

Q2S Binder for Industrial and Systems Engineering

General Info

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Department/School Info

College: ENT(null)

Department: ISE(Industrial and Systems Engineering)

Mission: The mission of the Department of Industrial and Systems Engineering is to:

Educate students in Industrial and Systems Engineering and to create and disseminate innovative methods in teaching, research, and service. Provide service to the community, Ohio University and the Russ College of Engineering and Technology via programmatic offerings, governance and outreach programs.

Programs

Moving to Semesters	Code	Name	Degree	Status	Level
Yes	BS7255	INDUSTRIAL & SYS ENGINEERING	BACHELOR OF SCIENCE IN INDUSTRIAL AND SYSTEMS ENGINEERING	REVIEW	UCC
Yes	ME7266	ENGINEERING MANAGEMENT	MASTER OF ENGINEERING MANAGEMENT	REVIEW	UCC
Yes	MS7255	INDUSTRIAL & SYS ENGINEERING	MASTER OF SCIENCE	REVIEW	UCC
Yes	SCISE	ISE Shared Components	ISE Shared Components	REVIEW	UCC

Courses

Course ID	Name	Course Type	Doc. Type	Doc. Status	Review Level
EMGT 6000	FOUNDATIONS OF ENGN G MGT		EXPEDITED	REVIEW	UCC
EMGT 6010	Engineering Writing	GRADUATE	SEMESTER	REVIEW	UCC
EMGT 6020	ENGINEERING LAW		EXPEDITED	REVIEW	UCC
EMGT 6110	STATISTICS FOR ENG MGMT		COMPOSITE	REVIEW	UCC
EMGT 6120	QUALITY SYSTEMS		EXPEDITED	REVIEW	UCC
EMGT 6130	PROJ MANAGEMENT		SEMESTER	REVIEW	UCC
EMGT 6949	EM Project		SEMESTER	REVIEW	UCC
ISE 1100	INTRO TO COMPUTERS AND IE	TIER2	EXPEDITED	REVIEW	UCC
ISE 2100	DATA MANAGEMENT & DISPLAY		EXPEDITED	REVIEW	UCC
ISE 3040	Fundamentals of Statistics	TIER2	SEMESTER	REVIEW	UCC
ISE 3200	ENGINEERING STATISTICS		EXPEDITED	REVIEW	UCC
ISE 3210	ENGINEERING PROBABILITY		EXPEDITED	REVIEW	UCC
ISE 3340	WORK DESIGN		EXPEDITED	REVIEW	UCC
ISE 3910	INTERNSHIP IN ISE		EXPEDITED	REVIEW	UCC
ISE 4120	INVENTORY & MANUF CNTRL I		EXPEDITED	REVIEW	UCC
ISE 4130	IND COMPUTER SIMULATION		EXPEDITED	REVIEW	UCC
ISE 4140	INTRO TO OPERATIONS RESCH		EXPEDITED	REVIEW	UCC
ISE 4150	INFO SYSTEMS ENGR		EXPEDITED	REVIEW	UCC
ISE 4160	PRINCIPLES OF SIX SIGMA		SEMESTER	REVIEW	UCC
ISE 4190	Senior Capstone I		COMPOSITE	REVIEW	UCC
ISE 4191	Senior Capstone II	TIER3	COMPOSITE	REVIEW	UCC
ISE 4300	INTRO TO DESIGNED EXP		EXPEDITED	REVIEW	UCC
ISE 4310	INTRO SYSTEMS ENGINEERING		EXPEDITED	REVIEW	UCC
ISE 4315	DECISION THEORY		EXPEDITED	REVIEW	UCC
ISE 4320	INVENTORY & MANUF CONTRII		EXPEDITED	REVIEW	UCC
ISE 4330	COST ENGINEERING		EXPEDITED	REVIEW	UCC
ISE 4335	APPLICATIONS MATH PROGRMG		EXPEDITED	REVIEW	UCC
ISE 4345	NETWORK ANALYSIS		EXPEDITED	REVIEW	UCC
ISE 4350	DATABASE INFO SYSTEMS		EXPEDITED	REVIEW	UCC
ISE 4360	FACILITY PLANNING/DESIGN		EXPEDITED	REVIEW	UCC
ISE 4365	MATERIAL HANDLING SYS ENG		EXPEDITED	REVIEW	UCC

