BUSINESS AND TECHNOLOGY MANAGEMENT (BS)

Department Website (https://engineering.nyu.edu/academics/programs/business-and-technology-management-bs/)

NYSED: 27813 **HEGIS:** 0599.00 **CIP:** 15.1501

Program Description

BTM is oriented toward current and future arenas where high growth occurs. The program assumes that modern business leaders must be deeply familiar with technology and innovation. Those who have such knowledge are likely to have a distinct advantage and prosperous and satisfying careers. When appropriate, these leaders also can leverage entrepreneurship in diverse venues. The BTM Program prepares students to become such leaders.

BTM also provides students with relevant professional management education and effective approaches related to technology, innovation and information management and entrepreneurship. In other words, BTM creatively fuses modern business administration with state-of-the-art technology management.

The BTM Program is STEM based which offers rigorous training in the qualitative, quantitative and innovative aspects of technology and innovation management. All courses nurture a broad managerial background along with specific application of ideas and practices relevant to the world of technologically innovative goods and services.

The art and science of management also demand that practitioners communicate ideas effectively. Therefore, as central components of the BTM learning experience the program emphasizes spoken and written presentations in individual, team, classroom and field internship settings.

Students completing BTM are prepared to succeed in a variety of positions-such as technology project leaders, technology entrepreneurs, venture capitalists, technology and IT analysts for various organizations, consultants in professional-services firms, marketing and business-unit managers for new products and services, and a variety of other exciting roles. BTM graduates work in large and small companies and they excel at jobs that require a cross-functional understanding of both technology and the motivational, financial, innovative and international challenges that need to be met for innovation to succeed. BTM students are also well prepared for advanced professional studies in management, such as in a MS in Management of Technology (MOT), or an MBA program, as well as more scholarly and research oriented programs, such as PhD studies.

Admissions

New York University's Office of Undergraduate Admissions supports the application process for all undergraduate programs at NYU. For additional information about undergraduate admissions, including application requirements, see How to Apply (https://www.nyu.edu/admissions/undergraduate-admissions/how-to-apply.html).

Program Requirements

The program requires the completion of 127-128 credits, comprised of the following:

Course	Title	Credits
General Education Requirements		
EXPOS-UA 1	Writing The Essay:	4
EXPOS-UA 2	THE ADVANCED COLLEGE ESSAY	4
Humanities and Social Science Electives (four 4-credit courses, for a total of 16 credits)		16
Major Requirements		
Computer Science		
CS-UY 1114	INTRO TO PROGRAMMING & PROBLEM SOLVING	4
Engineering & Technology Forum		
EG-UY 1001	Engineering and Technology Forum	1
Mathematics		
MA-UY 1324	Integrated Calculus I for Engineers	4
or MA-UY 1024	Calculus I for Engineers	
MA-UY 1424	Integrated Calculus II for Engineers	4
or MA-UY 1124	Calculus II for Engineers	
MA-UY 2054	Applied Business Data Analysis I	4
Management		
MG-UY 1002	FOUNDATIONS OF TECHNOLOGY MANAGEMENT	2
MG-UY 2204	Financial Accounting	4
MG-UY 2024	Management of Business Information Systems and Data Technology	4
MG-UY 2104	Organizational Behavior	4
MG-UY 2524	Microeconomics	4
MG-UY 2304	Marketing	4
MG-UY 2014	Operations Management	4
MG-UY 3204	Introduction to Finance	4
MG-UY 3002	Project Management	2
MG-UY 4004	Management Strategy in Technology Sectors	4
MG-UY 4214	Financial Strategy	4
MG-UY 4404	ENTREPRENEURSHIP	4
MG-UY 4504	Global Perspectives on Technology Management: A Capstone Project Course	4
MG-UY XXXX	Tandon Management Course	4
Electives		
Science Electives (two 3- to 4-credit courses, for a minimum of 7 credits)		3-4
Restricted Electives (three 4-credit courses, for a total of 12 credits)		12
Free Electives (four 3- to 4-credit courses, for a minimum of 15 credits)		15-16
Total Credits		**127-128**

