



Institute
and Faculty
of Actuaries

MORE THAN MATHS

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WHAT IS AN ACTUARY?

Actuaries are problem solvers and strategic thinkers who use their skills to help measure the probability and risk of future events.

Business and increasingly depend on the skills of actuaries and analysts to help them to model and plan for the future. As the world is changing at an increasingly rapid pace, risk management expertise can help businesses navigate this changing landscape.

Every area of business is subject to risk, which is why you'll find actuaries working within the public and private sector, in a number of fields in finance, government departments, health care and much more.



Solving real-world problems

A career as an actuary or actuarial analyst gives you the chance to apply your skills in actuarial science to real-world challenges. These could include:

- ▶ New technologies
- ▶ Climate change
- ▶ Population growth
- ▶ The impact of artificial intelligence (AI) and big data
- ▶ Risks associated with cryptocurrencies
- ▶ Uncertainties related to national economies

Valued by employers

Employers understand just how valuable actuaries and analysts are to their business, which is why you'll find actuaries working across a number of areas including:

- ▶ General insurance
- ▶ Health and care
- ▶ Investments
- ▶ Life insurance
- ▶ Pensions
- ▶ Risk management
- ▶ Data science

You might work for a bank, insurance company, consultancy firm or government but one thing is guaranteed – each day will bring a variety of challenges that you'll have the satisfaction of solving.

“As an actuary, I am future-oriented. Instead of looking back for the ‘most’, I look forward to the ‘next’.”

Grace Pei Guan
Fellow of the IFoA
Chief Actuary, Generali China

WHAT OUR

MEMBERS

HAVE TO SAY



LINJIE LI

Senior actuary based in China

“I really appreciate the opportunities in the strategy setting, providing important information to support business decisions, as well as designing products that meet the clients’ demands. Actuaries can and should take a whole picture of the company’s financial operation. Dynamic actuarial management is necessary rather than static calculation. It has extensive relationship with products, financial policies, marketing and final sales. Developments in social environment and technology have raised new challenges to actuaries.

“Furthermore, actuaries should find new ways to integrate their professionalism with these emerging changes in order to play new roles in the leading trends. During my career as an actuary, I got chances to cover actuarial work from valuation to products, as well as financial planning and marketing. With more than 15 years’ experience and practice in diversified actuarial work, I like the width and depth of this profession. This is the key reason for actuaries to be respected within and outside the companies.”



ANGELO WANG

Partner, EY Transaction Advisory Service Inc.

“I enjoy my role in general because the role enables me to solve problems for insurers by team working with other professionals. Though being an actuary no longer has the prestige of automatically making people believe in you, the technical skills certainly add credibility to our arguments provided we can communicate clearly how our arguments are relevant to the questions we are trying to address.

“Our analytical training also enables us to question the question itself, such as whether the question has a bias in the way it is phrased.”



YANG YU

Managing Director of Redington Ltd, Deputy Chairman of Yu Yuan Technology (Shanghai) Ltd.

“I hold Bachelor and Master degrees in Mathematics from the University of Cambridge and a Master degree in Actuarial Science from Cass Business School. I won the award ‘Top 30 under 30’ by Actuarial Post in 2012 and the ‘FN 40 under 40 Rising Stars of Asset Management’ by Financial News. In 2018 after incorporating the subsidiary of Redington in China, I was elected as one of the ‘Top 10 elite returnees’ by Shanghai Lujiazui Financial City.

“I am always passionate to serve our members and to promote actuarial science. When taking the role as the President of Chinese Actuarial Network in the UK (CANUK), I worked actively to promote the communication and cooperation between actuaries in China and the UK. I hope our profession will drive continuous innovation and keep bringing values to our members and our industry. I believe the profession will grow its influence in the wider fields by integrating with technology and other skills on a global scale of which will ultimately help more people make better sense of the financial future.”

Council is the governing body of the Institute and Actuaries Faculty of (IFoA). Ms Cynthia Yuan is the current IFoA Council member based in China. Let’s hear about her opinions on the profession.



CYNTHIA YUAN

Senior Risk Manager, China Reinsurance (Group) Corporation

“I have been working in the insurance industry for 19 years. Among them 10 year in UK and 9 years in China. I enjoy tremendously the changes and development of financial industry.

For our profession to stay prosperous and active, actively engagement our member can expand the influence of IFoA and promote the actuarial standards and the Actuaries’ Code. I have been working as an IFoA volunteer for many years by taking up different roles. I am passionate about our profession and want to do more for the profession.

