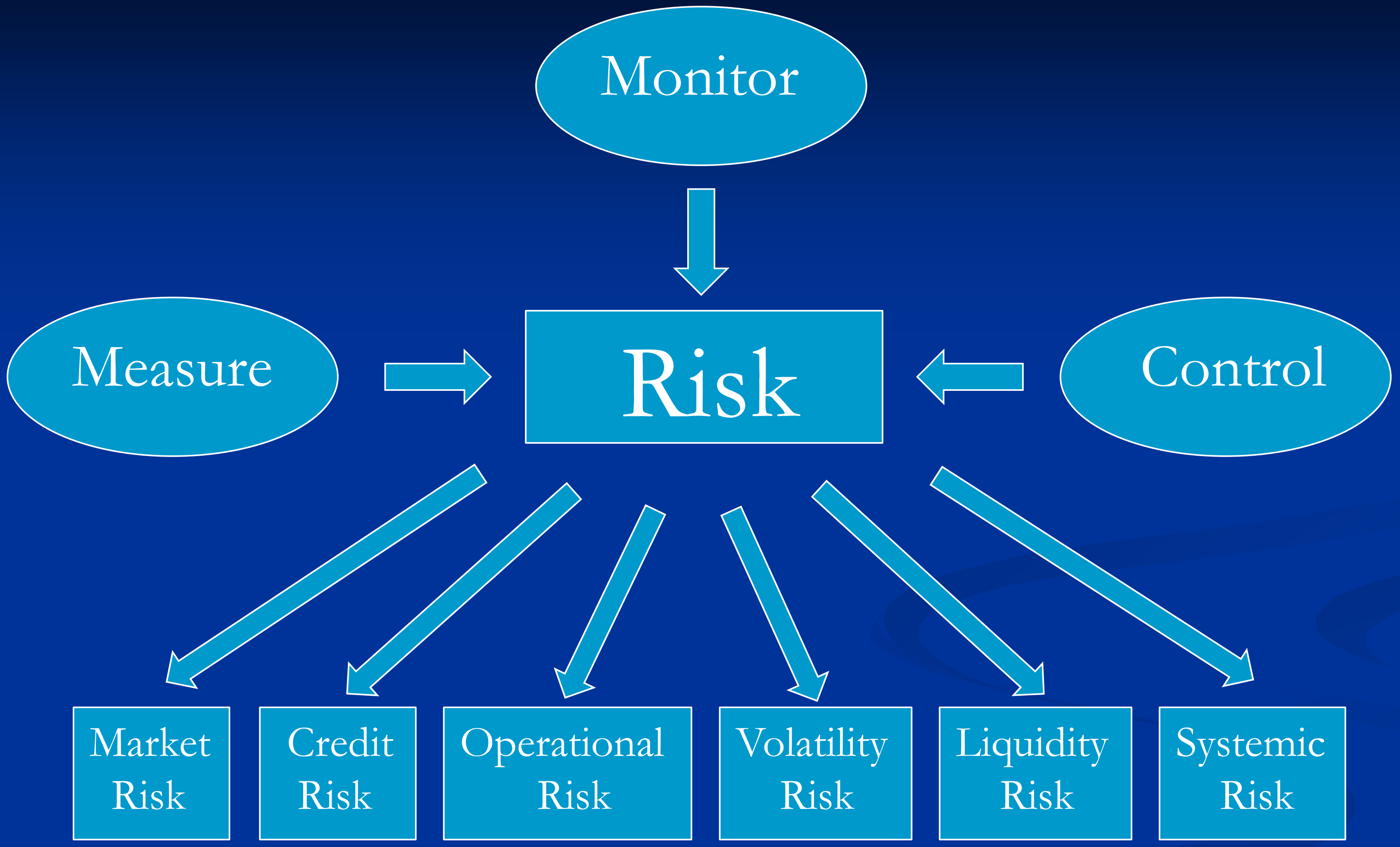
Bachelor of Science

(4-year Curriculum)

