

Shanghai University of Medicine & Health Sciences International Student Admissions Guide 2023 (Undergraduate)

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### Shanghai University of Medicine & Health Sciences (SUMHS)

### **1. University Introduction**

Born in the new era of "Healthy China", SUMHS is an applied undergraduate medical university in Shanghai. The university is located in the International Medical Park of Zhangjiang Science City, Pudong. It currently has more than 11,000 full-time students. There are 20 undergraduate majors such as Inspection and Quarantine, Food Hygiene and Nutrition, Health Service and Management, Pharmacy, Drug Analysis, Biomedical Engineering, Clinical Engineering Technology, Data Science and Big Data Technology, Medical Product Management, Public Utilities Management, Intelligent Imaging Engineering, Midwifery etc. Among the majors, Clinical Engineering Technology, Medical Product Management, Intelligent Imaging Engineering are the national initiatives in our country, and Health Service and Management, Medical Imaging Technology, Health Inspection and Quarantine, and Stomatology Technology have filled the gaps in Shanghai.

Adhering to the 72-year history of running school, and the historical inheritance of "the messenger of health promotion, the cradle of angels in white clothes" and "the cradle of medical device engineers", SUMHS implements the fundamental task of cultivating people by virtue, and practices the "Practice + Humanities" DNA double helix talent cultivation concept which integrates value shaping, knowledge imparting and ability training, adopts the collaborative education and cultivation model of "five-party linkage between industry, education, medical research and application", builds a general education curriculum system of "one body, two wings and three integration", and creates " The "People's Health" curriculum system of the "China Series" , promotes the resonance and deep integration of health education and ideological and political teaching. The university closely meets the needs of the times, based on the needs of serving economic and social development, and has trained a large number of scarce, innovative and high-quality medical talents for the development of the health career of the motherland.

The university is positioned as an "Applied, Characteristic, and International" medical university, and adheres to the development direction of "combination of medical industry, medical care, and medical insurance". The goal of running the university is to build a high-level application-oriented medical university with distinctive characteristics. The university cultivates human health promoters with sound personality and psychology, be able to solve practical problems, and have the potential to lead the industry, which has been widely recognized by the society. The university has high-level teachers such as young and middle-aged experts with outstanding contributions to national health, Shanghai leading talents, Shanghai medical leading talents, experts with special government allowances from the State Council, oriental scholars, Pujiang scholars, Venus Program, Dawn Program and Yangfan Program. The university has been approved for 2 national-level first-class undergraduate major construction sites, 4 municipal-level application-oriented undergraduate majors, 1 municipal-level first-class undergraduate construction leading plan, and municipal-level "new engineering" majors construction projects. It has been approved for 1 national virtual simulation experiment project, 8 Shanghai virtual simulation experiment projects, 2 Shanghai

experimental teaching demonstration centers, and 54 industry-university cooperation projects of the Ministry of Education. University teachers served as editor-in-chief and published 6 national planning textbooks, 23 national ministries planning textbooks, and 70 special textbooks. One person won the honorary title of advanced individual in the construction of national teaching materials, one second prize of national teaching achievement, and one municipal teaching achievement award.

The university also has the Shanghai Key Laboratory of Molecular Imaging and 4 key laboratories and engineering centers of Shanghai universities. In 2021, the first 5G+ smart medical innovation laboratory in Shanghai was established in our university, and the Shanghai Smart Medical Device and Active Health Collaborative Innovation Center will be successfully approved. The university actively builds a convergence platform for scientific and technological innovation and application transformation, and has been approved for major national scientific research instrument special projects, and scientific research projects such as local scientific and technological development special projects guided by the central government. University teachers have published a total of 1,033 high-level papers, authorized 337 patents of various types, signed contracts for 525 horizontal projects, and obtained 503 vertical projects, including 78 national-level projects. In 2021, scientific research funding exceeded 32 million yuan, an increase of 264% over the previous year. In the 2021 classification evaluation of Shanghai universities, the university ranked 4th among the 17 applied universities in Shanghai, and the quality index of the university's student sources ranked 1st. The employment rate of university graduates is high and stable, and they are very popular with employers. The employment rate of year 2022 students is close to 94%, which continues to rank among the top universities in the city.

The university has 4 direct affiliated hospitals which are Chongming Hospital, Zhoupu Hospital, Jiading District Central Hospital, Lingang Branch of Shanghai Sixth People's Hospital, and 2 affiliated hospitals that are Feng Xian District Central Hospital, and Jinshan Branch of Shanghai Sixth People's Hospital; SUMHS established The "Shanghai Health Medical College Community Health Service Center Health Alliance" covering 9 districts in Shanghai with 40 member units. SUMHS has carried out cooperative order classes with Ruijin Hospital, Zhongshan Hospital, Xinhua Hospital and other top three hospitals, and has cooperated with hundreds of high-level medical service institutions, medical device companies and testing units, and maintained an all-round close cooperative relationship. SUMHS actively carries out international cooperation and exchanges, and has carried out all-round, multi-perspective, and in-depth cooperation with 17 countries and regions including France, Belgium, Japan, and the United States, and established a long-term and stable talent training cooperation mechanism.

While continuously improving its own strength, SUMHS does not forget to serve the society and continuously expand its social influence. In recent years, SUMHS has hosted the International Rehabilitation Innovation and Application Symposium, the Asian Nuclear Medicine Forum, the Cross-Strait and Hong Kong and Macao Region Health Service and Management Talent Training Summit Forum, the China Urban Healthy Life Forum, the China Digital Medical Industry Forum, and the Oriental Medicine Education Forum As well as dozens of high-level academic conferences and skill competitions such as the National Medical Imaging Skills Competition, Shanghai International Nursing Skills Competition, and the 12th National College Student

E-Commerce "Innovation, Creativity, and Entrepreneurship" Challenge (Shanghai Division). SUMHS led the establishment of the National The first health medical education PBL alliance, was selected by the Ministry of Human Resources and Social Security as the main training base for the World Skills Competition Health and Social Care Project in China. SUMHS has carried out counterpart assistance projects with Hainan, Xinjiang, Tibet, Yunnan, Henan and other places, continuously improving the medical level and service capabilities in remote areas, and cultivating talents in short supply in the medical industry.