ISE 4370	MANUFACTURING SYSTEMS		EXPEDITED	REVIEW	UCC
ISE 4375	COMP INTEGRATED MANUFACT		EXPEDITED	REVIEW	UCC
ISE 4380	HUMAN FACTORS ENGINEERING		EXPEDITED	REVIEW	UCC
ISE 4385	SEM OCC SAFE & HLTH		EXPEDITED	REVIEW	UCC
ISE 4390	WORK PHYSIOLOG & BIOMECHS		EXPEDITED	REVIEW	UCC
ISE 4395	COGNITIVE ENGINEERING		EXPEDITED	REVIEW	UCC
ISE 4490	PROJECT MANAGEMENT		EXPEDITED	REVIEW	UCC
ISE 4500	COLLOQUIUM		EXPEDITED	REVIEW	UCC
ISE 4900	SPECIAL TOPICS		EXPEDITED	REVIEW	UCC
ISE 4930	SPECIAL INVESTIGATIONS		COMPOSITE	REVIEW	UCC
ISE 5120	INVENTORY & MANUF CNTRL I	GRADUATE	EXPEDITED	REVIEW	UCC
ISE 5130	IND COMPUTER SIMULATION	GRADUATE	EXPEDITED	REVIEW	UCC
ISE 5140	INTRO TO OPERATIONS RESCH	GRADUATE	EXPEDITED	REVIEW	UCC
ISE 5150	INFO SYSTEMS ENGR	GRADUATE	EXPEDITED	REVIEW	UCC
ISE 5160	PRINCIPLES OF SIX SIGMA	GRADUATE	SEMESTER	REVIEW	UCC
ISE 5200	ENGINEERING STATISTICS	GRADUATE	EXPEDITED	REVIEW	UCC
ISE 5210	ENGINEERING PROBABILITY	GRADUATE	EXPEDITED	REVIEW	UCC
ISE 5300	INTRO TO DESIGNED EXP	GRADUATE	EXPEDITED	REVIEW	UCC
ISE 5310	INTRO SYSTEMS ENGINEERING	GRADUATE	EXPEDITED	REVIEW	UCC
ISE 5315	DECISION THEORY	GRADUATE	EXPEDITED	REVIEW	UCC
ISE 5320	INVENTORY & MANUF CONTRII	GRADUATE	EXPEDITED	REVIEW	UCC
ISE 5330	COST ENGINEERING	GRADUATE	EXPEDITED	REVIEW	UCC
ISE 5335	APPLICATIONS MATH PROGRMG	GRADUATE	EXPEDITED	REVIEW	UCC
ISE 5340	WORK DESIGN	GRADUATE	EXPEDITED	REVIEW	UCC
ISE 5345	NETWORK ANALYSIS	GRADUATE	EXPEDITED	REVIEW	UCC
ISE 5350	DATABASE INFO SYSTEMS	GRADUATE	EXPEDITED	REVIEW	UCC
ISE 5360	FACILITY PLANNING/DESIGN	GRADUATE	EXPEDITED	REVIEW	UCC
ISE 5365	MATERIAL HANDLING SYS ENG	GRADUATE	EXPEDITED	REVIEW	UCC
ISE 5370	MANUFACTURING SYSTEMS	GRADUATE	EXPEDITED	REVIEW	UCC
ISE 5375	COMP INTEGRATED MANUFACT	GRADUATE	EXPEDITED	REVIEW	UCC
ISE 5380	HUMAN FACTORS ENGINEERING	GRADUATE	EXPEDITED	REVIEW	UCC
ISE 5385	SEM OCC SAFE & HLTH	GRADUATE	EXPEDITED	REVIEW	UCC
ISE 5390	WORK PHYSIOLOG & BIOMECHS	GRADUATE	EXPEDITED	REVIEW	UCC
ISE 5395	COGNITIVE ENGINEERING	GRADUATE	EXPEDITED	REVIEW	UCC
ISE 5490	PROJECT MANAGEMENT	GRADUATE	EXPEDITED	REVIEW	UCC
ISE 5900	SPECIAL TOPICS	GRADUATE	EXPEDITED	REVIEW	UCC
ISE 5910	GRAD INTERNSHIP IN ISE		EXPEDITED	REVIEW	UCC
ISE 6110	ANALYSIS ENGINRG SYSTEMSI		EXPEDITED	REVIEW	UCC
ISE 6115	ANALYSIS ENGR SYSTEMS II		EXPEDITED	REVIEW	UCC
ISE 6120	PROBABALISTIC SYST ANALYS		EXPEDITED	REVIEW	UCC
ISE 6140	RELIABILITY IN DESIGN		EXPEDITED	REVIEW	UCC
ISE 6150	INFORMATION SYSTEMS DESGN		EXPEDITED	REVIEW	UCC
ISE 6160	ENVIRONMENTAL SYS ENGR		EXPEDITED	REVIEW	UCC
ISE 6230	SEMINAR TRANSPORTATN SYS		EXPEDITED	REVIEW	UCC
ISE 6260	ARTF NEURAL NETS IN MFG		EXPEDITED	REVIEW	UCC
ISE 6300	SEMINAR INDUST & SYS ENGR		EXPEDITED	REVIEW	UCC
ISE 6320	SEMINAR CONTROL INV & MFG		EXPEDITED	REVIEW	UCC
ISE 6360	PROJ ANALYSIS/MANAGEMENT		EXPEDITED	REVIEW	UCC
ISE 6400	FAC LAYOUT AND LOC		EXPEDITED	REVIEW	UCC
ISE 6420	WAREHOUSE & DISTRIBTN SYS		EXPEDITED	REVIEW	UCC
ISE 6500	FOUNDATIONS OF ENGNMG MGT		EXPEDITED	REVIEW	UCC
ISE 6550	ENG SUPPLY CHAIN MGT		EXPEDITED	REVIEW	UCC
ISE 6600	GEOM MODEL FOR MFG		EXPEDITED	REVIEW	UCC
ISE 6710	SCHEDULING & SEQUENCING		SEMESTER	REVIEW	UCC
ISE 6900	SPECIAL TOPICS		EXPEDITED	REVIEW	UCC
ISE 6930	INDEPENDENT STUDY		EXPEDITED	REVIEW	UCC
ISE 6940	Research		EXPEDITED	REVIEW	UCC
ISE 6949	Master's Project		EXPEDITED	REVIEW	UCC
ISE 6950	THESIS		EXPEDITED	REVIEW	UCC
ISE 7090	INTELL ENGR SYS		EXPEDITED	REVIEW	UCC
ISE 7100	GENETIC ALG IN MANUFACT		SEMESTER	REVIEW	UCC
ISE 7260	NEURAL NETS USING OR		EXPEDITED	REVIEW	UCC
ISE 7270	DATA INTEGRATION		EXPEDITED	REVIEW	UCC
ISE 7320	SEMINAR CONTROL INV & MFG		EXPEDITED	REVIEW	UCC
ISE 7330	ADV SYSTEMS SIMULATION		EXPEDITED	REVIEW	UCC

