# CONTENTS

**Executive Summary** .................................................................................................................. 3  
**About Imperial** .......................................................................................................................... 4  
  Reputation and ranking ............................................................................................................. 4  
  Features ....................................................................................................................................... 4  
  Central London location ......................................................................................................... 7  
  Outstanding alumni ............................................................................................................... 7  
**About the Department** ............................................................................................................ 8  
  History and reputation ....................................................................................................... 8  
  Research sections and groups .......................................................................................... 8  
  Outstanding alumni ............................................................................................................... 9  
  High student satisfaction ................................................................................................... 9  
**About the Resource Geophysics Academy** ........................................................................... 10  
  Introduction to the Academy ............................................................................................ 10  
  Sinopec PhD Scholarship .................................................................................................. 10  
  Research topics .................................................................................................................... 11  
  How to apply ........................................................................................................................ 11  
**The Career Development Scheme at Sinopec** .................................................................. 12  
**FAQs (Frequently asked questions)** ....................................................................................... 13  
  Covid-19 ............................................................................................................................... 13  
  PhD research direction and topic .................................................................................... 13  
  Supervisors and mentors .................................................................................................. 14  
  Requirements for PhD study and graduation ...................................................................... 14  
  The Resource Geophysics Academy Scholarship .............................................................. 16  
  Career development at Sinopec ......................................................................................... 17  
  Other frequently asked questions ....................................................................................... 17
The Resource Geophysics Academy (RGA) was established in June 2019 as a key part of the partnership between Imperial College London and Sinopec (one of the largest energy companies in China). RGA is based at the Department of Earth Science and Engineering which was established in 1851.

Imperial delivers high student satisfaction with a rate of 84% in 2021. The department had the highest level (93.8%) within the College, thanks to the dedicated efforts from our teaching, research, and support staff to protect the quality of the student experience despite the exceptional challenge we have faced during the pandemic.

Within the Academy, we offer a generous PhD scholarship funded by Sinopec which covers full tuition fees, monthly bursaries, and five years of employment by Sinopec after successfully gaining a PhD degree.

At the Academy, you will have the chance to work with our excellent academic and research staff. Our Principal, Professor Yanghua Wang, was nominated as a Fellow of the Royal Academy of Engineering in 2021 for his excellence in science and engineering, and for worldwide leadership across the entire international petroleum industry. The Department and the Academy has three other Royal Academy Fellows, in Petroleum engineering, mineral processing, and in sustainable energy. They will work together to lead you to excellence in research and leadership in the future energy industry.

At RGA, we welcome you to apply for the Sinopec PhD Scholarship and look forward to hearing from you in the near future.

Contact the Academy’s Programme Manager, Hui Jia, at h.jia@imperial.ac.uk should you think our programme appealing to you.
Reputation and ranking

Imperial College London is a world top ten university with an international reputation for excellence in teaching and research. We are proud of our international outlook, ranked as one of the UK’s most international universities. Our research collaborations span the globe, and our students represent over 140 countries. The Times and Sunday Times Good University Guide 2022 also named us University of the Year for Student Experience 2022.

Our ground-breaking work has been recognised in the form of 14 Nobel Prizes, 80 Fellowships from the Academy of Medical Sciences, 101 from the Royal Academy of Engineering and 75 from Royal Society. By studying with us you can benefit from global recognition of our innovative environment and world-leading teaching and research.

Features

- **High impact research**

Our community has a long history of cutting-edge innovations and world-changing discoveries. From carbon capture and storage (CCS) technology to electrification of road vehicles, to mitigation of risks for renewable energy facilities, our research brings huge benefits to our society and the economy. The Imperial College COVID-19 Response Team has worked with scientists, governments and public health agencies around the world to help plan responses to the pandemic, including vaccine technology and informing policy. We are committed to addressing some of the world’s biggest challenges as we channel our expertise into making the world a healthier, safer, and cleaner place to live.

