Stevens Institute of Technology

School of Business

**AACSB**

**ASSURANCE OF LEARNING PLAN**

**Master of Science in Finance**

**(MFIN)**

May 2023

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1. INTRODUCTION: MFIN ASSURANCE OF LEARNING PLAN

The Finance curriculum provides you with a rigorous study of the terminology, methods and application areas of economics, finance and financial technology. Classes will prepare you to apply technology for financial analysis, forecasting and management; assess the financial health of an organization; develop plans that address financial management needs of an organization; and lead business and technology teams.

**Core curriculum**

**Prerequisites**

Prerequisite courses are intended for students who do not have training or prior coursework in accounting, finance and statistics. Students who have passed the CFA level 1 exam are exempt from all prerequisites; students who have not passed the exam will work with their advisor to determine which courses they may waive.

* FIN 523 Financial Management
* FIN 500 Financial and Managerial Accounting
* BIA 652 Multivariate Data Analysis

A prerequisite course in business writing and communication also is required. This can be fulfilled through a MOOC.

**Economics core**

* FIN 616 Managerial Economics
* MGT 700 Econometrics

**Finance core**

* FIN 629 Fixed Income Analysis
* FIN 627 Investment Management
* FIN 638 Corporate Finance
* FIN 510 Financial Statement Analysis
* FIN 628 Derivatives

**Informational, Computational and Quantitative Core**

Choose any three of the following 1-credit lab courses.

* FE 511 Introduction to Bloomberg and Thomson Reuters
* FE 515 Introduction to R
* FE 517 Introduction to SAS
* FE 520 Introduction to Python

**Specialization**

A unique feature of this degree is the ability to customize the curriculum to best suit your career interests. Students can select from the concentrations below or, if desired, select four elective courses in any areas of their choosing, such as management science, financial engineering, mathematics, statistics and computer science.

**Investment Banking and Valuation**

Choose any four of the following courses.

* FIN 530 Investment Banking
* FA542 Time Series with Applications to Finance and Advanced Financial Econometrics
* FIN 688 Mergers, Acquisitions and Other Corporate Restructuring
* FIN 526 Venture Capital and Private Equity
* FIN 648 International Finance
* FIN 540 Sustainable Finance

**Financial Analytics and Risk**

* FA542 Time Series with Applications to Finance and Advanced Financial Econometrics
* FA 631 Investment, Portfolio Construction and Trading Analytics
* FA 636 Advanced Risk Analytics

You may also choose one of the following:

* BIA 656 Advanced Data Analytics and Machine Learning
* FE 590 Statistical Learning in Finance

**Wealth Management**

Choose any four of the following.

* FA542 Time Series with Applications to Finance and Advanced Financial Econometrics
* FIN 658 Wealth Management Principles and Practices
* FIN 550 Financial Planning and Risk Management
* FA 631 Investment, Portfolio Construction and Trading Analytics
* FIN 555 Retirement and Estate Planning
* FIN 540 Sustainable Finance

**Certified Financial Planner**

* FIN 555 Retirement and Estate Planning
* FIN 550 Financial Planning and Risk Management
* FIN 565 Financial Plan Development
* FIN 560 Federal Taxation of Individuals

**Capstone experience**

The capstone consulting experience at Stevens ensure you are able to apply your new skills in tacking a real industry problem for a partner company. Working with a team of students, under the guidance of a faculty advisor, you'll meet with managers in the finance industry to frame a finance problem, then devise and present a formal solution to leadership. The capstone consists of two courses:

* MGT 808 Consulting Training Course (not for credit)
* MGT 809 Industry Capstone Experience

2. Overview of MFIN ASSURANCE OF LEARNING PLAN

|  |  |  |
| --- | --- | --- |
|  | **Credits** | **Courses** |
| **MFIN Degree Requirements** | 36 | 12 |
|  |  |  |

**School of Business and MFIN Vision Statements**

**School of Business Vision**

We will be leaders in the creation and dissemination of knowledge that drives successful innovation in products, processes and businesses.

**Master of Science in Finance** **(MFIN) Vision**

We will be recognized as a worldwide leader in graduate education for quantitative and technologically advanced applications in the field of finance.

**MFIN Competency goals**

The Competency goals for the MFIN program are listed in Table 1.

**Table 1: MS in Finance Competency goals**

|  |
| --- |
| **MS in Finance Competency goals** |
| MFIN - 1: Students can communicate effectively in written and oral presentations. |
| MFIN - 2: Students can interact effectively in teams. |
| MFIN - 3: Students will achieve mastery of the technical and basic quantitative methods required for the Finance domain. |
| MFIN - 4: Students are able to implement financial solutions to improve the performance of financial or non-financial businesses. |

