FINANCIAL INFORMATICS COURSE MODULES

Get a strong foundation in IT training, reinforced with exciting modules from these three areas: Financial analytics, banking & finance and enterprise computing in the Diploma in Financial Informatics (FI).

Financial analytics is an increasingly important tool to financial institutions as it helps them stay competitive, identify new business opportunities and detect frauds.

In banking & finance, financial technology is also a growth area. Many financial institutions are using digital technologies to make disruptive changes to their product and service offerings as they compete to meet the growing demands of clients.

Enterprise computing refers to a category of mission-critical information technology that is used by companies including financial institutions to enable core business processes. Without it, companies will not be able to function properly.

In the first year, you will build a strong foundation of IT knowledge, focusing on coding, databases, computer operating systems and networks. Accounting will be taught as well.

In addition to these modules, you will start building your digital portfolios in your first year and continue this effort in your second year. Your portfolios will be useful as you apply for internship in your third year, where you will gain relevant real-world experience with leading financial institutions such as DBS, OCBC, UOB and MAS. You can also intern at FinTech start-ups, accelerators and incubators, with some of them based in London, Australia or South East Asia, as well as well-known IT companies such as SAP and Salesforce.

LEVEL 3.1

Applied Analytics
This module provides students with an introduction to unsupervised machine learning methods such as Clustering. Students are taught how these methods are used to segment customers for targeted cross-sell, up-sell and pricing. The module also introduces students to supervised machine learning methods such as Decision Trees and how these methods are used to predict customer churn, credit risk etc.

Open-source tools like R and/or Python will be used for data analysis and modelling. Students will also be exposed to enterprise analytics tools for interactive data visualization and data wrangling. Data from various domains (Retail, Banking & Finance, Telcos etc) will be used to provide students with an introduction to domain-specific analytics.

Banking Applications and Processes
This module aims to provide students with an overview of the business processes and transaction workflows in banking and financial institutions. The module begins with a look at the various organizational structures within different types of banking and financial institutions, and the roles and responsibilities of key front office and back office functions across various business lines. Students will subsequently explore the end-to-end workflow processes for banking and financial transactions, and their supporting IT applications and systems.

Fundamentals for IT Professionals III
This module provides a stepping stone to the students in their IT career. Students are given an insight into the infocomm industries and are kept abreast of the updates and the necessary skill sets required in their IT career path. They also have the opportunity to be exposed to the various institutes of higher learning to further enhance their skill sets.

LEVEL 3.2

Internship or Project
This module provides students with the opportunity to apply the knowledge and skills gained to develop an IT solution to solve a practical problem. Students may undertake an in-house industry-driven project, a Technopreneurship Enterprise project or a real-life IT project in a local or overseas organisation. These projects may include problem definition, requirements analysis, design, development and testing, delivery and presentation of the solution.

Through the project, students will learn to appreciate the finer points of project planning and control issues relating to IT project development.

COURSE CURRICULUM

Module Name	Credit Units
YEAR 3	
Level 3.1 (22 hours per week)	
Applied Analytics	4
Banking Applications and Processes	4
#	8
Capstone Project or 2 Elective Modules	
Fundamentals for IT Professionals III	2
Interdisciplinary Studies (IS) elective ^	2
Level 2.2 (24 hours per week)	
Internship	22

Notes:

^ For more details on Interdisciplinary Studies (IS) electives, please log on to www.np.edu.sg/is/ **IS**

Modules

The School of Interdisciplinary Studies (IS) delivers a broad-based curriculum, which nurtures a new generation of professionals with multidisciplinary skills and an innovative and entrepreneurial spirit to meet the challenges of a knowledge economy. IS offers both prescribed modules and electives to challenge boundaries. Prescribed modules develop students' competencies in core areas such as Communication, Innovation and Enterprise, Culture and Communication, and Personal Mastery and Development, while elective modules provide insights into Arts and Humanities, Business, Design, and Science and Technology.

The elective modules offered may change from year to year, depending on relevance and demand. They may also include modules available in other diplomas offered by the School.

ELECTIVES OFFERED BY DIPLOMA IN FI

Banking and Finance	Enterprise / IT	Analytics
Economics	Enterprise Resource Planning	Descriptive Analytics
Risk Management	Customer Experience Management	Predictive Analytics
Secure Software Development	Service Management	Quantitative Analysis
Banking Technologies and Operations	IT Outsourcing	Big Data
Financial Analysis & Modelling	User Experience	
Technologies for Financial Industry		