

Softwares Define the World, Softwares Define Everything.

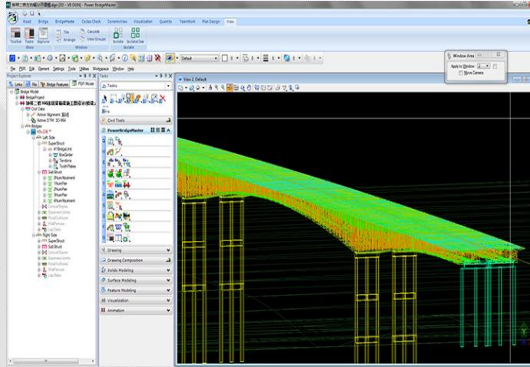
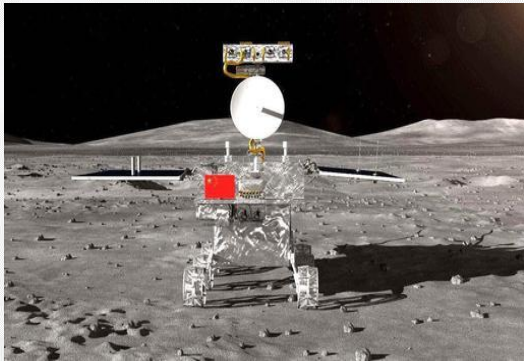
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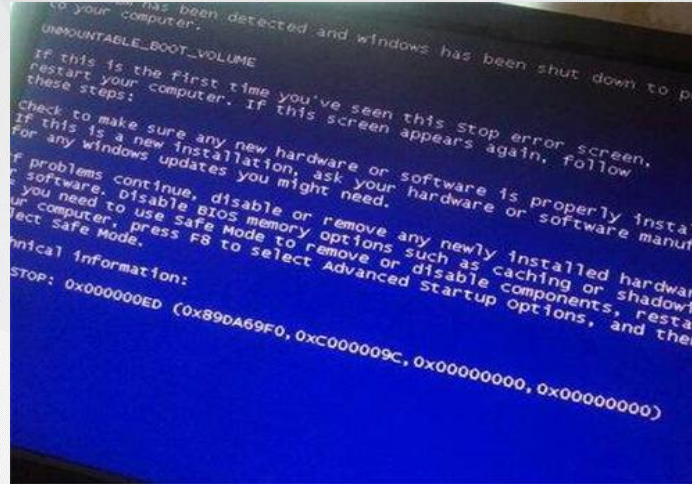
Contents

- 1 **Introduction to Software Engineering**
- 2 **Software Engineering Majors in China**
- 3 **Introduction to the Software Engineering Major**

1. Introduction to Software Engineering



1. Introduction to Software Engineering



All these applications requires knowledge from
----Software Engineering----

1. Introduction to Software Engineering

Top 10 companies by market capitalization in the world in 2021



1



2



3



4



5



6



7



8



9



10

1. Introduction to Software Engineering



图1 2014年—2021年软件业务收入增长情况



图4 2020年—2021年软件业从业员工工资总额增长情况

行业	非私营单位就 业人员平均工 资（元）
信息传输、软件和信息技术服务业	177544
科学研究和技术服务业	139851
金融业	133390
电力、热力、燃气及水生产和供应业	116728
卫生和社会工作	115449
文化、体育和娱乐业	112081
教 育	106474
交通运输、仓储和邮政业	100642
采 矿 业	96674
批发和零售业	96521
租赁和商务服务业	92924
房地产业	83807
制 造 业	82783
建 筑 业	69986
水利、环境和公共设施管理业	63914
居民服务、修理和其他服务业	60722
住宿和餐饮业	48833
农、林、牧、渔业	48540

1. Introduction to Software Engineering

The First Industrial Revolution

- UK
- Steam Engine Era
- British Globalization

The Second Industrial Revolution

- United States and Germany
- Electrical Age

The Third Industrial Revolution

- The first half: US
- Information Era
- American Version of Globalization

The Third Industrial Revolution

- The second half
- Who will be leading?

1. Introduction to Software Engineering

Software Engineering is a first-level discipline that is parallel to computer science and technology, and belongs to the engineering category. It has a software engineering major.

Software engineering is an engineering discipline that guides the development and maintenance of computer software. It uses engineering concepts, principles, technologies, and methods to develop and maintain software, combining management techniques that have been proven correct over time with the best technology methods currently available.

Contents

1 Introduction to Software Engineering

2 Software Engineering Majors in China

3 Introduction to the Software Engineering Major

2. Software Engineering Majors in China

<div>本科（普通教育）本科（职业教育）高职（专科）</div>					
门类	专业类	专业名称	专业代码	开设院校	专业满意度
哲学	力学类	计算机科学与技术	080901	查看	<div><div></div></div> 4.1
经济学	机械类	软件工程	080902	查看	<div><div></div></div> 4.1
法学	仪器类	网络工程	080903	查看	<div><div></div></div> 4.0
教育学	材料类	信息安全	080904	查看	<div><div></div></div> 4.2
文学	能源动力类	物联网工程	080905	查看	<div><div></div></div> 4.0
历史学	电气类	数字媒体技术	080906	查看	<div><div></div></div> 3.9
理学	电子信息类	智能科学与技术	080907	查看	<div><div></div></div> 4.3
工学	自动化类	空间信息与数字技术	080908	查看	<div><div></div></div> 4.1
农学	计算机类	电子与计算机工程	080909	查看	<div><div></div></div> 4.2
		数据科学与大数据技术	080910	查看	<div><div></div></div> -

