

Undergraduate Studies



UNIVERSITI TUNKU ABDUL RAHMAN
Demokrasi, Kemajuan, Kecekapan, Yakinan, Persekitaran, UTAR, 11200 Skudai, Johor

Actuarial Science, Mathematics and Process Management



Actuarial Science

Applied Mathematics with Computing

Financial Mathematics

Logistics and International Shipping

Statistical Computing and Operations Research

Bachelor of Science (Honours) Actuarial Science

(R2/462/6/0009)11/25(A6628)

Overview

Actuarial Science encompasses the study of applied mathematics, statistics and financial theory to solve financial problems. It is a study of the financial risks associated with uncertain future events, which emphasis on assurance (life assurance), property and casualty insurance, pension plans and employee benefit programmes.

This programme is designed to meet the rapidly 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, Accounting and Finance, and Mathematical Statistics.

It covers all 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 Investment and Financial Markets (IFM), Long Term Actuarial Mathematics (LTAM) and the CAS/SOA Short Term Actuarial Mathematics (STAM) 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.

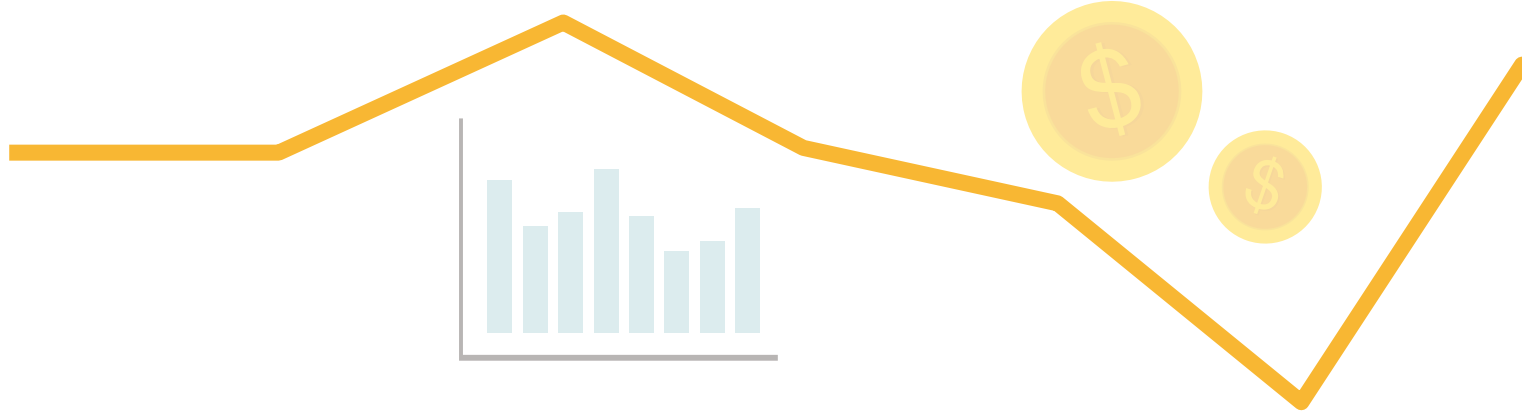
Career prospects

- Actuarial Analyst
- Pricing Analyst
- Tax Analyst
- Portfolio Manager
- Business Development Manager

Duration of study: 3 years

Medium of instruction: English

Campus: Sungai Long



Bachelor of Science (Honours) Applied Mathematics with Computing

(R2/461/6/0005)01/25(A6034)

Overview

This programme prepares students to be versatile and analytical problem-solvers using mathematical modelling coupled with computing dexterity. By offering subjects such as partial differential equations, ordinary differential equations and statistics, the programme introduces students to the immense ability of mathematical models in analysing current events.

Due to the large data set that an analyst has to deal with, this programme equips students with programming skills, simulation techniques and computational problem-solving techniques. Realising the importance of training graduates in an interdisciplinary environment, it also offers modules in professional writing and presentation skills to enhance student's communication of their ideas.