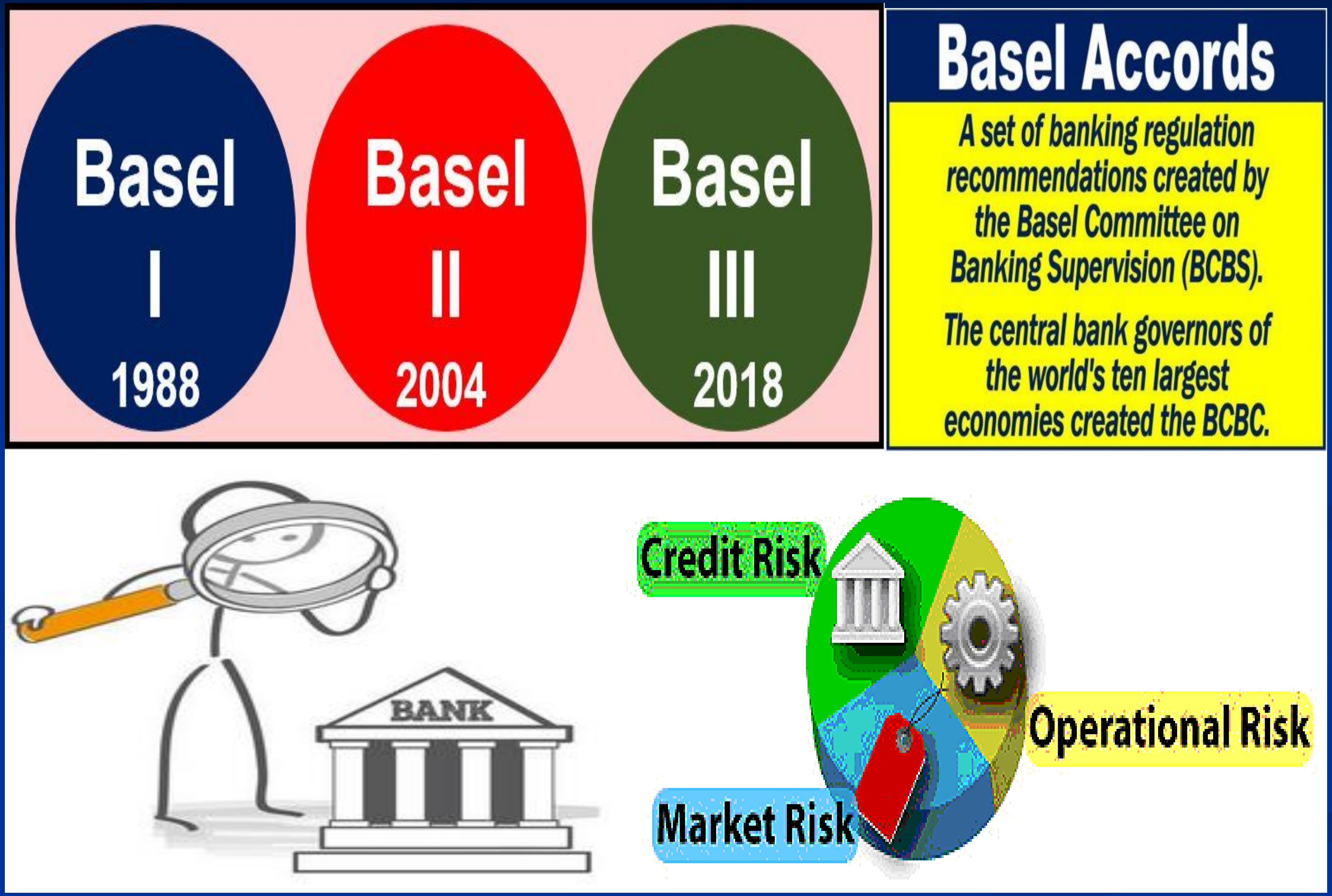
Major in Risk Management

Minor in Actuarial Studies



Life is full of risks, and the risks are costly!

