**Improvements by Program Driven by Assurance of Learning**

**Academic Year 2016/2017**

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# BS in Business – Significant Changes Related to AoL Assessment Process

**Bachelor of Science in Business**

**Top Significant changes made to this program driven by Assurance of Learning**

**INTRODUCTION AND OVERVIEW OF BS BUSINESS DEGREE**

The BS Business program includes the following majors: Business & Technology, Finance, Management, Marketing, Information Systems, Economics, and following feedback from faculty and from industry

a seventh major – Accounting and Analytics was added during academic year 2016-2017.

Students in all majors share the same core curriculum, which includes the Liberal Arts and Science Core, Business Core, and Practice Core. The BS Business program started in academic year 2013-2014, and it took the place of BS Business & Technology that has been running since Fall 2000.  The reason for the change is that under BS Business & Technology there was only one major – the Business & Technology major. **Starting fall 2016, seven majors exist that reflect well the degree of Bachelor of Science in Business.**

Since 2007, under the BS Business & Technology degree, the program followed strong assurance of learning processes that are being continued with the BS Business degree.  The goals of the program have been assessed 5-7 times depending on the goal. **Following the AOL accreditation committee’s recommendation in 2015**, to simplify the assessment process, we have begun to successfully **automate the team assessment goal (goal 2)**, and now also focus on assessing three AOL goals. More detailed results from goal assessments and corresponding steps taken to address those specific goals are documented in the individual goal booklets.  Below we have summarized more significant changes that have resulted from the AOL assessment feedback. These significant changes were also informed by other forms of feedback outside of Assessment of Learning, including student interviews and course reviews, benchmarking our programs relative to other universities, and an in-depth review of the program conducted by faculty.

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| **1** | Drawing on, e.g., AOL goal 3 trait “The student demonstrates creative and innovative thinking” and other feedback from students, faculty and benchmarking other universities, we **successfully rolled out** various courses in the **Bachelor of Science in Business** including: 1) **Decision making and 2) Creativity and Innovation**. The courses, e.g., Decision Making, also support other AOL learning objectives, including AOL learning **goal 1 oral communication** (e.g., students present case studies) and AOL learning **goal 2 effective** **team work** (e.g., students collaborate and lead teams). |
| **2** | Based on goal 3 (leveraging technology for business success) and other feedback from students, faculty and benchmarking other institutions, students in the Bachelor of Science in Business in the, e.g., Economics major, **are now taking additional technology oriented courses**, including **Econometrics** which enables to quantify theoretical models. |
| **3** | The Bachelor of Science in Business Program continues to invest great effort to address the significance of Business Ethics, which is implicitly addressed in many classes. All students in the BS in Business are continuing to take an ethics Module. |
| **4** | Based on goal 3 (leveraging technology for business success) and other feedback, students in the Business & Technology major can currently **take a wider variety of business courses** in the Business and technology concentration. In the business concentration, s**ince 2016-2017** students have **superior selection**, and specialties now include, Finance, Management, Marketing, Information Systems, Economics, as well as **Accounting and Analytics**. During academic year 2016-2017, we completed the roll out of all courses related to the new majors in Finance, Marketing, Information Systems, Economics and Management. We also finalized the Accounting and Analytics 5th year curriculum. The technology concentrations includes: IS, Computer Science, Environmental Science, Biotechnology, Green Technology, Music & Technology, Arts & Technology, History & Philosophy of Technology and Science.  Prior to the expanded business concentrations, students had a more constrained choice of coursework besides elective selections. The **extra concentrations in business,** combined with the technology concentrations, provide students more choice and ensure they are developing specialty capacity in both business and technology. In addition to goal 3, these changes are in line with the SOB Vision and Mission and program goals, which all emphasize the importance of being a business school with technology at our core. |
| **5** | Based on goal 2 (effective team work) and other feedback, we persisted to fine-tune the “practice core” courses that focus on team projects that challenge students to solve real-world problems that are cross-functional in nature. In several of the courses, students continue to center on performing strategic due diligence analyses and strategic planning for large public firms. In a different course, students learn about identifying market opportunities. Lastly, in two remaining classes students work on a project their entire senior year in which they have the option to either be matched up with an actual company as their “client” or work on a start-up business. All projects have an underlying business problem that needs solving. Projects culminate in group presentation as part of a campus-wide Innovation Day. Notably, during academic year 2016-2017, a comprehensive review of senior design for BSB was conducted and a plan was completed and reviewed by UCC. |
| **6** | Based on goal 1 (oral and written communication) assessments and other feedback, all students continue to take a freshman writing course, which was improved and perfected by the College or Arts and Letters. This continues to provide BSB students with a strong basis they then work and cultivate during the course of the curriculum, and later on are evaluated in senior year. |
| **7** | Our goal 3 assessments (leveraging technology for business success) and other feedback, suggested that although students were getting exposure to business fundamentals, the opportunity for students to develop a specialty in a **particular business** **area was still not comprehensive enough**. This narrowed students’ ability to have ample business acumen in a particular business domain so that they could have greater ability to leverage technology for business solutions. A **detailed ongoing review** was done and it was **decided to gradually adjust the curriculum** **and expand our SOB’s offerings beyond Business & Technology, Finance, Management, Marketing, Information Systems and Economics, to include Accounting & Analytics.**  The latter new major and the remaining majors all take the same core, as well as 6-8 courses in their major. We also continued to adjust the Business & Technology curriculum to reflect the additional majors that were added. In the new curriculum, students take the Business Core but **currently also have a much wider choice** of business concentrations to specialize in, which includes taking courses in one of seven business areas (Finance, Management, Marketing, Information Systems, **Economics and Accounting & Analytics).** |

