



The Fisher Program in
Management & Technology

Fisher Program Class of 2010 Curriculum Guide

Places you need to know

There are many other places on campus where you will find great value, but these places can't be missed!

1. **M&T Office** – 3537 Locust Walk (215-898-4145). The M&T Office is for all M&T students and should serve as your home base. Not only can you meet other M&T students here, but there are computers, printers, copier, fax machine, newspapers, magazines, and free coffee all for M&T students. Upperclassmen are also always around and are eager to assist the underclassmen with scheduling, professor recommendations, and career advice.
2. **Office of Academic Programs, Penn Engineering** – 111 Towne Building. APO is your Engineering home base. Everything administrative for Engineering is completed through this office.
3. **Wharton Undergraduate Advising** – G95 Huntsman Hall. All your Wharton registration/advising needs can be met here.

People you want to meet

You will meet so many interesting people at Penn, however these individuals will provide endless guidance and support to you during your four years.

1. **Dr. William Hamilton** (Hamilton@wharton.upenn.edu) - Director M&T Program and Ralph Landau Professor of Management and Technology
Dr. Hamilton is the founder of the M&T Program and the program's driving force. He is a great resource when you are looking for advice on your academic and/or career path. Dr. Hamilton teaches MGMT 237 and MGMT 235, both classes for M&T students.
2. **Professor Rob Weber** (weberrob@wharton.upenn.edu) - Senior Fellow, M&T Program and Managing Director, Antiphony Partners LLC
Professor Weber (M&T '82) is another great resource. As a graduate of the program, Professor Weber has great alumni connections and knowledge that he is eager to share. He also teaches MGMT 237 and MGMT 235 with Dr. Hamilton.

3. **Lea Engle** (lengle@wharton.upenn.edu) - Administrative Director, M&T Program
Lea handles everything from prospective student visits to admissions to academic advising to alumni events. If you have questions, seek her out.
4. **Jaime Davis** (djaime@wharton.upenn.edu) - Program Assistant, M&T Program
Jaime keeps the M&T Office going providing key administrative support to the Program and the classes within the Program.
5. **Joe Sun** (sunj@seas.upenn.edu) - Director, Academic Affairs, Penn Engineering
Dr. Sun serves as all M&T's Engineering advisor until they declare their major. He is very familiar with the M&T Program requirements and the Engineering disciplines.
6. **Marianne Lipa** (mlipa@wharton.upenn.edu) - Associate Director, Wharton Undergraduate Division
Marianne is one of many great resources in the Wharton School. She specializes in M&T student's curriculum and study abroad.

First things you need to know as an M&T Student

This is just the tip of the iceberg, but enough information to get you started.

1. You are officially enrolled in both the School of Engineering and Applied Science (SEAS) **and** the Wharton School. For registration and other administrative purposes, however, your 'home' school is Engineering.
2. All M&T students are classified as curriculum deferred in SEAS upon entering Penn. You may declare your major in SEAS after your first semester in the Office of Academic Programs, 111 Towne Building. You do not have to declare your Wharton concentration until much later. As a freshmen and sophomore, enjoy learning and exploring about the different concentrations before choosing the perfect one for you.
3. First semester freshmen year, all M&T student must take **EAS 101 (section 001)**. This is taught as a co-hort and a great way to meet your classmates. First semester students must also take MGMT 100. You can not drop these courses from your schedule.

Advising

Penn Engineering, Wharton, and the M&T Office offer sources of both formal and informal advising. These advisors can help you with matters related to choosing your major or concentration, planning your schedule, and defining your career goals.

School of Engineering and Applied Science

As an M&T student, you are curriculum deferred in Penn Engineering until the end of the first semester when you choose your major. During this time, your academic advisor will be Joe Sun, Director of Academic Affairs in Penn Engineering. When you do declare your major will also receive a faculty advisor and a student advisor in your major.