3. MFIN ASSURANCE OF LEARNING ASSESSMENT PLAN

**Table 2: MFIN ASSURANCE OF LEARNING ASSESSMENT PLAN**

| **COMPETENCY GOAL** | **Where and when measured?** | **How measured?** | **Criterion** |
| --- | --- | --- | --- |
| 1. Students will communicate effectively in oral and written presentations.   Responsibility: Suman Banerjee | Assessed in the Spring semester in FIN 629. Students submit short essays online; students receiving an unsatisfactory grade are required to take an online writing tutorial. | Student presentations are videotaped; student essays are assessed by professionals in CAL. Feedback is provided to each individual student.  Indirect measurement: evaluate some of student projects by an external fixed income expert | For both the oral and written test, 80% of students must receive a grade of “A” or “B”. Students receiving “C” or “D” grades are given remedial training. |
| 1. Students will be able to interact effectively in teams   Responsibility: Emmanuel D. Hatzakis | Assessed in the Spring semester in FIN 627 | Team performance questionnaires are administered online.  Indirect measurement: evaluate student projects by external investment professional | Students must show a demonstrated ability to work in teams, with varying degrees of preparation, on problems of varying levels of structure and complexity. |
| 1. Students will achieve mastery of the technical and basic quantitative methods required for the Finance domain.   Responsibility: Dragos Bozdog | Assessed in the fall semester in FE 511 | Measured by student performance on assignments and final project.  Indirect measurement: surveys and/or testimonials of how students will have used the knowledge, skills and tools gained in the course in the jobs they get after they graduate | 85% of students get a grade of GOOD or better as measured by the rubric for this competency goal |
| 4.Students are able to implement financial solutions to improve the performance of financial or non-financial businesses.  Responsibility: Anand Goel | Measured in the Fall semester in FIN 638 | Measured by student performance on the midterm and/or final exam.    Indirect measurement: surveys and/or testimonials of how students will have used the knowledge, skills and tools gained in the course in the jobs they get after they graduate | Students with a grade of B or higher based on the assignments in the course meet the competency goal. |

