# Stevens Institute of Technology 2006-2007 Catalog



## The Wesley J. Howe School of Technology Management - II

### UNDERGRADUATE PROGRAM

Business success in the 21st century is increasingly dependent on the strategic development and utilization of technology. This is a complex challenge since the solutions to many business problems rely on the convergence of a number of technologies and their proper alignment with customer requirements and various other business elements.

To meet this challenge, The Wesley J. Howe School of Technology Management at Stevens has designed a unique undergraduate program, specifically designed to teach students both business and technology in an integrated fashion. The Business and Technology program combines a traditional business curriculum with the most recent elements of technology to satisfy the growing corporate demand for professionals who are effective as liaisons between business and technology units. The innovative "corporate-defined" curriculum of this bachelor's degree program has a strong, broad base of computer science, science, economics, finance, marketing, and mathematics, plus a business plan spine.

Since this is a lock-step program, all courses for the business program need to be taken in the proper sequence. In addition, it is anticipated that students participate in an internship, ideally at the same company during each of the summers between their academic years. These internships typically form the basis for their final business plan, required for BT 402.

Business and Technology 4-Year Course Schedule:

**Freshman Year**

**Term I**

| | | Hrs. Per Wk. Class | Lab | Sem. Cred. |
|---|---|---|---|---|
| BT 101 | Introduction to Business Planning | 3 | 0 | 3 |
| BT 131 | Introduction to Innovation and Creativity | 3 | 0 | 3 |
| MA 117 | Calculus and Probability | 3 | 0 | 3 |
| MGT 111 | Social Psychology and Organizational Behavior | 3 | 0 | 3 |
| MGT 244 | Microeconomics | 3 | 0 | 3 |
| CS 105 | Intro. to Scientific Computing | 2 | 2 | 3 |
| | OR | | | |
| CS 115 | Introduction to Computer Science | 3 | 2 | 4 |
| PE 200 | Physical Ed. I | 0 | 2 | 1 |
| | **TOTAL** | **17(18)** | **4** | **19(20)** |

**Term II**

| | | Hrs. Per Wk. Class | Lab | Sem. Cred. |
|---|---|---|---|---|
| BT 102 | Diagnosing Internal Capabilities of a Company | 3 | 0 | 3 |
| BT 113 | Marketing | 3 | 0 | 3 |
| MA 118 | Probability for Business and Liberal Arts | 3 | 0 | 3 |
| BT 121 | IT and Applications: Intro. to e-Technology | 3 | 0 | 3 |
| BT 115 | Financial Accounting | 4 | 0 | 4 |
| PE 200 | Phys Ed. II | 0 | 2 | 1 |
| | **TOTAL** | **16** | **2** | **17** |

**Sophomore Year**

**Term III**

| | | Hrs. Per Wk. Class | Lab | Sem. Cred. |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| BT 201 | Diagnosing and Measuring Customer Satisfaction | 3 | 0 | 3 |
| PEP 111 | Mechanics | 3 | 0 | 3 |
| BT 221 | Statistics | 3 | 0 | 3 |
| BT 215 | Cost Accounting | 3 | 0 | 3 |
| HUM 1XX | History/Social Science (B) | 3 | 0 | 3 |
| PE 200 | Phys Ed. III | 0 | 2 | 1 |
| | **TOTAL** | **15** | **2** | **16** |

**Term IV**

| | | Hrs. Per Wk. Class | Lab | Sem. Cred. |
|---|---|---|---|---|
| BT 202 | Diagnosing the External Environment | 3 | 0 | 3 |
| BT 224 | Science & Technology: Electricity, Magnetism, and Optics | 3 | 0 | 3 |
| BT 223 | Applied Models and Simulations | 3 | 0 | 3 |
| BT 214 | Market Research | 3 | 0 | 3 |
| MGT 243 | Macroeconomics | 3 | 0 | 3 |
| HUM 1XX | History/Social Science (B) | 3 | 0 | 3 |
| PE 200 | Physical Ed. IV | 0 | 2 | 1 |
| | **TOTAL** | **18** | **2** | **19** |

**Junior Year**

**Term V**

| | | Hrs. Per Wk. Class | Lab | Sem. Cred. |
|---|---|---|---|---|
| BT 301 | Goal Setting and Sales / Revenue Plan Development | 3 | 0 | 3 |
| BT 334 | Science and Technology: Introduction to Chemistry and Materials | 3 | 0 | 3 |
| BT 321 | Corporate Finance | 3 | 0 | 3 |
| MGT 401 | MIS/DBMS/Networks* | 3 | 0 | 3 |
| EM 450 | Operations Management | 3 | 0 | 3 |
| HUM 1XX | Literature/Philosophy (A) | 3 | 0 | 3 |
| PE 200 | Physical Ed. V | 0 | 2 | 1 |
| | **TOTAL** | **18** | **2** | **19** |