ISE 7610	OPERATIONS RESEARCH I	EXPEDITED	REVIEW	UCC
ISE 7620	OPERATIONS RESEARCH II	EXPEDITED	REVIEW	UCC
ISE 7630	OPERATIONS RESEARCH III	EXPEDITED	REVIEW	UCC
ISE 7720	OPTIMIZATION ENGR SYST I	EXPEDITED	REVIEW	UCC
ISE 7730	OPTIMIZATION ENGR SYST II	EXPEDITED	REVIEW	UCC
ISE 8900	SPECIAL TOPICS IN ISE	EXPEDITED	REVIEW	UCC
ISE 8930	INDEPENDENT STUDY	EXPEDITED	REVIEW	UCC

Exceptions - Credit Analysis

Course ID	Name	Type	Credit Hours	Components	Doc. Status	Review Level
EMGT 6949	EM Project	SEMESTER	1.0 - 3.0	RESEARCH	3.0	REVIEW UCC
ISE 4900	SPECIAL TOPICS	EXPEDITED	1.0 - 4.0	LECTURE	3.0	REVIEW UCC
ISE 4930	SPECIAL INVESTIGATIONS	COMPOSITE	1.0 - 4.0	INDEPENDENT	2.0	REVIEW UCC
ISE 5900	SPECIAL TOPICS	EXPEDITED	1.0 - 4.0	LECTURE	3.0	REVIEW UCC

Exceptions - Non Three Hour Lecture

The Ohio University Faculty Senate Resolution on the Number of Semester Hours per Course and Course Meeting Times for Quarters to Semesters (<http://www.ohio.edu/facultysenate/upload/CourseHourTimeResolutionfinal4-2009.doc>) resolved that, as a norm, undergraduate lecture courses on the Athens Campus shall be 3 semester hours and that exceptions to these norms will be allowed on the basis of pedagogical justification specific to a course or course sequence.

Three-hour courses are important for balancing student schedules, and three lecture hour per week blocks are important for classroom utilization. It is understood that there are special cases where the 3-lecture hour course norm does not apply, sometimes for categories of courses (recitals or band), sometimes for disciplinary standards, and sometimes for other reasons.

For the semester courses taught by your department that do not meet the 3 lecture hour norm, give a brief explanation of why the norm was not followed and/or what circumstances make these deviations from the norm not create a problem with classroom scheduling or student schedules. (Notes: Categories of courses can be addressed as a group rather than individually. If you are using a 'disciplinary standard' argument, please make comparisons to Ohio Schools on semesters or to Ohio University peer schools on semesters. If you are using a block scheduling approach, please list the courses that will be block scheduled and identify the semester(s) where the block scheduling applies.)