4. MFIN CURRICULUM ALIGNMENT MAP

**Table 3: MFIN Curriculum Alignment Map**

| **Goals/**  **Required MFIN Courses** | **1: Students can communicate effectively in oral and written presentations.** | **2: Students can interact effectively in teams** | **3: Students will achieve mastery of the technical and basic quantitative methods required for the Finance domain.** | **4: Students are able to implement financial solutions to improve the performance of financial or non-financial businesses.** |
| --- | --- | --- | --- | --- |
| BIA 652  Feng Mai / Khasha Dehnad | Final projects require students to write a project report. | Students have the option to work in teams for their final project. | Class assignments include the application of fundamental statistical methods for Finance. | Students develop competency in using Excel and Python to solve finance-related problems. |
| BIA 656  German Creamer | Students are required to submit a written report and to present their research results. | Students work in teams to find and deploy business solutions based on analysis of large and heterogenous datasets. | Student identifies and understands machine learning methods involved in the analysis of large and heterogeneous data sets | Student adapts and/or applies time series and/or machine learning methods to analyze and identify solutions for business problems |
| FE 511  Agathe Sadeghi | I have seen the written since the final project was just handing a report over and did not have presentation. |  | Students employ a variety of technical and quantitative methods using financial databases, such as Bloomberg, and Thomson-Reuters |  |
| FE 535  Majeed Simaan | While students are required to work on three mini projects over the semester, the presentation is mainly written. Nonetheless, I do cover case studies and encourage participation. There are a lot of variability among the written skills. Some tend to be more technical and more qualitative. | Indeed, since the very first class, the students are split into 10 teams. These allocations are eventually fixed over the semester to work on the three mini projects. In addition to the work-related topics, I do encourage the students to learn more about their teammates and engage in a social activity to enhance the communication and effectiveness. | In addition to aligning the course content with GARP and, hence, the FRM certificate, the students are expected to perform computations and work with data. I do encourage them to enhance/develop their coding skills. To assist the students to achieve so, I provide a number of scientific vignettes that I have written myself over the semester. Additionally, I provide a one voluntary hour tutorial to help achieve so. | I try to my best to keep the class practical and to provide real-life case studies. I cover both the how and why the questions. The why helps the students understand the relevance of the materials to the real world. |
| FIN 510  Elaine Henry | Students are assigned 4-6 case study work projects per semester. Each requires written narrative and oral presentation, in addition to qualitative and quantitative analysis of financial information. | See Case Studies, Item #1, left. Students are assigned individual tasks but work together and present as teams. They are evaluated both individually and as a team. | Entire substance of course deals with mastering techniques of financial reporting and reading and critically analyzing financial statements and related information. Students make liberal use of SEC EDGAR database, and other resources of financial information-Bloomberg, Marketwatch, Morningstar, etc. | Students are assigned case studies of failing or troubled companies and asked to suggest changes and corrective strategies and actions. Students are also asked to analyze subject companies as potential investors, creditors, vendors/customers and executive employees. |
| FIN 530  Vasileios Katsikiotis | Students participate in a class simulation where they act as analysts of a certain industry/sector. They make in-class presentations in front of their peers and/or guest lecturers. | Every student is a member of an industry analyst team and makes contributions to team projects and group assignments. | Students have a broad overview of investment banking, a global business. In addition, each student creates an advisory report with M&A recommendations and other corporate actions. Students use this report as a key self-marketing product when they are ready to join the job market. | Every student is assigned to be the analyst advisor of a single company and is tasked to deliver a set of recommendations and industry comparisons in his report to the client. Students love the opportunity to own a recommendation based on quantitative and fundamental analysis. |
| FIN 540  Balbinder Singh Gill | Students are expected to come prepared to discuss the material assigned for each class. Students’ class participation is crucial to successful learning. I promote active class participation that makes the class discussion lively and exciting.  Students work in teams to evaluate the long-term economic and financial profitability of a corporate investment project that reduces the quantity of greenhouse gas (GHG) emissions that were produced because of the company’s operations in Excell. They are required to build a financial model by using Excel.  Students are also required to write a report about a selected topic in sustainable business and climate finance. Each group will also put together a well-organized presentation about the important findings of their report. The students have to present the report for the entire class of students. | Teams are assembled early in the semester and require ongoing collaboration to prepare the final team deliverable. I require all the teams to coordinate and meet outside of normal class sessions. Teams are also used to complete the evaluation of the long-term economic and financial profitability of a corporate investment project that reduces the quantity of greenhouse gas (GHG) emissions that were produced because of the company’s operations in Excell. | Students will understand and discuss current developments and trends in sustainable finance.  Students will be able to distinguish between several types of sustainable finance products and relevant eligibility criteria.  Students will be able to identify opportunities for corporations to issue green bonds and green loans.  Student will understand and discuss several different sustainable investment strategies.  Students will be applying sustainable finance mechanisms to a real-life investment case study.  Students will be able to discuss opportunities, challenges, and enabling conditions for corporations to benefit from growing sustainable investment opportunities. | My classes includes applied case studies and presentations by industry professionals that integrate class material with real life decisions.  Through the extensive use of guest lectures, and applied cases , students are able to apply various advanced financial techniques to address important financial problems in the domain of sustainable finance.  The final project is a group assignment that studies an important topic in sustainable finance and climate finance that is analyzed by using relevant financial data and analysis. |
| FIN 545  Paul Rohmeyer | Students work in teams to analyze a recent financial cybersecurity incident, prepare a presentation deliverable. Additionally, each student presents their Final Paper during a class session. Student activity during class is expected and included as part of the course participation grade. | Teams are assembled early in the semester and require ongoing collaboration to prepare the final team deliverable. Teams are required to coordinate and meet outside of normal class sessions. | Technical financial systems security topics are addressed in every class session, with discussion of the flow of financial transactions through the systems. Individual and team assignments are used to assess student learning. | Students are prepared to establish cybersecurity solutions for financial systems, incorporating considerations of technology, business process, and transaction processing. The Final Paper is an individual research assignment that studies an emerging topic that is analyzed and applied to the financial systems context. |
| FIN 560  James  Biagi  (No enrollments currently) | Students are asked to participate in case study discussions regarding the preparation and filing of a federal individual income tax return. | Students are encouraged to form informal teams to work on the class assignments. | Students use online learning software and tax preparation software to prepare and analyze a federal individual income tax return. | Students are asked to participate in assignments that consider and apply various tax planning strategies. |
| FIN 500  Little or no MFIN enrollments | Students are asked to participate in case study discussions regarding ethical issues related to the accounting profession. | Students are encouraged to form informal teams to work on the class assignments. | Students use online learning software to prepare and review financial statements. | Students participate in activities designed to allow them to determine how to use accounting information to make business decisions and to assess financial performance. |
| FIN 515  Little or no MFIN enrollments  Only other programs |  |  |  |  |
| FA 542  Dragos Bozdog or  Pallavi Pal | The course includes multiple oral presentations and written report submissions. | The course includes team-based projects and paper presentations. | Students learn employ a variety of quantitative methods to real world financial time series data using R program. | Students must perform a real-world financial time-series and forecasting analysis using econometrics techniques. |
| FIN 523  Victor Luo | Grade evaluations are partly based on in-class presentation and a final written project report. | Students are encouraged to form informal study groups to work on weekly homework assignments. | Students can derive mathematical pricing formulas for various financial products. | Students can use risk management techniques, measure their effectiveness and identify the practical challenges associated with their application. |
| FIN 526  Stefano Bonini | Students are required to work on two group projects focused on assessing the viability of a VC/PE investment and the valuation of a deal. Reports are due in written form and presented orally by the entire group. | Groups are formed randomly and shuffled between the two projects. Reports and presentations explicitly assign value to the quality and effectiveness of teamwork | The course is designed with a very hands-on, applied curriculum that leverages also on external industry speakers. Students are also given a rich portfolio of financial tools developed by the instructors and identical to the ones used in the industry. | At the end of the course students will be adequately prepared to successfully perform advanced analyst and or investment manager tasks in the VC and PE market. These tools are applicable however also from an entrepreneur standpoint to self-assess their own or independent transactions. |
| FIN 627  Emmanuel Hatzakis | Final project report should be appropriately written for a corporate environment and students discuss its results in class. | Students conduct an investment group project in which they apply the techniques explored in class. | Students solve financial problems that improve their analytical capacity to test investment strategies. | Students analyze financial series and corporate information to  develop and test investment portfolios. |
| FIN 628  Emmanuel Hatzakis | Students explore hedging strategies using derivatives and discuss case studies. | Students, organized in informal teams, solve class assignments. | Students use quantitative tools to design pricing models and econometric techniques in formulating hedging strategies. | Students employ hedging strategies in order to manage risk. They also price derivatives and design speculative trading strategies using various financial instruments. |
| FIN 629  Suman  Banerjee | Students evaluation is, among others conducted through in-class case presentations and a final written report. | Team performances are assessed competitively, against rubrics appropriate to each problem. |  | Students apply rigorous tools on public and private firms data to critically assess the viability of an investment both from the investor and the firm perspective. |
| FIN 638  Anand Goel | Oral communication by students is facilitated in class discussions of case studies. Written reports for case studies and feedback on these reports helps students improve written communication. | Students are encouraged to discuss problem sets with classmates. Case studies are group projects where students need to collaborate. | Established basic technical and quantitative results form the core of the class. Class examples and problem sets help students understand and apply financial concepts. | Students discuss contemporary corporate financial events and the applicability of the concepts learned in the class to those events. Students work in groups to analyze complex business cases, identify the issues and problems along with the feasible alternatives. They apply financial theory and perform quantitative analysis to make qualitative and quantitative recommendations. |
| FIN 658  Emmanuel Hatzakis | The backbone of the course is a team-based case study in multiple installments that concludes with a professional grade final project presentation. | Students conduct a wealth management group project in which they apply the principles and practices explored in class. | Students solve financial problems that improve their analytical capacity to test wealth management strategies. | Students analyze financial series, corporate information and client goals to develop and test wealth management client portfolios. |
| FIN 703  Alexander Rodivilov | The course includes multiple oral presentations and written report submissions. |  | The course covers scientific foundations for understanding the dynamics of asset prices equilibrium and corporate strategies in financial markets. |  |
| FIN 704  Victor Luo | Students conducted applied research using empirical methods taught in class and wrote up the results in the format of an academic publication. |  | Students learned econometric methods, including multiple regression analysis, Instrumental variables approaches, Probit and Tobit methods. |  |
| FIN 616  Alexander Rodivilov |  |  | Students learned the fundamentals and micro and macroeconomics, which are basic to understanding how the economy works and to be able to communicate with others in industry. Micro and macro analysis is also necessary for understanding the market forces that impact stock values. |  |
| MGT 700  Pallavi  Pal | The course includes multiple oral presentations and written report submissions. | The course includes team-based projects and paper presentations. | Students learn employ a variety of quantitative methods and computer-based techniques to process financial and economic data using Stata. | Students must perform a real-world economic and financial data analysis using econometrics techniques |