* Students may substitute BT421 for MGT 401

**Term VI**

| | | Hrs. Per Wk. Class | Lab | Sem. Cred. |
|---|---|---|---|---|
| BT 302 | Preparing the Planning Document | 3 | 0 | 3 |
| BT 352 | Managing Innovation and Technology | 2 | 0 | 2 |
| Ch 281 | Biology and Biotechnology | 3 | 0 | 3 |
| Ch 282 | Intro. Biology Lab | 0 | 3 | 1 |
| HUM 1XX | Literature/Philosophy (A) | 3 | 0 | 3 |
| | FREE ELECTIVE | 3 | 0 | 3 |
| PE 200 | Physical Ed. VI | 0 | 2 | 1 |
| | **TOTAL** | **14** | **5** | **16** |

**Senior Year**

**Term VII**

| | | Hrs. Per Wk. Class | Lab | Sem. Cred. |
|---|---|---|---|---|
| BT 401 | Implementation, Controlling and Capital Acquisition | 3 | 0 | 3 |
| BT 411 | Business Consulting or Engineering Management Design I | 0 | 6 | 2 |
| BT 414* | Technology Infrastructure | 3 | 0 | 3 |
| BT 413 | Business Law, Ethics and Negotiations | 3 | 0 | 3 |
| BT 403 | Marketing Strategy and Decision Making - Elective | 3 | 0 | 3 |
| | FREE ELECTIVE | 3 | 0 | 3 |
| | **TOTAL** | **15** | **6** | **17** |

**Term VIII**

| | | Hrs. Per Wk. Class | Lab | Sem. Cred. |
|---|---|---|---|---|
| BT 402 | Plan Perfection and Presentation | 3 | 0 | 3 |
| BT 412 | Business Consulting or Engineering Management Design II | 0 | 6 | 2 |
| BT 415 | Entrepreneurship | 3 | 0 | 3 |
| HUM 4XX/5XX | Humanities Elective | 3 | 0 | 3 |
| BT XXX | Business Elective | 3 | 0 | 3 |
| | FREE ELECTIVE | 3 | 0 | 3 |
| | **TOTAL** | **15** | **6** | **17** |

* Students may substitute BT 421 for BT 414.

### Economics Minor – Advisor: Prof. C. Timothy Koeller

Students enrolled in any undergraduate major at Stevens may qualify for a minor in economics by taking the seven courses indicated below.

In addition, students must achieve a GPA of at least 2.6 in the seven minor courses, with no individual course grade lower than a 'C'.

**Business and Technology Students:**

**Required:**
BT 215 (or equivalent, e.g., EM 301) Cost Accounting
BT 321 Corporate Finance
MGT 243 Macroeconomics
MGT 244 Microeconomics
HUM 107 Studies in History/Social Science: Modernization

***Plus one course from among the following:***

HHS 123 History of European Society and Culture I
HHS 124 History of European Society and Culture II
HHS 125 U.S. Social and Economic History I
HHS 126 U.S. Social and Economic History II

**Electives: *One course from among the following:***

HSS 377 Cities and the Global Economy
HSS 379 International Politics
HSS 380 Energy, Politics, and Administration
HSS 389 The Economic History of Europe
HHS 312 Technology and Society in America
HHS 390 History of Credit, Money, and Banking
HHS 414 Industrial America
HHS 479 Studies in the History of Technology

**Engineering / Science Students:**

**Required**:
E 355 Engineering Economy
MGT 243 Macroeconomics
MGT 244 Microeconomics
HUM 107 Studies in History/Social Science: Modernization

***Plus one course from among the following***:

HHS 123 History of European Society and Culture I
HHS 124 History of European Society and Culture II
HHS 125 U.S. Social and Economic History I
HHS 126 U.S. Social and Economic History II

**Electives: *Two courses from among the following:***

TG 401 Entrepreneurship and Business for Engineers and Scientists
EM 301 Engineering Cost Estimation
HSS 379 International Politics
HSS 377 Cities and the Global Economy
HSS 380 Energy, Politics, and Administration
HSS 389 The Economic History of Europe
HHS 479 Studies in the History of Technology
HHS 414 Industrial America
HHS 390 History of Credit, Money, and Banking
HHS 312 Technology and Society in America

**Click to find course descriptions for required courses offered from these departments:**

- **Business and Technology and Management (BT and MGT)**
- **Chemistry and Chemical Biology (CH)**
- **Computer Science (CS)**
- **Engineering Management (EM)**
- **Mathematics (MA )**
- **Physics (PEP)**

**Internship/Electives**

Seniors may elect to do an internship at their curriculum partner company for 2.5 days a week for the entire semester. A company manager and a Stevens faculty member will supervise them. The internships culminate in written and oral reports delivered to representatives from the companies, Stevens faculty, and other students in the class. Projects are selected by the company and approved by Stevens faculty. Intern projects must contain some significant creativity or development component. Credit for approved internships is variable.

Alternatively, during the senior year students may select up to three electives (9 credits) within a chosen area of interest and write a proposal to conduct an independent study that leads to a senior thesis. The student must convince a faculty member of the importance of the subject and convince that faculty member to act as a thesis advisor.

Areas of consideration might include Biomedical Products and Technology, Entrepreneurship, E-business, Technology Marketing, Financial Services, Information and Network Systems, etc.

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