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Industrial Management and Applied Engineering...... 1

Industrial Management and Applied Engineering

The Industrial Management and Applied Engineering major has as its objective the training of qualified personnel who can develop and direct the production and distribution of products and services. The major is designed to prepare management-oriented technical professionals in the economic-enterprise system.

The Industrial Management and Applied Engineering curriculum is flexible enough to provide the means whereby graduates of two-year occupational programs may obtain a Bachelor of Science degree. A graduate of a two-year industrially-oriented occupational program, such as aviation, construction, drafting, data processing, electronics, machine tool, mechanical, and mining may have an appropriate preparation to pursue a Bachelor of Science degree with a major in Industrial Management and Applied Engineering.

Students with work related experience might receive credit toward the degree via IMAE 258. Additional flexibility in earning credit toward the degree is possible through cooperative work experience provided meaningful employment is available.

Bachelor of Science (B.S.) in Industrial Management and Applied Engineering

Quality Management Specialization

The quality management specialization is designed to prepare graduates for supervisory and technical management positions in manufacturing. Curriculum requirements are broad based to enable the graduate to obtain employment in manufacturing areas such as quality control, processes, safety, methods analysis, and computer-aided manufacturing/robotics. The Capstone Option feature is available for students and is described in the Capstone Option section.

Students are required to earn a minimum of 6 credit hours of any combination of laboratory, hands-on, and/or practical experiences prior to completion of the program:

- Laboratory credit hours can be applied only to those laboratory courses that are approved by the department. Laboratory credit hours earned through an A.A.S. program are eligible for consideration.
- Hands-on experiences and/or practical experiences include credit hours obtained through the following courses: IMAE 258, IMAE 358, IMAE 319, and IMAE 342.

B.S. Industrial Management and Applied Engineering - Quality Management Specialization Degree Requirements

Degree Requirements	Credit Hours	
University Core Curriculum Requirements	39	
Foundation Skills	13	

Degree Requirements	Credit	Hours
ENGL 101, ENGL 102	6	
UNIV 101	1	
Mathematics (Substitute Mathematics in major)	3	
CMST 101	3	
Disciplinary Studies	23	
Fine Arts	3	
Human Health	2	
Humanities	6	
Science (substitute Physics in major for 3 hours)	6	
Social Science	6	
late quetire Chudies	3	3
Integrative Studies		
Multicultural	3	
		(6)+81
Multicultural Requirements for Major in Industrial Management and Applied Engine		
Multicultural Requirements for Major in Industrial Management and Applied Engine Specialization in Quality Management	eering with a	
Multicultural Requirements for Major in Industrial Management and Applied Engine Specialization in Quality Management IMAE Core Requirements	eering with a	
Multicultural Requirements for Major in Industrial Management and Applied Engine Specialization in Quality Management IMAE Core Requirements	eering with a	
Multicultural Requirements for Major in Industrial Management and Applied Engine Specialization in Quality Management IMAE Core Requirements PHYS 203A,B, PHYS 253A,B	(3) + 5	
Multicultural Requirements for Major in Industrial Management and Applied Engine Specialization in Quality Management IMAE Core Requirements PHYS 203A,B, PHYS 253A,B MATH 108	(3) + 5 (3)	
Multicultural Requirements for Major in Industrial Management and Applied Engine Specialization in Quality Management IMAE Core Requirements PHYS 203A,B, PHYS 253A,B MATH 108 MATH 140 or IMAE 307	(3) + 5 (3) 4	
Multicultural Requirements for Major in Industrial Management and Applied Engine Specialization in Quality Management IMAE Core Requirements PHYS 203A,B, PHYS 253A,B MATH 108 MATH 140 or IMAE 307 PSYC 323 or IMAE 340	(3) + 5 (3) 4	
Multicultural Requirements for Major in Industrial Management and Applied Engine Specialization in Quality Management IMAE Core Requirements PHYS 203A,B, PHYS 253A,B MATH 108 MATH 140 or IMAE 307 PSYC 323 or IMAE 340 Specialization in Quality Management: IMAE 110, IMAE 208, IMAE 305, IMAE 375, IMAE 390, IMAE 392, IMAE 442, IMAE 445, IMAE 450,	(3) + 5 (3) 4 3	
Multicultural Requirements for Major in Industrial Management and Applied Engine Specialization in Quality Management IMAE Core Requirements PHYS 203A,B, PHYS 253A,B MATH 108 MATH 140 or IMAE 307 PSYC 323 or IMAE 340 Specialization in Quality Management: IMAE 110, IMAE 208, IMAE 305, IMAE 375, IMAE 390, IMAE 392, IMAE 442, IMAE 445, IMAE 450, IMAE 465, IMAE 470A, IMAE 470B, IMAE 476	(3) + 5 (3) 4 3	