# Quantitative Finance (QF) - Significant Changes Related to AoL Assessment Process

**Bachelor of Science in Quantitative Finance**

**Top Significant changes made to this program driven by Assurance of Learning**

**INTRODUCTION AND OVERVIEW OF THE BS QUANTITIATIVE FINANCE DEGREE**

Stevens Institute of Technology offers one of the first four-year undergraduate program of its kind, in Quantitative Finance.   B.S. in Quantitative Finance provides students with the skill levels equivalent to what would be expected from the graduate of a premier masters degree program in financial engineering.  A relatively young field, Quantitative Finance is just 10-15 years old and until about 2009 it had been offered exclusively at the Master’s and PhD level. Stevens’ revolutionary undergraduate program is cross-disciplinary and combines curriculum from quantitative methods, computer science and finance.

The program was officially launched in Fall 2009, and is now beginning its ninth academic year. As with most new programs, the incoming freshmen classes were small at first; there will be 50 incoming students in Fall 2017. We also welcomed many internal transfer students from other majors, including Mathematics, Computer Science and Engineering. The program now has about 189 total full-time students (approximately 6% of Stevens total undergraduate enrollment). We started the Assessment of Learning processes in the 2012/13 Academic year, as at that point we had a critical mass of students and significant curriculum was developed and ready for assessment. Some of the most significant changes from the assessments conducted so far are below.

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| 1 | “Hanlon 2” — a new QF Lab with 30 more workspaces and 12 new Bloomberg terminals completed on Babbio first floor — this lab is formally named the Hanlon Laboratory for Financial Analytics and Data Visualization. Hanlon 2 incorporates revolutionary visualization technologies from Oblong Industries, offering a multithreaded, immersive and collaborative environment for research and education. (Oblong is the same technology used for the front end of the IBM Watson system for advanced analytics.) This is the first lab/classroom of its kind in the academic world. |
| 2 | The Laboratory for Quantum Informatics — as part of Hanlon 2, we have also constructed a node of Stevens’ developing network for quantum computing and communication, to support the application of quantum techniques to solve “hard” problems in financial science. This is the first faculty of its kind in the world, combining quantum technology with finance. |
| 3 | Enhanced Curriculum — The Student Managed Investment Fund (“SMIF”) 2.0: to strengthen the commitment to goals 1-4, the SMIF has been redesigned to add industry-standard layers of risk management, asset allocation and portfolio construction, and execution management — to give students greater experience in modeling financial asset portfolios, and in oral and written presentations to investment committees. |
| 4 | Curriculum revised to include a many new courses focusing on specific techniques in financial science, which can be flexibly configured either as lab-recitation sections aligned with substantive components of the QF curriculum, or as stand-alone quick-courses (typically 1 credit) targeting specific skill-set elements for QF. |
| 5 | Curriculum revised to add new substantive courses as electives, to expand the degree scope to include emerging areas of concern to the financial industry, including Financial Cybersecurity, Fixed Income, Securitization, and Investment Banking. |
| 6 | Curriculum revised to enhance and redesign courses in Risk Engineering, and Stochastic Calculus — two required QF courses originally drawn from the Graduate Program in Financial Engineering. These two courses have been restructured for undergraduates, and integrated more closely with the rest of the QF program. |

