

Proceedings
Teaching Entrepreneurship to Engineering
Students

Engineering Conferences International

Year 2003

Experience with an Entrepreneurship
Minor for Engineering Students

McRae C. Banks
Worcester Polytechnic Institute

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Collaborative for Entrepreneurship & Innovation

Worcester Polytechnic Institute

Worcester, MA

WPI Department of Management

- **We focus on three themes:**
 - **Leading and managing technology-based organization (primarily high tech)**
 - **Integrating technology into existing organizations**
 - **Converting technology into commercializable products, services and creating new organizations**

Management (cont'd)

- **UG Majors: Management, MIS, Management Engineering (AACSB pending), Industrial Engineering (ABET accredited)**
- **Graduate Degrees: MBA, MS in Marketing & Technological Innovation, MS in Operations & Information Technology**
- **Collaborative for Entrepreneurship & Innovation**
- **Information Technology Research Centers**

Entrepreneurship Minor

1996 - 1999

- **ID 1050 Introduction to Entrepreneurship**
- **One from:**
 - **SS2207 Creativity and the Scientific Community**
 - **SS2302 Science and Technology Policy**
 - **SS2111 Social Control of Business**
- **Three from:**
 - **MG/IE2200 Financial Management**
 - **MG/IE2300 Organizational Science**
 - **MG/IE3440 Management of Process Innovation**
 - **MG3600 Marketing Management**
 - **MG3700 Information Systems Management**
- **Independent Study Project in Entrepreneurship**

Entrepreneurship Minor 1999 - Present

- **Minor in Entrepreneurship for science and engineering majors**
 - **MG/IE 2850 Engineering Economy**
 - **MG 3910 Identifying and Evaluating NV Opportunities**
 - **MG 3920 Launching NV**
 - **MG 4930 Growing and Managing NV**
 - **And**

Current Minor

- Choose two from:
 - **MG 1100 Financial Accounting**
 - **MG 2950 Business Law & Ethics**
 - **MG 3400 Production Systems Design**
 - **MG 3600 Marketing Management**
 - **MG 3700 Information System Management**

Relative Merits

- **Advantages**

- **Strong grounding in business prior to entrepreneurship**
- **Prepares students as they are making career choices**
- **Still oriented towards minors**
- **Some courses can be used for credit toward MBA**

- **Disadvantages**

- **No entry level courses**
- **Depends on engineering advisors not to discourage students towards a minor**

Related Opportunities

- **Additional courses in Innovation and E-business**
- **NCIIA Grants**
- **CEI at WPI ALL-OUT Business Plan Challenge**
- **Business Idea Contest**
- **WPI Dinner with Entrepreneurs Series**
- **Collegiate Entrepreneurs Organization (CEO)**
- **CEO East Student Entrepreneurship Conference**
- **New England Collegiate Entrepreneurs Award**

Related Opportunities

- **WPI Venture Forum**
 - **Weekly radio show**
 - **Monthly programs**
 - **Elevator pitch opportunities**
 - **Breakfast With event**
 - **Business Plan Workshop**
 - **Business Plan Contest**
 - **Monthly Newsletter**

Outcomes

- **Stronger academic component to minor**
- **More students taking the minor in Entrepreneurship**
- **Ultimately, more graduates pursuing entrepreneurial careers**