Our researchers collaborate on a wide range of international projects and partnerships with institutions across the globe, including the Resources Geophysics Academy which was established in 2019 in partnership with Sinopec.
• **World-leading staff**

As a postgraduate student, you will be part of a highly respected research community. Our academic staff include some of the world’s most renowned scientists, medics, and engineers. They come here from across the globe and contribute diverse perspectives, new ideas, and fresh approaches to solving complex problems.

• **World-class facilities**

Staff and students at RGA will have access to excellent [research facilities](#) that are a vital part of our cutting-edge research. We invest in resources and research facilities to ensure that our academic staff and students are able to pursue their ideas, undertake research, and transfer their knowledge to ensure significant global impact.

• **Professional development**

You will receive training courses from the [Graduate School](#) to develop your study and research skills, preparing you for your future career. With our support you will have the opportunity to develop far beyond your degree.

We also deliver a Professional Development Programme at the [Imperial College Careers Service](#) which includes over 100 courses that focus on the skills you need to succeed on your chosen path. The Professional Development Programme will equip you with essential professional skillsets including business skills, industry and enterprise.

• **High student satisfaction**

Student satisfaction at Imperial is now at 84%, according to the most recent [National Student Survey (NSS)](#), with an increase of 3 percentage points compared to last year’s survey result. The College is now ranked first among fellow London universities and at the top of the table of Russell Group institutions.
Central London location

Our central London location offers a student experience unlike any other – most recently ranked the best in the world.

With world-famous museums, music, sights, parks, and entertainment, you will never be short of things to do.

You can take a virtual tour of the campus: https://360-visit.imperial.ac.uk/.

Outstanding alumni

Ning Chen

Ning Chen studied at Tsinghua University at undergraduate level and came to Imperial for his PhD study. While studying in the Department of Chemical Engineering, he set up his own lab from zero, where he modelled intercellular metabolism and applied his results to make antibodies. After returning to China, he worked with the Beijing Genomics Institute. Now he has established his own company Promegene, which offers gene sequencing technology services to universities and hospitals.

“I’d really encourage it, it’s a really cool environment, and life at imperial is happy. The one thing I’d say is that Imperial is really well recognised in most places but not everywhere in China. We are ranked top-ten in the world, and everyone should know that!”

You can find the full story about Ning Chen here and more alumni stories here.
About the Department

History and reputation

The Department of Earth Science and Engineering is part of the Royal School of Mines, which was established in 1851. Today, the department hosts approximately 50 academic and teaching staff, 60 research staff, 40 support staff, 180 PhD students, and 400 taught undergraduate and postgraduate students. We are ranked 2nd for Geology in the Times and Sunday Times University League Table 2021, 3rd for Geology in the Complete University Guide 2021 and 3rd for Earth and Marine Sciences in the Guardian University Guide 2021 League Tables.

Through a combination of pure and applied research, our academics and researchers are at the cutting edge of comprehending how Earth systems work and how natural resources and energy can be sustainably extracted and provided. We are also at the forefront of applying this knowledge to understanding the evolution of other solid bodies in our Solar System, such as Mars.

Research sections and groups

We undertake interdisciplinary, world-leading research across the full spectrum of Earth Science and Engineering. It is organised into three broad Research Sections: Earth and Planets, Natural Resources Geoscience and Engineering, and Computational Geoscience and Engineering. All PhD students and academic staff belong to one of these sections and are part of the yearly cohort of their section.

Under three research sections, our work covers nine main Research Themes: Exploring space; Metals and minerals; Life past and present; Pollution; Energy; Ocean and Climate; Dynamic Earth; Hazards; and Computational modelling, AI and ML.

We collaborate with industry partners from the mineral and energy sectors, and participate in cross-disciplinary and cross-departmental Research Centres such as the Grantham Institute, the Energy Futures Lab, and the Sustainable Gas Institute.

Additionally, there are various research groups that operate within or across Research Sections. Find further research details.
Dr Nan Zhang studied at the Department of Earth Science and Engineering from 2008 to 2012 and obtained his PhD degree in 2012. He returned to China following his time at Imperial and now works as a Business Development Manager at BP, focusing on gas and LNG.

