1.0 Why study Actuarial Science?

If you have enjoyed mathematics at your pre-U and are interested in a career in mathematics which offers stimulating work, the opportunity to communicate in a commercial environment, and an excellent salary, then you should consider taking Actuarial Science degree and progress to be an actuary. Actuarial Science applies mathematical skills to a range of applied subjects and helps to solve important problems for insurance, government, commerce, finance and industry. It studies the financial risks associated with uncertain future events, with emphasis on assurance (life assurance), property and casualty insurance, pension plans and employee benefit programmes.

An actuary is a person who is proficient in the fields of mathematics, probability, statistics, economics, and finance. An actuary is the business professional who works out how much an insurance or similar business company should charge its clients for making promise to pay them a certain amount in future if certain conditions happen. An actuary will putting a value to the risks that can occur to people, their properties or risks faced by a corporate. Actuaries are key professional that work in the areas of life insurance, health insurance, pensions, general insurance, and enterprise risk management.

2.0 Bachelor of Science (Hons) Actuarial Science

The B.Sc. (Hons.) Actuarial Science at UTAR is designed to get your career as an actuary off to a flying start. The programme is designed to meet the rapid changing needs and challenges of the insurance and investment-related industries by aligning its syllabi with the professional examination requirements. It offers subjects that have been approved by the actuarial organisations for Validation by Educational Experience (VEE) credit, i.e. Economics, Corporate Finance and Applied Statistics. It covers all the topics on the CAS/SOA Probability (P) and Financial Mathematics (FM) actuarial examinations plus more than 12 semester hours on the topics for the SOA Actuarial Models (M) examination and the CAS/SOA Construction and Evaluation of Actuarial Models (C) examination that entail topics such as contingent payment models and frequency, severity and aggregate claims models. Students may gain international recognition, in addition to the UTAR honours degree. To enhance their employability, this programme also equips students with relevant IT skills.

As a graduate of this programme, a student would be capable of achieving after graduation to

1. be well prepared for at least up to the preliminary education component of the Society of Actuary examination and satisfy the Society’s Validation by Educational Experience requirements. Eventually, students should be able to work towards the status of a qualified actuary.

2. develop students’ skills in the valuation of contingent assets and liabilities particularly in the context of insurance or related business. In this aspect, students are expected to perform actuarial model selection, estimation in turn projection or statistical inference from such models.
3. to adapt to the Malaysian Insurance-related Industries by providing them with assignments to mimic the actual decision making process and broad-based information pertaining to the industries.

3.0 Salient Features

1. **Rigorous and Holistic Curriculum**: Students are introduced to fundamental concepts and theorems in actuarial mathematics and economics such as calculus, probability and statistics, theory of interest, life contingency, financial economics, and risk management. Also, students are trained with current software technologies including Excel VBA, SAS, R etc.

2. **Commercial Actuarial Software**: UTAR is the only university in Malaysia that acquires commercial Actuarial software Prophet. Actuarial Science students have the added value of early opportunities to expose to this leading risk management platform used by the financial services industry around the world.

3. **Full VEE Exemptions**: UTAR is the first university in Malaysia that obtain all three VEE (Validation by Educational Experience) credit, i.e. Economics, Corporate Finance and Applied Statistics from the Society of Actuary, US.

4. **Hands-on research / project guidance**: Students gain exposure to industry valuation and modelling project in their final year Actuarial Expository Projects or Actuarial Modelling Projects which facilitated by experienced practicing actuaries and UTAR academic staff.

5. **Close links to the industry**: Numerous workshops and seminars conducted by industry experts, insurance companies, financial planners and senior academics relevant to Actuarial Science and risk management are conducted around the year.

6. **High employment rate**: more than 80% of UTAR graduates secured jobs within 6 months after graduation, testifying our students are well-received by the employers.

4.0 Career Prospects

The three basic requirements to become an actuary are – education, experience, and completion of a series of qualifying examinations administered by professional bodies. The only representative body of actuarial professionals in Malaysia is the Actuarial Society Malaysia (ASM), and the qualifying examinations that recognised by the (ASM) are:

- Society of Actuaries (US)
- Casualty Actuarial Society (US)
- Institute and Faculty of Actuaries (UK)
- Canadian Institute of Actuaries
- Institute of Actuaries of Australia

Graduates are generally expected to pursue their professional qualifications while working full-time, as professional experience is a requirement for qualifying. Generally qualification requirements differ according to the professional body.

Typical employer and job functions for actuaries and actuarial science graduates are:

- Insurance companies – valuing financial contracts, determining liabilities, ensure sovereignty
- banks – valuing financial contracts, investing funds, risk management
consulting firms – offering advice to occupational pensions, employee benefits, personal financial planning

government service – supervising and regulating insurance-related matters

Stock exchange – investing and hedging

5.0 Is this Programme for me?

• Interested and good at Mathematics
• excellent analytical skills
• strong interest business, finance, and economics
• excellent problem solving skills
• good communication skills
• Students should be from the science stream and have acquired fundamental knowledge in Mathematics

6.0 Student’s Testimonial/Success Story to Share (on your programme student)

Blog extract from former UTAR actuarial science student.

“IS ACTUARIAL SCIENCE HARD??

The answer is..
It depends on you. Certainly for sure is not easy, and certainly for sure is not a Mission Impossible subject.” - Tan Guan Han

http://g-han89.blogspot.com/2011/03/is-actuarial-science-that-hard.html

7.0 Mode of Studies: Full-time

8.0 Duration of Studies: 3 years

9.0 Medium of Instruction: English

10.0 Intakes: January, May, October

11.0 Related Programmes

Students who are interested in this programme might also like to consider

• Bachelor of Science (Hons) Applied Mathematics with Computing
• Bachelor of Science (Hons) Financial Mathematics
• Bachelor of Science (Hons) Statistical Computing and Operations Research
Bachelor of Science (Hons) Actuarial Science

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