Your faculty advisor helps with registering for class, choosing a major, and defining career goals. You are required to meet with your faculty advisors twice a year to register for classes. During the two weeks before advance registration, you are required to complete the Course Planning Guide worksheet (CPG) found on Penn In Touch and then meet with your advisor to receive approval to register for the next semester. If you do not seek this approval, there will be a block on your accounts prohibiting you from registering. Engineering student advisors are informal advisors who suggest courses and answer general questions about school and social life for freshman students.

At any point, you can also seek Engineering curriculum assistance through the Office of Academic Programs in 111 Towne.

Wharton School

Academic advising in the Wharton School is handled through the Undergraduate Division Office in G95 Huntsman Hall. Here several Academic Advisors (the Associate Directors) are able to assist you with curriculum planning, clarification of interests, and directing you to other University resources.

There are Departmental Faculty Advisors in each department who are helpful in answering questions about the department, a concentration, or a particular field of specialization. The Wharton Peer Advisor (an upperclassman in Wharton) is your Team Advisor for Management 100, a course all Wharton freshmen take in their first semester. Peer Advisors can help in course advising, networking and getting acclimated to University life.

M&T Office

The Management and Technology Office offers informal advising to students. Upperclass M&T students are great advisors who can offer first hand knowledge about courses and techniques for success in M&T. Stop in the office to meet some of these students and learn more.

Choosing a Major and a Concentration

Overview

All first year students in the M&T Program enter as curriculum deferred (CD) Bachelor of Science in Engineering students in Penn Engineering and as undeclared for their Wharton concentration.

School of Engineering and Applied Science

The School of Engineering and Applied Science offers two undergraduate degree programs: the Bachelor of Science, Engineering (BSE) and the Bachelor of Applied Science (BAS). There are seven pre-designed BSE majors that lead to an accredited degree in engineering. There are five pre-designed BAS majors. Refer to the Engineering Undergraduate Handbook and each departmental website for more specific information on each degree program. M&T students can declare their major after the first semester freshmen year.

The Wharton School

All Wharton students begin their studies with the CORE which provides a strong foundation in numerous business areas prior to choosing a concentration. Wharton offers over 17 distinctive concentrations which act like “majors.” Many M&T students actually choose more than one concentration creating an even more specialized and unique degree. A detailed explanation of the concentrations can be found in the Wharton Undergraduate Handbook or on the office’s website.

Registering for Courses

Overview

The University of Pennsylvania uses a universal registration system called **Penn In Touch** for students of all schools to register for classes. You can access Penn In Touch and other University resources through this link:

http://medley.isc-seo.upenn.edu/penn_portal/view.php

There are two registration periods for each semester, **advance registration** and **course selection**. During advance registration you will be entering your requests for the courses you wish to take the following semester. **Freshmen advance registration begins Monday, June 26, 2006 and closes at 11:59 pm EST on Friday, July 28, 2006.** In between June 26th and July 28th, you can “play” with your schedule and see what times, courses, professors, etc make sense for you. None of the activity you do to your schedule during this time actually creates a real schedule for you. Not until after July 28th does your schedule become active.

After July 28th, advance registration closes and the advance registration scheduler processes your courses, trying to match pieces like required courses and student preferences. **On Tuesday, August 8, 2006 you may view your active schedule in Penn In Touch**

After Tuesday, August 8, 2006, your schedule is live and you may make *real time* changes to it using Penn In Touch. This process does not consider preferences and is first come, first serve, so if there is a course that you did not get into during advance registration now is the time to frequently check Penn In Touch and see if a space opens in the course for you.

For greater detail regarding this process, visit this link:

http://www.upenn.edu/registrar/pdf_main/06C_FTT_Registration_Info.pdf

What Course Should You Take?

Course Planning Guides (CPG) assists you with planning your course work for the next four years. Because M&T students take so many courses and have requirements for both schools, this is a tool that you will want to become familiar with and will use with some frequency too. Upperclass M&T students are a great resource when you have questions about planning your curriculum and fulfilling requirements. The M&T Club also hosts CPG Workshops each semester.