I studied at Imperial College London from 2008 to 2012. It was very important to me to live abroad for a certain time and set up a good foundation to work with an international enterprise. My studies at Imperial brought me to the energy industry. The research work I undertook in the upstream technical discipline formed a good foundation for me and an understanding of the industry that I was able to further expand along the full value chain and convert from technical to commercial.

You can find the full story about Dr Nan Zhang here.

High student satisfaction

The Department of Earth Science and Engineering had the highest level of overall student satisfaction (93.8%) in the College this year, thanks to the dedicated efforts of our teaching, research, and support staff to protect the quality of the student experience despite the exceptional challenge we have faced during the pandemic.
About the Resource Geophysics Academy

Introduction to the Academy

Imperial College London and Sinopec (China Petroleum & Chemical Corporation) launched the “Resource Geophysics Academy” (RGA) at Imperial in June 2019. This represents a significant partnership with Sinopec, one of the largest integrated energy and chemical companies in China.

The Academy at Imperial will help meet strategic aims to facilitate Sinopec in its low-carbon transformation of fossil energy, as well as to supply energy to the people and industries of the world.

Within the Academy, we aim to drive innovation and create cutting-edge technology for the global energy sector. We aim to accelerate the transition to zero pollution. We aim to bridge the gap between academia and industry. And most importantly, we aim to provide opportunities for talented Chinese students to gain PhDs in technical subjects in order to serve the energy industry of the future.

The Sinopec PhD Scholarship

At RGA, we offer a PhD Scholarship funded by Sinopec. This Sinopec PhD scholarship covers:

- Overseas student tuition fees
- Bursaries for living in London
- Employment with Sinopec for at least five years for scholarship recipients when they complete their PhD studies at Imperial.
Research topics

Our research covers a broad range of topics in resource geophysics, from fundamental research to development of state-of-the-art models, assessment of model skills and refinement, and development and application of services for autonomous navigation. All projects aim to equip PhD students with essential skills and expertise to drive innovation in a technology-oriented discipline that is needed for long-term development goals of the world.

You can find a list of existing research topics from the RGA website and ESE website.

You are welcome to select a research topic from these lists based on your academic background, experience, skillset, and research interests. If you find that none of the topics on this list are of interest to you, you are encouraged to explore your own research topic relevant to earth science and engineering in consultation with your potential supervisor. The Academy will endeavour to match you with a suitable project topic and a supervisor who has relevant expertise.

How to apply

To apply for a studentship in the Resource Geophysics Academy, please take the following steps.

Before you apply: Please see the selection criteria and entry requirements for Postgraduate Research (including academic criteria and language criteria) before beginning your application.

Choose your research area: The “proposed research topic” can be either proposed by the applicant or selected from a list of suggested project topics from the RGA website and ESE website. Please send your CV and transcripts to the Academy’s Programme Manager, Hui Jia at h.jia@imperial.ac.uk. We will then get in touch to further discuss your background, experience, and research interests together with your potential supervisor.

Draft your application: You may send the draft research proposal to the potential supervisors and send the draft application to Mrs Hui Jia (h.jia@imperial.ac.uk) for comments and suggestions before the final online submission.

Apply online: via the Imperial College Online Application Portal.

Our application portal for 2022 entry opened on 4th October 2021. The deadline for applications for our scholarship at Imperial is 7th January 2022. The interviews will take place in the week of 7th February 2022. If you are successful at interview, you will be put forward for the opportunities of the Sinopec Scholarship and Sinopec will organise interviews within 1 month. You can expect to hear about the final outcome by the end of April 2022.

If you have any questions, please email Hui Jia, the Programme Manager of the Resource Geophysics Academy, at h.jia@imperial.ac.uk, who will guide you throughout the whole application process.
Sinopec is one of the largest integrated energy-resource companies in China, with the mission to power a better life. Its core values are People, Responsibility, Integrity, Excellence, Innovation and Collaboration. As an integrated energy and chemical company, Sinopec is in the process of a low-carbon transformation of fossil energy, while sticking to its main business to ensure energy supply before achieving carbon neutrality. This transformation also resonates with Imperial’s Transition to Zero Pollution (TZP) Initiative.

