# Plan of Study Form:

**Master of Science Degree in Industrial and Systems Engineering (ISE) Data Analytics and Optimization Concentration**

**Student Name (please print):**

**Required ISE Courses:** A total of 12 credit hours in ISE are required.

\*Students who have previously completed the equivalent of these courses can select substitutes from the list of recommended electives in the Data Analytics [concentration guide](http://ise.osu.edu/graduate/admissions/).

|  |  |  |  |
| --- | --- | --- | --- |
| **Course** | **Title** | **Hours** | **Semester Taken** |
| ISE 5110 | Design of Engineering Experiments | 3 |  |
| ISE 5200 | Linear Optimization | 3 | Fall 1 |
| ISE 6300 | Simulation for System Analytics & Decision- Making | 3 | Spring |
| ISE 7250 | Operations Research Models & Methods | 3 | Spring |

**Required CSE Courses:** A total of 10 credit hours in CSE are required.

\*Students who have previously completed the equivalent of these courses can select substitutes from the list of recommended electives in the Data Analytics [concentration guide](http://ise.osu.edu/graduate/admissions/).

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| --- | --- | --- | --- |
| **Course** | **Title** | **Hours** | **Semester Taken** |
| CSE 5023 | Software II (Java II) | 3 |  |
| CSE 5241 | Intro to Database Systems | 2 | Fall 1 |
| CSE 5032 | Foundations I: Discrete Structures | 2 |  |
| CSE 5243 | Intro to Data Mining | 3 | Spring/Fall 2 |

**Required STAT Course:** A total of 4 credit hours in STAT are required.

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| **Course** | **Title** | **Hours** | **Semester Taken** |
| STAT 6450 | Applied Regression Analysis | 4 | Fall |

**Required Visual Analytics:** Choose **one** 3 credit hour course

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| --- | --- | --- | --- |
| **Course** | **Title** | **Hours** | **Semester Taken** |
| ISE 5760 | Visual Analytics and Sense Making | 3 | Spring |
| CSE 5544 | Intro to Scientific Visualization | 3 | Spring |

# Additional ISE Requirements

**Department Seminar:** A total of two 1 credit hour courses are required.

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| --- | --- | --- | --- |
| **Course** | **Title** | **Hours** | **Semester Taken** |
| ISE 7883 | Department Seminar | 2 | Fall 1, Spring |

# ISE Secondary Sub-Discipline: Choose 1 course.

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| --- | --- | --- | --- |
| **Course** | **Title** | **Hours** | **Semester Taken** |
| ISE 5682 | Fundamentals of Product Design Engineering | 3 |  |
| ISE 5600 | Principles of occupational Biomechanics and Industrial Ergonomics | 3 |  |
| ISE 5700 | Cognitive Systems Engineering | 3 |  |

**A project (minimum of 2 credit hours), exam, or Master’s thesis (4 credit hours) designed to meet the exit requirements of the Data Analytics and Optimization MS Program.**

\*For more information on the project, exam, or Master’s thesis go to the Data Analytics [concentration guide](http://ise.osu.edu/graduate/admissions/).

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| --- | --- | --- | --- |
| **Course, Thesis, or Exam** | **Title** | **Hours** | **Semester Taken** |
|  |  | 2-4 | Fall 2 |

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| --- | --- | --- |
|  | **Approval Signatures** | **Date** |
| **Student:** |  |  |
| **Advisor:** |  |  |
|  **Print Advisor Name:** |  |  |
| **ISE Graduate Chair:** |  |  |

# INSTRUCTIONS FOR STUDENT

The first step to complete this form is to arrange a meeting with your faculty advisor. You and your advisor will discuss a viable plan of study, complete the ISE MS Plan of Study form, and obtain your faculty advisor’s signature. You should also sign the form, and then seek an approval signature from the ISE Graduate Chair. A copy of this form should be provided to the ISE Graduate Coordinator to be placed in your graduate file in the ISE main office (210 Baker Systems). It is also your responsibility to provide a copy of the ISE MS Plan of Study form to your faculty advisor. ***The Plan of Study must be approved prior to registration for your second semester of study.***

If any significant changes to your Plan of Study are made as you progress through your program (e.g. substitute courses, change in primary or secondary sub-disciplines, etc.), it is your responsibility to seek formal approval of those changes from your faculty advisor. This can be done by writing-in the changes on the originally submitted ISE MS Plan of Study form, and obtaining the faculty advisor’s initials and date next to the changes.

This form also serves as a convenient checklist for you, your faculty advisor, and the ISE Graduate Studies Chair to verify that all ISE MS program requirements have been met at the completion of your academic program.

You should submit your application to graduate through **GradForms.osu.edu** using your OSU username to submit an *Application to Graduate*. The deadline to approve graduation is the third Friday of the term (the application to graduate deadline includes both regular term and those planning to use the End-of-Semester deadline); students should apply far enough in advance to allow time for both the Faculty Advisor and the Graduate Studies Chair or Graduate Program Coordinator to approve the application. ***Application submission at least two weeks prior to the third Friday of the term is highly recommended.***

Finally, this form serves an archival record of what courses/credits you used to fulfill ISE MS program requirements. Extraneous courses can be identified by comparing the courses listed on this form with the full list of courses shown on your official transcript. Extraneous courses have the potential to be transferred to your doctoral program of study, if you decide to pursue that degree.