CPGs can be found through Penn In Touch as worksheets. You will need to create both a Wharton and a Penn Engineering worksheet. Below are *blended worksheets* (meaning a worksheet that displays both curriculums) for both BAS and BSE degree. These can help you to see which courses across the schools you will need to take. However, the *blended worksheets* are only a guide and are not specific for your major. You will need to fill in the courses needed for your specific major and concentration.

Specific Registration FAQ

- "I can't get into a section of.....chemistry."

Students should be able to register for the engineering sections 5 and 6 of CHEM 101. Students who need to get into other sections or labs need to contact the chemistry department at 215-898-9722 or visit them in room 126 of the Chemistry Building.

- "...physics lab."

If Students have AP class credit, they need to take a physics lab only. To sign up for the lab separately, or if all sections of Physics lecture and labs are closed, contact Ms. Mary Thomas (Thomas@dept.physics.upenn.edu) in the Physics Department. Or visit them at 2E1, David Rittenhouse Lab Bldg (DRL).

- "...math."

If students want to get into a closed section, they should contact the math department (215-898-8178; 4 floor DRL).

- "...another SEAS course."

Contact the Engineering Office of Academic Programs at 215-898-7246.

- "I'm not an Honors student, but I want to get into an Honors class."

Students should contact the department directly to learn the criteria for obtaining a permit.

- "I want to get into a closed elective."

- PennInTouch operates on a first-come first- served basis, so the first person to register after someone else drops the course will get that slot. Students should be persistent.

- Go to the first class and ask if the instructor would be willing to permit you in.

- “I have a permit that somebody put in for me – do I still need to register through PennIn Touch?”

Yes, the permit only makes it possible to register; it does not actually register the student.

- “I checked the wrong box on my introduction form. Can I change my curriculum?”

Yes---within SEAS. Students can switch to another SEAS department (BE, CSE, etc.) by filling out a change of curriculum form in this office or in 111 Towne.

**MANAGEMENT AND TECHNOLOGY PROGRAM
CURRICULUM PLANNING GUIDE**
Bachelor of Applied Science (BAS)/ Bachelor of Science in Economics
To be used in conjunction with Engineering Course Planning Guide

1. **Required Wharton/CAS Courses** -

9 cu
ACCT 101 FNCE 101*
ACCT 102 FNCE 100
BPUB 250* MGMT 100
ECON 010* MGMT 101
 MKGT 100

1. **Communications Requirement** -

1 cu
Foreign Language Proficiency
Writing Requirement*

2. **Business Breadth** -

2 cu
MGMT 237**

4. **Business Concentration** -

4 cu
May not include introductory courses.

5. **Gen. Education/Global Environment** -

4 cu
General Education: 2 cu
Global Environment: 2cu

6. **Societal Environment** -

1 cu
Choose 1 of the following:
 Legal Studies 101*
 Legal Studies 210*
 Public Policy and Mgmt 203

7. **Quantitative/Computational Skills** -

Minimum 6 credit units. Number may vary by engineering major.
MATH 104 SYS 301
MATH 114 SYS 302

[Students may substitute Statistics 430 & 431 for Systems 301 & 302, if the latter sequence is not required by their particular Engineering major.]

8. **Natural Sciences** - minimum 4 credit units.

Minimum number varies by engineering major.

See Engineering CPG for specific requirements for each engineering major.

9. **Required Engineering Courses** -

10 cu.
EAS 101**
CSE 110 or 120 or OPIM 101
EAS 499 (Applied Project)
MGMT 237**

Number of credit units will vary by engineering major. See the specific major for further details.