**Ethics Thread**

The MS in Finance Program also takes great effort to address the importance of Business Ethics. The following table shows the courses where ethics is explicitly addressed.

|  |  |
| --- | --- |
| **Goals/** | Students are aware of social responsibilities in a business environment and can reason about ethical issues. |
| **BIA 656 – Statistical Learning and Analytics** | Class discussion on data privacy and data collection ethics. |
| **FE 511 – Introduction to Bloomberg and Thomson Reuters** |  |
| **FE 535 – Introduction to Financial Risk Management** | Students are expected to become familiarized with a number of classic case studies. These cases cover topics related to risk culture, conflict of interests, moral hazard related to excessive risk taking, and regulatory loopholes. |
| **FIN 510 – Financial Statement Analysis** | Course delves deeply into legal/regulatory environment of financial reporting and. Course material, lectures and discussion address ethical issues, ethics codes, best practices, etc. Case studies require students to discuss ethical lapses and responses of regulators and legal system, and are asked to suggest preventative action, both within and without the company, to prevent such lapses. |
| **FIN 530 – Investment Banking** | Students master topics that often give rise to conflicts of interest and unethical conduct in investment banking. They learn about 1) fiduciary duty, 2) proprietary information (Chinese wall, restricted list of companies on which an ongoing investment banking project is active) between bankers and traders, 3) keeping their personal trading/investing account under surveillance and monitor by their employer. |
| **FIN 540 – Sustainable Finance** | This course introduces students to sustainable finance. In this course, sustainable finance is understood as the process of ensuring the inclusion of environmental, social, and governance (ESG) considerations into corporate decisions. A sustainable corporation will make their investment decisions that consider not only financial returns but also its social impact. Our textbook provides a clear and expert discussion of the principles of sustainable business based on “growing the pie” principle. By focusing on “growing the pie” as a corporate objective, the sustainable businesses can create shareholder values as well as stakeholder value.  This course provides the students with a solid foundation and introduction to this most important topic. Students taking this course will not only have the knowledge about sustainable finance they need, but the understanding to put that knowledge to practical use. This course will answer many fundamental questions about sustainable finance including the following: (1) What is sustainability and the social impact of corporations? and (2) What are the challenges to corporations in dealing with climate change? |
| **FIN 545 – Risk Management for Financial Cybersecurity** |  |
| **FIN 560 – Federal Taxation of Individuals** | Case study exercise and in-class discussion include review and application of the CFP Standards of Professional Conduct, AICPA Code of Professional Conduct, IRS Circular 230 and applicable civil and criminal provisions of federal tax law. |
| **FIN 500 – Financial and Managerial Accounting** | Case study exercise and in-class discussion include review and application of the AICPA Code of Professional Conduct. |
| **FIN 515 – Financial Decision Making** |  |
| **FA542 Time Series with Applications to Finance and Advanced Financial Econometrics** |  |
| **FIN 523 – Financial Management** |  |
| **FIN 526 – Venture Capital** |  |
| **FIN 627 – Investment Management** | Case study review and in-class discussion include ethics: best practices, and lapses, and how regulation drives ethical and professional conduct, or responds to emerging ethical challenges in investment management. |
| **FIN 628 – Derivatives** | Students are asked to review case studies and participate in discussions in class on failures in the use of derivatives and regulatory lapses, as well as make recommendations on how these could have been prevented through more ethical conduct and a better regulatory framework and supervision. |
| **FIN 629 – Fixed Income** |  |
| **FIN 638 – Corporate Finance** | Introduction to corporations discusses separation of ownership and management, conflicts between multiple stakeholders, agency conflicts, role of incentives, goal of corporation, corporate social responsibility, and externalities. |
| **FIN 658 – Wealth Management: Principles and Practices** | Students are asked to review case studies and participate in discussions in class on the ethics aspect of various situations in the Wealth Management Advisor-Client relationship, as well as make recommendations on how these could have been prevented through more ethical conduct and a better regulatory framework and supervision. |
| **FIN 703 – Microeconomic Theory** |  |
| **FIN 704 – Econometrics** |  |
| **FIN 705 – Asset Pricing Theory and Applications** |  |
| **FIN 708 – Corporate Finance Theory and Applications** |  |
| **MGT 700 – Econometrics** |  |