Examples of Applications



Examples of Applications

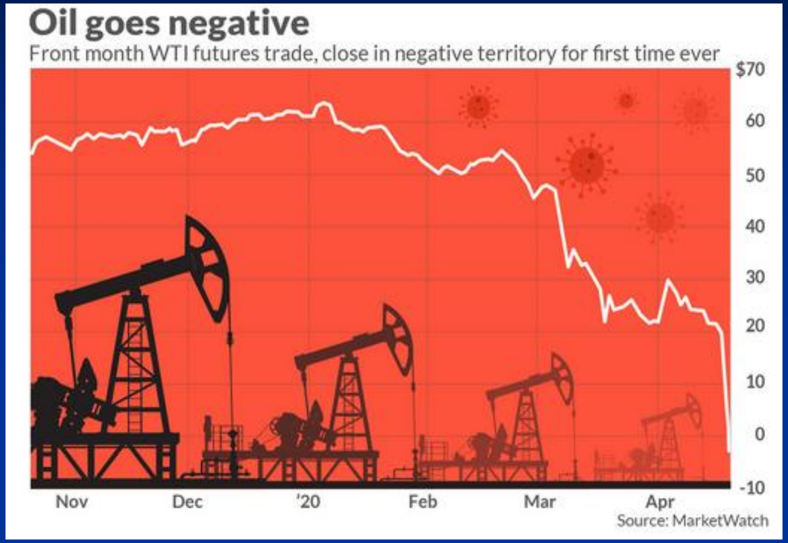
GARCH MODELS

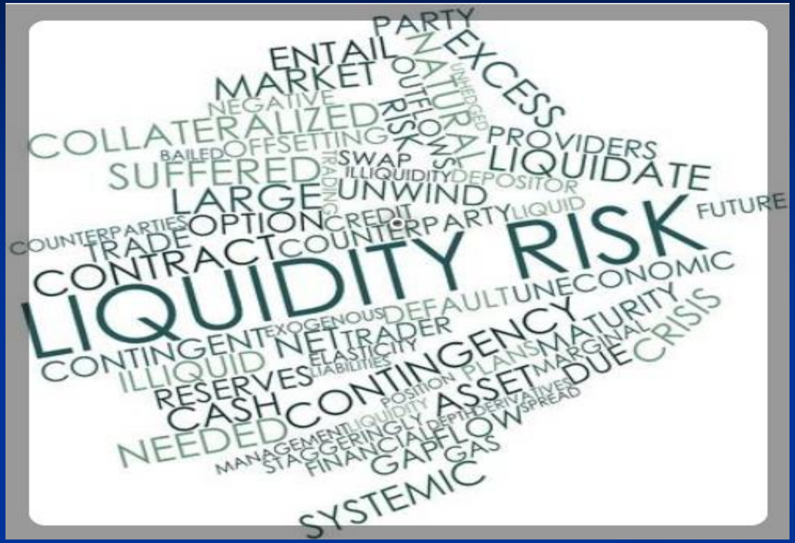
RiskMetrics Group

REALIZED VOLATILITY

Implied Volatility

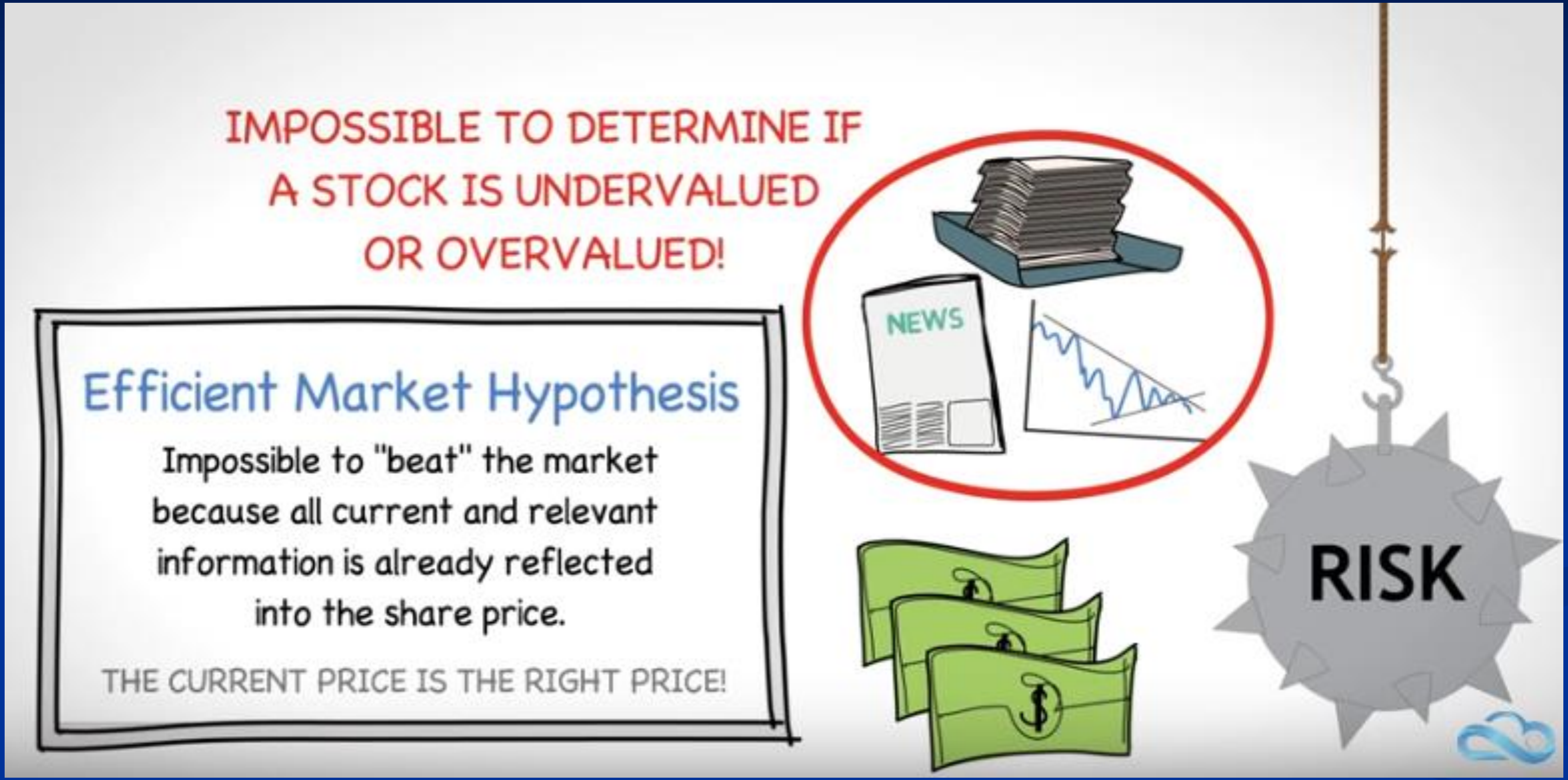
Examples of Applications





- A day trader who bought hundreds of oil futures contracts during its historic price crash last month was told he owed $9 million after a technology issue prevented his trading platform from displaying negative oil prices, Bloomberg reported on Friday.