### 2. About International Education

The College of International Education (CIE) was established in 2004. Relying on Shanghai's international and diversified economic model, CIE has carried out various forms of international exchange and cooperation under the shortage of international medical and nursing talents. After decades of development, CIE has established extensive cooperation in the field of health and medical education with universities in more than 10 countries in Europe, North America, Asia and Oceania. CIE has accumulated rich management experience in international medical education, and has made great achievements in cooperative education, bilingual teacher training, textbook development, and teacher-student international exchanges.

The countries of international students who came to the university in the past ten years include: the United States, Japan, Norway, the Netherlands, Finland, Denmark, Kazakhstan, Tajikistan, Uzbekistan, Russia, Ukraine, Laos, and Thailand, etc. They are majoring in clinical medicine, pharmacy, nursing, medical testing, rehabilitation physical therapy, and health service and management, etc.

### Introduction to Undergraduate Programs for International Students of SUMHS

## **1.Clinical Medicine**

**Cultivation objectives:** This major trains those who adapt to the developmental needs of the medical and health industry with professional quality. Based on clinical medical knowledge and skills, students will master preliminary clinical diagnosis and treatment ability, lifelong learning ability and humanistic care spirit, and will independently engage in medical work in multi-level medical and health institutions. At the same time, students can undertake the work of prevention, health care, medical treatment, rehabilitation, and health education as high-quality applied clinical medical talents.

### Academic system and time allocation:

1. Full-time, 5 years

2. Time Schedule: public basic courses and medical basic courses in the medical school, 2.5 years; clinical medicine and general medicine theoretical study, internship and practice in the affiliated hospital, 2.5 years; clinical internal medicine, surgery, gynecology, pediatrics and other departments Internship, 1 year (52 weeks).

#### Main Courses:

Main Subjects: Basic Medicine, Clinical Medicine, General Medicine.

**Core Courses:** Human anatomy, etiology (including microorganisms and parasites), medical immunology, biochemistry, physiology and pathophysiology, histoembryology and pathology, pharmacology, diagnostics, internal medicine, surgery, pediatrics, obstetrics and gynecology Science, Family Planning Technology, Epidemiology, Psychiatry, Emergency Medicine, Ophthalmology, Otorhinolaryngology, Traditional Chinese Medicine, Evidence-Based Medicine, Introduction to General Medicine, Rehabilitation Medicine, Medical Ethics, Health Law, Medical Psychology, etc.

#### **Employment Direction:**

Engaged in clinical medical treatment and scientific research in hospitals at all levels and other health institutions; engaged in teaching and scientific research in medical colleges, scientific research institutions and other units.

### **Professional Characteristics and Competitive Advantages:**

Shanghai's fixed-point cultivation of grass-roots-oriented and application-oriented advanced clinical medicine specialty

## **Skills (qualification) Certificate:**

The national medical license examination is needed one year after graduation

#### 2. Pharmacy

**Cultivation objectives:** This major cultivates applied talents with foundational knowledge of chemistry and medicine, systematic basic theory of pharmacy, basic knowledge and superb practical skills, professional quality, interpersonal communication skills, strong logical thinking and independent learning ability, and innovative spirit. Graduates of this major can engage in hospital pharmaceutical services, drug research and development, drug marketing, and production and testing in the field of pharmacy. The integrated design of the course not only cultivates the pharmaceutical practitioners with the basic skills, but also cultivates special skills in pharmaceutical services and drug research and development. Cultivating pharmaceutical talents with a medical background in short supply in the pharmaceutical industry is a key construction of the college.

**Core Courses:** Medical Advanced Mathematics, Medical Mathematical Statistics, Inorganic Chemistry, Organic Chemistry, Analytical Chemistry, Physical Chemistry, Medicinal Botany and Pharmacognosy, Medicinal Chemistry, Natural Medicinal Chemistry, Pharmacy, Pharmacology, Pharmaceutical Analysis, Pharmacy Management, Clinical Pharmacotherapeutics, Biopharmaceutical Technology, Professional Direction Elective Courses, etc.

#### **Employment Direction:**

The employment of this major is mainly for enterprises and institutions such as pharmacy departments of various hospitals at all levels, drug research and development institutions, pharmaceutical commodity management enterprises, and pharmaceutical production enterprises.

### **Professional Characteristics and Competitive Advantages:**

Cultivate pharmaceutical talents with medical background who are in short supply in the pharmaceutical industry, and become the key construction specialty of the university

The integrated course design not only cultivates the basic skills of pharmaceutical practitioners, but also cultivates special skills in pharmaceutical services and drug research and development.

Pay attention to humanities, highlight literacy, and realize all-staff, whole-process, and all-round education.

Established internship and employment cooperation with China General Research Institute of Pharmaceutical Industry, Shanghai Institute of Materia Medica, Chinese Academy of Sciences, Shanghai Food and Drug Inspection Institute, Huashan Hospital Affiliated to Fudan University and other units.

### **Skills (qualification) Certificate:**

Participate in professional qualification examinations such as pharmaceutical commodity buyers

and sellers

## **3. Medical Imaging Technology**

**Cultivation objectives:** This major cultivates applied talents with solid basic theories and basic skills of medicine, clinical medicine, medical imaging technology and equipment, good professional ethics, self-learning, and teamwork capabilities. Graduates of this major can engage in medical imaging technology and work in the fields of equipment management and maintenance, quality assurance and control, research and development, etc. This major strengthens both medical imaging technology and medical imaging equipment, and focus on the learning of medical imaging quality control and assurance. The faculty team has won the titles of National and Municipal Teaching Team. With the complete training base and stable cooperative relations with dozens of tertiary hospitals and medical device companies, the major cultivates compound high-quality medical imaging technology talents.