10. **Concentration** -

7 or 8 cu
See specific major for greater detail

11. **Social Sciences and Humanities** -

7 cu

PLEASE NOTE:

- a) * Denotes approved SSH course in Engineering.
- b) ** Denotes a special section or course for M&Ts
- c) A minimum of 46 cu's must be completed.
- d) Students are expected to maintain satisfactory academic progress throughout their program

MANAGEMENT AND TECHNOLOGY PROGRAM CURRICULUM PLANNING GUIDE

Bachelor of Science in Engineering (BSE)/ Bachelor of Science in Economics

To be used in conjunction with Engineering Course Planning Guide

1. **Required Wharton/CAS Courses** - 9 cu

ACCT 101 FNCE 101*
ACCT 102 FNCE 100
BPUB 250* MGMT 100
ECON 010* MGMT 101
 MKGT 100

2. **Communications Requirement** -

1 cu
Foreign Language Proficiency
Writing Requirement*

3. **Business Breadth** -

2 cu
MGMT 237**

4. **Business Concentration** -

4 cu
May not include introductory courses.

5. **Gen. Education/Global Environment** -

4 cu
General Education: 2 cu
Global Environment: 2cu

6. **Societal Environment** -

1 cu
Choose 1 of the following:
 Legal Studies 101*
 Legal Studies 210*
 Public Policy and Mgmt 203

7. **Quantitative/Computational Skills**

Minimum 6 credit units. Number may vary by engineering major.
MATH 104 SYS 301
MATH 114 SYS 302

[Students may substitute Statistics 430 & 431 for Systems 301 & 302, if the latter sequence is not required by their particular Engineering major.]

8. **Natural Sciences** - minimum 4 credit units.

Minimum number varies by engineering major.

See Engineering CPG for specific requirements for each engineering major.

9. **Required Engineering Courses** -

10 cu.
EAS 101**
CSE 110 or 120 or OPIM 101
EAS 499 (Applied Project)
MGMT 237**
Additional required courses will vary by major.

10. **Engineering Concentration**

Number of credit units will vary by engineering major. See the specific major for further details.

11. **Application Oriented Focus/Technical Electives**

Number of credit units will vary by engineering major. See the specific major for further details.

12. **Social Sciences and Humanities** -

7 cu

PLEASE NOTE:

- a) * Denotes approved SSH course in Engineering.
- b) ** Denotes a special section or course for M&Ts
- c) A minimum of 46 cu's must be completed.
- d) Students are expected to maintain satisfactory academic progress throughout their program



Sample Freshman Curriculum for Management & Technology Students

Freshman Year

Fall semester courses:

1. Math 104 or Math 114
2. Economics (ECON) 010
1. Engineering and Applied Science (EAS) 101, section 001 (Must be taken Fall Semester freshmen year). This course is taken as an M&T cohort.
4. Management 100 (must be taken fall semester freshman year. See Wharton Guidebook for details).
5. Computer Science and Engineering (CSE) 110
OR CSE 120/130 for potential degree in:
 - BSE in Computer Science,
 - BAS in Computer Science, Computational Biology, Cognitive Science, Digital Media Design,
 - Or If you are simply planning to take upper level computer science courses**OR**
ESE 115 for potential degree in:
 - Computer and Telecommunications Engineering
 - Electrical Engineering**OR**
 - PHYS 150/50, or CHEM 101/053

(Refer to each major's electronic Course Planning Guide for more details on each major's Natural Science requirement. This requirement differs with each Engineering major.)

Spring semester courses:

1. Continuation of Math (i.e.: Math 114 or Math 240)
2. Business Policy (BPUB) 250
3. Continuation of Science requirement (i.e. PHYS 151, CHEM 102/054) or CSE 121/131
4. MGMT 101
5. One or two of:
 - "Writing About..." Writing Requirement course
 - Required Wharton course (i.e. MKTG 101, ACCT 101, LGST 101/210, etc.)
 - General Education requirement, or
 - Foreign Language requirement

NOTES:

1. Your course plan will vary depending on your choice of engineering major. Please refer to Engineering's Freshman Advance Registration Guidebook for more detailed information.
2. Advanced Placement credit will give a student increased opportunities for advanced courses and free electives.
3. During your first semester, you may take **no more than 5.5 credits**. If you have a sufficiently high G.P.A. after the first semester, you may take an overload roster beginning in the Spring semester.

