STATUTE AB16

DEGREE OF MASTER OF SCIENCE (FINANCIAL ENGINEERING)

1. For admission as a candidate for the degree of Master of Science (Financial Engineering), a person must -

(a) be a graduate of this University or such graduate of another university as the Academic Board may approve; and

(b) have had a minimum of two years relevant working experience after obtaining the first degree or such other qualifications approved by the Academic Board under the provisions of sub-paragraph (a) of this clause. Candidates without working experience but with excellent academic qualifications may also be considered for admission.

2. A person will be admitted to the programme either as –

(a) a full-time candidate, where the minimum and maximum periods of candidature are three and six trimesters respectively; or

(b) a part-time candidate, where the minimum and maximum periods of candidature are six and twelve trimesters respectively.

Each trimester consists of two mini terms of seven weeks each.

3. During the period of study, a candidate must pursue such subjects of study and take such examinations as may be prescribed by Regulations made by the Board of Graduate Studies on the advice of the Dean of the Nanyang Business School.

REGULATIONS MADE UNDER STATUTE AB16

Subjects of Study

1. The programme leading to the degree of Master of Science (Financial Engineering) comprises –

(a) 22 core subjects;

(b) 1 elective subject;

(c) a mini term of study at the Carnegie Mellon University (CMU), where 4 core subjects (out of the 22 core subjects) will be completed;

(d) (i) a Business Study Mission to financial centre(s) outside Singapore, through which candidates are required to submit a dissertation; or

(ii) a dissertation on a topic approved by the Dean of Nanyang Business School.
2. (a) The 22 core subjects are -

Mathematics Sequence
FE8501 Financial Mathematics I
FE8502 Financial Mathematics II
FE8503 Financial Mathematics III
FE8504 Financial Mathematics IV
FE8505 Optimization

Statistics Sequence
FE8601 Mathematical Statistics
FE8602 Modern Regression Analysis
FE8603 Time Series Analysis
FE8604 Simulation

Computer Science Sequence
FE8701 Computer Programming I
FE8702 Computer Programming II
FE8703 Computer Programming III
FE8704 Financial Modelling

Finance Sequence
FE8801 Asset Pricing Theory
FE8802 Financial Markets I: Fixed Income & Money Market
FE8803 Financial Markets II: Equity
FE8804 Financial Markets III: Derivative Securities
FE8805 Financial Markets IV: Interest Rate Derivatives
FE8806 Risk Management
FE8807 Advanced Risk Management
FE8808 Term Structure: Theory & Practice
FE8809 Financial Engineering Project

(b) The single elective subject shall be chosen from the following -

FE8901 Monetary Economics
FE8902 Corporate Finance
FE8903 Financial Accounting
FE8904 Genetic Algorithms
FE8905 Neuro & Fuzzy Computing
FE8906 E-Commerce

(c) For the first and second mini terms, candidates with sufficient background in the subjects offered may be exempted from one of the core subjects and take the substituted elective offered in that term.

3. All candidates doing a dissertation through the Business Study Mission will be required to conduct pre-trip research on issues in financial markets, institutions or products and submit a proposal for approval prior to the Business Study Mission trip. Candidates will also be required to submit a dissertation through the Business Study Mission within four weeks of the end of the Mission.
Examinations

4. A candidate will be examined in each of the subjects he offers in a mini term and will be permitted to proceed with the programme of study if he passes the examination in each of the subjects taken. A candidate who fails in any subject is required to attempt the examination in that subject again in the following mini term. In the case of failure in an elective, the candidate may, with the approval of the Dean of the Nanyang Business School, offer an alternative elective that is offered in the following mini term, which for this purpose will be deemed a repeat attempt in the original subject.

5. There will be no formal examinations for the following subjects:

- FE8701 Computer Programming I
- FE8702 Computer Programming II
- FE8703 Computer Programming III
- FE8704 Financial Modelling
- FE8904 Genetic Algorithms
- FE8905 Neuro & Fuzzy Computing

For FE8701 Computer Programming I, FE8702 Computer Programming II and FE8703 Computer Programming III, assessment will be based on programming assignments, projects and class presentations.

For FE8704 Financial Modelling, assessment is project based, application related and on class presentations.

For FE8904 Genetic Algorithms and FE8905 Neuro & Fuzzy Computing, assessment will be based on projects and in-class problem solving exercises.

6. A candidate who has not completed and passed at least twelve subjects since his admission to the programme will be dismissed if he has either –

(a) failed to obtain a pass after two attempts in any one subject; or

(b) failed in two or more subjects at any one examination during the mini term; or

(c) failed his first attempts in a total of four subjects since his admission to the programme.

7. A candidate who is prevented by illness from taking or completing the examination may be permitted by the Board of Graduate Studies to take the examination again at a subsequent mini term provided that the illness is reported to the Registrar and a medical report submitted to the Registrar within forty-eight hours of the candidate's absence from the examination.

8. For the period of study at the CMU, a candidate must complete the period of study and obtain such results to the satisfaction of the Dean of the Nanyang Business School. A candidate who fails to complete the period of study at CMU and has obtained results
not to the satisfaction of the Dean of the Nanyang Business School, will be deemed to have failed and be refused re-admission to the programme.

9. For the dissertation through the Business Study Mission, the preliminary proposal report will form part of the assessment for the final grade. A candidate who fails to submit a dissertation through the Business Study Mission to the satisfaction of the Dean of the Nanyang Business School, will be required to undertake another Business Study Mission.

10. The dissertation shall not exceed 15,000 words and shall be submitted for examination in accordance with the provisions prescribed in clause 10 of Statute 18 (Degrees of Master).

Exemptions

11. The Academic Board may grant such exemptions as it thinks fit from the requirements of these Regulations.