2. Software Engineering Majors in China

开设院校 括号内为开设院校数量

全国(635)	北京(15)	天津(16)	河北(32)	山西(11)	内蒙古(10)	辽宁(25)	吉林(20)
黑龙江(23)	上海(13)	江苏(51)	浙江(19)	安徽(24)	福建(22)	江西(30)	山东(38)
河南(36)	湖北(46)	湖南(29)	广东(45)	广西(18)	海南(6)	重庆(14)	四川(24)
贵州(8)	云南(11)	陕西(31)	甘肃(10)	青海(1)	宁夏(2)	新疆(5)	

院校名称	推荐指数 ②	专业满意度 ②			
		综合情况	办学条件	教学质量	就业
山东大学	4.6 (130人)	4.3 (448人)	4.2 (454人)	4.3 (452人)	4.4 (448人)
山东科技大学	4.9 (160人)	4.5 (209人)	4.4 (207人)	4.4 (202人)	4.4 (200人)
中国石油大学(华东)	-	4.5 (94人)	4.4 (99人)	4.5 (92人)	4.5 (90人)
青岛科技大学	4.9 (62人)	4.6 (81人)	4.5 (83人)	4.4 (75人)	4.6 (73人)
青岛理工大学	4.7 (83人)	4.3 (164人)	4.2 (165人)	4.2 (158人)	4.3 (158人)
山东建筑大学	-	4.3 (67人)	4.2 (65人)	4.2 (62人)	4.1 (62人)

Contents

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2 Software Engineering Majors in China

3 Introduction to the Software Engineering Major

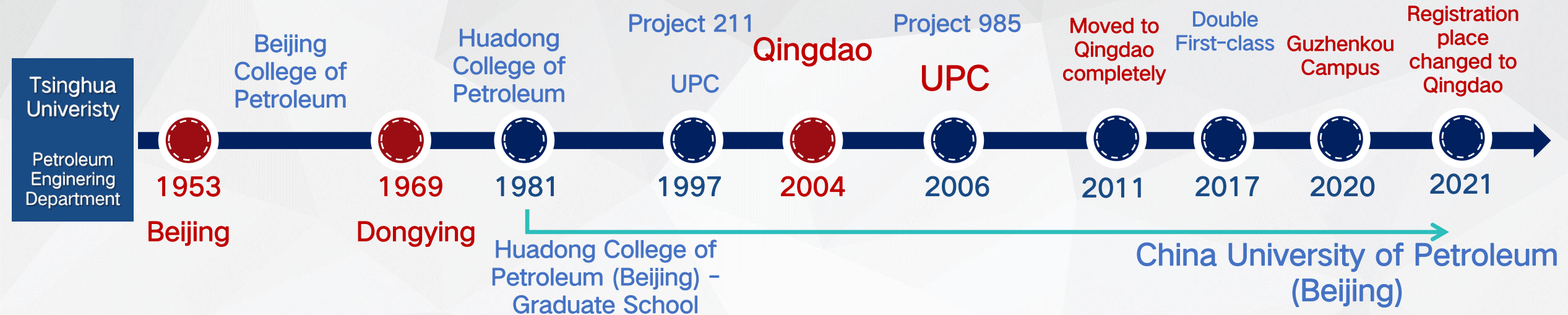


中國石油大學 (华东)
CHINA UNIVERSITY OF PETROLEUM

Introduction to the Software Engineering Major at UPC



1. The first university specialized in petroleum in China



First-class Discipline	Geological Resources and Geological Engineering, Petroleum and Natural Gas Engineering	First-class Major	Software Engineering, Computer Science and Technology, etc.
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Participated in constructing all petroleum and petrochemical enterprises: made great contributions to the exploration and development of all large oil and gas fields in new China, and the construction and operation of all large refineries.

Cultivated a group of outstanding talents: cultivated more than 300,000 high-quality talents, and the alma mater of CEOs of Fortune 500 companies ranked 35th in the world and 6th in China; among the undergraduate alumni, 11 were elected as academicians of the two academies, ranking 17th among universities in the country.

历史沿革

华东石油学院

1953 华东石油学院
1969 华东石油学院
1988 华东石油学院
1997 华东石油学院
2005 华东石油学院
2011 华东石油学院



1953

1969

1988

1997

2005

2011

2. History of Qing Institute of Software and the Software Engineering Major



- Two first-level master's degrees in Software Engineering (academic) and Electronic Information (Software Engineering) (professional)
- Cross-disciplinary doctoral degree in Advanced Science and Engineering Computing.
- In 2022, the college was approved as a National Characteristic and Pilot Software Engineering College (33 in total).
- In 2022, 6 classes were planned to be enrolled.

3. Training objectives of this major

The major adhere to the principle of cultivating students' morality and talents. The major aims to cultivate students with good moral character and comprehensive quality, who can master deep basic knowledge of the discipline, solid professional knowledge of software engineering, and specialized knowledge in the cross-field of petroleum industry and industrial Internet. Graduates are expected to have **strong software design and development capabilities** and be able to **work as senior engineering and technical personnel** in enterprises and institutions, especially in the petroleum industry and the cross-field of industrial Internet, competent in software development and management, software engineering services, or technical **research**. The major aims to make students become socialist builders and successors who develop comprehensively in morality, intelligence, physical fitness, aesthetics, and labor skills. Through about five years of practical work experience, graduates are expected to:

1. Have a good sense of social responsibility and consciously practice the core socialist values;
2. Be able to innovate and apply software engineering knowledge and cross-disciplinary knowledge to design and develop large and medium-sized software systems;
3. Have good communication and collaboration skills, broad international vision, and be able to lead project teams of a certain scale;
4. Continuously update their knowledge, constantly improve their workplace competitiveness, and adapt to technological progress and social development.

4. Curriculum and directions





中国石油大学（华东）

China University Of Petroleum



Thank you! Any Questions?

China University of Petroleum (East China) - Software Engineering