**Core Courses:** Advanced Mathematics, Human Anatomy, Introduction to Clinical Medicine, Sectional Anatomy, Electrical and Electronic Technology, Medical Imaging Physics, Medical Imaging Equipment, Medical Imaging Inspection Technology, Medical Imaging Diagnostics, Medical Imaging Image Processing Technology, Ultrasound Inspection Technology, Nuclear Medicine, Radiation Therapy Technology, Radiation Hygiene and Protection, Quality Control and Evaluation of Medical Imaging Equipment, etc.

#### **Employment Direction:**

Mainly for various medical and health institutions, medical device production or business units, educational institutions, etc., engaged in medical imaging technology, equipment management and maintenance, quality assurance and control, auxiliary research and development, etc.

## **Professional Characteristics and Competitive Advantages:**

Cultivate compound high-quality medical imaging technology talents

Pay equal attention to medical imaging technology and medical imaging equipment, and strengthen the learning of medical imaging quality control and assurance

The echelon of the teaching team is reasonable, and won the title of national and municipal teaching team

The training and experiment base is complete, and have stable cooperative relations with dozens of tertiary hospitals and medical device companies

International exchanges and cooperation provide good opportunities for teachers and students to study and exchange

### **Skills (qualification) Certificate:**

Occupational Qualification Certificate for X-ray Electromechanical Assembly and

Commissioning Worker (Forecast Technician)

After one year of practice from graduation, students can participate in the qualification examinations for medical imaging technical titles organized by the Health and Family Planning Commission and the Ministry of Personnel, as well as the national professional ability assessment of medical equipment users, and can obtain certificates if they pass.

Degree: Bachelor of Science

### 4. Medical Laboratory Technology

**Cultivation objectives:** This major cultivates applied talents with the basic knowledge, basic theories, and basic skills of medical laboratory technology, as well as the related knowledge of basic medicine and clinical medicine. Graduates of this major possess the professional ability, innovative ability, certain scientific research ability, high comprehensive ability, and outstanding practical ability. They can be engaged in jobs of inspection and pathological technique in laboratory departments of medical and health institutions at all levels, blood centers (blood banks), disease prevention and control centers, and independent inspection centers, etc. The medical laboratory application-oriented undergraduate professionals also can be engaged in technical jobs of technology, product research and development in biotechnology companies, or in vitro diagnostic product companies.

#### Academic system and time allocation:

1. Full-time, 4 years

2. Time Schedule: General courses, professional basic and professional courses in the medical school for 3 years; clinical probation (internal medicine and surgery) in affiliated hospitals, professional practice in major practical teaching bases, a total of 1 year (52 weeks)

#### Main Courses:

Main Subjects: Basic Medicine, Laboratory Medicine

**Core Courses:** Applied Chemistry, Normal Anthropology, Outline of Clinical Medicine, Fundamentals of Clinical Laboratory, Parasitology and Parasite Testing Technology, Biochemistry and Biochemical Testing Technology, Molecular Biological Testing Technology, Immunology and Immunological Testing Technology, Microbiology and Microbiology Testing Technology, Clinical Blood Transfusion and Testing Technology, Clinical Hematology and Hematological Testing Technology, Conventional Pathological Testing Technology, Cell and Histochemical Technology, Clinical Laboratory Management, Genetic Engineering, Medical Testing Instrument Analysis Technology and Application, etc.

### **Employment Direction:**

Laboratory departments and pathology departments of hospitals at all levels; independent medical inspection centers; medical and health departments such as blood centers, disease control centers, and health supervision institutes; enterprises related to the production and sales of biopharmaceuticals and medical diagnostic reagents.

## **Professional Characteristics and Competitive Advantages:**

Focusing on practical training and teaching, and cultivating students' ability to apply technology, the course system is oriented to industry needs, and use the advantages of the integration of the three schools to train talents in multiple directions, forming the main structure of medical inspection talents in Shanghai and surrounding areas.

## Skills (qualification) Certificate:

One year after graduation, the health professional technical qualification examination organized by the Ministry of Personnel and the Health and Family Planning Commission is needed.

### 5. Rehabilitation Therapeutics

**Cultivation objectives:** This major cultivates applied talents with good ideological quality, humanistic literacy, strong interpersonal communication skills, basic medical knowledge, basic clinical knowledge, basic principles and methods of rehabilitation assessment and treatment, international vision, and industry leading potential. The graduates of the major can independently carry out rehabilitation treatment for the disabled. The major has a professional faculty team with international perspective, and some of core courses are taught by renowned international rehabilitation experts and professors. It has a modern on-campus simulation training center to train rehabilitation technicians who are in short supply in clinical practice. It is a key construction major funded by the Central Government and Shanghai Municipal Government.

**Core Courses:** Human Anatomy and Histology, Physiology, Human Kinesiology, Human Biomechanics, Internal Medicine, Surgery, Rehabilitation Assessment, Sports Therapy, Traditional Chinese Rehabilitation Therapy, Musculoskeletal System Physical Therapy, Sports Injury Physical Therapy, Nervous System Physical Therapy, Cardiopulmonary System Physical Therapy, and Pediatric Physical Therapy.

### **Employment Direction:**

Mainly for all levels and types of medical, rehabilitation, elderly care, schools and other related institutions, engaged in rehabilitation treatment, rehabilitation consultation guidance, health education and rehabilitation management.