Further notes on the M&T Curriculum

Wharton Coursework:

Wharton Core: 9 credits

M&T students must satisfy all courses listed. MGMT 100 must be taken first semester freshmen year. MGMT 101 must be taken second semester freshmen or first semester sophomore year (it is a pre-requisite for MGMT 237).

Communication Requirements: 2 credits

- Foreign Language Proficiency: all M&T students must satisfy the language proficiency. This can be fulfilled by AP credit, achievement test scores or by passing department exams/requirements. If you need to take classes to satisfy this, two of them may count towards General Education Requirements.
- Writing Requirement: all M&T students must satisfy this requirement by enrolling in a "Writing About" course. This is typically completed during the freshmen year. This course is also an approved SSH course in the SEAS curriculum.

Business Breadth: 2 credits

- Management 237: this course is taken by all M&T students during the second semester of the sophomore year. This is a course created and designed for just M&T students.
- The second course can be any course offered through Wharton, but cannot count towards the primary business concentration. If a student has a dual Wharton concentration, one course from the second concentration can be used towards this requirement.

Business Concentration: 4 credits

- These courses constitute a student's Wharton major. They may not include introductory courses. Refer to the departmental websites for current course offerings.
 - To declare a concentration, visit the Undergraduate Division Advising Office in JMHH G95.

General Education and Global Environment: 4 credits

- General Education Courses: all M&T students must take two courses from the *Social Structures and Language* or the *Arts and Culture* categories found in the Wharton Handbook.
- Global Environment Course: all M&T student must take two courses that are neither business nor engineering. It must contain substantial international content from the following groups
 - Social Science courses like History, Anthropology, Economics, International Relations, which deal with international issues or with the nature of other

cultures, including area studies courses about particular regions of the world.

- Advanced language course in the commercial and financial vocabulary.
- Humanities courses dealing with the artistic or cultural heritage of particular cultures, including courses in music, art, literature or religious studies.

Societal Environment: 1 credit

Choose one of the following courses:

- Legal Studies 101 (approved SSH course in SEAS curriculum)
- Legal Studies 210 (approved SSH course in SEAS curriculum)
- Public Policy and Management 203

Engineering Coursework

This coursework will vary by Engineering major. Please continue to verify with the departmental web page of your program for specific requirements and pre-requisites. Also, utilize your CPG offered on PennInTouch for planning.

Quantitative/Computational Skills: 6 credits (minimum)

- All M&T students must take the listed courses. The additional one credit is usually satisfied within your engineering discipline.

Natural Sciences: 4 credits (minimum)

All M&T students must take 4 natural science courses. Refer to your Engineering CPG for further information. (Many Engineering curriculums require courses like chemistry, physics, and biology – many of these introductory courses may be satisfied through AP exams, advanced credit, or departmental exams).

Engineering Courses:**

Bachelors of Applied Science Major Concentration: 10 credits

All M&T students must complete the following coursework; additional coursework in this area constitutes the Engineering major, refer to your CPG for further information. Students are also encouraged to choose one or two linking courses (MGMT 235 and 237) in this area.

- EAS 101 (taken first semester freshmen year as a M&T cohort)
- 1 CSE course (most students take CSE 110 or 120)
- EAS 499 (the Applied Project): this should be the culmination of a student's academic program, integrating the courses from Engineering and Wharton.

Bachelor of Applied Science Concentration: 7 or 8 credits

- Each engineering major will vary in this area, refer to your CPG for further information. These courses should form a cohesive group around a possible career path. Many Wharton courses may fulfill this category.

Bachelor of Science in Engineering Concentration: credit units will vary by engineering major, refer to CPG for further information.

All M&T students must complete the following coursework; additional courses in this area will be dictated by the Engineering major.

- EAS 101 (taken first semester Freshmen year as an M&T cohort)
- 1 CSE course (most students take CSE 110 or 120)

Bachelor of Science in Engineering Application Orientated Focus/Technical Electives: number of credits will vary by engineering major

- Refer to your Engineering major and CPG for specific requirements in this area.

