
SJTU PhD 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 of China. The Doctor's degree receivers are expected to gain solid and systematic expertise on Materials Science and Engineering, and be able to apperceive the current situation, development trends, and international academic research frontier. They are also expected to achieve high academic and practical skills, innovation capabilities, excellent academic communication skills, as well as skills in teaching, engineering or science and technology management.

2. Application Requirements for International Applicants

- 1) A completed application form online:
http://www.study-shanghai.org/controller.asp?action=SignUp_4_en
- 2) Copy of high-education degree certificates: Master degree diploma (majored in Materials Science and Engineering, Mechanical Engineering, Physics, Chemistry, Metallurgy, etc.).
- 3) Transcripts of all courses during undergraduate and master 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: ≥ 16 , including *Academic Symposium* (2 credits). In principle, all the 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.

2) Academic Requirements

- Qualification Exam is required after the completion of course work and before the starting of dissertation. It should be completed within the first

month of the third semester since enrollment. The evaluation of Qualification Exam will be graded into A, B, C or D. Students who get D could apply for reexamination within half year and have to terminate the dissertation if fail again.

- According to the document “Regulations on awarding a Doctor's degree in Shanghai Jiao Tong University”, at least 2 academic papers should be published or accepted prior to thesis defense, and at least 1 of them is published in journals indexed by SCI or EI.
- Students should complete a dissertation, which should be approved by the supervisors and get peer-reviewed. Several steps are included in the process of dissertation: ①Opening Report, ②Mid-term Exam, ③Pre-Oral Defense, ④Peer review of dissertation, and ⑤Oral 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

5. Duration & Tuition Fee

PhD'degree:3-4 years (Min. 2.5 years, Max. 6 years)

Tuition Fee: RMB 45,500/year

6. Contact Information

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