**Global Thread**

**Another thread that runs through the MS in Finance Program are global considerations. Following is a chart that maps our courses to global coverage using the legend below.**

**Legend**

 – Entirely Global Content

 – Significant parts are global

 – Some global content

|  |  |  |
| --- | --- | --- |
| **Course** | **Legend** | **Notes** |
| **BIA 656 – Statistical Learning and Analytics** |  | Most topics covered are global, some datasets used in the analysis are based on US economic activity. |
| **FE 511 – Introduction to Bloomberg and Thomson Reuters** |  |  |
| **FE 535 – Introduction to Financial Risk Management** |  | The case studies covered in the class are global. They draw implications on the failures of risk management that took place globally. Additionally, managing risk using forwards/futures covers topics related to exchange rates and international trades. |
| **FIN 510 – Financial Statement Analysis** |  | Entire course is structured around an international perspective, emphasizing both US and international financial reporting platforms (GAAP and IFRS), and comparing and contrasting same. Course also focuses on various major national financial reporting requirements and how international companies address multi-national reporting obligations. |
| **FIN 530 – Investment Banking** |  | Investment Banking is a global business |
| **FIN 540 – Sustainable Finance** |  | For international investors and policymakers, sustainable finance has emerged as a major area of interest. The guest lectures, textbook, and applied cases covered in the class are global. |
| **FIN 545 – Risk Management for Financial Cybersecurity** |  |  |
| **FIN 560 – Federal Taxation of Individuals** |  | Conduct a review of issues related to the U.S. federal taxation of foreign source income. |
| **FIN 500 – Financial and Managerial Accounting** |  | Compare and contrast U.S. Generally Accepted Accounting Principles with International Financial Reporting Standards. |
| **FIN 515 – Financial Decision Making** |  |  |
| **FA 542 – Time Series with Applications in Finance and Advanced Financial Econometrics** |  | Students are introduced to a wide range of finance-related time-series (e.g., financial, commodities, and macro variables), which are mainly global in nature. |
| **FIN 523 – Financial Management** |  | Several topics address unique challenges faced by multi-national corporations. |
| **FIN 526 – Venture Capital** |  |  |
| **FIN 627 – Investment Management** |  | Several topics address investment management of global portfolios. |
| **FIN 628 – Derivatives** |  | Trading in futures, forwards and swaps is predominantly global; options trading is treated as mostly U.S.-based in the course. |
| **FIN 629 – Fixed Income** |  |  |
| **FIN 638 – Corporate Finance** |  | Concepts covered in the class are global in nature. Institutional details, a minor but essential part of the course, are U.S. focused. International finance topics are covered if time is available. |
| **FIN 658 – Wealth Management: Principles and Practices** |  |  |
| **FIN 703 – Microeconomic Theory** |  |  |
| **FIN 704 – Econometrics** |  |  |
| **FIN 705 – Asset Pricing Theory and Applications** |  |  |
| **FIN 708 – Corporate Finance Theory and Applications** |  |  |
| **MGT 700 – Econometrics** |  | Students may get exposure to some global data such as GDP, exchange rate, unemployment, and pollution across different countries. |

5. MFIN COMPETENCY GOALS, OBJECTIVES AND RUBRICS

**Table 4: MFIN Competency goals, Objectives and Rubrics**

Note: Goals 1 and 2 are common to all School of Business degree programs.

|  |  |
| --- | --- |
| **MFIN - 1** | **Competency goal, Objectives and Traits** |
| **GOAL** | Our students will communicate effectively in writing and oral presentations. |
| **Learning Objectives** |  |
| **Objective 1:** | *Students will be able to write effectively* |
| **Traits** |  |
| Trait 1: | Logical flow |
| Trait 2: | Grammar and sentence structure |
| Trait 3: | Spelling and word choice |
| Trait 4: | Development of ideas |
| **Objective 2:** | *Students will be able to deliver presentations effectively* |
| **Traits** |  |
| Trait 1: | Organization and logic |
| Trait 2: | Voice and body language |
| Trait 3: | Use of slides to enhance communication |
| Trait 4: | Ability to answer questions |
| Trait 5: | Content |

**Explanation for indirect measurements:**

Indirect measurements will be taken at periodic intervals. Depending on the measurement chosen a diagnostic tool will be selected for analysis.

An effective method for obtaining indirect observations is asking industry practitioners to serve in the judging panel of team project presentations and provide feedback both during the final presentations session and later in written or oral form. Such feedback is valuable to students, as it gives them the opportunity to improve their presentation, teamwork and leadership skills, and to the instructor, who has the opportunity to improve the process of managing the project from the initial stages to the final presentation.

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**Table 4: MFIN Competency goals, Objectives and Rubrics (continued)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **MFIN GOAL - 1: RUBRIC 1** | | | | | |
| **GOAL** | **Our students will communicate effectively in writing and oral presentations.** | | | | |
| **Objective 1** | *Students will be able to write effectively* | |  |  |  |
|  | **Trait** | **Poor** | **Good** | **Excellent** | **Score** |
|  | **Value** | **0** | **5** | **10** |  |
| Trait 1: | Logical flow | Unclear introduction or conclusion. Does not use a sequence of material to lead reader through the paper. Draws illogical conclusions | Develops ideas through effective use of paragraphs, transitions, opening & concluding statements. Generally well structured to suggest connection between sub-topics. | Maintains clear focus, uses structure to build the paper's conclusions. Presents analysis using sequence of ideas, clarity of flow and continuous voice or point of view. |  |
| Trait 2: | Grammar and sentence structure | Frequently uses inappropriate grammar and incomplete or poorly structured sentences which interfere with comprehension. | Generally complies with standard English and grammar and sentence usage. | Sophisticated use of English language, using varied sentence structured, phrasing and cadence. Grammar is error-free |  |
| Trait 3: | Spelling and word choice | Frequent misspellings. Poor or limited choice of words for expression ideas. | Has proofread or checked spelling and uses vocabulary correctly. Minor errors. | Demonstrates good use of words to support written expression of topic. Spelling is error-free. |  |
| Trait 4: | Development of ideas | Many unsupported statements offered. Uses flawed or unclear reasoning. | Most statements supported, ideas explained with examples and written with sufficient explanation. | Shows thoughtful reasoning and explores alternatives. Uses existing, supported ideas to develop well-formed, readable output. |  |

