each program.）**

**Mathematics**

| Course Code | Course Name | Credits | Course Objectives |
|---|---|---|---|
| MA101a | Mathematical Analysis I | 5 | This course aims at providing math majored students with solid foundation in the theory of analysis, cultivating their ability of rigorous logical reasoning and mathematical thinking. |
| MA102a | Mathematical Analysis II | 5 | |
| MA117 | Calculus I | 4 | This course emphasizes the basic concepts and properties of single-variable and multivariable Calculus theories, as well as the basic techniques of calculating differentiation and integration. It develops students' ability to use the ideas of Calculus to solve problems in other scientific disciplines. |
| MA127 | Calculus II | 4 | |
| MA118 | Single-variable Calculus | 4 | This course emphasizes the basic concepts and properties of single-variable and multivariable Calculus theories, as well as the basic techniques of calculating differentiation and integration, providing students with the necessary mathematical foundation for further study in the subsequent major courses |
| MA128 | Multivariable Calculus | 4 | |
| MA107 | Advance Linear Algebra I | 4 | It aims at leading students into systematic and thorough studies of the fundamentals of modern algebra and providing a solid foundation for subsequent, more advanced courses in math major. The contents of the course and the standards of assessment will normally surpass the other courses in the same series, with the purpose to foster students with the strongest algebra knowledge and foundation. |
| MA113 | Linear Algebra | 4 | The course introduces the basic concepts and theories in linear algebra, including systems of linear equations, matrix algebra, determinants, vector spaces, linear transformations, eigenvalues and eigenvectors, singular value decomposition and quadratic forms and other related theories, laying a solid foundation for further study in the advanced Linear Algebra courses. |

## Physics

| Course Code | Course Name | Credits | Course Objectives |
|---|---|---|---|
| PHY101 | General Physics I | 5 | The course is mainly for physics majors, focusing on the introduction to the origin and development of physics principles, as well as the connotations and interrelationships of different physical laws. It also emphasizes the use of mathematical tools to conduct qualitative and quantitative analyses of physical phenomena in order to help students build a solid foundation in mathematical physics for further research in physics. |
| PHY102 | General Physics II | 5 | |
| PHY105 | College Physics I | 4 | The course is intended for general science and technology and other related majors. It mainly introduces the basic principles and laws of physics and cultivates students' basic ability to flexibly apply their physics knowledge to research and analyze various physical phenomena. It allows students to form a good knowledge framework and foundation for further study in related major courses. |
| PHY106 | College Physics II | 4 | |

## Chemistry

| Course Code | Course Name | Credits | Course Objectives |
|---|---|---|---|
| CH103 | General Chemistry | 4 | The course provides students with an understanding of the most fundamental principles of chemistry (including microscopic theory, statistical theory and macroscopic theory) and their applications in chemistry and chemical engineering, incorporating contents from inorganic chemistry, organic chemistry, analytical chemistry, physical chemistry and polymer. Introduction to cutting-edge developments in chemistry is also included. |
| CH105 | Chemistry: the Central Science | 3 | The course provides students with an understanding of the most fundamental principles of chemistry (including microscopic theory, statistical theory and macroscopic theory) and their applications in chemistry and chemical engineering, which incorporates contents from inorganic chemistry, organic chemistry, analytical chemistry, physical chemistry and polymer. The course also introduces contents related to chemistry and life, chemistry and materials, chemistry and the environment, and chemistry and energy. |

**Geoscience + Life Science**

| Course Code | Course Name | Credits | Course Objectives |
|---|---|---|---|
| BIO103 | Principles of Biology | 3 | *Principles of Biology* allows the most diversified exposure to biology at the introductory level. It is designed to provide a knowledge base in life sciences that students can use as a foundation for life-long learning in sciences (including the most basic molecules of life, organelles, cells, genes, heredity, plants, and other related fields). At the same time, the content presented in Principles of Biology also provides excellent preparation for a wide range of advanced life science courses (including biochemistry, cell biology, molecular biology, physiology, etc.). |
| BIO102B | Introduction to Life Science | 3 | *Introduction to Life Sciences* is a discovery course mainly for SUSTech freshmen, with or without prior knowledge in biology. Each module of the course begins with an exposition of some interesting biological issues that are relevant to our health, daily life and spiritual pursuit, and provides the insight into the history of modern life science, its knowledge base, great achievements, exacting research results and challenges, as well as a summary of the common ground shared by experimental sciences (curiosity, dialectic, chance, inevitability, etc.). Thanks to the extensive and profound multidisciplinary interaction and collaboration, the life science has expanded far beyond its classical scope, leading to quite a few subversion of traditional and contemporary biological perceptions in past 60 years. This course would break away from the stereotypic teaching style(s) of biology, guide students through a novel learning journey, and educate them to respect, appreciate and value the lives. |
| EOE100 | Introduction to Earth Sciences | 3 | The earth is the homeland of human beings and the only planet on which human beings live. Global major issues relevant to human survival and sustainable development, such as the mitigation of global climate change (International carbon neutrality declaration), defence against natural disasters, exploration and development of deep-earth, deep ocean, and deep-space resources, environmental pollution control and etc., are all the research topics of Earth science. Understanding and protecting our blue habitable planet is every nation's and every citizen's responsibility. This course mainly introduces the origin and evolution of our universe, our galaxy and our planetary systems, the origin and evolution of life on the Earth, the interaction between the solid Earth, surface environment, atmosphere, and oceans, the origin and current status of global climate change, and the impact of human social development on the Earth system. After taking this course, students will have a basic understanding of frontier topics in earth science and the problems faced by the sustainable development of human society. |

