Guidelines for Comprehensive Examination Preparation

Master of Science Program in Financial Engineering

Qualifications of Students who are eligible to sit for the comprehensive examination

1. Students must complete the coursework of the program with not less than 3.00 grade point average.

2. The grade point average of core courses as shown below must not be lower than 3.00
       - FN 6001 Financial Econometrics and Forecasting
       - FN 6002 Financial Engineering
       - FN 6003 Financial Modeling
       - FN 6004 Financial Data Analytics

3. Students must submit the NIDA TEAP or TOEFL or IELTS result for the school.

Comprehensive Exam Schedule

Comprehensive exam will be conducted twice a year.
First time: Around March
Second time: Around August

Application Procedure

1. Students can apply online on the Education Service System website in the address http://reg.nida.ac.th
2. Students login to the system and click **Comprehensive Examination** menu for confirming the exam application. Then, students can print a bill payment.
3. Students can pay their bill payment at Bangkok Bank, Internet Banking and Counter service all branches.

    Fees are as follow:
- Comprehensive Examination fee   500 baht/exam
- Student status maintenance fee 2,000 baht/semester
- Payment fee according to charge of each channel

    In the event that students lack required qualification, they will not eligible to take the exam and receive a refund of Comprehensive Examination fee.

Topics and Content for Comprehensive Exam Preparation

The exam will consist of 8 questions. Students will be required to answer 4 questions only. The subject details are as follows:

Financial Econometrics and Forecasting (2 questions)

- Logistic regression and binary choice model, Panel data model, Characteristic of time series (stationary, unit root, autocorrelation), Testing for characteristic (unit root test, autocorrelation test), Model with time series characteristics (ARIMA, ARDL)

Financial Engineering (2 questions)

- Synthetic and contractual equations for forward loans, zero-coupon bonds, FRA, swaps, Repo, FOREX

Financial Modeling (2 questions)

- Forecasting of Macroeconomic and financial data, Volatility model (GARCH, Riskmetric), Value-at-Risk, Multi-factor model and application, Option Pricing Model and implied volatility

Financial Data Analytics (2 questions)

- Python library for data analytics, Machine Learning: Process and evaluation, Data preparation and handling, Feature extraction and features engineering, Application of machine learning model and performance evaluations

Criteria for Passing the Comprehensive Exam

Students must achieve a total score of at least 50 percent from the four exam questions.

Announcement of the Comprehensive Exam Results

Exam results will be announced within 45 days after the exam date (excluding holidays).

<u>To Request an Explanation of the Comprehensive Exam Results</u>, follow these steps:

1. Only students who did not pass the comprehensive examination at that time.
2. Write and submit a school form to request an explanation of comprehensive examination results within 30 days after the result announcement date at the education department, School of Development Economics ,14th floor, Navamindradhiraj Building.
3. Attend the explanation of the results on the date and time set by the examination committee.