We are currently in the early stage of the Sinopec PhD scholarship programme at RGA, Imperial. The first and second batch of PhD students are still studying with us. The Career Development Scheme is under active development at Sinopec to welcome the first batch of our graduates in the not-too-distant future.

Sinopec has seven research institutions:

• The SINOPEC Exploration & Production Research Institute
• The SINOPEC Research Institute of Petroleum Processing
• The SINOPEC Fushun Research Institute of Petroleum and Petrochemicals
• The SINOPEC Shanghai Research Institute of Petrochemical Technology
• The SINOPEC Qingdao Safety Engineering Institute
• The SINOPEC Research Institute of Petroleum Engineering
• The SINOPEC Geophysical Research Institute

Sinopec will endeavour to match your research area, experience, skillsets, and skills with a suitable position after your graduation. Please be aware that you will need to sign an agreement with Sinopec before starting with us as you need to work for Sinopec for at least five years after you have obtained your PhD degree from Imperial.
Covid-19

How is the Covid-19 situation in the UK now? Is it safe to come and study in the UK?
Many of the major restrictions in place to prevent the rise of Coronavirus cases have been lifted, thanks to the vaccine rollout programme being well underway in the UK.

What is the current status of the Imperial campus? Is it open now or when will it open?
From autumn 2021, if you are joining us to study an on-campus programme, we are looking forward to welcoming you on campus for a broad range of teaching and extra-curricular activities, complemented by online activities where effective and necessary.

We are continuing to ensure that we have contingency plans in place for all possible scenarios. We will keep our plans under continuous review, guided by the UK Government and by our own Covid response team who have played an active role in informing national and international policy to keep people safe. You can check frequently for future updates at Imperial’s COVID-19 information pages.

PhD research direction and topic

How can I find a research topic suitable to me? Do I have to choose from the research topics listed on the RGA website? Or can I choose a direction or topic I’m interested in, if my supervisors agree?

You can find a list of existing research topics at the RGA website and ESE website. You are welcome to select a research topic from this list based on your academic background, experience, skillset, and research interest. If you find that none of the topics on this list interest you, you are encouraged to explore your own research topic relevant to earth science and engineering in consultation with your potential supervisor.
Does my research topic have to be related to oil and natural gas because I will be funded by Sinopec and will work there after graduation?

Our research projects cover a broad range of research topics at both the Academy and Imperial’s Department of Earth Science and Engineering. Also, Sinopec is in the process of aiding the transition to low carbon economy. It is expected that the Academy will expand research into wider areas.

What if my research background is not in geophysics or hydrocarbon?

The Academy will endeavour to match you with a suitable project topic and a supervisor based at Department of Earth Science and Engineering who has relevant expertise.

Supervisors and mentors

How many supervisors or mentors will I have? What kind of help will my supervisors or mentors provide for my study and research?

Most students will have two Imperial-based academic supervisors and sometimes additionally one or more external supervisors. One of the supervisors will be the lead supervisor, who will oversee the project and supervision. The role of co-supervisors will vary depending on the PhD project and they may be involved in all or only part of the PhD work.

All students can request to additionally have an academic mentor from the department or another Imperial-based group or department. When the planned PhD work does not lend itself to supervision by two Imperial academics, the supervisor will have been requested to appoint a mentor before the start of the PhD.

You can expect support from your supervisor and mentor in academic development, building partnership, maintaining good health and wellbeing, and professional development. Should you experience any difficulties or need support during your studies at Imperial, you can ask your supervisor(s) and/or mentor to obtain support and advice.

Requirements for PhD study and graduation

Could you please provide a timeline for PhD studies at Imperial College London?

Here is a brief introduction to the timeline and major milestones during your PhD studies at Imperial.
Once you start with us, you will be provided more detailed guidance throughout your PhD studies.