In the fast-developing digital world, actuaries will need to innovate to stay relevant. We are no longer in the secure box that we used to be. I would like to support the Council to explore how we can better innovate and therefore better equip our current young members and stay relevant.”

WHAT OUR MEMBERS HAVE TO SAY



MENGKE LYU

Sir Edward Johnston Prize winner 2019

“I have both Bachelor and Master degrees of Actuarial Science and gained the IFoA exemptions from accredited universities. There are two reasons for my choice of the actuarial profession. The first reason is that I’m a firm believer in logic and statistics. My lifetime passion is to use scientific approaches to solve real-world problems, and actuarial science actually enlightens me on how to do it. The second reason is that I believe in the value of insurance. To me, insurance is more than risk sharing. It is the key to bring a happier life to everyone, and I’m excited to be part of a profession to make this happen.

“I chose the IFoA to start my actuarial career, because I love challenges. The actuarial world is smaller than other financial professions, making it easier for members to connect with each other. As an IFoA actuarial student, I often feel connected to the actuarial community where everyone shares similar interests and passion. As a newly graduate student, I’m going to join MunichRe Hong Kong office soon. My career plan is to qualify as the IFoA Fellow within five years. Afterwards, I hope to rotate to different regions of the world, to share my experience with others, and to continue bringing positivity and innovation to this industry.”



YUAN FANG

Sir Edward Johnston Prize winner 2020

“I graduated from actuarial programme at Shanghai University of Finance and Economics. I studied the actuarial courses which adopted the IFoA curriculum with teaching staff’s guidance. I passed 8 CTs and 1 ST professional exams during 4 years of undergraduate study. I’m now working at an actuarial consultancy. The actuarial skills and knowledge I acquired in depth and width are not only helpful for my current work, but are also required in fields like finance, investment and data analytics.

“To qualify as an actuary requires perseverance and efforts. For actuaries, life-long learning is also a very important quality. This reflects on pre and post qualification stages. We need to keep up with the new trends in industry, to embrace new technologies and to adapt to new environment.”

If there’s one thing that all actuaries have in common it’s that they’re bright and engaged. It’s a young, energetic and dynamic profession. Here’s what our outstanding student members, who are also Sir Edward Johnston Prize winners, say about how and why they made their professional choice.



TIANJUN LI

Sir Edward Johnston Prize winner 2018

“I am now working on the development and pricing of insurance products in mainland China’s largest life insurer, China Life Insurance Group. Being good at math back in high school, I chose the undergraduate programme of Actuarial Science at Central University of Finance and Economics (CUFE). It now appears to be a correct and crucial decision for myself. CUFE is an IFoA accredited university and follows the IFoA syllabus, so my classmates and I were very lucky to learn actuarial science based on the IFoA’s qualification framework and gained exemptions from the IFoA. Deeply influenced by the university and the IFoA, I understand the importance of professionalism and key qualities to become an excellent actuary.

“I’ve worked on insurance product pricing for one and half year. The practical experience helps me to get a better understanding of actuarial science in addition to principles and modelling. I am also incredibly grateful for the mindsets and communication skills acquired from the IFoA’s qualification framework, which has made my current work smoother and more efficiently. I hope to qualify as the Fellow of IFoA within 3 to 5 years, and to design and develop more interesting and innovative insurance products for the regional market.”



YING JIE

Sir Edward Johnston Prize winner 2019

“To be honest, when I chose actuarial science as my major at the very beginning, I knew very little about this profession. I was under the impression that it was all about dealing with numbers and I happened to have great enthusiasm for mathematics. After several years of study, I realize how fascinating actuarial science is. That was when I decided to pursue my actuarial career after graduation. I graduated from the Central University of Finance and Economics which has been accredited by the IFoA. I have gained several exam exemptions and benefited a lot from this accredited undergraduate programme. The IFoA has also provided considerable support to me since the very beginning of my actuarial study and career. The member support covers academic study, great insights into the industry and profession.

“I am currently working for a life insurer in China. It’s thrilling to apply what I have learned in the industry. I really enjoy the teamwork with my current colleagues. The continuous growth of the industry in the region also motivates me to keep studying to keep up with the industry trends. It is both challenging and fulfilling to get involved in such a dynamic industry and I really look forward to being part of its success.”