# MS in Business Intelligence and Analytics (BIA) – Significant Changes Related to AoL Assessment Process

**Masters of Science in Business Intelligence and Analytics (BI&A)**

**Top Significant changes made to this program driven by Assurance of Learning**

**INTRODUCTION AND OVERVIEW OF BI&A PROGRAM**

Overview

[*The Masters of Science in Business Intelligence and Analytics (BI&A)*](https://www.stevens.edu/business/bia), a STEM program, is a unique 36-credit degree for part-time or full-time students who have completed undergraduate degrees in quantitative disciplines such as science, mathematics, computer science or engineering. The degree is designed for individuals who are interested in careers in analytical fields and the coursework focuses on industry-specific applications in areas such as marketing, finance, pharmaceutical, underwriting, manufacturing, information technology, telecommunications, energy and engineering.

After discussions with the BI&A Program Board in 2015, we implemented a unique three-level architecture as follows:

The Professional Skills Layer, This layer consists of written and oral communications skill workshops a CV tutorial workshop and a visiting speaker program. It supports the BI&A programs efforts to improve performance on *BIA Goal 1 Students can communicate effectively in written and oral presentations*

The Disciplinary Layer consists of our 12-course (36 credits) curriculum, which culminates in a required projects course. *BIA Goal 3* *Students understand and can apply a broad range of business analytic techniques* tests students’ attainment of knowledge and skills across all courses in the curriculum.

The Technical Skills Layer provides one– or two-day software bootcamps in SAS, R, Python and Hadoop – the lingua franc of data science. This layer facilitates the programming homeworks and projects in the Disciplinary layer of the architecture.

**CURRICULUM CHANGES - Influenced by AOL and our Industry Advisory Board**

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| **1** | Introduced two new courses:  *BIA 662 Cognitive Computing* ( covers artificial intelligence applications in business)  *BIA 664 Data & Information Quality* (80% of data science work involves data cleansing.) |
| **2** | Introduced required certification in SQL, Python and R using Stanford, EDX and Cloudera MOOCs |
| **3** | In spring 2017, the BI&A faculty conducted a detailed mapping of topics and software usage across the entire curriculum. The review provided insights for continuous curriculum improvement. |

**SIGNIFICANT CHANGES FROM AOL ASSESSMENT PROCESS**

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| **1** | Workshops in CV writing, job skills, written and oral skills and Python will be run during orientation week in fall 2017 to ease the pressure on students during the regular semester. |
| **2** | To benchmark our program against other schools and professional dat a scientists, BI&A faculty encourage students to engage in hackathons and competitions such as Kaggle. A survey in May 2016 revealed that over 30 students competed in various competitions and a number of “top 10” rankings were achieved in various Kaggle competitions. |
| **2** | *BIA 2: Students Will Demonstrate Competency In Interacting Effectively In Teams* (Fall 2016; Course BIA660). - An effort will be made to reduce the size of the teams to a maximum of 4 students and to start team projects earlier in the semester. All student teams will have to submit a recorded video presentation (Slides with voiceover), in addition to their project code. All Teams will be required to use GitHub for their projects. Peer grading by randomly selected students will partially determine team grades. |
| **3** | *BIA Goal 3* *Students understand and can apply a broad range of business analytic techniques* (Fall 2016; Course BIA686) For several years, all BI&A students have been required to complete a comprehensive test of their knowledge surrounding key techniques and methods used in BI&A. As a result of student performance on the comprehensive test we’ve revised some of the questions to make them better indicators of student knowledge. The test has also been automated. All students now are encouraged to pursue supplemental material (from on-line MOOCs) to better enhance their understanding of foundational material in data science and analytics. |
| **4** | *BIA Goal 5: Students Can Find and Deploy Business Solutions Based on Analyses Of Large And Heterogeneous Data Set use.* (Fall 2016; Course BIA656)  Expand the theoretical review to the main models explored in this course.  Emphasize the review of Bayesian models. |