**How many papers need to be published during the PhD study duration?**

You are encouraged to publish your work as research is not complete until the results are published. Publication delivers knowledge to the scientific community, provides a tangible return for your effort and the investment of any sponsor, and enhances your scientific and academic reputation. A good rule of thumb is that a PhD project should produce about three published papers. In other words, roughly the same as the number of chapters in your thesis, after the introduction, literature review and conclusions are discounted.

**Do I need to attend any compulsory courses? If so, are there any basic requirements for examination results?**

All doctoral students are expected to complete a number of our Professional Skills courses as part of their doctoral degree registration and achieve a minimum of four Graduate School credits by the Late Stage Review. In addition to these credits, the online doctoral plagiarism awareness course must be completed by the Early Stage Assessment.

**How long do I have to finish this PhD programme?**

The PhD programme normally takes three to four years of full-time study to complete. Usually, it should take no more than five years.
The Resource Geophysics Academy Scholarship

What is the application procedure for the Resource Geophysics Academy Sinopec Scholarship?

Please send your CV and transcripts to Programme Manager Hui Jia at h.jia@imperial.ac.uk. We will then get in touch to arrange an informal interview at RGA to further discuss your background, experience, and research interest. If you are eligible for the scholarship, we will match you with a suitable project topic and a supervisor and guide you throughout the whole application process. You can find detailed guidelines in the How To Apply section of this brochure.

What is the requirements for the Resource Geophysics Academy Sinopec Scholarship?

For admission to a PhD research programme the College would normally expect you to hold or achieve a Master’s degree in addition to a Bachelor’s degree. You will also be required to meet our English language requirement. Please note that meeting academic requirements does not guarantee admission, and is only one of the factors taken into account when selectors make their decision: other factors such as suitability for the course, relevant work experience and references are also important.

In order to meet specific requirements for the RGA Sinopec Scholarship, you are preferably required to be a graduate from Tsinghua University or another C9 League university in China. Additionally, you will be willing to work for Sinopec for at least five years after you obtain a PhD degree at Imperial. An agreement between you and Sinopec will be signed before you start with us.

What bursary will I receive per annum from the scholarship? Will the bursary be enough for me to live in London?

Your PhD studentship will provide you with a bursary of £18,000 per annum (£1500 per month) for 3.5 years. You can find information about living in London on Imperial’s Study pages.

What other kinds of support are available to me?

During your time at Imperial, there will be a wide range of support you can get to help you take care of practical issues, health, wellbeing and other concerns, and personal development. You can find details online at Imperial’s Student Support Zone.

You will join PhD cohorts who joined both RGA and the Department of Earth Science and Engineering in 2020 and 2021. They will explore the new life here along with you.
Career development at Sinopec

Could you please describe the recruitment procedure of Sinopec for students funded by the Resource Geophysics Academy Scholarship? Is there any difference from the regular school recruitment procedure?

Sinopec is still working on the matching mechanism for students funded by the Resource Geophysics Academy Scholarship. The difference from the regular school recruitment procedure could be that you have secured a position at Sinopec for five years if you have been offered a place on our programme and you will be required to sign an agreement with Sinopec before your PhD study with us. Sinopec will still develop specific procedures to match your research area, experience, and skills with a suitable position after your graduation.

Which department of Sinopec will I work in after graduation? What is the recruitment and allocation mechanism? Do I have the freedom to choose my work location and department?

Sinopec will endeavour to match your research area, experience, and skills with a suitable position after your graduation.

Do I need to sign a contract with Sinopec before registration?

Yes, you will need to sign an agreement with Sinopec before registration as Sinopec will fund your PhD study.

Do I still need to submit a job application to Sinopec and attend an interview after graduation?

You do not need to submit a job application, but you need to go through certain procedures in order to assess your expertise and skillsets and match you with a suitable position.

What is the Career Development Plan for me at Sinopec?

The Career Development Plan for students funded by the RGA Scholarship is still under active development. We will include this key information as soon as it is finalised.

Other frequently asked questions

You can find answers to other frequently asked questions at the Imperial Postgraduate Study pages.