Continuous Improvement Minor

A minor in continuous improvement is designed to introduce undergraduate students to continuous improvement methodologies and tools that are applicable across a wide variety of industries from manufacturing to healthcare to service. The minor requires 12 hours of coursework, which includes IMAE 450, IMAE 465, IMAE 470a, and IMAE 476. All courses in the minor must be completed with a grade of C or better. All prerequisites for these classes must also be satisfied.

Students must consult the Industrial Management and Applied Engineering Academic Advisor to declare a minor.

Professional Development Sequence (PDS) in Lean Six Sigma

The PDS in Lean Six Sigma is intended to enhance the marketability and training of students who wish to pursue careers in quality management and process improvement. Enrollment in the Industrial Management and Applied Engineering major is not required to complete the program. The PDS in Lean Six Sigma facilitates prospective students to transfer earned program credits to pursue a B.S. degree in Industrial Management and Applied Engineering at SIU. Students not wishing to pursue a baccalaureate must complete the unclassified undergraduate application.

Professional Development Sequence (PDS) in Lean Six Sigma

Degree Requirements	Credit Hours	
Requirements for PDS in Lean Six Sigma	12	
Courses: IMAE 450, IMAE 465, IMAE 470A, IMAE 470B. All courses are offered Face-to-Face and Online.		

Capstone Option for Transfer Students

A Capstone Option may be available in the Industrial Management and Applied Engineering major. Students holding technical associate degrees of at least 60 semester hours in non-baccalaureate-oriented programs or equivalent certification with a minimum grade point average of 2.0 are qualified. For the Industrial Management and Applied Engineering major, the associate degree or equivalent certification should be in an industry-related field. This option permits qualified students to fulfill their degree requirements by completing 60 semester hours of work approved by the Capstone advisor. Each individual's program of study may differ according to the previous academic work.

The Association of Technology, Management, and Applied Engineering accredits the Industrial Management and Applied Engineering program. For each curriculum, a minimum of 30 hours in Industrial Management and Applied Engineering courses must be taken in residence at Southern Illinois University Carbondale.

Industrial Management and Applied Engineering Courses

IMAE105 - Computer-Aided Drafting 105-3 Computer-Aided Drafting. (Same as EET 103) Links the components of technical sketching with current CAD software. Sketching to include: orthographic projection, sectional views and dimensioning. Employ these elements with current CAD software in creating drawing entities, managing layers, displaying and modifying drawings, annotating and

dimensioning, and file management. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

