CATALYZE YOUR CAREER

PURDUE UNIVERSITY

CHEMICAL ENGINEERING

PROFESSIONAL MASTER'S PROGRAM

WHY PURDUE CHEMICAL ENGINEERING?

- Purdue Graduate Engineering ranked No. 6 in the U.S.
- Competitive tuition
- Purdue's No. 3 ranking among U.S. public universities for international student enrollment
- 124 countries represented on campus
- Purdue's 450,000-member alumni network, worldwide
- Affordable cost of living in the safe, welcoming community of West Lafayette, Indiana

PROGRAM HIGHLIGHTS

- World-class Master of Science in Chemical Engineering degree
- Non-thesis, terminal degree
- 12 month, full-time, on-campus program
- Modern, well-designed learning environments
- Summer research program with world-class researchers
- Access to two Purdue major job-search events:
  - The Fall Industrial Roundtable Job Fair
  - Spring Expo Career Fair, attended by 400 companies
- Strong industrial collaborations and support

5 CONCENTRATIONS

- Biochemical Engineering
- Energy Systems Fundamentals & Processes
- Kinetics, Catalysis & Reaction Engineering
- Particulate Products & Processes
- Pharmaceutical Engineering

CONTACT US:
chegrad@ecn.purdue.edu / 765-494-4057
engineering.purdue.edu/ChE/MS

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PURDUE UNIVERSITY

CHEMICAL ENGINEERING

Professional Master's Program Suggested Courses

Minimum 30 credit hours *Bulleted items in bold indicate courses in ChE*	**Biochemical Engineering**	**Energy Systems Fundamentals & Processes**	**Kinetics, Catalysis & Reaction Engineering**	**Particulate Products & Processes**	**Pharmaceutical Engineering**
ChE Core	**Transport Phenomena, Applied Statistics or other CHE 60000 courses**				
Core Concentration	• **Bioprocess Engineering** • **Engineering Applications of Biological Molecules** • Bioseparations • Biochemistry • Good Regulatory Practices	• **Systems Analysis of Energy Production, Transformation, Distribution & Use** • **Advanced Solar Energy Conversion** • **Organic Electronic Materials & Devices** • **Intro to Nanoscale Science & Engineering** • **Intro to Energy Storage Systems**	• **Advanced ChE Thermodynamics** • **Chemical Reaction Engineering** • **Catalysis** • **Methods in Catalysis** • **Advanced Modeling for Catalysis Studies**	• **Particulate Processes** • **Particle Design & Processing** • Particle Characterization • Powder Processing	• API Manufacturing Processes • Intro to the Pharmaceutical Industry • Intro to the Pharmaceutical Processes • Biopharmaceutics
Management (9 credit hours)	• Financial Marketing • Marketing Management		• Strategic Management • Operations Management	• Quality Management, Audits & Inspection	
Electives	• Pharmaceutical Process Development & Design • Principles of Pharmaceutical Design • **Protein Engineering** • **Metabolic Engineering** • **Advanced Separations** • Polymers & Pharmaceutical Systems • Biochemistry II • Biological & Food Processing • Introduction to Pharmaceutical Manufacturing Processes • Advanced Biopharmaceutics	• **Battery Systems Engineering** • **Separations Processes** • **Advanced Chemical Engineering Thermodynamics** • **Transport Phenomena**	• **Polymerization Reaction Engineering** • Industrial Organic Chemistry • Statistical Thermodynamics • Kinetics & Mechanisms of Inorganic Reactions • Transition Metal & Organometallic Chemistry • Advanced Inorganic Chemistry • Advanced Organic Chemistry	• Introduction to Pharmaceutical Processes • API Manufacturing Processes • Biological & Food Processing Unit Operations • Pharmaceutical Solids	• **Particulate Processes** • **Particle Design & Processing** • Pharmaceutical Solids • Physico-Chemical Principles • Biopharmaceutics • Pharmacokinetics
Research (6 credit hours)	Summer Research Activity				

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