** A minimum of 46 credits must be taken for the BAS degree and a minimum of 46 credits must taken for the BSE degree.

For further understanding of required courses or how to satisfy requirements refer to both schools handbooks:

Engineering Student Handbook (<http://www.seas.upenn.edu/ugrad/undergrad.html>)

Wharton Undergraduate Handbook

(<http://undergrad.wharton.upenn.edu/policies/handbook.cfm>).

Transfer Credit and Placement

Overview

Certain scores from the Advanced Placement program, the International Baccalaureate program, C.G.E. "A" Level examinations, other national examinations, the SAT II's and courses taken at other universities can be used for credit and placement at the University of Pennsylvania. Foreign languages and the Math Department have their own methods of placement in order for all students to be enrolled at the proper level in these areas.

Advanced Placement Program

Through Penn Admissions, the Transfer Credit and Advanced Placement Office handles the review and posting of all AP and transfer credits for incoming first-year students. Students who received acceptable scores on the Advanced Placement Exams and have arranged for those scores to be reported to Penn should receive notification of their credit in August on Penn InTouch.

Through these links you can find great detail regarding transfer credits and minimum scores required in order to receive credit:

AP Policy: <http://www.admissionsug.upenn.edu/applying/advanced.php>

IB Policy: <http://www.admissionsug.upenn.edu/applying/baccalaureate.php>

GCSE-Advanced "A" Level Examinations:

<http://www.admissionsug.upenn.edu/applying/a-level.php>

For more information from the Office of Transfer Credit email the office at transfer@admissions.ugao.upenn.edu.

A detailed description of Penn's Advanced Placement policies can be found at: <http://www.college.upenn.edu/courses/ap.html>

Courses at other Universities and Colleges

School of Engineering and Applied Science

SEAS students may take up to 5 courses for credit at other institutions provided prior approval is obtained from the relevant departments of the University, from the academic advisor, and from the Associate Dean. Any course taken for transfer credit by SEAS students at another institution must be an approved course for majors in a baccalaureate program at that institution. The Academic Performance Committee must approve exceptions to this rule. An application to take a course at another institution is available in 111 Towne Building. The student must take the form and a course catalog description to the appropriate University of Pennsylvania department representative, who must attest that the course is "comparable in quantity and quality" to one offered by his or her own department. The student must then obtain his or her advisor's approval and

submit the form to the Office of Academic Programs for action. After completion of the course, an official transcript must be forwarded to the Office of Academic Programs; no course with a grade below C will be accepted for credit towards SEAS degrees.

*****Because SEAS is the home school for all M&T students, SEAS handles all transfer credit.*****

International Baccalaureate, C.G.E. "A" Level, and Other National Exams

Penn grants credit on a case-by-case basis for these programs. Contact the Transfer and Advanced Placement Office for more information at 898-6080.

The Wharton School

Business courses taken to fulfill the Wharton core and concentration requirements may only be taken at Penn. Transfer credit is not permitted for these requirements.

Foreign Language Placement and Proficiency

Wharton students may satisfy the foreign language requirement in any of the following ways:

- Achieving the required score on a standardized test while in high school:
 - A minimum score of 4 or 5 on a foreign language AP test, depending on the language.
 - A minimum score of 650 on some, but not all foreign language achievement tests (SAT II).
- Scoring sufficiently high on a departmental competency exam. If your native language is not English you must have your competency certified by the appropriate department or by the Penn Language Center.
- Taking the required foreign language course(s) at Penn and passing the competency exam requirements of the courses.

Each language department at Penn has a different means of measuring competency. In some departments, the competency exam is the final exam for the fourth-semester course. In other departments, students are required to take a certain number of course units in a given language.

Departments routinely report to the Undergraduate Division the names of students who have demonstrated competency. *It is your responsibility to make sure that the Undergraduate Division has a record of the fulfillment of your language requirement.* You cannot graduate without written documentation that your foreign language competency requirement has been satisfied.