**Criterion: Does not meet expectations: 0 – 20; Meets: 21-30; Exceeds: 31-40**

**Table 4: MFIN Competency goals, Objectives and Rubrics (continued)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **GOAL - 1: RUBRIC 2** | | | | | |
| **GOAL** | **MFIN - 1: Our students will communicate effectively in written and oral presentations.** | | | | |
| **Objective 2** | *Students can deliver presentations effectively.* | | | |  |
|  | **Trait** | **Poor** | **Good** | **Excellent** | **Score** |
|  | **Value** | **0** | **5** | **10** |  |
| Trait 1: | Organization and logic | Fails to introduce topic, no evidence of or poor logical flow of topic, does not manage time. | Prepares listeners for sequence and flow of topic. Loses place occasionally. Maintains pace, without need to rush. | Engages listeners with overview, guides listeners through connections between sections, uses time to good effect. |  |
| Trait 2: | Voice and body language | Cannot be heard well due to volume, mumbling, speed, rote delivery, heavily accented English. Turns away from audience or uses distracting gestures, such as scratching or tugging clothing. | Clear delivery with well-modulated voice and self-carriage. | Exemplary delivery, using voice and gestures as part of medium. Uses vocal and physical resources to aid in communicating topic. |  |
| Trait 3: | Use of slides to enhance communications | Misspelled, too busy, too many slides for allotted time, poor use of graphics like charts. | Readable, containing reasonable amount of material per slide, good use of graphics or illustrations | Well written and designed, used as support to verbal content presentation. |  |
| Trait 4: | Ability to answer questions | Does not answer questions that are asked | Responds to questions well and provides sufficient response | Responds convincingly and addresses all aspects of question. Knows own material thoroughly. |  |
| Trait 5: | Content | Does not satisfy assignment requirements. Misuses theory or selects poor examples. | Provides good analysis of subject, satisfying intent of assignment and demonstrating knowledge. | Shows evidence of strong research and highly competent use of analyses to reach conclusions and recommendations. |  |
| **Criterion: Does not meet expectations: 0 – 20; Meets: 21-40 ; Exceeds: 41-50** | | | | | |

**Table 4: MFIN Competency goals, Objectives And Rubrics (continued)**

|  |  |
| --- | --- |
| **Competency goal 2: Students can interact effectively in teams.** | |
| **Learning Objectives** |  |
| **Objective 1:** | *Students will be able to form teams that work together effectively and bring a complex project of function assigned to them to successful completion* |
| Traits: |  |
| Trait 1: | Conflict Resolution |
| Trait 2: | Collaborative Problem Solving |
| Trait 3: | Communication/Active Listening |
| Trait 4: | Team Leadership and Task Coordination |

**Table 4: MFIN Competency goals, Objectives and Rubrics (continued)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Competency goal 2 (Teams) Rubric for 2013 and Beyond**  ***Goal: Students can interact effectively in teams.*** | | | | | |
|  | **Trait** | **Poor** | **Good** | **Excellent** | **Pre-Test/Post-Test Scores** |
|  | **Value** | **0** | **5** | **10** |  |
| Trait 1 | Conflict Resolution | * Does not acknowledge/avoids conflict. * Forces their view on others. * Discounts or marginalizes others’ ideas. | * Encourages diverse perspectives. * Protects all views -- those of the majority and those of the minority. * Ensures that differing perspectives are understood by all. | * Helps team evaluate differing alternatives against agreed upon “criteria for a good solution”. * Works to resolve conflict by identifying where differing solutions are in agreement and where they diverge. * Helps team synthesize ideas such that synergy is achieved – i.e. new ideas surface that are superior to what has come before. |  |
| Trait 2 | Collaborative Problem Solving | * Team members withhold information. * Team members protect self-interests. * Team members operate as individuals, each responsible for a discreet set of tasks. | * Team members share knowledge, information, and expertise freely. * Team members demonstrate a willingness to influence others as well as be influenced by others. * Team members reinforce the team’s understanding of itself as working together toward a common goal. | * Team members facilitate the teams’ feeling “collectively accountable” for outcomes. * Team members operate such that the collective goal of the team is more important than self-interest.   . |  |
| Trait 3 | Communication/Active Listening | * Communication is abrasive, insensitive. * Individual(s) feel threatened or attacked as a result of the communication. * Aggression, anger, competitiveness, and/or avoidance result from the communication | * Communication is characterized by the use of clarifying, probing, and reflective statements. * You see the expressed idea and attitude from the other person’s point of view. * You can sense how it feels to the other person. * You achieve the other person’s frame of reference about the subject being discussed | * Others feel understood and respected as a result of the communication. * Differences become more rational and understandable. * Defensiveness decreases. * Statements become less exaggerated. Members come closer to seeing the objective truth of the situation. * Attitudes become more positive and oriented toward effective problem-solving. |  |
| Trait 4 | Team Planning and Task Coordination | * No attempt is made to clarify roles or responsibilities. * No attempt is made to organize a process by which the team will work * Deliverables and critical dates are not identified. | * Facilitates a discussion of how the team will complete the task. * Facilitates the team’s understanding of roles, responsibilities, deliverables, and due dates. * Periodically reviews progress and due dates. | * Helps team achieve a common understanding of the task and how the team will achieve its collective goal. * Helps surface problems and generate solutions when needed. * Helps define priorities and contingency plans as needed |  |