## **Professional Characteristics and Competitive Advantages:**

• Cultivate technical talents in rehabilitation who are in short supply in clinical practice;

- It is a key construction major funded by the Central Finance and Shanghai municipal finance;
- There is a professional teaching team with an international perspective, and some major courses employ internationally renowned rehabilitation experts and professors to teach;
- Curriculum setting is in line with national rehabilitation treatment occupational standards and integrated into international rehabilitation treatment access standards;
- First-class training conditions, with a modern on-campus simulation training center;
- Established internship and employment cooperation with more than 20 well-known rehabilitation medical institutions in Shanghai, including Shanghai Sunshine Rehabilitation Center, East China Hospital Affiliated to Fudan University, and the Sixth People's Hospital Affiliated to Shanghai Jiao Tong University;
- The social demand is huge, the industry gap is serious, and the employment prospect is good.

### Skills (qualification) Certificate:

One year after graduation, students can take the Rehabilitation Medical Technology Hygiene Qualification Examination and obtain the Rehabilitation Medical Technology Primary (Bachelor) Qualification Certificate.

### 6. Nursing (Including English-taught major)

**Cultivation objectives:** This major cultivates applied nursing professionals with basic medicine, systematic nursing basic theory, basic knowledge and skills, basic knowledge of preventive health care, good professional quality, interpersonal communication skills, strong clinical thinking and independent learning ability, and active innovation spirit. The graduates of the major can engage in clinical nursing, community nursing, preventive health care, nursing management, and teaching in the nursing field. The College of Nursing cultivates applied nursing talents with an international perspective and specialized specialities, and carries out student exchanges with the United States, Canada, France, Australia, Finland, Denmark, and other countries. The major has a municipal-level excellent teaching team, a municipal-level distinguished faculty ,and a core university-level undergraduate-teaching team.

### **Core Courses:**

1. Basic medical courses: Medical Chemistry, Human Anatomy, Physiology, Biochemistry, Pharmacology, Pathology, Pathophysiology, etc.

2. Professional basic courses: Introduction to Nursing, Health Assessment, Nursing Psychology, Nursing Ethics, Nursing Management, Nursing Pedagogy, Nursing Etiquette (Interpersonal Communication).

3. Professional courses: Basic Nursing, Internal Medicine Nursing, Surgical Nursing, Obstetrics and Gynecology Nursing, Pediatric Nursing, Critical Care Nursing, Psychiatric Nursing, Community Nursing, Nursing Research.

### **Employment Direction:**

Mainly for all types of medical and health institutions, community health service institutions and health education institutions, etc., engaged in clinical nursing, preventive health care, health education, health management and other work.

## **Professional Characteristics and Competitive Advantages:**

The School of Nursing cultivates applied nursing talents with an international perspective and specialized specialties, and continues to carry out student exchanges with the United States, Canada, France, Australia, Finland, Denmark and other countries. The health interactive training center has an OSCE nursing skills test station and a modern nursing public training center with an area of 11,000 square meters. This major now has a municipal excellent teaching team, a municipal teaching teacher and an undergraduate teaching core team. Docking with 2 exclusive affiliated hospitals including the Sixth People's Hospital, and relying on the Nursing Vocational Education Group, there are nearly 30 off-campus practice bases with Shanghai's well-known tertiary first-class hospitals as the main body.

#### Skills (qualification) Certificate:

College English Certificate, Medical English Certificate, National Nursing Qualification Certificate

### 7. Biomedical Engineering

**Cultivation objectives:** This major mainly cultivates medical-industrial-integrated clinical engineering technology with clinical medical engineering technical literacy and medical device technology foundation, serving medical applications, engaging in clinical application, maintenance, and quality control of medical equipment and equipment, and can be extended to applications in related fields of biomedical engineering applied talents.

#### **Core Courses:**

1. General courses: Humanities and Social Sciences, College English, Computer Culture Foundation, Programming, Introduction to Medicine

2. Professional basic courses: College Physics, Advanced Mathematics, Human Anatomy, Human Physiology, Introduction to Clinical Medicine, Mechanical Drawing and CAD, Circuit Principles, Analog Electronic Technology, Digital Electronic Technology, Engineering Mechanics, Biomedical Detection Technology

3. Professional courses: Microcomputer Principles and Applications, Signals and Systems, Biomedical Sensors, Digital Signal Processing, Biomedical Electronics, Biomedical Ultrasound Technology, Application and Design of Medical Instruments, Principles of Embedded Systems, Biomedical Materials, Biomedical Optics, Quality and Safety of Medical Equipment, Electromechanical Control Technology of Medical Equipment, Human Body Function Replacement Device, Clinical in Vitro Diagnostic Equipment, Advanced Manufacturing Technology.

### **Employment Direction:**

Clinical engineers, medical device aided design, medical device technology application, medical device management, medical device marketing, electromechanical technology application, etc.

## **Professional Characteristics and Competitive Advantages:**

This major opens up a new field for the cultivation of domestic clinical engineers, develops undergraduate majors in the direction of medical devices and education, conducts scientific research in the field of low-end medical devices, and provides services for pre-hospital first aid, geriatric rehabilitation, and general practitioners.

Students have relatively broad theoretical knowledge related to medicine, electronics, information, and electromechanical technology, and receive training in modern medicine and typical medical device applications. They can not only work as clinical engineers, solve clinical engineering problems, realize medical safety management, help and promote the treatment and nursing of patients but also be engaged in technical application and auxiliary design work for various types of medical treatment, scientific research, production enterprises and other biomedical engineering related fields.

#### 8. Health Service and Management

**Cultivation objectives:** This major cultivates applied talents with a certain theoretical foundation of medical science, management science, information science, basic theories, professional knowledge, technologies and methods of health management, modern health concepts and health management expertise, services skills of health testing, assessment, intervention, and good innovative spirit, practical ability, communication, and cooperation ability. Graduates of the major can be engaged in jobs of health administrative departments, medical and health institutions, health examination centers, insurance institutions, commercial health management service institutions, health service institutions, health consulting institutions, health education, health consultation, health guidance, health assessment and intervention, health service marketing and other health management in public institutions.

#### **Core Courses:**

- 1. Basic theories related to medicine and health
- 2. Basic theory of management and information technology
- 3. Core Professional Theory
- 4. Professional skills development module

### **Employment Direction:**

Clinical engineers, medical device aided design, medical device technology application, medical device management, medical device marketing, electromechanical technology application, etc.