Registering for the Appropriate Level

If you took a foreign language SAT II exam in high school, you may automatically enroll in the appropriate level without taking the departmental placement exam.

If you score between 600 and 640 on the French, German, Italian, or Spanish SAT II, you can be exempt from the language requirement if you pass an oral examination. Sign up for the exam in the relevant academic department before the end of the first week of classes. If you score below 700 in Hebrew, you must take the department placement exam.

If you did not take a foreign language SAT II exam, register for the level that you think is appropriate. For guidance, see the language placement test web site at http://www.college.upenn.edu/curriculum/language_exams.html.

In September you must take the departmental placement exam to determine the actual level in which you belong. If the actual level is different from what you registered for, you may drop/request after you receive the results of your exam.

Other Departmental Placement Exams

Math and Biology

Whether or not students have taken the external AP exam in Mathematics or Biology, they are eligible to take the Internal Exams for these two departments. If students have studied calculus or advanced biology, they should consider taking these. Information about the internal exams can be found by calling or visiting the specific department:

Biology Department

102 Leidy Laboratories

(215) 898-7172

Mathematics Department

DRL 4W1

(215) 898-8178

AP Physics Requirements

If students have taken the AP Physics-C exam and received a 5, they automatically receive credit for Physics 150 and 151, but it will appear on their transcript as Physics 093 and 094. In order for these courses to convert to the required Physics 150 and 151, a physics lab requirement must be fulfilled. Students may choose to submit their lab reports and lab manual to the physics department undergraduate chair. Students should recognize that most high school physics courses, and many courses offered at other institutions do not provide a laboratory experience equivalent to that offered by a Penn course. In general, the evaluation of laboratory work performed at other institutions will be based on the number of experiments performed, the perceived difficulty of each experiment, the level of analysis required (including graphical presentation of data and error analysis), and the choice and spread of topics.

Students who are unable to satisfy the lab requirement for Physics 150 and 151 in this way must complete the lab portion of the corresponding Penn course in order to obtain credit. Any student who needs to register for the laboratory section alone must see Ms. Mary Thomas (Room 2E5 DRL; 215-898-8141) Thomas@dept.physics.upenn.edu. Students should register for the appropriate lab section *before* visiting the physics department. After completion of the laboratory program, it is the student's responsibility to initiate, by application at the Physics Academic Office, the steps necessary to obtain full credit for the course in question.

- See the following web page for more details:

<http://www.physics.upenn.edu/undergraduate/transcre.html#llab>

Academic Performance Guidelines

School of Engineering and Applied Science

To remain in good standing, students are required to maintain a minimum GPA of 2.0 throughout the undergraduate program while making academic progress toward their declared curriculum. In addition, students must maintain a minimum GPA of 2.0 in “the major”. The major is defined as all math, science and, engineering courses. Academic progress is defined as averaging a minimum of eight successfully completed course units each academic year.

Wharton School

In order to maintain satisfactory progress at Wharton, students are expected to maintain a minimum term and cumulative GPA of 2.0, have no more than two “I” (Incomplete), “NR” (No grade Reported for entire class), or “GR” (No Grade for student) for the academic term. You must obtain a “D” or better to receive credit in any course.

Special Academic Opportunities

Honors Programs

- Benjamin Franklin Scholars/General Honors Program
 - Benjamin Franklin Scholars are required to take at least one General Honors course each year. The General Honors Program offers approximately fifty courses a year. If you are not in the BFS program you may still take many of the GH courses with permission from the instructor.
 - For more information about the program or applying to be in it, see the web page <http://www.upenn.edu/curf/bfs/>
- Joseph Wharton Scholars
 - Approximately 50 entering Wharton freshmen are chosen each year from the top 10 percent of the entering class to participate in the Joseph Wharton Scholars Program. This program, founded in 1988, is designed to emphasize the importance of scholarly research and a liberal arts education within the framework of a business education. To achieve this goal, a special curriculum was instituted, which includes honors sections of economics, statistics, legal studies, management and finance. The curriculum also includes a senior research seminar and capstone course in business policy and ethics. JWS students must take at least eight honors courses over four years. Students who fulfill all of the JWS Program’s requirements are expected to do so while maintaining an overall GPA of at least 3.4. Students are selected for the

JWS Program upon entering as first year students; transfers are only accepted at the end of the first year.

