BUSINESS AND TECHNOLOGY MANAGEMENT (BS)

Department Website (https://engineering.nyu.edu/academics/departments/technology-management-and-innovation/)

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

Program Description

Today, we are in the midst of a global technological revolution in terms of Generative Artificial Intelligence (GenAI: Machine Learning (ML), LLMs (Large Language Models)), Internet of Things (IoT), Augmented Reality (AR), and Virtual Reality (VR) within rapidly transformative and disruptive technologies. Every leader must become technology proficient, which underscores the value of Tandon's invention, innovation, and entrepreneurship (i^2e) focus in today's high-speed, high-tech business world of service-led and socially networked companies. Those who have such knowledge will have a distinct advantage in their careers. The STEM-based Bachelor of Science Program in Business and Technology Management (BTM) offered by the Department of Technology Management and Innovation (TMI) espouses the values of i^2e and prepares students to become such leaders.

BTM is oriented toward current and future arenas where high growth occurs, providing students with relevant professional management education and effective approaches related to technology, innovation, information, design thinking, strategy, operations, supply chains, financial management and entrepreneurship. BTM creatively fuses modern business management with state-of-the-art technology management. BTM's rigorous STEM based training in the qualitative, quantitative and innovative aspects of technology and innovation management includes as central components emphasis upon communication skills in individual, team, classroom and field internship settings. BTM students are required 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 BTM concentrations are: Technology Innovation and Strategy and Technology and Innovation in Finance, shown under the Program Requirements.

BTM graduates are equipped to succeed in a variety of positions, such as: technology project managers, tech entrepreneurs, venture capitalists, technology and financial analysts/managers/controllers for various organizations, consultants in professional-service, finance, engineering and marketing firms and business-unit managers for new products and services including a variety of other exciting and emerging roles in large and small companies and start-ups. BTM students are prepared to pursue advanced professional and graduate studies in management.

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 (60 credits)		
Humanities and Social Sciences		
EXPOS-UA 1	Writing as Inquiry (Humanities and Social Sciences 1)	4
EXPOS-UA 22	Advanced Writing for Engineers (Humanities and Social Sciences 2)	4
TCS CAM/STS/SEG Cluster Elective (Humanities and Social Sciences 3)		4
MG-UY 2624	Business Economics (Humanities and Social Sciences 4)	4
STS-UY 2144	Ethics and Technology (Humanities and Social Sciences 5)	4
XX-UY 4504	Advanced Seminar; TCS CAM/STS/SEG Cluster Elective (Humanities and Social Sciences 6)	4
Computer Science		
CS-UY 1114	Intro To Programming & Problem Solving	4
Engineering and Design		
EG-UY 1004	Introduction to Engineering and Design	4
Design Thinking		
MG-UY 2701	Fundamentals in Design Thinking	1
Mathematics		
MA-UY 1024	Calculus I for Engineers	4
MA-UY 1124	Calculus II for Engineers	4
MA-UY 2224	Probability and Statistics for Engineers	4
Science Electives (2/3 science areas: Chemistry / Bio-molecular Science / Physics; for a minimum of 7 credits)		7
Restricted Electives (two Math / Science / HuSS 4-credit courses, for a total of 8 credits)		8
Major Requirements (52 credits)		
Management		
MG-UY 1002	Foundations of Technology Management	2
MG-UY 2014	Operations Management	4
MG-UY 2024	Management of Business Information Systems and Data Technology	4
MG-UY 2104	Organizational Behavior	4
MG-UY 2204	Financial Accounting	4
MG-UY 2304	Marketing	4
MG-UY 3002	Project Management	2
MG-UY 3204	Introduction to Finance	4
MG-UY 3224	Management Science	4
MG-UY 3404	Innovation Management	4
MG-UY 4404	Entrepreneurship	4
MG-UY 4504	Global Perspectives on Technology Management: A Capstone Project Course	4
Concentration Courses (see section below)		8
Free Electives (15-16 credits)		
Three 4 credit courses and one 3-4 credit course		15-16
Total Credits		**127-128**

Concentrations

Students in this program are required 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.

Additional Program Information

Students with a 3.6 GPA or better in MG-UY major courses at the end of junior year may request to take, when available, the 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 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 (4 credits and with permission by the Dept. Chair and BTM Pgm Dir and after having successfully completed a 1cr MG-UY 444x Guided Studies (with a BTM full-time faculty member as proposed thesis advisor). The Bachelor's Thesis in Management may take longer than 1 semester to complete and students must follow Tandon thesis guidelines. MG-UY 4514/24, 4904, or 444x may only count towards BTM Free Electives.