- **IMAE110 Geometric Dimensng & Tolerncng** 110-3 Geometric Dimensioning and Tolerancing. Geometric dimensioning and tolerancing (GD&T) principles based on industry standards such as ANSI and ASME. Includes terminology, symbol identification feature control frames, modifiers, datums, etc. Selection of datum features, calculation of bonus tolerances, assignment of form, run-out and positional tolerances, and tolerance stack-up. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.
- **IMAE200 Field Experience I** 200-1 Field Experience I-Personal Leadership. This is a one week immersion experience that introduces new students to the personal habits practiced by disciplined leaders. Students will learn how to hold themselves accountable, work as a team to solve problems, and the importance of good leadership. At the end of the week they will have gained self confidence and trust in their teammates.
- **IMAE201 Intro to STEM Leadership Dev** 201-1 Lab I-Introduction to STEM Leadership Development. This class introduces students to the exemplary leadership practices and the skills necessary to lead. Students will learn how to lead by applying the readings and lectures to their own STEM organization.
- **IMAE202 Lab II-STEM Leadership** 202-1 Lab II-STEM Leadership (Team-Building). This course is designed to provide students with knowledge and skills necessary for building a team. They will learn the stages of team development and effective conflict resolution. Prerequisite: IMAE 201 with a grade of B or better.
- **IMAE203 Fit to Lead I** 203-1 Fit to Lead I (Self-Discipline). This course will provide the knowledge and skills for a leader to cope with stress and maintain a healthy mind and body. Students will engage in various intense physical fitness activities while learning important aspects of healthy lifestyles such as nutrition, weight-management, alcohol education, and sex education.
- **IMAE204 Fit to Lead II** 204-1 Fit to Lead II (Team-Building). This course will challenge students' problem solving skills and foster teamwork through physical activities of team building. These activities will promote students' personal, psychological, and social development in fostering cooperation and cohesiveness within a team. Prerequisite: IMAE 203 with a grade of B or better.
- **IMAE208 Fundamentals of Mfg Processes** 208-3 Fundamentals of Manufacturing Processes. [IAI Course: IND 913] Introduction to the basic processes, equipment, and material used in manufacturing. Includes plastics, metal removal, materials joining, casting, and some of the newer processes. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.
- **IMAE209 Mfg Process Laboratory** 209-3 Manufacturing Process Laboratory. (Same as EET 209) Laboratory experiments to familiarize the student with the theory and operation of manufacturing processes. Laboratory. Prerequisite: IMAE 208 or consent of instructor. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Lab fee: \$30.
- **IMAE258 Work Experience Credit** 258-2 to 30 Work Experience Credit. Credit granted for past work experience while employed in fields related to the student's educational objective. Credit is established by departmental evaluation. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.
- **IMAE259 Occupational Experience** 259-2 to 60 Occupational Credit. For occupational credit earned at junior colleges and technical institutes. Credit is established by departmental evaluation. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.
- **IMAE300 Field Experience II** 300-1 Field Experience II-Mentor Leadership. Second year students will be taught mentoring skills, and then asked to assume team leadership roles where they will mentor first year members. They will employ the mentoring model of: Telling, Showing, Doing, and Correcting, in developing their mentees. Mentors will provide a support system for new students and introduce

them into a leadership culture. They will serve as role models and engage in developing new member's organizational values. Prerequisite: IMAE 200 with a grade of B or better.

IMAE301 - Lab III-STEM Leadership 301-1 Lab III-STEM Leadership (RSO Leadership). Second year students will apply their leadership skills through leading and organizing RSO projects/programs for Southern Illinois University. Examples of projects are ATMAE Robotics Competition, Steel Bridge Competition, Ag-bassadors, Science Ambassadors, Cyber-Dawgs, and other STEM related projects/programs. A faculty mentor will closely monitor their performance during these projects/programs. Prerequisites: IMAE 201 and IMAE 450 with grades of B or better.

IMAE302 - Lab IV-STEM Leadership 302-1 Lab IV-STEM Leadership (Service Leadership). This capstone course is designed to test the student's cumulative knowledge by having them lead a technical team. Students are required to either hold the officer position of president of a technical RSO in a STEM college, or lead a team in a technical community service project. Examples of these projects include mentoring a local high school robotics team, math team, science club, or computer club. Faculty mentors will review the student's project proposal; the student will execute the project, and then provide a report on the project. Prerequisites: IMAE 202 and IMAE 301 with grades of B or better.

IMAE303 - Fit to Lead III 303-1 Fit to Lead III (Mentoring). This is a final course in the Fit to Lead series. At this level, students are expected to practice their mentoring skills in promoting the culture of healthy living. They are expected to apply knowledge in wellness programs to encourage the participation of new members in Fit to Lead I (Self Discipline) course. Prerequisites: IMAE 203 and IMAE 204 with grades of B or better.

IMAE305 - Industrial Safety 305-3 Industrial Safety. Principles of industrial accident prevention; accident statistics and costs; appraising safety performance; recognizing industrial hazards and recommending safeguards. Includes a study of the Occupational Safety and Health Act and the Coal Mine Health and Safety Act. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE307 - Applied Calculus for Tech 307-3 Applied Calculus for Technology. Applying mathematical techniques to technology problems, including the analysis, formulation, and problem solutions. Techniques of differentiation, max-min problems, and elementary techniques of integration. Prerequisite: MATH 108 or equivalent with a minimum grade of C. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE315 - Leadership Communications 315-3 Leadership Communications. Leadership Communications is designed to introduce students to professional communication. They will learn how to become a better leader by developing their communication abilities and by understanding the role of communication inside and outside of organizations. The course teaches students how to communicate effectively with different audiences and how to use logical, persuasive techniques in writing and presenting. Students develop their written, oral, interpersonal, and team skills while developing an understanding of leadership communication in different contexts, including their own major field of study.

