

# General Information for PhD Students in Civil Engineering 2019 Grade--basic information

## I. Brief Introduction

The Department of Civil Engineering of Shanghai Jiao Tong University (SJTU) was re-established in 1985. The Civil Engineering course, being one of the First Tier courses (Category B) of Shanghai High Education Institutions (HEIs), holds 3 Master Programs and 1 Doctorate Program. The faculty members consist of 2 academicians (including shared position), 28 professors and 23 associate professors. 98% faculty members hold Doctorate degrees, in which 22 are from overseas. The Department has established specialized research focuses covering both the fundamental and application research and has made great progress in the interdisciplinary fields and in industrial-academic-research collaborations. In response to the demands for urbanization and sustainable development, the Department has developed the following major research fields such as Ocean Civil Engineering, Tunneling and Underground Construction, Large-span Structures, Life-cycle Reliability of Structures, Safety and Disaster Management and Sustainable Construction Materials and Novel Structures.

The Department has improved the full English Master Course by adding more than 10 English modules and has established the dual-degree courses with several overseas universities such as the Johns Hopkins University and the University of Birmingham. In the QS World University Rankings, the Department has ranked within the world's top 50 for 4 consecutive years since 2012, amongst the top three universities in China, and reached the 29th in 2015.

The department is equipped with a wide range of state-of-the-art laboratory facilities such as the shaking table, the centrifuge testing machine and the multi-purpose high capacity hydraulic servo loading equipment in structural, geotechnical and construction materials labs. In recent years, the department has accomplished several national key projects, including the state 863/ 973 programs, the key and standard projects of National Natural Science Foundation of China, and has produced a series of high standard scientific results. Our graduates usually pursue their career in the HE, R&D, design and consultancy, contracting, construction management, financing and investment sectors, etc.

## II. Academic Objective

The current courses focus on the systematic cultivation of the talents, equipping them with professional competence and ethical adequacy. The future qualified students are expected to:

- Possess a strong background of the basic theory in civil engineering
- Follow the recent development of civil engineering nationally and globally
- Understand the professional ethics and be innovative and independent in pursuing scientific research
- Be excellent in technical reading and writing in English and IT skills.

## III. Study Period

Four years.

## IV. Curriculum and Credits

At least 16 credits in total.

## V. Research Papers

PhD students must publish at least two academic journal articles related to their degree thesis, including at least one SCI journal paper.

## VI. Dissertation

In compliance with the relevant regulations of the university.

PhD Students in Civil Engineering 2019 Grade --curriculum of training programme

Course Type	Course Number	Course Name	Department	Credits	Hours	Season	compulsory/elective	Checkbox
General Courses	FL28002	English for Academic Purposes	School of Foreign Languages	2	32	spring	compulsory	
	G090510	Introduction to Chinese Culture	SJTU Graduate School	2	36	spring	compulsory	
	GS00001	Scientific writing, integrity and ethics	SJTU Graduate School	1	16	spring	compulsory	
	CN16003	Elementary Chinese (1)	School of Humanities	4	64	autumn	elective	One out of Four
	CN16004	Elementary Chinese (2)	School of Humanities	4	64	autumn	elective	
	CN16005	Intermediate Chinese (1)	School of Humanities	4	64	autumn	elective	
	CN16006	Intermediate Chinese (2)	School of Humanities	4	64	autumn	elective	
Specialized Core Courses	CV26003	Computational Structural Mechanics	School of Naval Architecture, Ocean & Civil Engineering	3	64	spring	elective	
	MA16011	Applied Functional Analysis	School of Mathematical Sciences	3	48	autumn	elective	
	MA26070	Numerical Solutions of Partial Differential Equations	School of Mathematical Sciences	3	48	autumn	elective	
	MA26073	Matrix Theory	School of Mathematical Sciences	3	48	spring	elective	
	MA26074	Numerical Analysis	School of Mathematical Sciences	3	48	autumn	elective	
	MA26078	Optimization method	School of Mathematical Sciences	3	48	autumn	elective	
	X100528	Elastici-Plastic Mechanics	School of Naval Architecture, Ocean & Civil Engineering	3	54	autumn	elective	
	X100531	Variational Theory and Finite Element Method	School of Naval Architecture, Ocean & Civil Engineering	3	54	spring	elective	
Specialized Advanced Courses	CV26002	Sustainable Construction	School of Naval Architecture, Ocean & Civil Engineering	2	32	spring	elective	
	CV26004	Conceptual Design of Structures	School of Naval Architecture, Ocean & Civil Engineering	2	32	spring	elective	
	CV26007	Disaster Prevention and Mitigation in Civil Engineering	School of Naval Architecture, Ocean & Civil Engineering	2	36	autumn	elective	
	CV26015	Structural Design for Fire	School of Naval Architecture, Ocean & Civil Engineering	2	32	spring	elective	

Specialized Advanced Courses	CV26018	Forensic Engineering	School of Naval Architecture, Ocean & Civil Engineering	2	32	spring	elective
	F100539	Advanced Structural Dynamics And Applications	School of Naval Architecture, Ocean & Civil Engineering	3	54	spring	elective
	F100546	Advanced Rock Mechanics	School of Naval Architecture, Ocean & Civil Engineering	2	36	autumn	elective
	F100552	Spatial Braced and Dome Structures	School of Naval Architecture, Ocean & Civil Engineering	3	54	autumn	elective
	S100702	Academic Reports	School of Naval Architecture, Ocean & Civil Engineering	2	36	spring	compulsory
Specialized Optional Courses	CV26008	Principle of Geotechnical Engineering	School of Naval Architecture, Ocean & Civil Engineering	2	34	spring	elective
	CV26013	Spectral Element Method and its Application in Structural Dynamics	School of Naval Architecture, Ocean & Civil Engineering	2	32	spring	elective
	CV26014	Seismic Research Methodology on Civil Engineering Structures	School of Naval Architecture, Ocean & Civil Engineering	2	32	autumn	elective
	CV26016	Wind Engineering and Wind-resistant Safety of Engineering Structures	School of Naval Architecture, Ocean & Civil Engineering	2	32	spring	elective