SYLLABUS
IE 4934/6934 INFORMATION SYSTEM FOR INDUSTRIAL ENGINEERING
Fall 2021

INSTRUCTOR:	Haifeng Wang, Ph.D.
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OFFICE:	McCain 260P
Tel.:	662-325-3923
CLASS HOURS:	M, W, F: 10:20AM - 11:10AM (Location: **LDRCKS 75**)
LAB HOURS:	M: 1:50PM - 4:50PM (Location: **MCCAIN 175**)
OFFICE HOURS:	W, F: 1:00PM - 2:30PM; or by appointment
WEBSITE:	canvas.msstate.edu

CATALOG DESCRIPTION:
Three hours lecture. Three hours laboratory. An introduction to the design and development of information system for use in industrial engineering applications.

PREREQUISITES:
IE 1911: Introduction to Industrial Engineering

TEXTBOOKS:
1) Walkenbach, J., and Kusleika, D. "Excel 2016 Power Programming with VBA," John Wiley & Sons, 2016.
2) Alexander, M., and Kusleika, D. "Access 2019 Bible," John Wiley & Sons, 2019.
3) "Developing Spreadsheet-Based Decision Support Systems" 2nd Edition, by Eksioglu, Hanna, Ahuja, Winston, Dynamic Ideas Publishers (http://www.dssbooks.com/excel2/index.html).
4) Jelen, B., Alexander M. "Pivot Table Data Crunching," Pearson Education Inc., 2016.

SOFTWARE:
Windows 10
Microsoft Access and Excel 2016 (or later)
(http://it.engr.msstate.edu/software, sign in with MSU NetID and MSU)
Anaconda (https://www.anaconda.com/distribution/, free)

COURSE OBJECTIVES:
- To learn and practice the fundamentals of programming for the purpose of applications development.
- To be able to design and program Excel & Access applications to support industrial engineering analyses using the Visual Basic for Applications (VBA) language.
- To learn and practice the design and implementation of database systems considering the needs of the applications and its users.
- To perform query operations on a real problem dataset.
- Learn how to learn a programming language.

GRADE DETERMINATION:

- Quizzes   20%
- Mid-term Exam   25% (tentatively October 11th Monday, 1:50-4:50pm)
- Final Exam   30% (tentatively December 3rd Friday, 8-11am)
- LAB Assignments   20%
- Participation   5%

Final letter grades will be determined: A = 90% through 100%; B = 80% through 89%; C = 70% through 79%; D = 60% through 69%; F = Less than 60%. Grades will be posted on-line. Disputations of lab assignment or exam grade should be discussed with the professor within one week from the date the grade is submitted. As a note: A request for grade review will result in a complete regrade of the assignment or exam, not only those items in the request.

Quizzes (20%): There will be five online quizzes (exact time will be notified through Canvas). Quizzes are close book, close notes. You can drop one lowest quiz grade. There will be no make-up for the quizzes (unless this is the result of an officially excused absence).

Exams (55%): There will be two exams (midterm and final), and the final exam will be cumulative, but with an emphasis on the material covered since the midterm.

Lab Assignments (20%): Lab assignments will be assigned. These assignments will consist of a few exercises which you should complete during the lab hour or after class. The lab assignment is due on Wednesday at 12pm (more details will be noticed in each assignment). A 15% penalty will be assessed for assignments submitted by 5pm on the day the assignment is due. No credit will be given for an assignment that is turned in after 5pm on the day that it is due (unless it is the result of an officially excused absence). Assignments should be submitted on-line. Emailing assignments is unacceptable unless prior arrangement is made with the instructor. Emailing an assignment does not mean an assignment is turned in for credit. You can drop two lowest assignment grades (one from Excel and one from the Database).

Participation (5%): Class attendance (on-campus students) and CANVAS discussions (both distance and on-campus students) will be considered for the participation. For on-campus students, excessive unexcused absences will result in a deduction to their participation grade as follows:

- 0-3 unexcused absences: 0% deduction

- 4-6 unexcused absences: 20% deduction

- 7-9 unexcused absences: 50% deduction

- 10+ unexcused absences: 100% deduction

Working Together: It is ok to _**discuss**_ together on Lab Assignments. However, when it comes time for you to write up the solutions/codes, you need to do this on your own. Working together on exams and quizzes are expressly forbidden.

Absences: Students are expected to attend every class and laboratory. If you are not able to turn in a lab assignment, take a quiz, or take an exam because of an unexcused absence, you will not be able to turn the homework in late or take the quiz or exam. A university excuse from a scheduled class activity such

as an exam must be presented in writing no later than two weeks prior to the date of the absence. An absence due to illness or family emergency may be excused, provided that you can supply acceptable written evidence to the instructor as soon as possible.

Absent Professor: Students will be notified in advance if the instructor is going to be late for class. However, if an unscheduled conflict or emergency occurs which prevents the instructor (or someone else to take his place) from meeting the class, the students are authorized to leave after 15 min.

Suggestions: Suggestions for improvement are welcome at any time.