## **Professional Characteristics and Competitive Advantages:**

This major trains students who are familiar with the basic knowledge of medicine and health and have management and information technology theories, methods and skills. Enterprises and institutions such as pension, medical insurance, etc. are engaged in health management and service work, focusing on the grassroots, mastering relevant knowledge and skills such as health care, statistical analysis, information processing, psychological counseling, nutritional guidance, and management of common chronic non-communicable diseases. High-level and high-quality application-oriented professionals working in the field of health management.

# Length of Study and Degrees Conferred:

The four-year schooling period grants a bachelor's degree in management.

### **Employment Direction:**

All kinds of hospitals, health administrative departments, community health service agencies, families, health management companies, pension institutions, insurance companies, etc.

### 9. Health Inspection and Quarantine

**Cultivation objectives:** This major cultivates applied talents with the basic knowledge and ability of basic medicine, clinical medicine, and preventive medicine, as well as strong professional theory and experimental operation ability of health inspection and quarantine. Graduates of the major can be engaged in jobs of Entry-Exit Inspection and Quarantine Bureau, customs, supervision departments, quality and technical supervision bureaus, environmental sanitation monitoring departments, manufacturers of food, drug and cosmetics, social testing institutions, higher medical colleges as applied and compound technical talents in health inspection, public health, and border inspection and quarantine.

## Academic system and time allocation:

1. Full-time, 4 years

2. Time Schedule: 3 years of on-campus study of public basic courses, professional basic courses and professional courses; 1 year of off-campus graduation practice and graduation design (40 weeks)

#### **Core Courses:**

Inorganic Chemistry, Organic Chemistry, Analytical Chemistry, Instrumental Analysis, Food Physical and Chemical Inspection, Water and Air Physical and Chemical Inspection, Immunology and Molecular Biology Inspection, Sanitation and Quarantine.

### **Employment Direction:**

Clinical engineers, medical device aided design, medical device technology application, medical device management, medical device marketing, electromechanical technology application, etc.

## **Professional Characteristics and Competitive Advantages:**

Emphasize the foundation, strengthen skills, expand entrepreneurship and innovation, and establish five industry alliances to jointly cultivate compound application-oriented health inspection and quarantine talents.

#### **Employment Direction:**

Entry-Exit Inspection and Quarantine Bureau and Customs, Center for Disease Control and Prevention, Health Supervision Department, Quality and Technical Supervision Bureau, Environmental Sanitation Monitoring Department, Food, Drug and Cosmetics Manufacturers, Social Testing Organizations, Higher Medical Colleges and other institutions.

# Skills (qualification) Certificate:

Physical and chemical inspectors, food inspectors and microbiological inspectors, etc.

## **10. Clinical Engineering Technology**

**Cultivation objectives:** This major cultivates applied talents with basic knowledge of clinical medicine and engineering, the ability to discover, and solve practical problems in clinical engineering. Graduates of the major can be engaged in clinical application, function development, technical management, technical maintenance, and technology training in positions of hospital clinical engineering technology. They also can work in professional fields such as after-sales service of medical equipment in medical service institutions to ensure the safety and effectiveness of medical equipment during clinical use. This major is the only one that has been approved by the Ministry of Education to train undergraduate medical-engineering combined with high-quality clinical engineering technology.

## Academic system and time allocation:

1. Full-time, 4 years

2. Time Schedule: General education courses are mainly arranged in the first and second academic years. Professional basic courses are mainly arranged in the second and third academic years. Professional courses are mainly arranged in the third academic year and the first semester of the fourth academic year. The above content is mainly carried out on campus. Graduation

practice and graduation thesis are arranged in the second semester of the fourth academic year (on campus, in hospitals, in enterprises, etc.).

Main Disciplines: Biomedical Engineering, Clinical Engineering Technology

### **Core Courses:**

Biomedical Materials, Biophysical Properties Engineering, Biomedical Detection Technology, Medical Electrical Safety, Medical Clinical Diagnostic Instruments, Human Body Function Replacement Devices, Medical Treatment Equipment Technology, Human Morphology, Basic Disease A, Medical Statistics Principles and Applications, Clinical Medicine Outline C, Hydraulic and Pneumatic Technology, Medical Ethics A, Medical Equipment Technology, Medical Equipment Quality and Safety, Creative Practice of Clinical Engineering Technology, Hospital Practice.

#### **Employment Direction:**

Clinical engineers, medical device aided design, medical device technology application, medical device management, medical device marketing, electromechanical technology application, etc.

## **Professional Characteristics and Competitive Advantages:**

This major is the only one in China that has been approved by the Ministry of Education to cultivate high-quality clinical engineering technology application-oriented talents combining undergraduate medicine and engineering;

The on-campus and off-campus training base is complete, and has established stable cooperative relations with many top three hospitals and large medical device companies in Shanghai;

Extensive international cooperation, providing teachers and students with good opportunities for overseas study and exchange;

The clinical engineering technology teaching team has a reasonable echelon, and has won the Shanghai Municipal Teaching Team and Shanghai Education Pioneer. Second Prize of Achievement Award;

Team teachers guided students to win awards in various competitions.

### **Employment Direction:**

Serve as clinical engineers in clinical engineering and technical positions in various hospitals at all levels. Engage in the clinical application, function development, technical management, technical maintenance and technical Job training etc. Ensure the safety and effectiveness of medical instruments and equipment during clinical use.

Medical service institutions at all levels are engaged in after-sales service and technical training of medical equipment.