BTM students may participate in internship experiences through first the 3 credit MG-UY 4603 Technology Management—Internship and Service* course and then additionally followed by either another MG-UY 4603 internship or the 1.5 credit CP-UY 2011 Internship for BS I (sec TM01*) and then the 1.5 credit CP-UY 2021 Internship for BS II (sec TM01*) courses, for a maximum of 6 total preapproved internship related credits, which will only count towards Free Electives. International BTM students wishing to participate in an internship must follow these rules and those set by NYU OGS. (*Only available to TMI students.)

BTM students are encouraged to participate in NYU Minors. BTM students are recommended to complete the NYU Cross School Minor in Technology, Management and Design TMD) or the Tandon exclusive Engineering Innovation Minor. (BTMs may not take the NYU Cross School Management minor).

Sample Plan of Study [1]

Course	Title	Credits
1st Semester/Term		
MA-UY 1024	Calculus I for Engineers [2]	4
EXPOS-UA 1	Writing as Inquiry (Humanities and Social Sciences 1) [3]	4
Science Elective 1 [4]		4
EG-UY 1004	Introduction to Engineering and Design	4
	Credits	**16**
2nd Semester/Term		
MA-UY 1124	Calculus II for Engineers [2]	4
CS-UY 1114	Intro To Programming & Problem Solving	4
EXPOS-UA 22	Advanced Writing for Engineers (Humanities and Social Sciences 2) [3]	4
Science Elective 2 [4]		3
MG-UY 1002	Foundations of Technology Management	2
	Credits	**17**
3rd Semester/Term		
MG-UY 2204	Financial Accounting	4
MG-UY 2024	Management of Business Information Systems and Data Technology	4
MG-UY 2104	Organizational Behavior	4
MA-UY 2224	Probability and Statistics for Engineers [2]	4
MG-UY 2701	Fundamentals in Design Thinking	1
	Credits	**17**
4th Semester/Term		
TCS CAM/STS/SEG Cluster Elective (Humanities and Social Sciences 3) [3]		4
MG-UY 2654	Business Economics (Humanities and Social Sciences 4) [7]	4
MG-UY 2304	Marketing	4
MG-UY 2014	Operations Management	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) [5]	4
Restricted Elective 1 [6]		4
Free Elective 1 [9,10]		4
	Credits	**18**
6th Semester/Term		
MG-UY 3404	Innovation Management	4
Select one of the following: [8]		4
MG-UY 3304	Introduction to Supply Chain Management (Strat. Con.) [8]	
MG-UY 3214	Advanced Corporate Finance (Fin. Con.) [8]	
Restricted Elective 2 [6]		4
MG-UY 3224	Management Science	4
	Credits	**16**
7th Semester/Term		
Select one of the following: [8]		4
MG-UY 4004	Management Strategy in Technology Sectors (Strat. Con.) [8]	
MG-UY 4214	Financial Strategy (Fin. Con.) [8]	
MG-UY 4404	Entrepreneurship	4
Free Elective 2 [9,10]		3-4
Free Elective 3 [9,10]		4
	Credits	**15-16**
8th Semester/Term		
MG-UY 4504	Global Perspectives on Technology Management: A Capstone Project Course	4
Free Elective 4 [9,10]		4
TCS CAM/STS/SEG Cluster Elective (Humanities and Social Sciences 6: XX-UY 4504 Advanced Seminar; XX=STS/CAM/URB/TCS) [3]		4
	Credits	**12**
	Total Credits	**127-128**

[1] Concerning the Sample Plan of Study: 1st, 3rd, 5th and 7th Semester/Terms correspond only to Fall semesters and 2nd, 4th, 6th and 8th Semester/Terms correspond only to Spring Semesters.

BTM students must maintain a minimum 2.0 CUM GPA in MG-UY courses or the BTM student will be disqualified from the BTM Program and asked to leave the BTM Program after that semester with less than a 2.0 CUM MG-UY GPA. There is no official probationary period.
a. BTM students are reminded that Tandon students may only take four courses outside of NYU Tandon to apply towards the student's 127/8 credits in BS BTM, unless officially completing an NYU Minor or in an NYU Study Abroad program.
b. Any courses taken outside of NYU Tandon require written pre-approval including equivalence from the requisite Tandon dept. and then requires a BTM Advisor's approval unless the BTM student has NYU Undergraduate Admissions approved MG-UY transfer credits, or has NYU Study Abroad pre-approval from TMI for specific MG-UY courses, or is transferring into BTM and has outside management courses evaluated and approved by TMI, or has other pre-approved management courses to be taken outside of TMI evaluated and approved by TMI, the BTM student may not apply any management courses outside of NYU-Tandon's Department of Technology and Innovation (TMI) towards the 127/8cr BS in BTM degree.
c. BTM students must keep track of surplus and/or deficit credits - especially when transferring credits.
d. Grandfathering rules may apply. Students are responsible for their degree progression.
e. BTM Students are responsible for any conditions &/requirements concerning NYU Minors, such as courses counting towards both BTM and the minor.