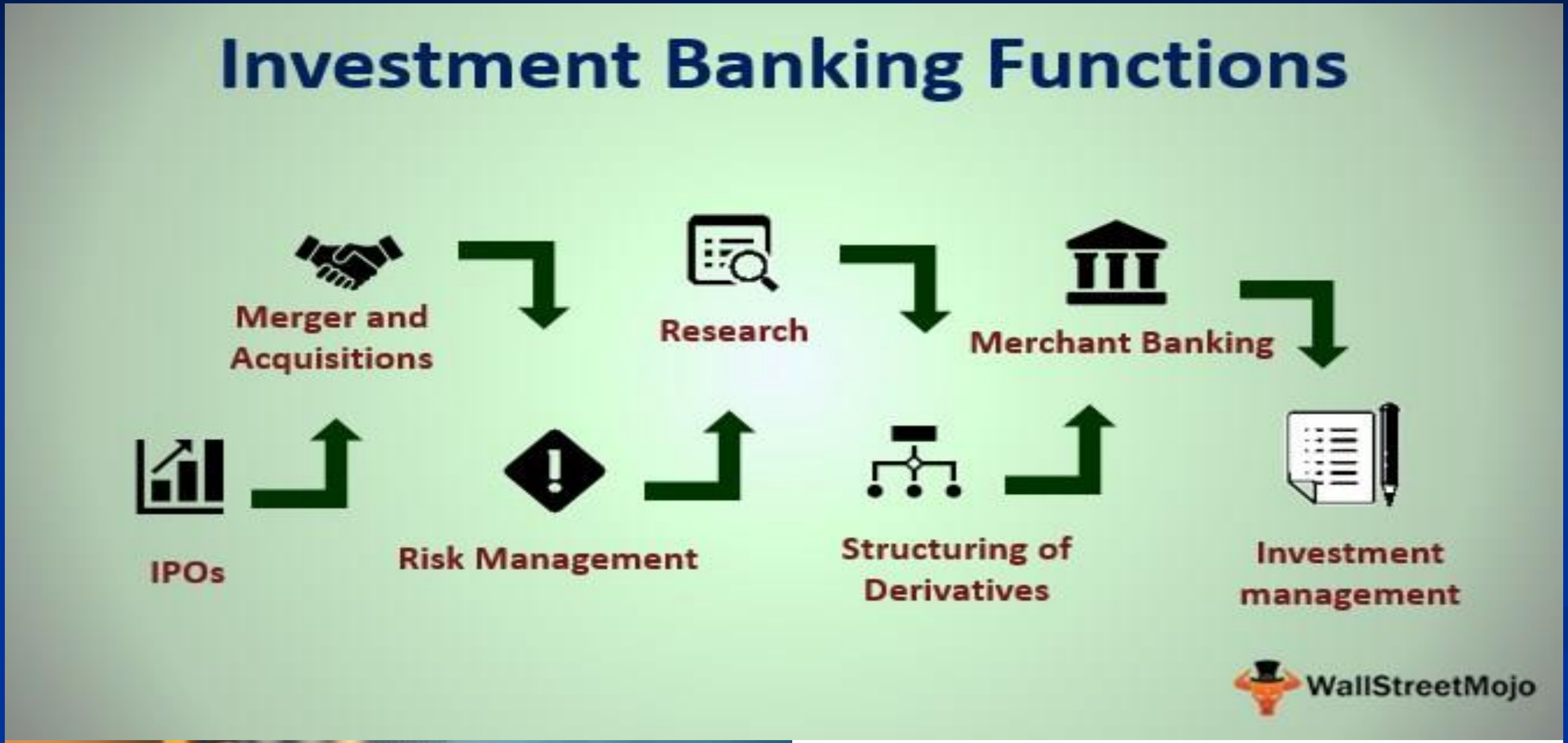
Examples of Applications

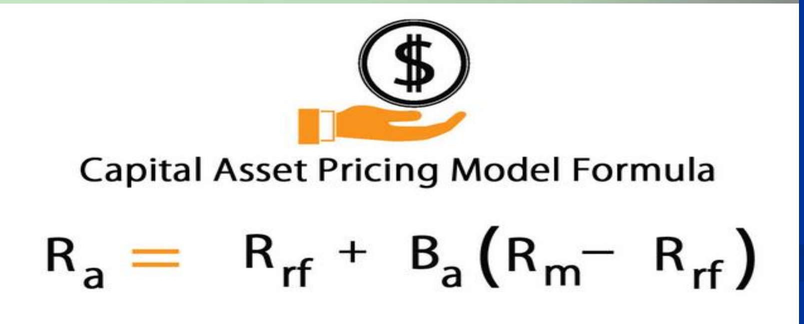


Q: Can the stock price be predicted?

A: It is predicted only when the market is not efficient.
----- by E. Fama (Nobel Laureate in Economics 2013)

