



# Bachelor's / MBA 4 + 1 Program

Complement your undergraduate degree  
with a career-enhancing MBA.

You can obtain both degrees in 5 years,  
with substantial cost and time savings.

## PROGRAM FEATURES

- Earn Bachelor's degree with graduate credits by May
- Earn MBA degree by May of the following year
- 36 credit MBA program with innovative 3- & 1.5-credit courses:
  - Designed for students with diverse academic backgrounds
  - 6 MBA credits in senior year, at undergraduate tuition rate, satisfy both degree requirements AND
  - 9 to 10.5 MBA credits per term Summer, Fall & Spring
  - Each term: classes up to 2-3 evenings per week, plus 1-2 online class(es).
- Cohort-based program, Set schedule of courses
- Internships/co-ops to obtain professional experience
- Individualized career coaching and preparation
- 9-10 day international study trip

### **Admission Qualifications:**

- *Program is available to Undergraduate student pursuing a Bachelor's degree in a variety of majors. Please contact the MBA Office for approved majors.*
- Cumulative GPA of 3.1 or higher
- GRE/GMAT waived for eligible candidates**



**Attend an Information Session**  
**Register at [business.montclair.edu/infosession](http://business.montclair.edu/infosession)**

**Contact Us:** MBA & Graduate Programs Office

Feliciano School of Business  
Room 330  
973-655-4306  
[mba@montclair.edu](mailto:mba@montclair.edu)  
[www.montclair.edu/mba](http://www.montclair.edu/mba)

For application information, contact  
The Graduate School  
973-655-5147  
[gradschool@montclair.edu](mailto:gradschool@montclair.edu)





**Montclair State University**  
**Department of Physics and Astronomy**  
**BS Physics/MBA 5-year Combined Program**

<b>I. GenEd Requirement</b>		<b>32 sh</b>	
A. New Student Seminar		1	PHYS 399 Special Topics in Physics 1-4
C. Communication		9	PHYS 451 Radiation and Medical Physics 3
C1. Writing			PHYS 461 Special & General Relativity 3
C2. Literature			PHYS 462 Nuclear Physics 4
C3. Communication			PHYS 470 Solid State Physics 3
D. Fine and Performing Arts		3	PHYS 480 Astrophysics 3
F. Humanities		6	PHYS 495 Research/Indep. Study in Physics 1-4
F1. Great Works and Their Influences			
F2. Philosophical and Religious Perspectives			
G. Computer Science	<i>CSIT 104</i>	(0)	<b>C. Collateral Requirements (26-27 sh)</b>
H. Mathematics	<i>MATH 122 or AMAT 120</i>	(0)	CSIT 104 Computational Concepts 3
I. Natural Science Laboratory	<i>PHYS 191</i>	(0)	CHEM 120 General Chemistry I 4
J. Physical Education		1	CHEM 121 General Chemistry II 4
K. Social Science		9	MATH 122 Calc. I or AMAT 120 Applied Calc. A 4
K1. American and European History			MATH 221 Calc. II or AMAT 220 Applied Calc. B 4
K2. Global Cultural Perspectives ( <i>Select one course from attached list to also satisfy II.B. World Cultures.</i> )			MATH 222 Calculus III 4
K3. Social Science Perspectives			and choose one of the following options:
L. Interdisciplinary Studies ( <i>ECON 202 by waiver</i> )		3	AMAT 350 Applied Mathematics I 3
			or PHYS 377 Mathematical Physics 3
			or MATH 325 Differential Equations 4
<b>II. World Languages and Cultures Requirement</b>		<b>3-6 sh</b>	
A. World Languages		3-6	
B. World Cultures		(0)	
(Some World Cultures courses may fulfill Gen Ed requirements.)			
<b>III. Major Requirements</b>		<b>71-75 sh</b>	
<b>A. Physics Core</b>		<b>(36 sh)</b>	
PHYS 191 University Physics I		4	
PHYS 192 University Physics II		4	
PHYS 198 Introductory Physics Seminar		1	
PHYS 210 Intermediate Mechanics		3	
PHYS 220 Oscillations, Waves, & Optics		3	
PHYS 230 Intermediate Physics Laboratory		4	
PHYS 300 Junior/Senior Physics Seminar		1	
PHYS 320 Statistical and Thermal Physics		3	
PHYS 330 Advanced Physics Laboratory		4	
PHYS 340 Electricity and Magnetism		3	
PHYS 360 Modern Physics		3	
PHYS 464 Quantum Mechanics		3	
<b>B. Physics Electives</b>		<b>(9-12 sh)</b>	
PHYS 180 Astronomy for Everyone		4	
PHYS 245 Fundamentals of Electronics		4	
PHYS 280 Astronomy for Physicists		4	
PHYS 310 Advanced Mechanics		3	
PHYS 325 Computational Physics		3	
PHYS 341 Electronics and Digital Circuits		4	
PHYS 350 Modern Optics		4	
PHYS 368 Fluid Mechanics		3	
PHYS 377 Mathematical Physics		3	
PHYS 380 Observational Astronomy		4	
			<b>IV. MBA Courses taken as Undergraduate 6 sh</b>
			<b>A. MBA Prerequisite options (0 sh)</b>
			Students are recommended to take the following preparatory courses in accounting, economics, and statistics, with final grade of B- or higher. Alternatively, they may complete online <i>Foundation Modules</i> in these subjects (\$75 each).
			ACCT 204 Fundamentals of Accounting (3)
			ECON 202 Econ. & Finance for Bus. Minors (0)
			(Students should enquire about ECON 202 satisfying their Gen. Ed. L requirement, by credit adjustment.)
			Statistics requirement is satisfied by Physics Core courses.
			<i>Students typically apply to the MBA program in their junior year. Minimum 3.1 GPA required.</i>
			<b>B. MBA Swing Courses † (6 sh)</b>
			These courses count towards both the undergraduate physics major requirements and the graduate MBA requirements. (see additional pages below)
			<b>V. Free Electives 1- 8 sh</b>
			<b><u>Minimum total required for graduation 120 sh</u></b>
<b>Revised May 1, 2020</b>			