[2] BTM Students who are placed through the Tandon Mathematics Placement Exam or by Tandon-Courant Mathematics into MA-UY 914 Precalculus for Engineers must successfully complete the course before progressing to MA-UY 1024 Calculus I for Engineers. BTM students then progress to MA-UY 1124 Calculus II for Engineers. BTM students complete their mathematics requirement with MA-UY 2224 Probability and Statistics for Engineers. MA-UY 914/1024/1124/2224 may be substituted only with written permission by Tandon-Courant Mathematics.
a. MA-UY 2054 Applied Business Data Analysis is no longer offered. BTM no longer accepts AP (Advanced Placement) credit for statistics.

[3] BTM Students follow the latest NYU Tandon Expository Writing and TCS (HuSS - Humanities & Social Sciences) requirements as stated per the NYU Tandon School of Engineering Bulletin. Note: CAM/STS/SEG designate clusters of Technology, Culture and Society (TCS) courses, refer to TCS General Education Requirements for all TCS HuSS courses, TCS course prefixes and TCS HuSS equivalent courses. All BTM students must complete the mandatory Tandon TCS Dept's XXX-UY 4504 Advanced Seminar (where XXX = STS/CAM/URB/TCS), the 3rd required writing course, which may be substituted only with written permission by the TCS Dept.

[4] 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 or CM-UY 1013 General Chemistry I with or without CM-UY 1011 General Chemistry Laboratory I, 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 and course area 3: PH-UY 1013 Mechanics. BTM no longer accepts PH-UY 1213 Motion and Sound. Any science course replacement requires approval by the BS BTM Program Director and corresponding Tandon science department. Labs must correspond with the science to count towards the 7crs of required sciences in BTM.

[5] STS-UY 2144 Ethics and Technology is mandatory for all BTM majors and counts towards HuSS credits.

[6] Restricted Electives are Tandon pre-approved courses in math, science, Humanities and Social Sciences (HuSS) only. (Engineering and Computer Science courses may not be counted as Restricted Electives). Consult your BTM Advisor if you are unsure if a course counts as a Restricted Elective.

[7] MG-UY 2624 Business Economics replaces MG-UY 2524 Microeconomics, which is no longer offered.

[8] Students must select, remain in and complete a BTM Concentration. Current BS BTM Concentrations are: 1) Technology Innovation and Strategy Concentration (Tech Strat Concen) and 2) Technology and Innovation in Finance Concentration (Fin Strat 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. Students may complete both BTM Concentrations, where the extra MG-UY courses can only count towards BTM Free Electives.

[9] BTM's 15/16 credits of Free Electives must follow NYU Tandon academic policies. Free Electives may not duplicate content.

[10] Students with a 3.6 GPA or better in MG-UY major courses 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 MG-UY 4904 BS Thesis in Business & Tech Management (with permission by the Dept. Chair and BTM Pgm Dir and after having successfully completed a 1cr MG-UY 444x Guided Studies (with a BTM full-time faculty member as proposed thesis advisor)). 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 by the Dept. Chair and BTM Pgm Dir and after having successfully completed a 1cr MG-UY 444x Guided Studies (with a BTM full-time faculty member as proposed thesis advisor)). The Bachelor's Thesis in Management may take longer than 1 semester to complete and students must follow Tandon thesis guidelines. MG-UY 4514/24 or 4904 may only count towards BTM Free Electives.
a. BTM students may participate in internship experiences through first the 3 credit MG-UY 4603 Technology Management—Internship and Service course and then additionally followed by either another MG-UY 4603 internship or the 1.5 credit CP-UY 2011 Internship for BS I (sec TM01*) and then the 1.5 credit CP-UY 2021 Internship for BS II (sec TM01*) courses, for a maximum of 6 total preapproved internship related credits, which will only count towards Free Electives. International BTM students wishing to participate in an internship must follow these rules and those set by NYU OGS. (*Only available to TMI students.)
b. BTM students are encouraged to participate in NYU Minors. BTM students are recommended to complete the NYU Cross School Minor in Technology, Management and Design TMD) or the Tandon exclusive Engineering Innovation Minor. (BTMs may not take the NYU Cross School Management minor). 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.

Note: This chart is also used for advisement and BS BTM degree requirement audit checklist for Fall 2024 students onward. All information is subject to revision. 45749.

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

Program 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/).