Examples of Applications



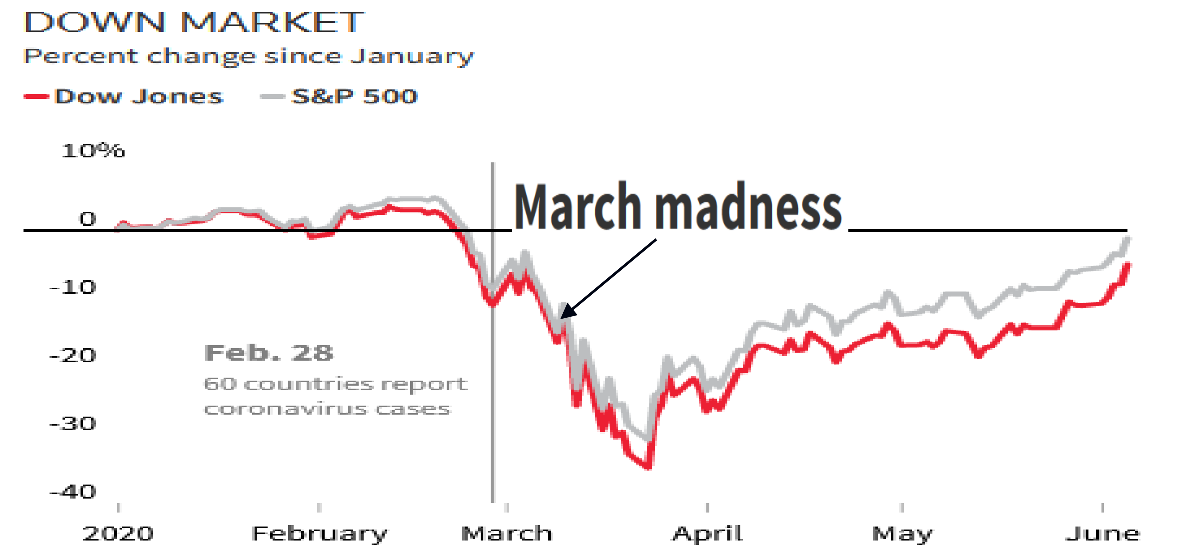


Examples of Applications

Q: What happened if the stock market fused four times in a single month?

Crazy but true!

A: Stress testing by using scenario analysis.



What do we need from your Mathematics?

- Set notation and theory
- Functions (*incl.* limits, continuity)
- Sequences, series
- Basic calculus (*incl.* partial differentiation, double integration)
- Vectors, matrices (basic operations)

Mathematical background adequate?

- Students must have level 2 or above in

  HKDSE Extended Module 1 or 2 of

  Mathematics

  or equivalent

- Otherwise, strongly advised to take

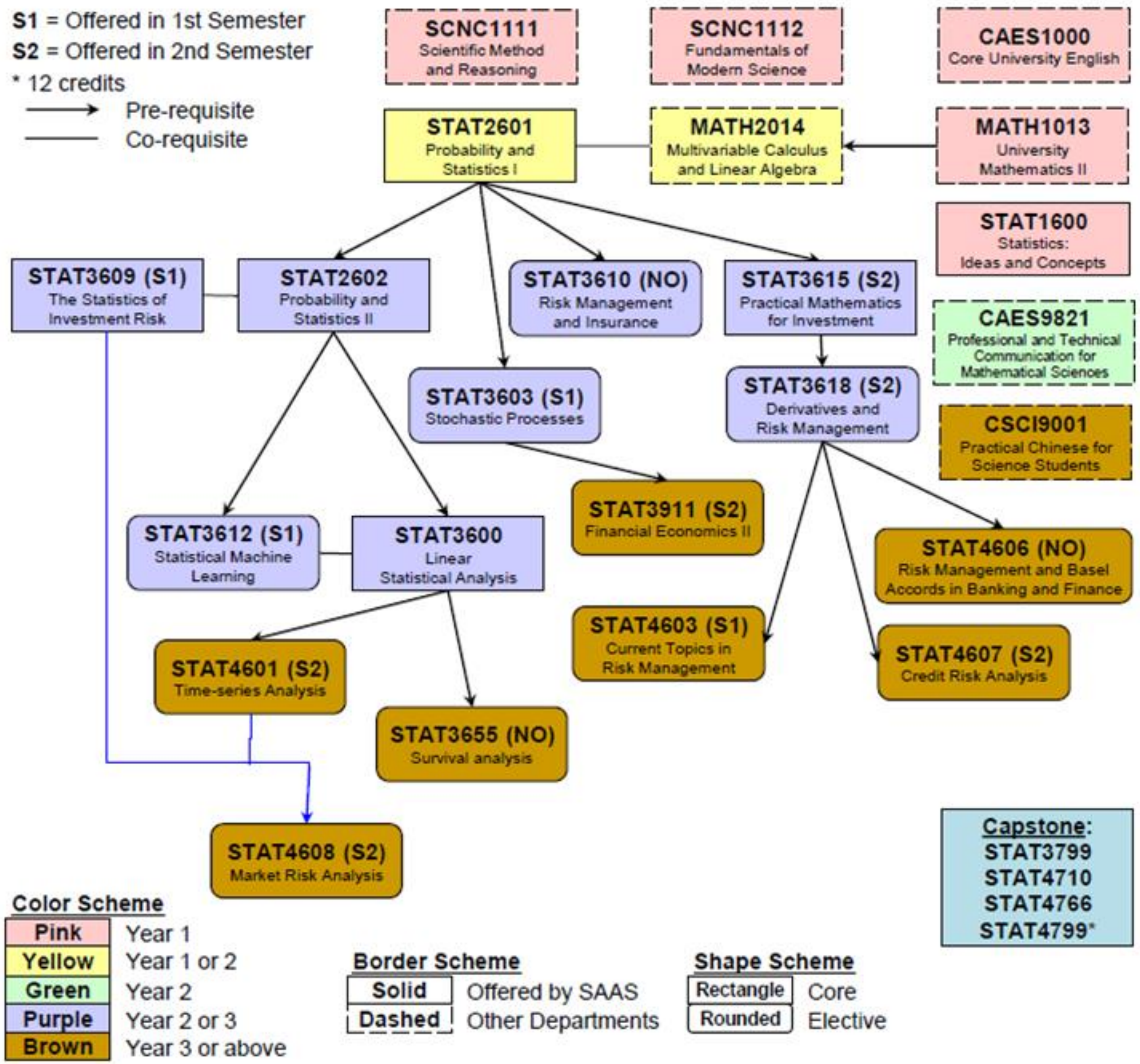
  MATH1011 University Mathematics I

  in Semester 1.