- For more information about the program or applying to be in it, see the web page: <http://www.wharton.upenn.edu/jws>

Submatriculation

SEAS

- Students in SEAS have the opportunity to submatriculate into the graduate program while still completing their undergraduate degree.
- For detailed information on submatriculation within Engineering, see the web page: <http://www.seas.upenn.edu/ugrad/submatric.html>

Wharton School

- Wharton undergraduates have the option of getting an advanced degree in conjunction with their Bachelor's degree in cooperation with Wharton's MBA and Ph.D. programs and with the Penn Law School. A student may obtain a Bachelor of Science in Economics and an MBA in a total of five years, or a Bachelor of Science in Economics and JD in a total of six years.
- For detailed information on submatriculation, see the web page: [Http://undergrad.wharton.upenn.edu/programs/day/options/submatric.cfm](http://undergrad.wharton.upenn.edu/programs/day/options/submatric.cfm) and also contact a Wharton Associate Director.

Study Abroad

The Office of International Programs at the University of Pennsylvania helps all students coordinate their personal study abroad program. The office is located at 133 Bennett Hall; their phone number is 215-898- 9073. The URL is: <http://www.upenn.edu/oip/>

Special M&T Programs

As a student in the M&T Program you are automatically part of a very special network of over 1,400 individuals. You will learn of events throughout the year that will provide you with an opportunity to interact, meet, and learn from various M&T alumni. Annual events include the M&T Club's Alumni Career Dinner in the spring and monthly brown bag lunches.

You will also have access to M&T Connect, our online portal for both students and alumni of the program. Through M&T Connect, you can search our alumni databases, search for jobs, and connect with M&Ts all over the world.

In addition to alumni connections, several employers will visit campus in search of hiring M&T students. You will receive email notices of these special sessions, so please always read your emails!

Frequently Asked Questions by Current M&T Students

“What is a Petition for Action and what is it used for?”

Deviations from SEAS course requirements and special requests require the submission of a “Petition for Action” to the Towne Building, Room 111. (Forms can be found in Towne Room 111 as well). Final submission is to the Office of Academic Programs for approval of request.

“Is there a difference between getting credit and getting a course waived?”

Yes, if you receive actual credit for a course, you do not have to take that course and have one less credit to complete. However, if a course is waived, you must take another course for credit in that department or category to fulfill the requirement. For example, if an M&T student received a score of 4 on the Econ I AP exam, it will be noted that they have waived the course on the Wharton side, but the student will still have to complete an additional SSH course, which is where the Economics course fits on the Engineering side. For more details, contact Engineering and Applied Science at 215-898- 7246 or the M&T Office at 215-898-4145.

“Is it possible to get a dual concentration?”

Yes. To obtain a dual concentration, you will have to fulfill the requirements of that concentration, usually an additional four courses (visit the Wharton Undergraduate Office for more details), one of which can be counted towards the Business Breadth requirement.

“Which courses can I double-count?”

The following Wharton courses often fulfill the adjacent Engineering requirements, however, you should always confirm these (especially the elective courses) with your faculty advisor or the administrative offices.

Wharton Requirement = Engineering Requirement

<u>Foreign Language</u>	<u>Humanities</u>
ECON 001	Social Science
ECON 002	Social Science
FNCE 101	Social Science
Legal Studies 101/210	Social Science
Writing Req.	Humanities
Global Environment Req.	SS/Hum
General Education Req.	SS/Hum
Mgmt 235	Engr (BAS)
Mgmt 237	Engr (BAS)