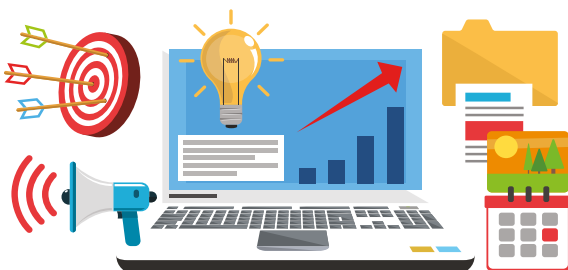
Career prospects

- Risk Analyst
- Simulation Developer
- Statistician
- Inventory Strategist
- Cryptologist
- Quality Control Officer
- System Analyst
- Operations Research Analyst
- Quantitative Analyst/Developer
- Equity Analyst
- Compliance Officer
- Foreign Exchange Trader
- Credit/Portfolio Analyst
- Quality Assurance Officer
- Market Researcher
- Data Mining Engineer

Duration of study: 3 years

Medium of instruction: English

Campus: Sungai Long



Bachelor of Science (Honours) Financial Mathematics

(R2/343/6/0145)01/25(A10874)

Overview

This programme stresses producing graduates with advanced training in quantitative finance. Nowadays, as the financial environment becomes more and more sophisticated, we need financial professionals who are capable to analyse, evaluate financial instruments and manage risks of investment quantitatively.

UTAR's Financial Mathematics programme provides the best training for this purpose. Mathematical finance draws from the disciplines of probability theory, scientific computing, and computational finance to provide models and derive relationships between fundamental variables such as asset prices, market movements and interest rates.

These disciplines allow us to design financial products based on the theory of option pricing due to Black, Scholes, and Merton (Nobel Prize Winners in 1997). Undergraduates trained in these disciplines would be able to strengthen financial risk management and raw materials hedging in large multi-national corporations. They could also be future participants or regulators of the derivatives and commodity markets.

In UTAR's Financial Mathematics programme, students will have the opportunities to try their programming skills in electronically automated trading systems.

Career prospects

- Financial Analyst
- Risk Manager
- Commercial Bank Consultant
- Investment Consultant

Duration of study: 3 years

Medium of instruction: English

Campus: Sungai Long



Bachelor of Science (Hons)

Logistics and International Shipping

(R2/840/6/0022)04/25(A10759)

Overview

This programme aims to produce professionals who are well equipped to analyse and solve problems in the operations of logistics and shipping. Nowadays, logistics and shipping have moved to a higher agenda in an organisation in every industry and sector. Senior management has begun to see the transportation function as an important competitive tool because logistics costs represent such a significant proportion of total cost that it is possible to make major cost reduction through fundamentally re-engineering logistics processes.

Proper logistical procedures can lead a company to reduce cost and achieve efficiency by receiving greater responsiveness and reliability from suppliers, reduced lead time, just-in-time delivery and value-added services as a way of gaining market share and increase profitability.

Students are required to undergo a period of industrial placement in manufacturing/service industries. This experience will prepare students to perform their final year project and enhance their future employability.

Career prospects

- Supply Chain Analyst
- Logistics Executives
- Marine Surveyors
- Marine Insurance Agents
- Operation Executives
- Warehouse Executives
- Transport Analysts
- Warehouse Planners
- Logistician
- Transport Planner
- Freight Forwarder
- Ship Agent
- Expeditors
- Procurement Executive

Duration of study: 3 years

Medium of instruction: English

Campus: Kampar



Bachelor of Science (Hons)

Statistical Computing and Operations Research

(R2/462/6/0007)11/24(A10094)

Overview

This programme equips students with the fundamentals and applications of statistical methods and operations research techniques to support quantitative analysis, modelling and solving in the scientific and business-related problems. Students will also be exposed to managerial and computing skills to effectively and efficiently utilise and optimise the usage of organisational resources in service and manufacturing industries.

The key objective of the programme is to produce students who are able to practice lifelong learning attitudes, continuously challenging themselves to improve and remain relevant to the ever-changing needs of industry, locally as well as internationally.

Career prospects

- Statistician
- Data Scientist
- Data Analyst
- Financial Analyst
- Quality Controller
- Business Analyst
- Operation Researcher Analyst
- Market Researcher
- Risk Assessor
- Survey Firm Consultant

Duration of study: 3 years

Medium of instruction: English

Campus: Kampar





For more information, please contact
Division of Programme Promotion, Universiti Tunku Abdul Rahman DU012(A)

Kampar Campus +605-468 8888

Jalan Universiti, Bandar Barat,
31900 Kampar, Perak Darul Ridzuan.

 KL Sentral ↔ Kampar

Sungai Long Campus +603-9086 0288

Jalan Sungai Long, Bandar Sungai Long
Cheras, 43000 Kajang, Selangor Darul Ehsan.

 Sg. Buloh / Kajang ↔  Bukit Dukung (Bus T453)
 Serdang ↔  Bus 590

 +6016-2233 557

 enquiry@utar.edu.my

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 study.utar.edu.my