Suggested / Example Structure of BSc (Major in Risk Management) Curriculum

Year	One		Two	
Semester	One	Two	One	Two
Disciplinary Core	MATH1013 University Mathematics II STAT1600 Statistics: Ideas and Concepts	MATH2014 Multivariable Calculus and Linear Algebra	STAT2601 Probability and Statistics I	STAT2602 Probability and Statistics II STAT3615 Practical Mathematics for Investment
Science Foundation Courses	SCNC1111 Scientific Method and Reasoning	SCNC1112 Fundamentals of Modern Science		
Common Core	Six common core courses within the first three years			
Language	CAES1000 Core University English (offered in both semesters)		CAES9821 Professional and Technical Communication for Mathematical Sciences (offered in both semesters)	

Flow Chart of Disciplinary Courses for BSc Major in Risk Management



Major in Risk Management *vs* Major in Statistics

- All 7 introductory level courses <u>**SAME**</u>
- Advanced level core courses:

  <u>**1 SAME**</u>, <u>**3 DIFFERENT**</u>
- **Risk Management** –

  courses focus primarily on business-related topics: e.g.

  investment, insurance, finance, banking, etc.
- **Statistics** –

  courses cover wide range of topics with emphasis on

  "METHODS", their applications, and *underlying theory.*
- Students <u>**CANNOT**</u> double major or major/minor in

  Risk Management & **Statistics**
- For detailed curriculum structure, please refer to

  https://webapp.science.hku.hk/sr4/servlet/enquiry?frmid=MenuP

Reminder

- plan ahead
- watch out for pre-requisites of individual courses
- courses **<u>CANNOT</u>** be double-counted to fulfill different majors/minors

(exception for double major in Science:

<u>SCNC1111</u> & <u>SCNC1112</u> & <u>up to 12 credits</u> of compulsory courses

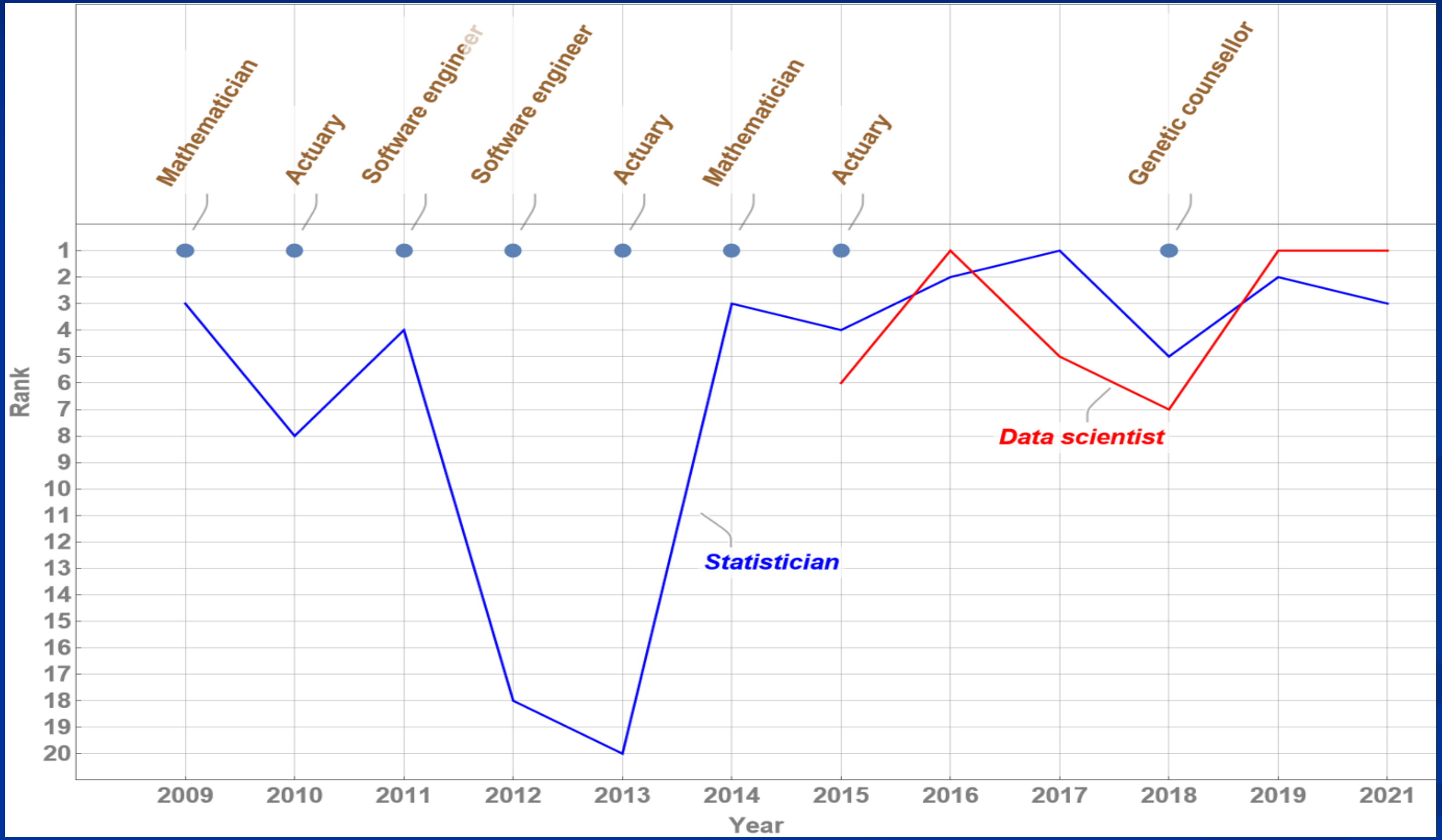
REQUIRED by both Science majors can be double-counted)