Reason: Among the courses with two lecture hours per week, there are three classes that are required for the BS ISE program: ISE 2100, 3340, and 4130. The content of each of these classes is significantly distinct from the others which means that it is not desirable to combine them into two-three credit courses.

For comparison, at Youngstown State, the comparable course to ISE 3340 (ISEN 3736) is also 2 credits; the comparable course to ISE 4130 (ISEN 3727) is 3 credits, which is the same as ISE 4130. (Note that ISE 4130 includes 2 hours of lab work per week, which is why there are only 2 hours of lecture work for the 3 credits.) There is no course at YSU (or, to my knowledge, any other school) that is comparable to ISE 2010, as this course is a unique component of our program.

The remaining 2-credit classes are electives (except for ISE 4490, which is a service course). Because of the breadth of topics relevant to industrial and systems engineering practice, there is not much commonality in the topics which would allow combining courses. In addition, expanding these courses to 3-credits would restrict the ability of students to take a wider variety of electives.

ISE 4490 replaces ISE 436 for non-ISE students (and ISE 5590 replaces ISE 536 for ISE graduate students). For ISE students, ISE 436 was combined with ISE 445A and ISE 445B for a 3:2 Q2S conversion (ISE 4190/4191). The first 10 weeks of ISE 4190 will cover the content of ISE 436; ISE 4490 will meet concurrently with this course for 3 hours/week for the first 10 weeks of the semester. ISE students (the majority of the course) will continue for the remaining 5 weeks of the semester; other students (i.e., those in ISE 4490/5490) will be finished after 10 weeks.

There is one proposed 4-credit course (ISE 4160). This course is a combination of two quarter courses, ISE 412 (4 credits) and ISE 435 (3 credits). We have received feedback about the current courses that there is an overlap in the content between the courses, so we are taking the opportunity to eliminate the duplication by combining the courses. However, it is not feasible to combine the current content (70 hours of lecture) into a 3-credit class (45 hours of lecture) so we are planning to do it as a 4-credit course (60 hours of lecture).

To prevent problems for students and to maintain room utilization, the 2-credit courses will be scheduled on Tuesday-Thursday in blocks of 3 2-credit classes. This will allow the 2-credit courses to completely fill the slots for 2 3-credit courses.

The 3-credit courses with only 2 lecture hours per week (ISE 4130 and ISE 4380) will be scheduled Monday and Wednesday during late afternoon, when there is typically a lower demand for classrooms, and the 2-hour lab session will be scheduled on Friday afternoon. Tuesday and Thursday will not be used for these classes because if they were, the lab would need to be scheduled during another block, which would complicate students' schedules.

The 4-credit course will be scheduled MWF, with a 2-hour session on Friday (e.g., MW 1-2; F 1-3). The MW sessions immediately following that course (e.g., MW 2-3) will be filled with a 2-credit course to maintain room utilization.

Course ID	Name	Type	Contact Hours	Doc. Status	Review Level
ISE 2100	DATA MANAGEMENT & DISPLAY	EXPEDITED	2.0	REVIEW	UCC
ISE 3340	WORK DESIGN	EXPEDITED	2.0	REVIEW	UCC
ISE 4130	IND COMPUTER SIMULATION	EXPEDITED	2.0	REVIEW	UCC
ISE 4160	PRINCIPLES OF SIX SIGMA	SEMESTER	4.0	REVIEW	UCC
ISE 4300	INTRO TO DESIGNED EXP	EXPEDITED	2.0	REVIEW	UCC
ISE 4310	INTRO SYSTEMS ENGINEERING	EXPEDITED	2.0	REVIEW	UCC
ISE 4315	DECISION THEORY	EXPEDITED	2.0	REVIEW	UCC
ISE 4320	INVENTORY & MANUF CONTRI	EXPEDITED	2.0	REVIEW	UCC
ISE 4330	COST ENGINEERING	EXPEDITED	2.0	REVIEW	UCC
ISE 4335	APPLICATIONS MATH PROGRMG	EXPEDITED	2.0	REVIEW	UCC
ISE 4345	NETWORK ANALYSIS	EXPEDITED	2.0	REVIEW	UCC
ISE 4380	HUMAN FACTORS ENGINEERING	EXPEDITED	2.0	REVIEW	UCC
ISE 4490	PROJECT MANAGEMENT	EXPEDITED	2.0	REVIEW	UCC