# Enterprise Project Management (EPM) – Significant Changes Related to AoL Assessment Process

**Masters of Science in Project Management (EPM)**

**Top Significant changes made to this program driven by Assurance of Learning**

**INTRODUCTION AND OVERVIEW OF BI&A PROGRAM**

The M.S. in Enterprise Project Management degree was launched in Fall 2012. Previous to the EPM degree, Stevens offered a graduate certificate in Project Management (PM) as well as concentrations in PM that are available in the following degrees: MBA, M.S. in Management (MSM), and the M.S. in Information Systems. The majority of PM students were in the MSM degree program so the PM Program has been managed in conjunction with that program. As such, we leveraged learning goals and improvements based on experience in the MSM program.

The EPM program at Stevens is focused on the business aspects of project management. That distinguishes our program from other PM programs that are frequently in engineering schools. We developed a curriculum and learning goals that captured this focus on business.

The first two learning goals are common across many degrees in the School of Business: 1) effective communications and 2) effective teaming.

Effective communications for all programs is assessed in MGT 609 (Project Management Fundamentals). Specific improvements are detailed below.

For the teaming goal, the faculty are establishing a repository for best practices in achieving this goal so they can share pedagogy, content and course resources.

The third goal is demonstrating how a project provides business value which strikes at the core of the learning objectives for the EPM degree. Based on business courses such as Strategy, Marketing and Accounting and Project Management courses, students are asked to show the relationship between the successful execution of projects and creating business value for organizations. This goal had its first assessment in AY 2012-2013.

The fourth goal is understanding project leadership. The PM faculty that developed this goal and assessing it have extensive experience with the teaming goal.

The program is also accredited by the Project Management Institute (PMI). PMI did an on-site evaluation of the program in September 2011. They provided a series of recommendations that have implemented or are in the process of implementing. These are:

1. Develop rubrics to measure learning goals
2. Add an advisory board to provide additional guidance on practical applications and research areas of interest
3. Ensure faculty support for larger classes (we now have a TA to support the PM faculty)

**CURRICULUM CHANGES - Influenced by AOL**

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| **1** | Overhaul of MGT 609 to ensure it is better aligned with latest PMBOK requirements. |
| **2** | Initiated a review of writing assignments across the curriculum in order to analyze and assess the extent to which students are developing written communication skills. |

**STRUCTURAL CHANGES – Influenced by Advisory Board, Alumni, market needs, etc.**

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| 1 | In conjunction with the office of graduate admissions, developed international recruitment strategy in an effort to increase diversity and promote globalization. |
| 2 | Systematic review of curriculum structure at key benchmark schools in order to better understand if competitive in nature (October 2016). |
| 3 | Revised course scheduling in order to ensure students are on track to graduate and that there is better curriculum continuity to help degree completion. We now offer courses in a series therefore no student will get to their last semester without prerequisites taken for their final courses. |
| 4 | Seeking accreditation for the MS in Enterprise Project Management through GAC; applied for reaccreditation of the project management concentrations in MBA and MSIS. |
| 5 | EPM is moving fully online in conjunction with other Stevens schools – School of Engineering and Science and School of Systems and Enterprises. The first online degree with be in conjunction with Systems Engineering and the second will be with Construction Management. These two degrees will be in addition to the traditional MS in Enterprise Project Management. |

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# Master of Business Administration (MBA)

**Masters of Science in Business Administration (MBA)**

**Top Significant changes made to this program driven by Assurance of Learning. Also includes structural changes influenced by input from advisory board, alumni, market need, etc.**