WHY YOU SHOULD BECOME AN ACTUARY

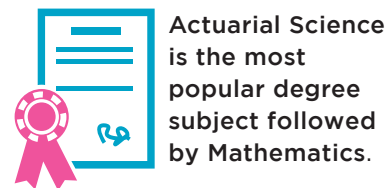
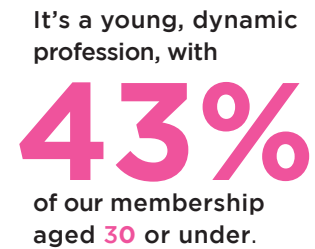
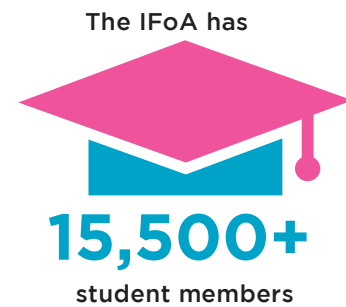
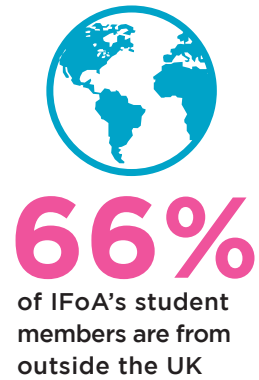
The actuarial profession attracts academic and ambitious people with skills that are in high demand.

The IFoA qualification is globally recognised as equipping its members with the numerical and business skills needed to work anywhere in the world.

Opportunities for career progression, nationally and internationally, are huge. In a globalised economy, becoming an actuary or actuarial analyst makes you part of a truly international network. The interconnectedness of finance and business means you'll be able to work anywhere in the world.

In addition, we have links with partners around the world, ensuring no matter where you are based, you can get started on your actuarial journey.

Providing careers advice to you is something that we pride ourselves on here at the IFoA. We know that no matter where you are in the world, making a decision about your career is going to be important to you, not just now, but for the rest of your life.



MORE REASONS TO CHOOSE THE ACTUARIAL PROFESSION



Do you have a good quantitative/finance based degree?

Secure a graduate role as a student actuary.

Begin studying/ completing IFoA exams.

Become an IFoA Associate

Become a Fellow & develop advanced actuarial skills

Don't have a quantitative/finance based degree but really interested in actuarial science

Take one of our non-member entry exams.

SO WHERE DO YOU START?

The good news is, there's more than one way to achieve your goal and you can choose a route that best suits your situation now and your long term ambitions. We're here to support you in making the right choice and you can contact us for free, expert advice at careers@actuaries.org.uk.

To get things started, take a look at our route map and see which path looks most appropriate for you. You're right at the start of a hugely exciting career journey and it's up to you how far you travel.

BECOME AN ACTUARY

A successful career starts with a strong foundation.

Your university course

When deciding on your university course, there is a lot to consider.

Choose a course that is going to fulfil you, that will help you gain a degree that employers will require from you, and consider the following:

- ▶ Are the modules interesting and going to add value to your career?
- ▶ Do you want a course that offers a work placement?
- ▶ If you're set on becoming an actuary, have you considered looking at universities that hold accreditations with us?

Picking your degree course can be challenging. For the actuarial profession you can consider courses like actuarial science or maths, but really anything numerical is ideal.

Also remember that there's more to university than preparing yourself for the first job. It's about preparing yourself for the rest of your life. So it's important to choose a subject which you'll enjoy and that you feel will be personally enriching.

Accredited universities in Greater China

If you've already decided you want to study actuarial science at university, you may want to consider studying with the below universities who hold exemptions with some of our professional exams and offer accredited subjects under our new Curriculum in the region.

- University of Hong Kong (Hong Kong)
- Central University of Finance and Economics (Beijing)
- Zhongnan University of Economics and Law (Wuhan)
- Dongbei University of Finance and Economics (Dalian)
- Fudan University (Shanghai)
- Beijing Technology and Business University (Beijing)
- Xi'an Jiaotong Liverpool University (Suzhou, China)

In addition, the students at **Shanghai University of Finance and Economics (Shanghai, China)** are studying the actuarial programme based on the IFoA's syllabus and taking our professional exams.

Finding your graduate role

There are many ways that you can increase your chances of gaining a graduate role, from general work experience while you're studying to joining a society or club at university. Your experience doesn't have to be related to the actuarial profession, any experience you gain will give you valuable transferable skills that employers look for.

Once you graduate, securing your first role is an important step on the road to an actuarial career. You can find more information about actuarial roles in our Actuarial Careers Guide or online at www.theactuaryjobs.com

EXAMS

Our exams may seem complex, but there's plenty of expert support and guidance available to you. Whether you're at the beginning of your educational journey, looking for your first job or have already started an actuarial role, we're here to help.

