

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

*To be Used by Students Following Catalog Year 2007-08 Requirements*  
*Return to the IE Undergraduate Coordinator by the End of Your Junior Year of Study*

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

*I wish to declare the following **optional IE/MS concentration(s)**.*

*I will not complete an IE/MS concentration.*

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

**\_\_\_ 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 366-1,2 Mathematical Models in Finance  
 \_\_\_ Math 364 Game Theory  
 \_\_\_ \*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

**\_\_\_ 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

**\_\_\_ 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

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

\_\_\_ EECS 311 Data Structures and Data Management  
 \_\_\_ ES APPM 346 Modeling and Comptn in Sci & Engg  
 \_\_\_ EECS 328 Numerical Methods for Engineers  
 \_\_\_ Math 304 Game Theory  
 \_\_\_ Math 320-1,2,3 Real Analysis  
 \_\_\_ Math 330-1,2,3 Abstract Algebra  
 \_\_\_ \*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*

*\*\*Petition required*

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