**Suggested Sequence for Five-Year Plan****First Year**

<b>Fall</b>	<b>Total: 15cr</b>	<b>Spring</b>	<b>Total: 15cr</b>
I. PHYS 191 University Physics I (4) H. MATH122 Calc I or AMAT120 App Calc A(4)* G. CSIT 104 Computational Concepts (3) C1. Writing (3) A. New Student Seminar (1)		PHYS 192 University Physics II (4) PHYS 198 Introductory Physics Seminar (1) MATH 221 Calc II or AMAT 220 AppCalcB (4) C2. Literature (3) C3. Communication (3)	

**Second Year**

<b>Fall</b>	<b>Total: 17cr</b>	<b>Spring</b>	<b>Total: 13cr</b>
PHYS 210 Intermediate Mechanics (3)** MATH 222 Calculus III (4) CHEM 120 General Chemistry I (4) K3. Social Science Perspectives (3) L. Interdisciplinary Studies (3)		PHYS 340 Electricity and Magnetism (3)** PHYS 320 Statistical and Thermal Physics (3)** AMAT 350 or PHYS 377 (3) [or MATH 325 (4)] CHEM 121 General Chemistry II (4)	

**Third Year**

<b>Fall</b>	<b>Total: 14cr</b>	<b>Spring</b>	<b>Total: 15-16cr</b>
PHYS 220 Oscillations, Waves, & Optics (3)** PHYS 230 Intermediate Physics Lab (4) PHYS 300 Junior/Senior Physics Seminar (1) World Language I (3) D. Fine & Performing Arts (3)		PHYS 360 Modern Physics (3)** Physics Elective (3-4) F1. Great Works and Their Influences (3) F2. Philosophical & Religious Perspectives (3) World Language II/Free Elective (3)	

**Fourth Year**

<b>Fall</b>	<b>Total: 16-17cr</b>	<b>Spring</b>	<b>Total: 11-16cr</b>
PHYS 464 Quantum Mechanics (3) PHYS 330 Advanced Physics Lab (4) Physics Elective (3-4) K1. American & European History (3) K2.Global Cultural Perspec./World Cultures*** (3)		Physics Elective (3-4) MBA Swing Courses (6) † [see attached] J. Physical Education (1) Free Electives (2-5) ‡	

Note: After Year 1, General Education, World Languages/Cultures, and free electives can be taken in any sequence.

\*Students who do not have a strong (4 year) background in high school mathematics, including exponential, logarithmic, and trigonometric functions are advised to take MATH 111 Applied Precalculus before Calculus I.

\*\* The PHYS 210, 320, 340 and PHYS 220, 360 sequences are offered in alternate years and can be taken in Year 2 or Year 3. Most 200-level and higher physics courses are offered on an alternate-year schedule.

\*\*\* GenEd Category K2 & World Cultures double-dip: ANTH 100, 115, 120, 130, 140, 150, ARAB 193, ARHT 101, DNCE 145, FREN/FRIN 283, 289, GSWS 200, HUMN 217, 289, HIST 108, 114, 132, 138, LALS 201, 205, PHIL 237, POLS 206, RELG 240, 250, 252, 254

† Upon admission to the BS/MBA program, students are provided with a cohort sequence and a student code which allows them to enroll in a **specific list** of 6 credits from the fixed core of MBA.

‡ ACCT 204 and ECON 202 are recommended free electives that can be applied to MBA prerequisite requirements (in place of online Foundation Modules in Accounting and Finance).



## 4+1 MBA Program Sequence - General MBA

### Spring (Senior Year)

Course	Title	Credits
INFO 561	Foundations of Data Analytics	1.5
MKTG 561	Applied Marketing Management	1.5
MGMT 561	Achieving Competitive Advantage	1.5
ECON 563	Managerial Economics	1.5

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### Summer

Course	Title	Credits
MKTG 562	Market Analysis and Customer Insight	1.5
MGMT 562	Organizational Behavior and Team Leadership	1.5
FINC 561	Investments: Principles and Practice	1.5
ECON 562	Macroeconomic Analysis and Public Policy	1.5
ACCT 560	Accounting for Business Managers	3
ELECTIVE COURSE	MGMT577: Design Your Career	1.5

10.5

### Fall

Course	Title	Credits
INFO 562	Operations Analytics	1.5
INFO 563	Information Systems Strategy and Innovation	3
INBS 561	Emerging Trends in Global Markets	1.5
FINC 560	Corporate Financial Decision Making	1.5
ELECTIVE COURSE	MGMT 574: Business Leader Perspectives	1.5
ELECTIVE COURSE	BUGN 570: Business Consulting Experience	1.5

10.5

### Early January

International Experience 9-10 days
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### Spring

Course	Title	Credits
INFO 564	Operations and Supply Chain Management	1.5
MGMT 567	Business Growth Strategy	1.5
MKTG 563	Sustainability and Corporate Responsibility	1.5
<i>Choose 3 credits from list of Flexible MBA courses</i>		3
MGMT 565	Project Management	1.5
MGMT 566	Negotiation in the Workplace	1.5
MGMT 569	Business Communications	1.5
ENTR 561	Business Innovation and Entrepreneurial Thinking	1.5
ELECTIVE COURSE	BUGN572: Co-op Experience	1.5

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**Total Number of MBA Credits**

**36.0**

This sequence is tentative and subject to change