- consult course selection advisors if necessary


FRM Exam (Financial Risk Management Certification)
GARP
Global Association of Risk Professionals

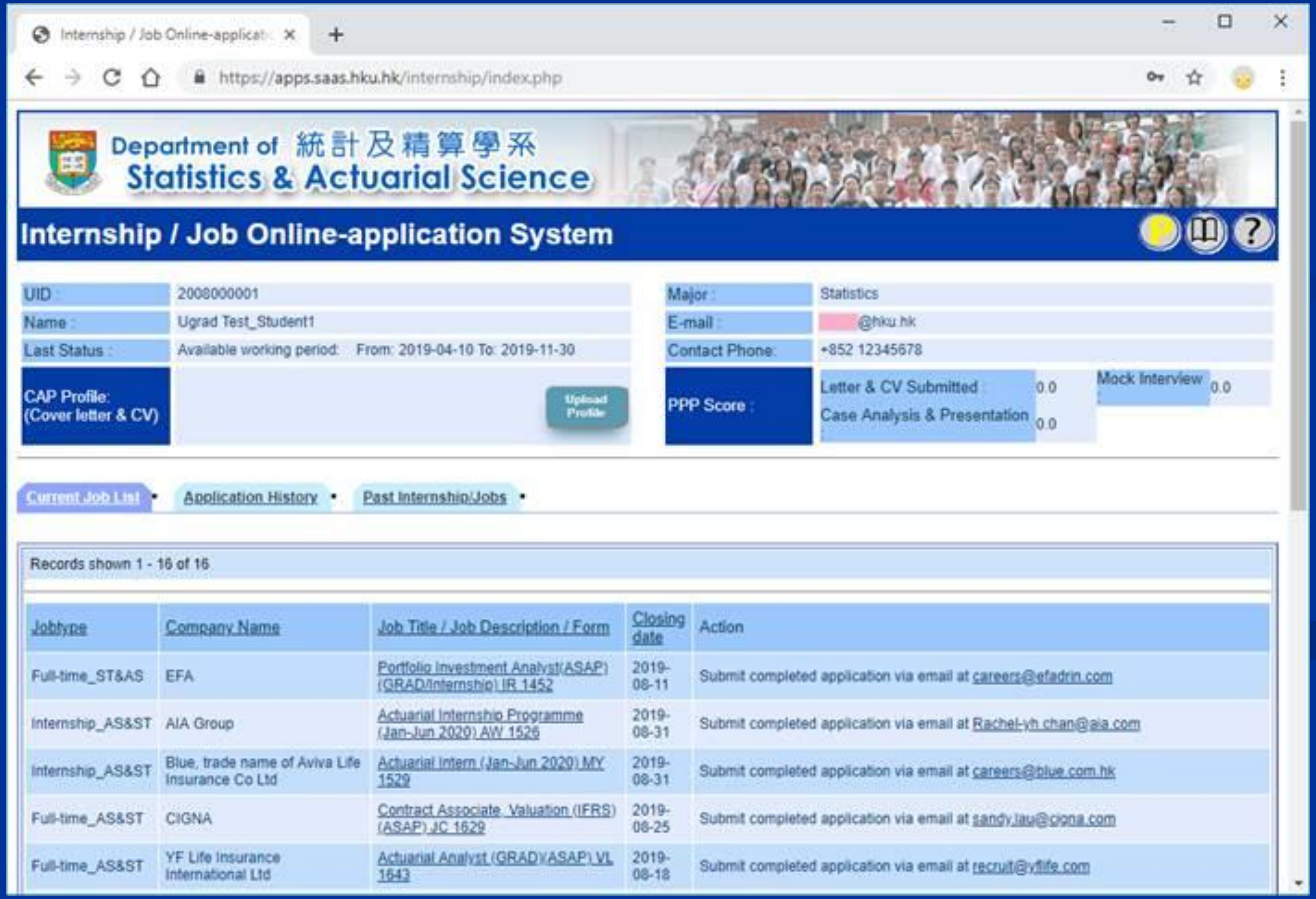

PRM (Professional Risk Manager)
PRMIA
The Professional Risk Managers' International Association
www.educba.com

https://www.careercast.com/jobs-rated/best-jobs-2021



Support from University and Department

- **HKU** : Centre of Development and Resources for Students
  - NETmatch, NETjobs, JIJIS (Joint Institutions Job Info. System)
- **Department** : Internship / Job Online Application System