### Skills (qualification) Certificate:

"Clinical Engineer" Professional Qualification Certificate from Society of Clinical Engineering

### **11. Medical Product Management**

**Cultivation objectives:** This major cultivates applied talents with the theoretical basis of medicine, engineering, management, and law, as well as good professional ethics and innovative spirit. Mastering the knowledge and skills of medical product management, graduates can be engaged in medical product review and registration, clinical evaluation, quality system management, regulatory affairs implementation in medical product management departments and institutions, production and operation enterprises, and other enterprise organizations as high-quality applied and compound talents. This major pays equal attention to technology and regulations, and aims to cultivate high-quality applied talents who can be engaged in registration production management, clinical evaluation and supervision, and inspection in medical device production enterprises, clinical trial institutions and other departments.

## Academic system and time allocation:

1. Full-time, 4 years

## **Core Courses:**

Production Management of Medical Device, In Vitro Diagnostic Reagent Management, Medical Device Registration Management, Medical Device Clinical Evaluation, Testing and Evaluation of Passive Medical Device, Testing and Evaluation of Active Medical Device, Post-market Management of Medical Devices, and Medical Device Supervision Practices, etc.

#### **Employment Direction:**

Clinical engineers, medical device aided design, medical device technology application, medical device management, medical device marketing, electromechanical technology application, etc.

## **Professional Characteristics and Competitive Advantages:**

The professional technology and regulations are equal, and it is positioned to cultivate quality management personnel based on technical foundation. High-quality applied talents who are engaged in registration production management, clinical evaluation and supervision and inspection work.

### **Employment Direction:**

Registered Commissioner, Management Representative, System Engineer, Quality Engineer, Inspector and Auditor

## 12. Dental Technology

Cultivation objectives: This major is the unique major in Shanghai that focus on training advanced dental prosthetic technicians. The professional teaching hardware facilities are

first-class in China, and industry technical experts are hired to participate in the teaching. This major cultivates applied talents with the integrated disciplines of medicine, engineering, science and literature, good computer application ability, foreign language ability, basic medical theory and knowledge, and possesses professional theories such as stomatology, dental restorative technology, orthodontics, dental materials, and art technology. Graduates of the major understand the new technologies and new trends of the global development of the dental industry, and are able to apply artificial intelligence technology to engage in the design and production of oral restorations and appliances, process technology improvement, product quality supervision, dental materials and equipment training, sales, and research and development of stomatology technology as application-oriented undergraduate talents.

### Academic system and time allocation:

1. Full-time, 4 years

#### **Core Courses:**

This major aims to cultivate students who can adapt to the development needs of stomatology technology, have a high sense of social responsibility, good professional ethics and pioneering and innovative spirit, have both humanistic and scientific literacy, have lifelong learning and independent learning ability, have a solid theoretical foundation, outstanding practical ability, master Knowledge and skills of basic medicine, material science, fine art, manufacturing, dental restoration technology, high-quality talents who can engage in the production and processing of various dentures, education and business operations in medical and health institutions, denture processing enterprises and colleges and universities applied dental technicians.

#### **Employment Direction:**

Mainly for the technical production center (laboratory) of the stomatology department and dental prevention institute of hospitals at all levels. Denture production enterprises, colleges and universities, dental materials and equipment companies and other institutions are engaged in the production and processing, quality inspection, education and business operation of various dentures.

### **Professional Characteristics and Competitive Advantages:**

This major is the only characteristic major in Shanghai that is set up to train advanced dental prosthetic technicians. The professional teaching hardware configuration has reached the domestic first-class level. In recent years, advanced teaching concepts and related professional teaching materials and teaching molds have been introduced from developed countries to conduct experiential teaching. Industry technical experts and first-class technical experts are hired to participate in the teaching, which is very popular among students.

#### 13. Food Hygiene and Nutrition

**Cultivation objectives:** This major trains students with background of basic medicine, clinical medicine, preventive medicine, food engineering foundation, theoretical knowledge of nutrition, food science, food safety, and food laws and regulations. Graduates of the major will excel at nutrition guidance and education, diet therapy, food safety supervision, food quality control, prevention, and health care skills. They can be engaged in front-line jobs in clinical nutrition, food safety, prevention, and health care. This major has a team of teachers with an international perspective and it was rated as an excellent teaching team at the municipal level in 2011. In terms of scientific research, it has undertaken 3 projects of National Natural Science Foundation in China and 5 provincial and ministerial scientific research projects.

#### Academic system and degree:

- 1. Full-time, 4 years
- 2. Bachelor of Science

## **Core Courses:**

Basics of Disease, Medical Chemistry, Molecular Biology, Biochemistry, Normal Human Body, Microbiology and Immunology, Introduction to Clinical Medicine, Introduction to Food Engineering, Food Toxicology, Food Chemistry, Food Analysis and Inspection, Basic Nutrition, Population Nutrition, Public Nutrition, Clinical Nutrition, Preventive Medicine, Food Technology, Food Safety, Supervision and Management of Food Safety Laws and Regulations, Epidemiology and Biostatistics

### **Employment Direction:**

Clinical nutrition departments of general hospitals at all levels, maternal and child health care institutions, elderly care institutions, rehabilitation centers, food-related research institutes, health and agricultural management departments at all levels, Centers for Disease Control and Prevention, Food and Drug Administration, etc.

#### **Professional Characteristics and Competitive Advantages:**

This major adopts the approach of "external introduction and internal training" to build a "double-qualified" teaching staff with sufficient numbers, reasonable structure, excellent technology, solid theory, and international vision. There are 35 professional teachers, including 19 full-time teachers. Among the professional full-time teachers, there are 12 doctors, 5 masters, and 11 senior professional titles. Among the part-time teachers in the industry, there are 8 doctors and 4 masters, all of whom have senior professional titles. Professional teachers participated in the national inspection, biotechnology, nutrition professional planning textbook editor and deputy editor of 8 books, and completed 3 national-level courses, 4 municipal-level courses and 8

school-level courses. In 2011, it was rated as an excellent teaching team at the municipal level. There are 2 city-level famous teaching teachers in the team, and 2 people who are trained by teaching famous teachers. Professional teachers often win municipal awards in various teaching method evaluation activities, and many students under their guidance have won awards in national and Shanghai vocational college skills competitions. In terms of scientific research, it undertakes 3 National Natural Science Foundation of China, 5 provincial and ministerial scientific research projects, serves as the executive director of the Chinese Trace Element Science Research Association, the deputy director of the National Health Chemistry Education Organizing Committee, the director of the Shanghai Preventive Medicine Association, and the Chinese Nutrition Society, Branch committee members and other academic societies.