1

Students with a 3.6 GPA or better in major at the end of junior year may request to take, when available, MG-UY 4514 Honors Capstone Project in Tech, Innovation and/or Info Mgmt & Entrepreneurship I or the Bachelor's Thesis in Management (4 credits and with permission of the Dept. Chair/Pgm Dir). Upon completion of MG-UY 4514 they may also request to take, when available, MG-UY 4524 Honors Capstone Project in Tech, Innovation and/or Info Mgmt & Entrepreneurship II or MG-UY 4904 BS THESIS IN BUSINESS & TECH MANAGEMENT (with permission of the Dept. Chair/Pgm Dir). The Bachelor's Thesis in Management may take longer than 1 semester to complete and students must follow all thesis guidelines.

Concentrations

Students in this program may choose to direct their study in one of two areas of concentration, which focus on particular issues and strategies that apply to business and technology management. The concentrations are:

Technology Innovation and Strategy

This concentration enables students to develop effective skills for conducting strategic analysis addressing marketing, logistics, channel and operations managements issues, as well as relevant best business practices in the technological arena. Students who choose the Technology Innovation and Strategy concentration must complete both MG-UY 3304 Introduction to Supply Chain Management in their 6th semester and MG-UY 4004 Management Strategy in Technology Sectors in their 7th semester.

Technology and Innovation in Finance

This concentration prepares students to understand financial theory and how firms use modern finance for strategic and tactical decision-making. Students electing the Technology and Innovation in Finance concentration of study must complete both MG-UY 3214 Advanced Corporate Finance in their 6th semester and MG-UY 4214 Financial Strategy in their 7th semester.

Sample Plan of Study

Course	Title	Credits
1st Semester/Term		
MA-UY 1324 or MA-UY 1024	Integrated Calculus I for Engineers [1] or Calculus I for Engineers	4
EXPOS-UA 1	Writing The Essay: (Humanities and Social Sciences 1) [2]	4
Science Elective 1 [3]		4
MG-UY 1002	FOUNDATIONS OF TECHNOLOGY MANAGEMENT	2
EG-UY 1001	Engineering and Technology Forum	1
	Credits	**15**
2nd Semester/Term		
MA-UY 1424 or MA-UY 1124	Integrated Calculus II for Engineers [4] or Calculus II for Engineers	4
CS-UY 1114	INTRO TO PROGRAMMING & PROBLEM SOLVING	4
EXPOS-UA 2	THE ADVANCED COLLEGE ESSAY (Humanities and Social Sciences 2) [2]	4
Science Elective 2 [3]		3
	Credits	**15**
3rd Semester/Term		
MG-UY 2204	Financial Accounting	4
MG-UY 2024	Management of Business Information Systems and Data Technology [5]	4
MG-UY 2104	Organizational Behavior	4
TCS CAM/STS/SEG Cluster	Elective (Humanities and Social Sciences 3) [6]	4
	Credits	**16**
4th Semester/Term		
MG-UY 2524	Microeconomics [7]	4
MG-UY 2304	Marketing	4
MG-UY 2014	Operations Management	4
MA-UY 2054	Applied Business Data Analysis I [8]	4
	Credits	**16**
5th Semester/Term		
MG-UY 3204	Introduction to Finance	4
MG-UY 3002	Project Management	2
STS-UY 2144	Ethics and Technology (Humanities and Social Sciences 5) [9]	4
Restricted Elective [10]		4
Free Elective [11,12]		4
	Credits	**18**
6th Semester/Term		
MG-UY 3404	Innovation Management	4
Select one of the following:		4
MG-UY 3304	Introduction to Supply Chain Management (Strat. Con.) [13]	
MG-UY 3214	Advanced Corporate Finance (Fin. Con.) [13]	
Restricted Elective [10]		4
MG-UY 3224	Management Science [14]	4
	Credits	**16**
7th Semester/Term		
Select one of the following:		4
MG-UY 4004	Management Strategy in Technology Sectors (Strat.Con.) [13]	
MG-UY 4214	Financial Strategy (Fin. Con.) [13]	
MG-UY 4404	ENTREPRENEURSHIP [15]	4
Restricted Elective [10]		4
Free Elective [12]		4
	Credits	**16**
8th Semester/Term		
MG-UY 4504	Global Perspectives on Technology Management: A Capstone Project Course	4
Free Elective [12]		4
Free Elective [12]		3-4
TCS CAM/STS/SEG Cluster Elective (Humanities and Social Sciences 6) [2]		4
	Credits	**15-16**
	Total Credits	**127-128**

