

# **SJTU Master Program of Materials Science and Engineering in English**

## **1. Brief Introduction**

Materials Science and Engineering of Shanghai Jiao Tong University, as a first level discipline, is one of the first national key specialized subjects in China. The master degree receivers are expected to gain systematic expertise on Materials Science and Engineering, and be able to apperceive the current situation, development trends, and international academic research frontiers. They are also expected to achieve high academic and practical skills, innovation capabilities, and excellent academic communication skills.

## **2. Application Requirements for International Applicants**

- 1) A completed application form online:  
[http://www.study-shanghai.org/controller.asp?action=SignUp\\_4\\_en](http://www.study-shanghai.org/controller.asp?action=SignUp_4_en)
- 2) Copy of high-education degree certificates: Bachelor degree diploma(majored in Materials Science and Engineering, Mechanical Engineering, Physics, Chemistry, Metallurgy, etc.).
- 3) Transcripts of all courses during undergraduate study.
- 4) Resume/CV.
- 5) Recommendation letters from at least two teachers with titles of or above associate-professor.
- 6) Proof of English proficiency adequate for professional study.
- 7) Personal statement and research proposal.
- 8) Receipt of application fee of RMB 800.
- 9) A copy of passport and one passport-sized photo.

## **3. Degree Requirements**

### **1) Curriculum Requirements**

Total credits:  $\geq 30$ , with degree courses  $\geq 19$  (Core curriculum  $\geq 10$ , mathematics  $\geq 5$ ). In principle, all courses are required to be finished during the first academic year. For non-Chinese students, *Chinese Culture* (2 credits) and *Chinese* (2 credits) are also required. GPA of Degree Courses should be no less than 2.00.

### **2) Academic Requirements**

- According to the document "Regulations on awarding a master's degree in Shanghai Jiao Tong University", all the students should publish at least one scientific paper related to the applicant's dissertation work in professional journals.
- Students should complete a dissertation, which need to be approved by the

supervisors and get peer-reviewed. Several steps need to be passed during the dissertation work: ① Opening Report; ② Mid-term Exam; ③ Pre-oral Defense; ④ Peer review of dissertation, and ⑤ Oral Defense.

- Students should attend and pass the pre-oral-defense and Oral Defense according to the prescribed procedures.

#### **4. Major Courses**

Chinese Language

Chinese Culture

Numerical Analysis

Matrix Theory

Thermodynamics and Kinetics of Materials

Fundamentals of Solidification of Metals

Modeling Materials: electronic, atomistic and multiscale techniques

Fracture Mechanism of Engineering Materials

Smart Polymeric Materials

Principles and Technologies of Powder Materials Processing and Consolidation

Supramolecular material and biomedical materials

Nonlinear Constitutive Models and their Applications in Materials Forming

Academic Symposium

#### **4. Duration & Tuition Fee**

Academic Masters' Degree: 2-2.5 years (Min. 1.5 years, Max. 3.5 years)

Tuition Fee: RMB 28,900/year.

#### **5. Contact Information**

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