

**Industrial Engineering Concentration Form**  
**Northwestern University, McCormick School of Engineering and Applied Science**

*Return to the IE Undergraduate Coordinator by the second Friday of the last quarter before graduation.*

Name \_\_\_\_\_ Student ID \_\_\_\_\_

Date \_\_\_\_\_ Expected Grad Date (Month/Yr) \_\_\_\_\_ E-Mail \_\_\_\_\_

*I have or will complete IE/MS major requirements for AY 2005-06 and wish to declare the following optional concentration(s).*

*I have or will complete IE/MS major requirements AY 2005-06 and **will not** complete a concentration.*

\_\_\_ **Economics and Finance**

- \_\_\_ Econ 308 Money and Banking
- \_\_\_ Econ 309 Elements of Public Finance
- \_\_\_ Econ 337 Economics of State and Local Governments
- \_\_\_ Econ 349 Industrial Economics
- \_\_\_ Econ 361 International Trade
- \_\_\_ Econ 362 International Finance
- \_\_\_ Econ 380-1,2 Intro to Mathematical Economics
- \_\_\_ Econ 381-1,2 Advanced Econometrics
- \_\_\_ Econ 383 Economic Forecasting
- \_\_\_ IEMS 373 Financial Engineering I
- \_\_\_ Math 301 Mathematical Models in Finance
- \_\_\_ Math 304 Game Theory
- \_\_\_ \*IEMS 399

\_\_\_ **General Business Management**

- \_\_\_ Bus Inst 239 Marketing Management
- \_\_\_ \*\*Bus Inst 394 Professional Linkage Seminar
- \_\_\_ Civ Eng 302 Engineering Law
- \_\_\_ Civ Eng 336 Project Scheduling
- \_\_\_ IEMS 224 Principles of Accounting and Finance
- \_\_\_ IEMS 306 Decision Analysis
- \_\_\_ IEMS 325 Engineering Entrepreneurship
- \_\_\_ IEMS 342 Organizational Behavior
- \_\_\_ IEMS 343 Project Management for Engineers
- \_\_\_ IMC 303 Advertising
- \_\_\_ IMC 304 Direct Marketing
- \_\_\_ \*IEMS 399

\_\_\_ **Industrial Behavioral Sciences**

- \_\_\_ CFS Chicago Field Studies (1 credit, petition req)
- \_\_\_ Econ 339 Labor Economics
- \_\_\_ Econ 350 Monopoly, Competition, and Public Policy
- \_\_\_ IEMS 340 Field Project Methods
- \_\_\_ IEMS 342 Organizational Behavior
- \_\_\_ IEMS 345 Negotiations & Conflict Resolution for Eng
- \_\_\_ LOC 211 Intro. To Organization Theory and Practice
- \_\_\_ LOC 306 Studies in Organizational Change
- \_\_\_ LOC 310 Organizations for Complex Environments
- \_\_\_ Sociol 302 Sociology of Organizations
- \_\_\_ \*IEMS 399

\_\_\_ **Mathematical Sciences/Graduate Research**

- \_\_\_ Comp Sci 311 Data Structures and Data Management
- \_\_\_ ES APPM 346 Modeling and Comptn in Sci & Engg
- \_\_\_ ECE 328 Numerical Methods for Engineers
- \_\_\_ Math 304 Game Theory
- \_\_\_ Math 310-1,2,3 Introduction to Real Analysis
- \_\_\_ Math 337-1,2,3 Introduction to Modern Algebra
- \_\_\_ \*IEMS 399

\_\_\_ **Production and Logistics**

- \_\_\_ Civ Eng 336 Project Scheduling
- \_\_\_ Civ Eng 371 Intro to Transportation Plan & Analysis
- \_\_\_ Civ Eng 372 Transportation System Design & Analysis
- \_\_\_ Civ Eng 376 Transportation System Operations
- \_\_\_ Econ 355 Transportation Economics and Public Policy
- \_\_\_ IDEA 344 Manufacturing Engineering Design
- \_\_\_ IEMS 381 Supply Chain Modeling and Analysis
- \_\_\_ IEMS 382 Production Planning and Scheduling
- \_\_\_ IEMS 383 Service Operations Management
- \_\_\_ \*IEMS 399

\_\_\_ **Statistics and Quality Control**

- \_\_\_ Econ 281 Intro to Applied Econometrics
- \_\_\_ IEMS 304 Statistics II
- \_\_\_ IEMS 305 Statistical Methods of Quality Improvement
- \_\_\_ IEMS 306 Decision Analysis
- \_\_\_ IEMS 307 Quality Improvement by Exprmntl Design
- \_\_\_ Mat Sci 391 Process Design
- \_\_\_ Mech Eng 359 Reliability Engineering
- \_\_\_ Stats 325 Survey Sampling
- \_\_\_ Stats 350 Regression Analysis
- \_\_\_ Stats 351 Design and Analysis of Experiments
- \_\_\_ \*IEMS 399

*\*Requires IEMS faculty approval and a petition.*

Four courses in each section must be completed to fulfill **optional** concentration requirements.

Student's Signature \_\_\_\_\_ Date \_\_\_\_\_

Advisor's Signature \_\_\_\_\_ Date \_\_\_\_\_

Program Chair's Signature \_\_\_\_\_ Date \_\_\_\_\_