EXPECTED TOPICS COVERED SCHEDULE:

Topics Covered	Classes
Programming Applications in Excel	
➢ Excel Background	3
➢ VBA Programming Fundamentals	2
➢ Procedures and Functions	4
➢ User Forms	3
➢ Advanced Features	2
➢ Application Development	3
Pivot Table in Excel	
➢ Creating a Basic Pivot Table	1
➢ Grouping, Sorting, and Filtering Pivot Data	2
➢ Using Pivot Charts and Other Visualization	2
➢ Mashing up Data with Power Pivot	1
Database Design and Development	
➢ Introduction to Databases	1
➢ Creating a Tables	3
➢ Queries	2
➢ Forms	2
➢ Structured Query Languages	1
➢ Normalization in Design	1
➢ Reports	1
Special Topics	
➢ Python Dataframe with Pandas	2
➢ Basic Data Computation using Dataframe	3

Mississippi State University Honor Code http://www.honorcode.msstate.edu/
"As a Mississippi State University student, I will conduct myself with honor and integrity at all times. I will not lie, cheat, or steal, nor will I accept the actions of those who do" Upon accepting admission to MSU, a student immediately assumes a commitment to uphold the Student Honor Code, to accept responsibility for learning, and to follow the philosophy and rules of the Student Honor Code. Students will be required to state their commitment on examinations, research papers, and other academic work. Ignorance of the rules does not exclude any member of the MSU community from the requirements or processes of the Student Honor Code. If found cheating on any assignment, the instructor will most likely recommend the student receive an "F" in the course.

Continuity of Instruction
In the event that face-to-face classes are suspended due to extenuating circumstances, such as weather, the instructor will continue instruction in a manner that best supports the course content and student

engagement. In this event, all instructors will notify students of the change via their university email address (the official vehicle for communication with students). At that time, they will provide details about how instruction and communication will continue, how academic integrity will be ensured, and what students may expect during the time that face-to-face classes are suspended. If a student becomes unable to continue class participation due to extenuating circumstances, (e.g., health and safety, loss of power, etc.) the student should contact their instructor and advisor for guidance. For additional guidance, please refer to Academic Operating Policy 12.09.

Attendance policy for face-to-face instruction
This section is a face-to-face instructional class. Please refer to Academic Operating Policy 12.09, regarding attendance expectations and accommodations.

Title IX
MSU is committed to complying with Title IX, a federal law that prohibits discrimination, including violence and harassment, based on sex. This means that MSU's educational programs and activities must be free from sex discrimination, sexual harassment, and other forms of sexual misconduct. If you or someone you know has experienced sex discrimination, sexual violence and/or harassment by any member of the University community, you are encouraged to report the conduct to MSU's Director of Title IX/EEO Programs at 325-8124 or by e-mail to titleix@msstate.edu. Additional resources are available at http://www.msstate.edu/web/security, or at http://students.msstate.edu/sexualmisconduct/ .

Disability Resource Center
Mississippi State University is committed to providing equitable access to learning opportunities for all students. The Disability Resource Center (01 Montgomery Hall) collaborates with students who have disabilities to arrange reasonable accommodations. If you have, or think you may have, a disability, please contact drc@saffairs.msstate.edu or 662-325-3335 to arrange a confidential discussion regarding equitable access and reasonable accommodations. Disabilities may include, but are not limited to, conditions related to mental health, chronic health, attention, learning, autism, brain injury, vision, hearing, mobility, speech, or intellectual disabilities. In the case of short-term disabilities (e.g., broken arm), students and instructors can often work to minimize barriers. If additional assistance is needed, please contact the Disability Resource Center.

Disability Support Services
Students who need academic accommodations based on a disability should visit the Office of Disability Support Services, 01 Montgomery Hall, call 662-325-3335, or visit the website at https://www.dss.msstate.edu

University Safety Statement
Mississippi State University values the safety of all campus community members. Students are encouraged to register for Maroon Alert texts and to download the Everbridge App. Visit the Personal Information section in Banner on your mystate portal to register. To report suspicious activity or to request a courtesy escort via Safe Walk, call University Police at 662-325-2121, or in case of emergency, call 911. For more information regarding safety and to view available training resources, including helpful videos, visit ready.msstate.edu.

Other Policies: Make sure cell phones are OFF while in class.

Important MSU Dates

August 18	Classes begin
August 24	Last day to drop a course without a grade (5th class day) 11:59 p.m.
September 6	Labor Day Holiday - no classes scheduled
September 29	First progress grades reporting deadline (30th class day)
October 6	Mid-point of semester
October 7 to October 8	Fall Break - no classes scheduled (subject to change)
October 11	Last day to drop a course with a "W" grade (36th class day) 5:00 p.m.
October 22	Second progress grade reporting deadline (end of week 10)
November 24 to November 26	Thanksgiving holiday - no classes scheduled
December 1	Classes end

NOTE
- This syllabus is subject to change based on the needs of the class; course announcements will be made during the class period or via email.
- If you are a student with special needs, please contact the instructor ASAP.