**Criterion: Does not meet expectations: 0 – 20; Meets: 21-30; Exceeds: 31-40**

**Table 4: MFIN Competency goals, Objectives and Rubrics (continued)**

|  |  |
| --- | --- |
| **MFIN 3:** | **Competency goal, Objectives and Traits** |
| GOAL | Students will achieve mastery of the technical and basic quantitative methods required for the Finance domain. |
| **Objective 1:** | *Students will demonstrate the capability to examine the context of a modeling task and employ commercial-grade financial information tools, such as Bloomberg, and Thomson-Reuters (“the standard financial toolkit”) and efficient techniques to conduct the modeling.* |
| **Traits** |  |
| Trait 1: | The student becomes thoroughly familiar with the basic and advanced features and properties of the standard financial toolkit. |
| Trait 2: | The student has a good knowledge of the relative merits and limitations of each product in the standard financial toolkit and can demonstrate the ability to select the appropriate model or technique for a given type of task. |
| Trait 3: | The student can construct basic financial models using the financial databases and programming features of the standard financial toolkit. |

**Table 4: MFIN Competency goals, Objectives and Rubrics (continued)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **MFIN COMPETENCY GOAL - 3: RUBRIC 1** | | | | | |
| **MFIN 3** | **Students will achieve mastery of the technical and basic quantitative methods required for the Finance domain.** | | | | |
| **Objective 1** | *Students will demonstrate the capability to examine the context of a modeling task and employ relevant and efficient techniques to conduct the modeling.* | | | | |
|  | **Trait** | **Poor** | **Good** | **Excellent** | **Score** |
|  | **Value** | **0** | **5** | **10** |  |
| Trait 1: | The student becomes thoroughly familiar with the basic and advanced features and properties of the standard financial toolkit. | Poor understanding of the elements and capabilities of the standard financial toolkit. | Ability to effectively navigate and operate each of the elements of the standard financial toolkit. | Fluency in navigating and operating each of the elements of the standard financial toolkit, to a level commensurate with current commercial practice. |  |
| Trait 2: | The student has a good knowledge of the relative merits and limitations of each product in the standard financial toolkit and can demonstrate the ability to select the appropriate model or technique for a given type of task. | Poor understanding of the relative merits and advantages of the various items in the standard financial toolkit. | Ability to articulate the key advantages and capabilities of each element of the standard financial toolkit. | Fluency and efficiency in selecting the best element of the standard financial toolkit for a given task, and to be able to match different tools to different tasks, to a level commensurate with current commercial practice. |  |
| Trait 3: | The student can construct basic financial models using the financial databases and programming features of the standard financial toolkit. | Student is not able to construct and debug simple financial forecasting models. | Student can construct simple financial forecasting models, with efficiency and average skill. | Students can carefully construct financial forecasting models, using the financial databases and programming features of the standard financial toolkit to a level commensurate with current commercial practice. |  |
| **Criterion: Does not meet expectations: 0 – 14; Meets: 15-19; Exceeds: 20-30** | | | | | |

**Table 4: MFIN Competency goals, Objectives and Rubrics (continued)**

|  |  |
| --- | --- |
| **MFIN 4:** | **Competency goal - 4: Objectives and Traits** |
| GOAL | Students are able to implement financial solutions to improve the performance of financial or non-financial businesses. |
| **Objective 1:** | *Students can design and implement financial models that address significant problems or requirements in the current financial industry.* |
| **Traits** |  |
| Trait 1: | Students have the ability to formulate pricing models for various financial instruments and understand the limitations of such models. |
| Trait 2: | Students can use risk management techniques, measure their effectiveness and identify the practical challenges associated with their application. |
| Trait 3: | Students can design trading strategies and evaluate their performance. |

**Table 4: MFIN Competency goals, Objectives and Rubrics (continued)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **MFIN COMPETENCY GOAL - 4: RUBRIC 1** | | | | | |
| **MFIN 4** | **Students are able to develop and use financial models and technical systems from a perspective of a broad critical understanding of the financial system.** | | | | |
| **Objective 1** | *Students can design and implement financial models that address significant problems or requirements in the current financial industry.* | | | | |
|  | **Trait** | **Poor** | **Good** | **Excellent** | **Score** |
|  | **Value** | **0** | **5** | **10** |  |
| Trait 1: | Students have the ability to formulate pricing models for various financial instruments and understand the limitations of such models. | Students are unable to coherently formulate pricing specifications for derivative instruments. | Students are reasonably good at specifying appropriate pricing models but do not have a good grasp of their limitations. | Students can both formulate pricing models and have a good understanding of their limitations. |  |
| Trait 2: | Students can use risk management techniques, measure their effectiveness and identify the practical challenges associated with their application. | Students are unable to design and apply risk management techniques. | Students show some ability to apply risk management techniques, but have difficulty measuring their effectiveness. . | Students are quite competent at design and applying risk management techniques as well as assessing the effectiveness of such techniques. |  |
| Trait 3: | Students can design trading strategies and evaluate their performance. | Students are ineffective at designing trading strategies. | Students show some ability in designing trading strategies, but they have difficulty in evaluating their performance. | Students are able to design trading strategies and evaluate their performance. |  |
| **Criterion: Does not meet expectations: 0 – 14; Meets: 15-19; Exceeds: 20-30** | | | | | |