1

Students who are placed through the Tandon Mathematics Placement Exam or by a Tandon-Courant Mathematics Advisor, into MA-UY 914 Precalculus for Engineers must successfully complete the course before progressing to MA-UY 1324 Integrated Calculus I for Engineers. MA-UY 1054 Calculus I with Pre-calculus is no longer offered. A more advanced Calculus I Course than indicated by Tandon-Courant placement exam (MA-UY 1024 Calculus I for Engineers) may be substituted only with written permission by a Tandon-Courant Mathematics Advisor.

2

Follow latest NYU Tandon School of Engineering & Expository Writing and TCS (HuSS - Humanites & Social Sciences) requirements as stated per the NYU Tandon School of Engineering Bulletin. Note CAM/STS/SEG designate clusters of TCS courses, refer to TCS General Education Requirements for all TCS HuSS courses & prefixes. HUSS8 has been converted into a Free Elective.

3

BTM students are required to complete a minimum of a total of 7 credits of science electives by choosing 2 approved science elective courses from 2 different course areas as follows: course area 1: ((CM-UY 1003 General Chemistry for Engineers with or without CM-UY 1001 General Chemistry for Engineers Laboratory (as CM-UY 1004 is discontinued) or (CM-UY 1013 GENERAL CHEMISTRY I with or without CM-UY 1011 General Chemistry Laboratory I (as CM-UY 1014 is discontinued)), course area 2: (BMS-UY 1003 Introduction to Cell and Molecular Biology with or without BMS-UY 1001 Introduction to Cell and Molecular Biology Laboratory (as BMS-UY 1004 is discontinued)) and course area 3: (PH-UY 1013 MECHANICS or PH-UY 1213 MOTION AND SOUND). Any science course replacement requires approval by the BSBTM Program Director.

4

MA-UY 1052 Calculus II with Pre-Calculus and MA-UY 1154 Calculus II with Pre-Calculus are no longer offered and are replaced by a more advanced MA-UY 1424 Integrated Calculus II for Engineers course which follows MA-UY 1324 Integrated Calculus I for Engineers and may be substituted with MA-UY 1124 Calculus II for Engineers only with written permission by a Tandon-Courant Mathematics Advisor.

5

MG-UY 2004 Management of Information Technology and Systems and MG-UY 3024 Management of Data Communications and Networking is replaced by MG-UY 2024 Management of Business Information Systems and Data Technology. Students who have already taken MG-UY 2004 Management of Information Technology and Systems and not MG-UY 3024 Management of Data Communications and Networking must complete MG-UY 2024 Management of Business Information Systems and Data Technology.

6

The TCS STS Cluster BTM Mandatory Technology Subset has been replaced by a Restricted Elective

7

ECON-UA 2 Introduction to Microeconomics was replaced by MG-UY 2524 Microeconomics.

8

With written permission from the NYU Tandon/Courant Dept. of Mathematics, MA-UY 2054 Applied Business Data Analysis I may be substituted with MA-UY 2224 Data Analysis.