IMAE319 - Industrial Internship 319-2 to 16 Industrial Internship. Industrial experience includes job skills, manufacturing processes, technical information, and labor-management relationships with supervised instruction, conferences, and examinations. Special approval needed from the instructor. Mandatory Pass/Fail. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE340 - Introduction to Supervision 340-3 Introduction to Supervision. Analysis of problems of supervisors. Topics include leadership, motivation, communication, grievances, training, discipline, group and individual effectiveness, and labor relations. This course is designed to introduce the roles and responsibilities of supervisors and managers in the workplace. In addition, this course is designed to prepare persons who are or intend to become supervisors in business, industry, government, or in the service industry. Prerequisites: none. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE341 - Maintenance 341-3 Maintenance. Principles and practices of maintenance department organization, preventative procedures, and typical equipment problems. Also, includes related topics

such as plant protection, custodial services, and maintenance of powerplants. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE342 - Industri Tech Co-op Education 342-1 to 12 Industrial Technology Cooperative Education. Supervised work experience in industry with an emphasis on manufacturing. Students will gain first-hand knowledge of the various aspects of Industrial Technology. Work experience is supervised by a faculty. Reports will be required from the student and employer. Hours may count toward technical electives. Mandatory Pass/Fail. Restricted to junior standing. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE351 - Industrial Metrology 351-3 Industrial Metrology. Methods and equipment of industrial measurement and inspection. Includes 3-D measuring machines, lasers, and non-destructive testing. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE358 - Work Experience Credit 358-1 to 30 Work Experience Credit. Credit granted for past work experience that is principally management and/or supervisory in nature. Students seeking credit must demonstrate an employment history in fields/areas related to the student's educational objective. Credit is established by departmental evaluation. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE375 - Production & Inventory Mgmt 375-3 Production and Inventory Management. Includes topics in forecasting, master production scheduling, material requirements planning, capacity requirements planning, inventory management, production activity control, and applicable operations research techniques. Prerequisite: MATH 108 or equivalent with a minimum grade of C. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE386 - Total Quality 386-3 Total Quality. Application of quantitative methods and human resources to improve product quality, enhance productivity, customer satisfaction, manufacturing organizational effectiveness and ability to compete in a global market. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE390 - Cost Estimating 390-3 Cost Estimating. (Same as EET 390) Study of the techniques of cost estimation for products, processes, equipment, projects, and systems. Prerequisite: MATH 108 or equivalent. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE392 - Facilities Plan/Workplace Dsgn 392-3 Facilities Planning and Workplace Design. Discusses and applies the tools necessary to design a work area (e.g. facility, department, workstation) from various aspects including time standards development and uses, throughput requirements, ergonomics, lean manufacturing, standard work, work environment, safety, material handling, process flow, and cost. Various methods and techniques will be introduced and utilized to analyze the effectiveness and efficiency of a process design. Prerequisite: IMAE 208. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE395 - Technology Design 395-3 Technology Design. An elective project on a technical subject selected by the student with advice from the instructor. Stimulates original thought and creativity. Special approval needed from the instructor. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE405 - Applied Robotics & Control 405-4 Applied Robotics and Control Lab. Laboratory experiments to familiarize the student with writing robotic programs for performing specific tasks, developing and debugging PLC code, integrating robotic programming and PLC programming in the control of a robotics cell, developing basic programming skills using computer simulation packages; milling and lathing applications of CNC machining. Prerequisite: IMAE 445 or ET 445 and IMAE 455 or concurrent enrollment in both. Restricted to Junior/Senior standing. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE430 - Health/Injury:Work Setting 430-3 Health and Injury Control in a Work Setting. (Same as PH 430) Assesses the health and injury control programs present in a work setting. Emphasis given to employee programs in health, wellness, and injury control that are effective. Field trips to work sites are

included. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE440 - Manufacturing Policy 440-3 Manufacturing Policy. Review of all areas covered by the industrial technology program. Includes problems which simulate existing conditions in industry. Students present their solutions to the class and to the instructor in a formal manner. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE442 - Fundamentals of Leadership 442-3 Fundamentals of Leadership. This course is designed to provide an introduction to leadership by focusing on what it means to be a good leader. Emphasis in the course is on the practice of leadership. The course will examine topics such as: the nature of leadership, recognizing leadership traits, developing leadership skills, creating a vision, setting the tone, listening to out-group members, handling conflict, overcoming obstacles, and addressing ethics in leadership. Attention will be given to helping students to understand and improve their own leadership performance. Not for graduate credit. Restricted to sophomore standing or higher. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE445 - Computer Integrated Mfg 445-3 Computer Integrated Manufacturing. (Same as EET 445) Introduction to the use of computers in the manufacturing of products. Includes the study of direct and computer numerical control of machine tools as well as interaction with process planning, inventory control and quality control. Prerequisite: IMAE 208. Restricted to Junior/Senior standing. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE450 - Project Management 450-3 Project Management. This course is designed to provide students with an overview of the project management process followed by an in-depth examination of the activities needed to successfully initiate, plan, schedule, and control the time and cost factors of the project. Prerequisite: none. Restricted to Junior/Senior standing. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE455 - Industrial Robotics 455-3 Industrial Robotics. (Same as EET 455) Study of robotics within a wide variety of application areas. Topics covered include classification of robots, sensor technology, machine vision; control systems, including programmable logic controllers (PLCs); robot safety and maintenance; and economic justification of robotic systems. Prerequisite: None. Restricted to Junior/Senior standing. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE465 - Lean Manufacturing 465-3 Lean Manufacturing. This course will cover the principles and techniques of lean manufacturing. Major topics covered include lean principles, 5S, value stream mapping, total productive maintenance, manufacturing/office cells, setup reduction/quick changeover, pull system/Kanbans, continuous improvement/Kaizen, lean six sigma, lean simulation, and other modern lean manufacturing techniques and issues. Restricted to Junior/Senior standing. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE470A - Six Sigma Green Belt 470A-3 Six Sigma Green Belt. Study the knowledge areas of Six Sigma Green Belt. Topics include six sigma goals, lean principles, theory of constraints, design for six sigma, quality function deployment, failure mode and effects analysis, process management, team dynamics, project management basics, data and process analysis, probability and statistics, measurement system analysis, and process capability. Restricted to Junior/Senior standing. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE470B - Six Sigma Green Belt II 470B-3 Six Sigma Green Belt II. The objective of this course is to provide the student with a complete coverage of the statistical and analytical tools used and applied in the "Six Sigma" methodology at the green-belt level. Topics include: discrete probability distributions, continuous probability distributions, statistical process control tools, quality control charts, process capability analysis, gauge and measurement capability studies, cumulative sum control charts and exponentially-weighted moving average control charts. Prerequisite: IMAE 307 or MATH 140 or MATH 150, IMAE 470A or consent of instructor. Restricted to Junior/Senior standing. Restricted to students

with junior, senior or graduate standing in the College of Engineering, Computing, Technology, and Mathematics except when approved by department.

IMAE475 - Quality Control 475-3 Quality Control. Study the principles and techniques of modern quality control practices. Topics include total quality management, fundamentals of statistics, control charts for variables and other quality related issues and techniques. Restricted to senior standing. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE476 - Supply Chain Management 476-3 Supply Chain Management. Introduces topics in supply chain management including roles of logistics in supply chains, global dimensions of supply chains, demand management, order management and customer service, managing inventory in the supply chain, transportation, distribution, and other modern supply chain management techniques and issues. Restricted to Junior/Senior standing. Restricted to College of Engineering, Computing, Technology, and Mathematics students or school approval required.

IMAE480 - Six Sigma Black Belt 480-3 Six Sigma Black Belt. (Same as QEM 515) The purpose of this course is to provide the student with a comprehensive coverage of the knowledge areas and tools of Six Sigma beyond green-belt training, focusing on descriptive and analytical methods to deal with variability including point and interval estimation, hypothesis testing, and design of experiments. Topics include: confidence intervals, hypothesis testing, regression analysis, analysis of variance, single factor experiments, block design of experiments. Prerequisite: IMAE 307 or equivalent, IMAE 470B with grades of C or better. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required. Special approval needed from the department. Restricted to Junior/Senior standing.