**INTRODUCTION AND OVERVIEW OF MASTER OF BUSINESS ADMINISTRATION**

The School of Business’s 48-credit, MBA is aimed at professionals who wish to further their career while continuing to work full time. The program offers a comprehensive, streamlined learning experience that prepares students to be technology-savvy business leaders. The program was designed with input from Howe faculty, feedback from students and advice from the Howe School advisory board which is comprised of top industry leaders in the metropolitan region. The program employs innovative pedagogical techniques and small class sizes, enabling students to rapidly assimilate the knowledge they need to move their career forward. The result is a unique MBA program that incorporates Stevens core competencies in technology, innovation and entrepreneurship into the learning experience

Incorporating a technology-centric approach with skills development along the core **Four C**’s, the Flex MBA program is designed to help students succeed in today’s fast-paced technology-driven environments. Students graduate with an understanding of how those skills contribute to excellence at the intersection of business and technology. More importantly, through coursework and other learning experiences, they will learn to apply their new skills to solve real-world problems and challenges. The **4C**’sare embedded throughout the Stevens/Howe School MBA experience. They are stressed through the topics that the students study enabling them to grasp their implications for business and technology. Students are challenged to apply them to complete course assignments and master new concepts and material.

**CURRICULUM CHANGES - Influenced by AOL**

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| **1** | One year MBA program structured to enhance experiential learning; programming and curriculum organized around four learning threads: 1. Leadership and Career Development, 2. Leading Peers and Influencing Organizations, 3. MBA Governance, 4. Innovation Teams. |
| **2** | Preliminary coaching model developed to help target skills that cut across several learning objectives that include critical thinking, communication and team leadership, personal branding, etc. |
| **3** | Worked with corporate partner (Pfizer) to utilize internal data in courses that will directly enhance the students’ critical thinking skills and job relevance. |
| **4** | Initiated a review of writing assignments across the curriculum in order to analyze and assess the extent to which students are developing written communication skills. |

**STRUCTURAL CHANGES – Influenced by Advisory Board, Alumni, market needs, etc.**

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| 1 | Created proposal for a one year MBA program to address market needs. Advisory board gave input on curriculum design and programming content. Proposal currently on track for first cohort to start in Fall 2018. |
| 2 | Expanded corporate cohorts - increased Pfizer NYC locations. Initiated cross training of faculty to ensure consistency in the delivery of corporate, on-campus, and online courses. Such efforts are already underway for EMT 696 Design Thinking. |
| 3 | Developed a proposal for establishing peer leadership teams giving students more ownership of what they want out of their MBA experience. Management Programs Advisory Board endorsed this as an initiative that would help students further develop necessary leadership, communication, collaboration, interpersonal and critical thinking skills. |
| 4 | Revised course scheduling in order to ensure students are on track to graduate and that there is better curriculum continuity to help degree completion. We now offer courses in a series therefore no student will get to their last semester without prerequisites taken for their final courses. |
| 5 | In conjunction with the office of graduate admissions, developed international recruitment strategy in an effort to increase diversity and promote globalization. |
| 6 | Systematic review of curriculum structure at key benchmark schools in order to better understand if competitive in nature (October 2016). |

# Master of Science in Information Systems (MSIS) - Significant Changes Related to AoL Assessment Process

**Masters of Science in Information Systems (MSIS)**

**Top Significant changes made to this program driven by Assurance of Learning**

**INTRODUCTION AND OVERVIEW OF MSIS**

The MSIS program is offered as part-time and full-time graduate program with 3 concentration options. All students take 3 core business courses, followed by 6 Information Systems courses. Students can choose between threee concentrations (Business Intelligence & Analytics, BPM & Service Innovation, Project Management) and 3 free-choice electives to complete their degree.

The program has undergone strong assurance of learning processes. The four goals of the program are being assessed once a year.