#### 14. Data Science and Big Data Technology

**Cultivation objectives:** This major cultivates high-quality, application-oriented, and compound senior talents who are competent in medical and health institutions, the medical information industry, health industry, and other related enterprises and institutions. Graduates of the major can be engaged in big data analysis, processing and development, management, and maintenance. The major pays attention to the comprehensive development of students' morality, intelligence, physique and aesthetics, and the cultivation of good professional ethics, professional skills, and innovative spirit. After completing the major, students will master the basic theories and skills of data science, information science, and medicine, and will be able to apply core skills related to big data collection, processing, analysis, and mining to solve practical problems in the field of healthcare as the new engineering talents with knowledge of multi-disciplinary, diversification and innovation.

#### Academic system and degree:

- 1. Full-time, 4 years
- 2. Bachelor of Engineering

### **Core Courses:**

C Programming, Object-oriented Programming, Computer Network, Operating System, Medical Image Analysis. Machine Learning and Clinical Decision-making, Health Statistics, Large-scale Distributed Systems, Big Data Visualization, Artificial Intelligence, and Smart Medical, etc.

## **Employment Direction:**

Big data analysis engineer, big data development engineer, big data visualization engineer, big data product manager.

### **Professional Characteristics and Competitive Advantages:**

The teaching and research team of data science and big data technology is composed of 31

teachers, including 4 professors, 11 associate professors, 15 doctors, 2 master tutors, 2 famous teachers in Shanghai, and 2 tutors of "Excellent Innovation and Entrepreneurship Nationwide". In the past 3 years, it has undertaken more than 10 scientific research projects at the national, provincial and ministerial levels. There is the highest level of national scientific research funding project approved in 2019-the key special project of "Intelligent Robot" of the National Key R&D Program of the Ministry of Science and Technology. This project of our university was approved for the first time by the Ministry of Science and Technology, 1 National Natural Science Foundation Youth Fund approved in 2018, and 5 Ministry of Education Industry-University Cooperation Collaborative Education Projects. There are more than 20 enterprise horizontal projects, more than 50 academic papers have been published, more than 10 invention patents have been authorized, and 5 textbooks have been published.

In addition, we have hired a large number of industry experts as part-time teachers, including technical experts from health big data companies, health information analysis and application experts in community health service centers, and government personnel in government health information management departments.

## **15. Public Affairs Management**

**Cultivation objectives:** This major cultivates professionals who have the foundation of medicine, management, sociology, and law, and help students master the knowledge and skills of public health management and emergency management. Graduates of the major will excel at emergency plan preparation and management, emergency search and rescue, and emergency resource management. Since its establishment in 2019, the major, relying on the Shuangjia Emergency Medical Rescue Technology Research Institute, has undertaken several research tasks such as the major consulting project of the Chinese Academy of Engineering "Research on the Emergency Prevention and Control System of Public Health Emergencies in China," and regularly holds international academic conferences, and has achieved fruitful scientific research achievements in those exchange activities.

#### **Core Courses:**

Public Administration, Management Information System, Health Service Management, Disaster Risk Assessment and Management, Emergency Search and Rescue Theory and Technology, Emergency Plan Preparation and Management, Rescue Medicine, Preventive Medicine, Community Health Service Management, and Public Health Laws and Regulations, etc.

## **Professional Characteristics and Competitive Advantages:**

The public affairs management major is determined to innovate in the talent training mode. Here, technology and humanities fly together, theory and practice go hand in hand. In addition to

covering professional courses related to public affairs management, the course content also focuses on the field of public health emergency management, attaches great importance to cultivating students' emergency response execution ability, and improves their multi-management capabilities such as coordination, organization, and public relations in response to emergencies; pays attention to practical teaching, comprehensive use of project teaching, simulation teaching, on-site teaching and other methods to improve students' practical ability.

Relying on high-quality practical teaching bases such as Zhongshan Hospital Affiliated to Fudan University, Xinhua Hospital Affiliated to Shanghai Jiao Tong University, and the South Branch of the Sixth People's Hospital Affiliated to Shanghai Health Medical College, this major provides you with a wealth of practice options. At the same time, Shanghai Health Medical College Actively cooperate with emergency industry organizations such as China Medical Rescue Association, China Public Safety Science and Technology Society, China Inspection and Certification Group Shanghai Branch, as well as Shanghai Center for Disease Control and Prevention, Shanghai Fire Rescue Training Base, Shanghai Fire Hospital and surrounding communities Institutions establish cooperative relationships to ensure students' diverse choices.

# Academic system and degree:

- 1. Full-time, 4 years
- 2. Bachelor of Management

### **Employment Direction:**

Our graduates can choose to work in public health management, emergency management, etc. in government health administrative departments at all levels, emergency management departments, centers for disease prevention and control, medical and health institutions, street communities and related industries. Graduates who intend to continue their studies can choose to apply for postgraduates in related majors such as public administration, social medicine, and health management.

# Implementation Rules for the Enrollment of International Students of SUMHS (2023)

# Application Ways, Conditions, Deadlines, Fees and Scholarships for International Students

## **1. Application Ways**

1) Apply through the website of Study in Shanghai (http://iec.sumhs.edu.cn).

2) Directly contact the SUMHS teacher recruiting international students of the College of International Education: Teacher Li

Tel: 021-65882336, 65881903

Email: <u>liwq@sumhs.edu.cn</u>

## 2. Application Conditions

1) Degree Students

1. Undergraduate (Chinese-taught)

Have a senior high school diploma, be in good health, and be over 16 years old and under 35 years old. For learners who cannot use Chinese, they can arrange to study Chinese for one year first. The Chinese requirement for majors is generally HSK level 4 or above.