9

(The prior old PL-UY 2144) STS-UY 2144 Ethics and Technology is mandatory for all BTM majors and counts towards HUSS Credits.

10

Restricted Electives are Tandon pre-approved courses in math, science, Humanities and Social Sciences (HuSS) **only**. Computer Science courses may not be counted as Restricted Electives.

11

The prior 4cr BTM Technical Elective has been converted into a 4cr Free Elective.

12

Free Electives must must follow NYU Tandon guidelines.

13

Students must select, remain in and complete a BTM Concentration. Current BS BTM Concentrations are Technology Innovation and Strategy Concentration (Strat Concen) & Technology and Innovation in Finance Concentration (Fin Concen). Candidates who choose the Technology Innovation and Strategy concentration must complete both MG-UY 3304 Introduction to Supply Chain Management and MG-UY 4004 Management Strategy in Technology Sectors. Students electing the Technology and Innovation in Finance concentration of study must complete both MG-UY 3214 Advanced Corporate Finance taken first, and then MG-UY 4214 Financial Strategy.

14

MG-UY 4204 Management Science has been renumbered as MG-UY 3224 Management Science due to its move from the Fall semester of the senior year to the Fall semester of the junior year.

15

Students with a 3.6 GPA or better in major at the end of junior year may request to take, when available, MG-UY 4514 Honors Capstone Project in Tech, Innovation and/or Info Mgmt & Entrepreneurship I or the Bachelor's Thesis in Management (4 credits and with permission by the Dept. Chair/Pgm Dir). Upon completion of MG-UY 4514 Honors Capstone Project in Tech, Innovation and/or Info Mgmt & Entrepreneurship I they may also request to take, when available, MG-UY 4524 Honors Capstone Project in Tech, Innovation and/or Info Mgmt & Entrepreneurship II or MG-UY 4904 BS THESIS IN BUSINESS & TECH MANAGEMENT (with permission by the Dept. Chair/Pgm Dir). The Bachelor's Thesis in Management may take longer than 1 semester to complete and students must follow all thesis guidelines.

Note: BTM students may participate in internship experiences through first the 3 credit MG-UY 4603 Technology Management—Internship and Service[1] course and then additionally followed by either another MG-UY 4603 Technology Management—Internship and Service or the 1.5 credit CP-UY 2011 Internship for BS I (sec TM01[1]) and *then* the 1.5 credit CP-UY 2021 Internship for BS II (sec TM01[1]) courses, for a maximum of 6 total preapproved internship related credits, which will only count towards Free Electives.

Students are encouraged to also apply any MG-UY course including those which they do not use towards a BTM Concentration or from the Technology, Management and Design Minor's set of MG-UY courses as a Free Elective.

1

Only available to BTM students

Note: This chart is also used for advisement and BS BTM degree requirement audit checklist. All information is subject to revision.

Learning Outcomes

Upon successful completion of the program, graduates will:

1. Demonstrate and apply fundamental knowledge of technology and management concepts and their best practices in diverse work settings.
2. Engage in the basic analyses of strategic innovation and financial global technological management.
3. Apply entrepreneurial and innovative approaches (NYU Tandon's i^2e (invention, innovation and entrepreneurship) mission).
4. Utilize adequate communication and presentation skills commensurate required in starting positions in global industry.

Policies

Degree Requirements

To remain in good standing, candidates for the degree BS-BTM must satisfy the following requirements, in addition to NYU Tandon requirements for a minimum term and cumulative 2.0 GPA in all courses:

- An average of C (2.0) or better in all MG courses must be maintained.
- A course in which the grade of I is received may not be used to satisfy any prerequisites until the incomplete is resolved.

NYU Policies

University-wide policies can be found on the New York University Policy pages (https://bulletins.nyu.edu/nyu/policies/).

Tandon Policies

Additional academic policies can be found on the Tandon academic policy page (https://bulletins.nyu.edu/undergraduate/engineering/academic-policies/).