More detailed results from goal assessments and corresponding steps taken to address those specific goals are documented in the individual goal booklets.  A number of major changes were made, as follows:

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| **Top Significant changes made to this program driven by Assurance of Learning** |

# MS Management (MSM) - Significant Changes Related to AoL Assessment Process

**Masters of Science in Management (MSM)**

**Top Significant changes made to this program driven by Assurance of Learning. Also includes structural changes influenced by input from advisory board, alumni, market need, etc.**

**INTRODUCTION AND OVERVIEW OF MS MANAGEMENT**

The Master of Science in Management (MSM) program is a generalist graduate business program designed specifically for individuals with non-business academic backgrounds/degrees. Students do not need any professional work experience to be admitted to this 30-credit program. Grounded in the fields of management, economics, applied psychology, and quantitative methods, the unique 10-course curriculum encompasses the primary business disciplines to help students round out their undergraduate training and experience. Students learn how economics, technology, social science and quantitative methods can be used to solve today’s complex and managerial challenges.

In today’s competitive global workplace, having the right technical skills is extremely important, but it is often not enough. Businesses need people who can enter the workplace with the ability to transform technical expertise into business solutions. Through the MSM coursework and other learning experiences, students are guided in developing a core set of critical thinking, collaboration, communication and innovation skills that are keys to success at the intersection business and technology. The MSM curriculum helps students master business fundamentals and enrich their capacity to communicate effectively across business and technical domains.

Stevens is renowned for excellence in project management, leadership and innovation management. Not only are these skills important to technical professionals, they will also give students a competitive edge regardless of their previous field of study or current type of work. The faculty include thought leaders who are experienced professionals, many of whom were managers at Fortune 500 organizations.

The MSM program is well-suited to new, high-caliber graduates with little or no previous professional experience. Those individuals who seek additional business skills to complement their undergraduate training before entering the job market will emerge with strong management skills.

**CURRICULUM CHANGES - Influenced by AOL**

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| **1** | Initiated a review of writing assignments across the curriculum in order to analyze and assess the extent to which students are developing written communication skills. |
| **2** | Overhaul of MGT 609 to ensure it is better aligned with latest PMBOK requirements. |

**STRUCTURAL CHANGES – Influenced by Advisory Board, Alumni, market needs, etc.**

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| 1 | Initiated efforts to explore the strategic positioning of the MSM program in relation to other management program offerings, specifically as it will relate to the one year MBA offering. Key question under consideration are whether or not we should continue to offer the MSM as an ongoing degree program. |
| 2 | Revised course scheduling in order to ensure students are on track to graduate and that there is better curriculum continuity to help degree completion. We now offer courses in a series therefore no student will get to their last semester without prerequisites taken for their final courses |
| 3 | In conjunction with the office of graduate admissions, developed international recruitment strategy in an effort to increase diversity and promote globalization. |
| 4 | Systematic review of curriculum structure at key benchmark schools in order to better understand if competitive in nature (October 2016). |

# MS Technology Management (MSTM/EMBA) - Significant Changes Related to AoL Assessment Process

**Masters of Science in Technology Management/Executive MBA (MSTM/EMBA)**

**Top Significant changes made to this program driven by Assurance of Learning. Also includes structural changes influenced by input from advisory board, alumni, market need, etc.**

**INTRODUCTION AND OVERVIEW OF MS TECHNOLOGY MANAGEMENT**

The Stevens Master of Science in Technology Management (MSTM) is a 36-credit degree program designed for experienced professionals having over 5 years of work experience who are motivated to become transformational business leaders in technology and management. Students enrolled in the 48 credit EMBA take an additional 12 credits beyond those required for the MSTM

Students gain cutting-edge knowledge in product and process innovation, entrepreneurship and strategic project management and learn how to lead in today’s progressive, competitive business world.

Graduates gain the skills to understand and leverage today’s rapidly changing technological landscape to solve challenging business problems, position technology effectively to reach business goals and lead innovation across organizations.

Students engage with faculty members who were industry leaders at Fortune 500 companies and government agencies and daily practitioners of the skills they teach. This program offers a unique blend of small class sizes, intense collaboration and professional networking opportunities. Graduates leave Stevens with better communications, interpersonal and team skills to plan, implement and manage leading-edge practices in technology management.