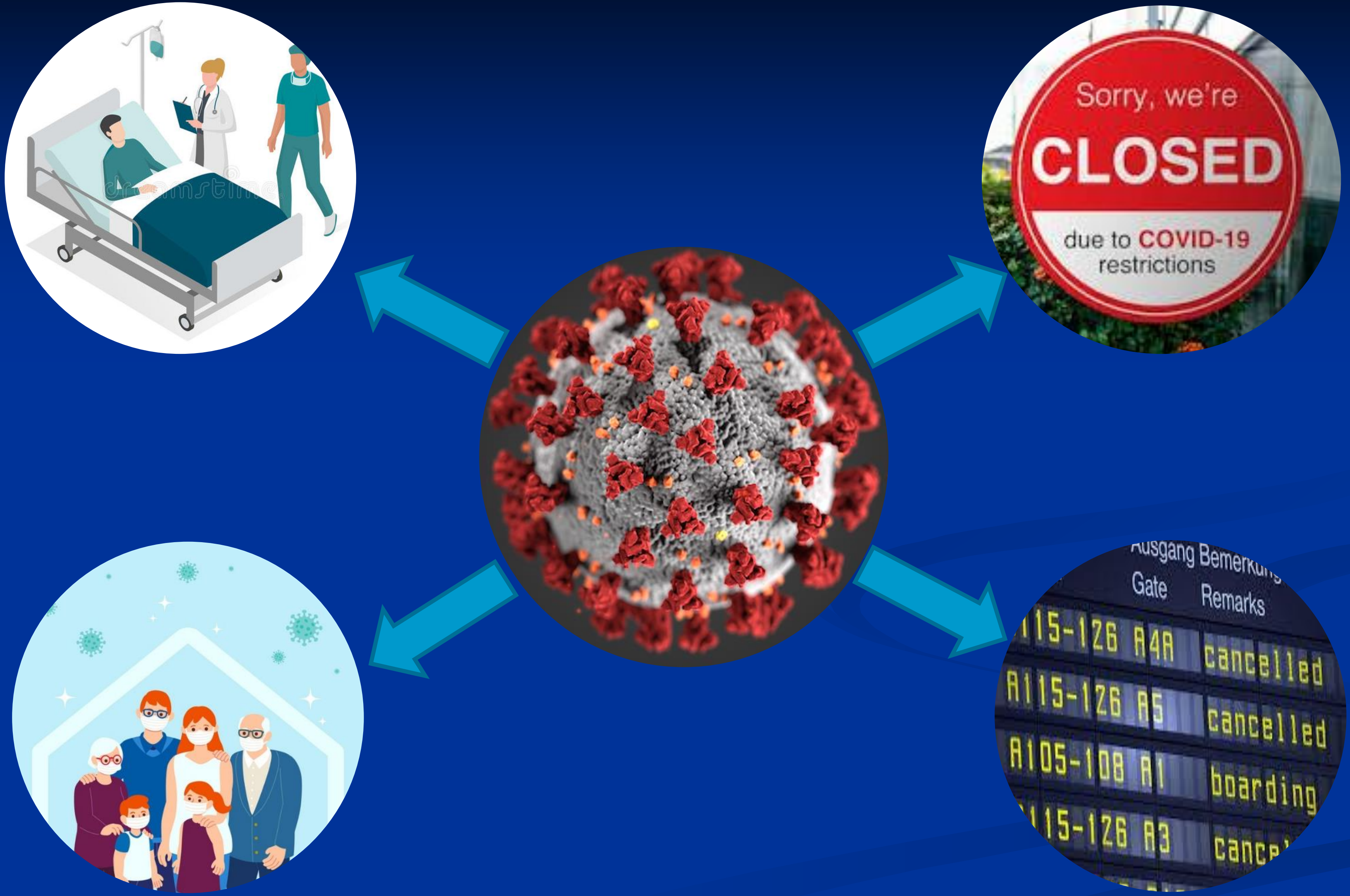
Contact person:
Dr. Eric LI
<internship-job@saas.hku.hk>

Career Development Training

- **Summer IT course:**
  - Essential IT skills (certificate course)
- **Career Advising Programme (CAP) to prepare students for:**
  - internships and job opportunities
  - advancing resume and interview skills

Minor in Actuarial Studies

Disciplinary Elective			
Introductory		Advanced	
MATH1013	FINA1310	STAT3612	STAT3615
STAT2601	STAT2602	STAT3901	STAT3904
STAT2604		STAT3906	STAT3908
		STAT3910	STAT3911
		STAT3953	STAT4903


Sorry, we're
CLOSED
due to COVID-19
restrictions
Ausgang
Gate
Remarks
115-126 A4A cancelled
A115-126 A5 cancelled
A105-108 A1 boarding
115-126 A3

Contact Persons

- Co-ordinator & Course Selection Adviser
  - Dr. K.P. WAT
- Credit Transfer
  - Dr. Chen WANG
- Tel: 3917 2466
- Email: ug_enquiry@saas.hku.hk