## Computer Programming

| Course Code | Course Name | Credits | Course Objectives |
|---|---|---|---|
| CS109 | Introduction to Computer Programming | 3 | The course aims to cultivate students who have programming experience before their university study. In this course, we will introduce the fundamentals of object-oriented programming language and techniques. The students will be familiar with the mainstream programming language Java and be able to use the language to construct programs and solve practical problems. |
| CS110 | Introduction to Java Programming | 3 | The course is designed for students who have no programming experience and aims to cultivate them on basic knowledge and techniques of programming. Students will learn basic elements and structures of programming through JAVA and use Java to solve simple programming problems. |
| CS111 | Introduction to C Programming | 3 | The course introduces C language and programming design methods, aiming at helping students understand the basic structure of program design and the general workflow and logic of using programming to solve real-world problems. The students will master the basic ideas, methods and skills of C programming. They should be able to write qualified programs independently and complete simple group research and development projects. Most importantly, students will be trained for a programming mindset and have the initial ability to use programming language and development environment to solve practical problems in the field, laying a solid foundation on programming theories and practice for subsequent major studies and research. |
| CS112 | Introduction to Python Programming | 3 | The basic goal of this course is to introduce the data type and related programing skills in the Python language. The course covers the Python programming environment setup, main components of Python (variables, operators, data type, etc.), flow control, functions, lists, dictionaries, tuples and sets, input and output, plotting, Numpy, SciPy, Pandas, and objected-oriented programming. At the end of the course, students are expected to master the Python language and to be able to solve relevant scientific computing problems proficiently and effectively |
| CS113 | Introduction to Matlab Programming | 3 | MATLAB is a U.S. commercial mathematical software from MathWorks, Inc. targeting the high-tech computing environment of scientific computing, visualization, and interactive programming. It integrates many powerful features such as numerical analysis, matrix computation, visualization of scientific data, and modeling and simulation of nonlinear dynamic systems in an easy-to-use windowed environment, providing a comprehensive solution for scientific research, engineering design, and many scientific fields where efficient numerical computation is necessary. This course will introduce the basic concepts, methods, techniques, and common misconceptions of MATLAB and provide students with a foundation for using MATLAB in the areas of scientific computing, data analysis, simulation modeling, etc. |

## SUSTech Undergraduate Programs

| Dept. | Majors | Degree | Major by Discipline | Contact |
|---|---|---|---|---|
| Department of Mathematics | Financial Mathematics | BEc | Finance | 0755-88018719 |
| | Mathematics and Applied Mathematics | BSc | Mathematics | |
| Department of Physics | Physics | BSc | Physics | 0755-88018251 |
| | Applied Physics (Suspension of Admissions) | BSc | Physics | |
| Department of Chemistry | Chemistry | BSc | Chemistry | 0755-88018350 |
| Department of Earth and Space Sciences | Geophysics | BSc | Geophysics | 0755-88018804 |
| Department of Statistics and Data Science | Statistics | BSc | Statistics | 0755-88015675 |
| | Data Science and Big Data Technology | BSc | Computer Science | |
| Department of Mechanics and Aerospace Engineering | Theoretical and Applied Mechanics | BSc | Mechanics | 0755-88018176 |
| | Aerospace Engineering | BEng | Aerospace | |
| Department of Mechanical and Energy Engineering | Mechanical Engineering | BEng | Mechanical Engineering | 0755-88018173 |
| | Robotics Engineering | BEng | Automation | |
| | Science and Engineering for Renewables | BEng | Energy and Power | |
| Department of Materials Science and Engineering | Materials Science and Engineering | BEng | Materials | 0755-88015994 |
| | Electronic and Photonic Materials and Devices | BEng | Materials | |
| Department of Electrical and Electronic Engineering | Communication Engineering | BEng | Electronic Information | 0755-88018569 |
| | Optoelectronic Information Science and Engineering | BEng | Electronic Information | |
| | Information Engineering | BEng | Electronic Information | |
| Department of Computer Science and Engineering | Computer Science and Technology | BEng | Computer Science | 0755-88018553 |
| | Intelligence Science and Technology | BEng | Computer Science | |
| Department of Ocean Science and | Oceanography | BSc | Marine Science | 0755-88018759 |
| | Offshore Engineering and | BEng | Offshore | |

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|---|---|---|---|---|
| Engineering | Technology | | Engineering | |
| Department of Biomedical Engineering | Biomedical Engineering | BEng | Biomedical Engineering | 0755-88015001 |
| | Intelligent Medical Engineering | BEng | Medical Technology | |
| School of Environmental Science and Engineering | Environmental Science and Engineering | BEng | Environmental Science and Engineering | 0755-88018064 |
| | Hydrology and Water Resources Engineering | BEng | Water Conservancy | |
| School of Microelectronics | Microelectronics Science and Engineering | BEng | Electronic Information | 0755-88010151 |
| School of System Design and Intelligent Manufacturing | Industrial Design | BEng | Mechanical Engineering | 0755-88015339 |
| | Automation | BEng | Automation | |
| School of Life Sciences | Biological Sciences | BSc | Biological Sciences | 0755-88018404 |
| | Biotechnology（Suspension of Admissions） | BSc | Biological Sciences | |
| | Bioinformatics | BSc | Biological Sciences | |
| School of Medicine | Biomedical Science | BSc | Basic Medicine | 0755-88018033 |
| | Clinical Medicine | BM | Clinical Medicine | |
| School of Business | Finance | BEc | Finance | 0755-88018609 |
| | Financial Engineering | BEc | Finance | |
| | Big Data Management and Applications | BBA | Management Science and Engineering | 0755- 88012803 |
| School of Design | Industrial Design | BEng | Mechanical Engineering | 0755-88012833 |