Depending on the modules you study, the grades you achieve and whether your degree programme is IFoA accredited, you can apply for exemptions from IFoA exams. This will help reduce the number of exams you will need to take to become an actuary.

Find out more about our accredited programmes and other recognised qualifications at www.actuaries.org.uk/exemptions

You will also need to meet our Personal and Professional Development (PPD) requirement to qualify as an actuary. PPD is a record of your work-based learning and it demonstrates your ability to work effectively as an actuary by applying your knowledge and skills. PPD will also help you to understand:

- ▶ Working within a professional and ethical framework
- ▶ The impact your work has on the wider business
- ▶ The importance of reflecting on the quality of your work and identify areas of improvement through Continuing Professional Development (CPD) activities

The minimum PPD requirement is two years for an Associate and three years for a Fellow.

The IFoA CPD scheme for members builds on this foundation and helps members meet their obligation to maintain their professionalism set out in the *Actuaries' Code*. The Actuaries' Code sets the standards and ethics all actuaries need to abide by.

You can find more details about PPD at www.actuaries.org.uk/PPD

If you would like to find out more about the exam process, visit www.actuaries.org.uk/actuaralexams

Congratulations! You are now a Fellow.

Upon completion of 3 years of PPD; one further year after the 2 years at Associate level.

SA1 Health and Care
SA2 Life Insurance
SA3 General Insurance
SA4 Pensions and Other Benefits
SA7 Investment and Finance

You'll choose 1 specialist advanced subject - the final subject needed to reach fellowship

SP1 Health and Care
SP2 Life Insurance
SP4 Pensions and Other Benefits
SP5 Investment and Finance
SP6 Financial Derivatives

SP7 General Insurance Reserving and Capital Modelling
SP8 General Insurance Pricing
SP9 Enterprise Risk Management

You'll choose 2 specialist principle subjects to determine your career direction.

CP1 - Actuarial Practice
CP2 - Modelling Practice
CP3 - Communication Practice

Take these core practice exams to broaden your overall knowledge

Well done! You are now an Associate.

Upon completion of 2 years of Personal and Professional Development (PPD) and Professional Skills Stage 1 & 2

CS1 - Actuarial Statistics 1
CS2 - Actuarial Statistics 2
CM1 - Actuarial Mathematics 1
CM2 - Actuarial Mathematics 2
CB1 - Business Finance
CB2 - Business Economics
CB3 - Business Management

Take these actuarial and business exams to gain the skills and techniques needed to progress in your career

You must complete the Professional Skills Stage 1 course before you can apply to sit the CB3 exam.

MORE FROM THE IFoA

The IFoA is one of the largest and most prestigious professional bodies globally. We are dedicated to educating, developing and regulating actuaries across the world.

We have the resources, expertise and commitment to support you at every stage of your career. We'll work hard to help you to realise your professional goals and to continue to develop our industry to ensure a breadth of opportunity. Join us and you'll be one of 32,500+ members worldwide. 43% of our members are under 30 – and we have a truly global reach.

As a member you'll benefit from:

- ▶ Professional recognition of your achievements nationally and internationally
- ▶ Education and career development
- ▶ Influence through your involvement with matters of public interest
- ▶ A highly influential professional body worldwide
- ▶ Networking as you build a community of your peers to share best practice and offer support
- ▶ Extensive library resources online and hardcopy support for your studies and research



MAKE A DIFFERENCE WITH ACTUARIAL SCIENCE

Have you considered how you can use your love of maths to really make a difference? You might not realise it, but actuaries help to solve real world problems, not just in pensions and insurance, but in climate change, cyber security, population growth and so much more.

Actuaries are risk experts - applying comprehensive skillsets to help individuals and society manage the risks we all face. We simplify complex problems, communicate them effectively, and translate the outcomes into meaningful actions. It's a varied, demanding and fulfilling career that really puts your numerical skills to the test.

As an actuary, you'll be part of a global community of problem-solvers and strategic thinkers, helping businesses and governments navigate complex issues in a rapidly changing world and prepare for the challenges of the future.

The technical skills and commercial acumen you'll develop as an actuary or actuarial analyst, combined with advances in technology will open up opportunities in exciting new fields like AI and data science.

If you're interested in a career that can make a real impact, that is challenging but hugely rewarding, then I very much hope you will join us.

Find out more about the IFoA at
www.actuaries.org.uk | www.actuaries.org.cn



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