Application Materials:

(1)Application form for international students of SUMHS

(2)Copy of passport

(3)High school diploma, transcript, HSK certificate

(4) Proof of good health

2. Undergraduate (English-taught for Nursing only)

Have a senior high school diploma, be in good health, and be over 16 years old and under 35 years old. Good level of English, be able to use English for daily listening, speaking, reading, writing, etc.

**Application Materials:** 

(1)Application form for international students of SUMHS

(2)Copy of passport

(3)High school diploma, transcript, proof of TOEFL or IELTS score

(4) Proof of good health

2) Non-Degree Students

Chinese language student

Good health, over 16 years old and under 45 years old.

Application Materials:

(1)Application form for international students of SUMHS

(2)Copy of passport

(3)Proof of good health

Note: Copies of relevant academic certificates and transcripts must be translated in Chinese or English.

3) Duration of Study

Clinical medicine undergraduates: 5 years; other medical undergraduates: 4 years; Long-term Chinese language students: three months, six months, one to two years (4) Application Time Undergraduate students: apply online from March 21st to May 31<sup>st</sup>

Language students: apply in spring until January 15 of the year, apply in autumn until the end of July of the year

# 4) Fees

Application fee: RMB600 (non-refundable) Tuition fee: RMB18000/year Accommodation: RMB1500/month (single room), RMB900/month (double room)

# 5) Scholarships

The scholarship is divided into full award and half award, and the evaluation of its level depends on your admission application qualifications and materials. The full award (category C-level A) will cover tuition fees, accommodation, medical insurance and your living expenses. The half award (category C and B) is able to pay tuition and medical insurance.

## **Registration Process for International Students**

#### 1. Preparation of registration materials

International students admitted by our university should pay attention to whether the following materials are complete:

- 1) Students who choose to live off-campus, please go to the nearest police station to apply for the "Registration Form for Temporary Accommodation for Overseas Personnel", and submit it to the International Student Management Office (Room 206, Building 6, No. 279, Zhouzhu Highway) for inspection when registering. When students who apply to live in dormitories complete the relevant check-in procedures, the university will issue a relevant letter of introduction to the local police station to handle the registration of temporary accommodation for overseas personnel.
- 2) Students who come to Shanghai from other places or abroad must take the physical examination again in Shanghai. Please go to the website of "Shanghai International Travel Health Care Center" to make an appointment for physical examination (http://www.sithc.com). For details, please consult the international student management teacher.

## 2. Registration Process 1: payment and visa processing

- For new students to enroll, please go to the International Student Office of the International Cooperation and Exchange Office of SUMHS to complete the registration procedures. Passports, admission notices and other relevant materials must be submitted for inspection upon registration.
- Self-financed students will receive the "Notice of Payment and Receipt for International Students" from the International Student Office, and pay the registration fee, tuition fee, insurance fee (see the attachment for details), accommodation fee and other related fees at the school's financial office.
- 3) Degree students (self-financed students must show the proof of tuition payment) go to the International Students Office to get various registration materials (such as a letter of introduction for residence permit and the third copy of JW202 form), go through relevant procedures, and complete the registration.

### **3. Registration Process 2: teaching arrangement**

After completing the first step of registration, please go to the office of the teacher in charge of the respective college to arrange registration (course arrangement, purchase of teaching materials,

accommodation arrangement, etc.).

#### **Regulation of Purchasing Insurance for International Students**

- Article 1 For meeting the needs of the rapid development of international student education in China, optimizing the environment of international education, maintaining the stability of the campus, improving the emergency response mechanism, and protecting the legitimate rights and interests of international students, the Department of International Cooperation and Exchange of the Ministry of Education formulated and issued the "Interim Provisions of Colleges and Universities Requiring Foreign Students to Purchase Insurance" in 2007. According to this document and [2008] No. 961 document, this regulation is specially formulated in combination with the actual situation of Shanghai University of Health and Medicine Science (SUHMS).
- Article 2 All international students studying in SUHMS for more than one semester (including one semester) must purchase the international student Group Comprehensive Insurance designated by SUHMS during the study period.
- Article 3 International students who need to purchase the group comprehensive insurance designated by SUHMS must purchase the insurance for the corresponding semester while paying the tuition.
- Article 4 If the terms of Chinese government scholarship students, Shanghai municipal government scholarship students, and international exchange scholarship students, include the provision of medical insurance, SUHMS will purchase comprehensive insurance for those international students, and if there is no clear regulation, the insurance fee will be borne by the students themselves.
- Article 5 When signing an agreement with overseas colleges or institutions to accept international students, the colleges and departments must specify the paying parties and payment methods for the insurance costs of international students in accordance with the provisions of Article 2 of this regulation. If there is no specific provision, the insurance cost shall be borne by the students themselves.
- Article 6 In view of the fact that Ping An Insurance Company of China has been the insurance company accepting the "Comprehensive Insurance for International Students in China" for Chinese government scholarship students, in order to ensure that the international students in SUHMS have the rights of the same insurance protection standards, SUHMS chooses the "Comprehensive Insurance for International Students in China" of Ping An Insurance Company of China "As SUHMS's designated insurance for international students of SUHMS .

- Article 7 All specific matters related to "comprehensive insurance for international students in China" shall be implemented in accordance with the specific terms and conditions of Ping' An Insurance Company of China.
- Article 8 Self-funded international students who refuse to pay insurance premiums (and do not provide proof of having purchased overseas insurance in their own countries) will lose their qualifications to apply for municipal government scholarships in our university and all consequences arising therefrom will be borne by themselves.
- Article 9 These Provisions shall come into force on the date of promulgation.
- Article 10 The College of International Education is responsible for the interpretation of these regulations.