IMAE485 - Quality Control II 485-3 Quality Control II. Study the principles and techniques of modern quality control practices. Topics include fundamentals of probability, control charts for attributes, acceptance sampling systems, reliability and other quality related issues and techniques. Restricted to senior standing. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE490 - Six Sigma 490-3 Six Sigma. Six Sigma is a data-driven management system with near-perfect-performance objectives that has been employed by leading corporations. Its name is derived from the statistical target of operating with no more than 3.4 defects per one million chances, but its principles can be applied in business of all types to routinely reduce costs and improve productivity. This overview describes what Six Sigma is, and what is techniques and tools are. Prerequisite: IMAE 475. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE492 - Special Probs in Industry 492-1 to 6 Special Problems in Industry. Special opportunity for students to obtain assistance and guidance in the investigation and solution of selected industrial problems. Not for graduate credit. Special approval needed from the instructor. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE494A - Applied Project-Motion/Time 494A-1 Applied Project-Motion and Time Study. Selected applied project. Requires the students to apply knowledge learned in various courses to the solution of industrial problems. Not for graduate credit. Special approval needed from the instructor. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE494B - Applied Project-Cost Estimatng 494B-1 Applied Project-Cost Estimating. Selected applied project. Requires the students to apply knowledge learned in various courses to the solution of industrial problems. Not for graduate credit. Special approval needed from the instructor. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE494C - Spec Proj-Mat Handl Plant Layt 494C-1 Applied Project-Materials Handling and Plant Layout. Selected applied project. Requires the students to apply knowledge learned in various courses to the solution of industrial problems. Not for graduate credit. Special approval needed from the instructor.

Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE494D - Special Project-Prod Inv Ctrl 494D-1 Applied Project-Production and Inventory Control. Selected applied project. Requires the students to apply knowledge learned in various courses to the solution of industrial problems. Not for graduate credit. Special approval needed from the instructor. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE494E - Special Project-Quality Cntrl 494E-1 Applied Project-Quality Control. Selected applied project. Requires the students to apply knowledge learned in various courses to the solution of industrial problems. Not for graduate credit. Special approval needed from the instructor. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE494F - Applied Project-Supply Chain 494F-1 Applied Project-Supply Chain Operations. Selected applied project. Requires the students to apply knowledge learned in various courses to the solution of industrial problems. Not for graduate credit. Special approval needed from the instructor. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE494H - Special Project-Fund Ind Prcs 494H-1 Applied Project-Fundamentals of Industrial Processes. Selected applied project. Requires the students to apply knowledge learned in various courses to the solution of industrial problems. Not for graduate credit. Special approval needed from the instructor. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE494I - Special Project-Indust Safety 494I-1 Applied Project-Industrial Safety. Selected applied project. Requires the students to apply knowledge learned in various courses to the solution of industrial problems. Not for graduate credit. Special approval needed from the instructor. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

IMAE494K - Special Project-Comp-Aid Mfg 494K-1 Applied Project-Computer-Aided Manufacturing. Selected applied project. Requires the students to apply knowledge learned in various courses to the solution of industrial problems. Not for graduate credit. Special approval needed from the instructor. Restricted to College of Engineering, Computing, Technology, and Mathematics students or departmental approval required.

Industrial Management and Applied Engineering Faculty

DeRuntz, Bruce D., Professor, Ph.D., Southern Illinois University Carbondale, 2005.

Dunston, Julie K., Associate Professor and Chair, Ph.D., Florida State University, 1995.

Spezia, Carl J., Associate Professor, Ph.D., Southern Illinois University Carbondale, 2002.

Velasco, Tomas, Associate Professor, Ph.D., University of Arkansas, 1991.

Emeriti Faculty

Chang, Feng-Chang (Roger), Associate Professor, Emeritus, Ph.D., Ohio State University, 1985. **Marusarz, Ronald K.,** Associate Professor, Emeritus, Ph.D., Southern Illinois University Carbondale, 1999.

Last updated: 03/10/2021

Southern Illinois University

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Catalog Year Statement:

Students starting their collegiate training during the period of time covered by this catalog (see bottom of this page) are subject to the curricular requirements as specified herein. The requirements herein will

extend for a seven calendar-year period from the date of entry for baccalaureate programs and three years for associate programs. Should the University change the course requirements contained herein subsequently, students are assured that necessary adjustments will be made so that no additional time is required of them.