**CURRICULUM CHANGES - Influenced by AOL**

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| **1** | Faculty are consistently looking into best practices, better software to enhance students learning experience. |
| **2** | Revision of BIA 678 Big Data and Analytics courses so it now includes more exposure to key software and analytics tools being used in industry (i.e. Gephi, Sparc, Tableau, Watson Analytics). |
| **3** | Initiated a review of writing assignments across the curriculum in order to analyze and assess the extent to which students are developing written communication skills. |

**STRUCTURAL CHANGES – Influenced by Advisory Board, Alumni, market needs, etc.**

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| 1 | Expanded corporate cohorts - increased Pfizer NYC locations. Initiated cross training of faculty to ensure consistency in the delivery of corporate, on-campus, and online courses. Such efforts are already underway for EMT 696 Design Thinking. |
| 2 | Systematic review of curriculum structure at key benchmark schools in order to better understand if competitive in nature (October 2016). |
| 3 | Revised course scheduling in order to ensure students are on track to graduate and that there is better curriculum continuity to help degree completion. We now offer courses in a series therefore no student will get to their last semester without prerequisites taken for their final courses. |

# MS Finance (MFIN) - Significant Changes Related to AoL Assessment Process

**INTRODUCTION AND OVERVIEW OF MS FINANCE**

The Stevens Master of Science in Finance (MFIN) is a 36-credit degree program designed for experienced professionals or new students interested in leading positions in the finance departments of major corporations or seek to advance their careers in the financial sector. The program consists of core courses covering fundamental topics in finance and economics, the management of financial technologies, and allows students to specialize in topics such as regulatory and market environments, financial project management, investment banking and valuation, or financial analytics and risk. Graduates complete the program having been trained to apply quantitative thinking to the challenges of managing finance, and develop specialties in areas of greatest interest to their career tracks.

The Stevens Finance graduate degree program has been accepted into the CFA Institute University Recognition Program. Universities with this recognition incorporate at least 70 percent of the CFA Candidate Body of Knowledge (CBOK), making them well positioned to sit for the CFA exams. The financial analytics and risk specialization is aligned with the Financial Risk Manager exam of the Global Association of Risk Professionals (GARP).

The four AoL goals have been evaluated for first time on the year 2016-17. This process has helped the faculty to design instruments of evaluation that integrates communication and organizational aspects besides the traditional academic performance. Additionally, the courses have been modified emphasizing communicational abilities and practical skills related to trading and quantitative analysis.

**STRUCTURAL CHANGES – Influenced by Advisory Board, Alumni, market needs, etc.**

**Overall Program Improvement**

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| **1** | Faculty is exploring new exercises to improve the communication abilities of our students, and their capacity to work in groups. |
| **2** | Revision of FE511 Financial Lab to include new programming and trading exercises to reinforce the technical and analytical capacity of MFIN students with real data provided by Bloomberg and Thomson Reuters. |
| **3** | Revision of FIN 620 Financial Econometrics to incorporate an ethics component according to the CFA standards, and the guidelines of the AoL process. |

# Doctor of Philosophy in Business Administration - Significant Changes Related to AoL Assessment Process

**Doctor of Philosophy in Business Administration**

**Top Significant changes made to this program driven by Assurance of Learning**

**INTRODUCTION AND OVERVIEW OF Ph.D. DEGREE**

The Ph.D. program at the School of Business at Stevens is predominantly a fulltime program preparing the students for a successful academic career. It is 54 credit degree. The Ph.D. program’s designation and structure were changed over the academic year 2016. The Ph.D. program’s designation was changed in the beginning of the fall semester 2015 from Technology Management with its 3 research areas (Information Systems, Technology and Innovation Management and Social Computing) to a Ph.D. in Business Administration with 3 areas of research: Innovation & Entrepreneurship, Information Systems & Analytics and Finance. The curriculum was completely revised and new policies were defined. The new curriculum was approved in 2016-2017.

Assessment data that could be linked to the program changes is not available at this point in time. The major AoL changes were discussed and finalized in spring 2016.The first AoL goal (PhD-1: Ph.D. graduates can effectively communicate research in oral presentations.) will therefore be assessed in the 2017 fall semester with the students who started in Fall 2016. No changes to the AoL process were made for the 2016-2017 period.

**STRUCTURAL CHANGES – Influenced by Advisory Board, Alumni, market needs, etc.**

**Overall Program Improvement**

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| **1** | Final approval of curriculum changes. |