**ETHICS**

|  |  |
| --- | --- |
| Non-credit specialized seminar in ethics required for graduation | Students must complete an online seminar about the CFA Institute Code of Ethics and Professional Standards as part of the FIN 620 Financial Econometrics course. |

**GLOBAL**

|  |  |
| --- | --- |
| MGT 606 Economics for Managers | Brief introduction to macroeconomics and international problems. |

6. RESULTS OF AACSB COMPETENCY GOAL ASSESSMENTS

The results of the initial competency goal ASSESSMENTs carried out to date are included below.

**Explanation**

Each competency goal has a number of learning objectives and performance on each objective is measured using a rubric that in turn contains a number of desired “traits”. Students are scored individually on each trait.

The grading sheets for each student are used to develop a Summary Results Sheet for each competency goal objective. A selection of these Summaries is included below.

The first table in the Summary Results Sheet for a learning objective and trait gives the counts of students falling in each of the three categories:

- Does not meet expectations

- Meets expectations

- Exceeds expectations

The right-hand column in the table is used to record the average score of the students on each trait. This table provides an indication of the relative performance of students on each trait.

The second table on each sheet provides the counts of students who fall in each of the above three categories for the overall learning objective.

The person doing the ASSESSMENT provides explanatory comments and recommendations on the bottom of the Results Summary Sheet. The recommendations suggest content or pedagogy changes for the next time the course is given.

**School of Business**

**RESULTS OF AACSB COMPETENCY GOAL ASSESSMENT**

**PROGRAM: MFIN (Master of Science in Finance)**

**COMPETENCY GOAL #1: Our students will be effective communicators.**

**LEARNING OBJECTIVE # 2: Students will be able to deliver presentations effectively.**

**ASSESSMENT DATE: ASSESSOR:**

**NO. OF STUDENTS TESTED: COURSE:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Number of Students** | | |  |
| **Competency goal Traits** | **Not Meet Expectat-ions** | **Meet Expectat-ions** | **Exceed Expectat-ions** | **Avg. Grade on Trait** |
| **1: Organization and logic** |  |  |  |  |
| **2: Voice and body language** |  |  |  |  |
| **3: Use of slides to enhance communication** |  |  |  |  |
| **4: Ability to answer questions** |  |  |  |  |
| **5: Content** |  |  |  |  |
| **Average Grade (Maximum 10)** | | | |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Total Students by Category**  (Based on Average score across all traits) | **Not meet expectations** | **Meet Expectations** | **Exceed Expectations** |
|  |  |  |  |

**COMMENTS:**

**REMEDIAL ACTIONS:**

7. INDIRECT MEASUREMENTS

*Indirect Measurements:*

* For USNWR: Five experts from the industry rating us – we have visibility to an average of these ratings
* Finance Board Meetings: Give us feedback on curriculum, placement, CPT, etc.
* Alumni we invite to talk to our students: they indirectly evaluate the programs by relating their experiences and their career path
* Industry professionals that we invite to attend class project presentations provide feedback to students in those sessions that can help enhance the projects and the course

*How we use them in our programs:*

* Designing new courses
* Introducing new topics in existing courses
* Retiring deprecated / obsolete topics from courses
* Capstone courses
* Industry projects for the capstone courses – repeat engagement of companies with us is an indirect measurement
* Enhance course content, e.g., we can suggest to instructors to include new content that is more relevant to the industry needs

8. COMPETENCIES

1. COPA’s tools like 12Twenty, which record placement outcomes for our students
2. We publicize the employment rate and starting salary of our students
3. We highlight exemplary students with awards for academic achievement and for commitment to leadership and service
4. Success in the CFA and FRM exams that our students take, which is a result of studying in our programs. The best students are selected for scholarships in these exams

9. ENGAGEMENT, INNOVATION AND IMPACT

* Engagement
  + We engage graduate students with graduate assistantships, where they organize events, contact incoming students, and work on other tasks
  + We engage current students in clubs, such as the Stevens Graduate Finance Association, and Stevens Women in Business
  + Capstone projects, such as the Integrated Capstone Experience
  + Faculty meetings: we engage faculty in curriculum development, revamping, and enhancements
  + Finance Board Members: we engage them in curriculum development by regularly seeking their input to curriculum initiatives we are undertaking
* Innovation
  + Lab courses: they provide skills to incoming students and ensure the graduates are better positioned to compete for jobs; they are offered across all three financial programs
  + Having Ph.D. students help develop practical problems that test the skills learned in classes
* Impact
  + Outcomes: We enhance student skills to get better jobs and positively contribute to economy and society
  + Business School Rankings: improvement through the year because of our efforts
  + Our Sustainability Offering: this ensures that students are informed about ways to better society
  + By being responsible for capstone projects/master’s thesis, our students will gain skills in doing independent research. In addition, they will learn how best to effectively convey their ideas to an audience.
  + Through teamwork, they learn collaborative practices.
  + The analytical skills our students learn will allow them to excel in their given fields, as we have prepared them to be able to handle all sorts of situations. Their math and computer science skills translate to working in the quantitative finance domain.