

**Graduate Program in Operations Research and Industrial Engineering
The University of Texas at Austin**

**Master of Science in ORIE
with Concentration in Decision Analysis**

The Decision Analysis MS Concentration is designed to provide the necessary coursework and training for students that wish to work as decision analysts. Students obtain an MS in ORIE, but focus their coursework on topics that are necessary to practice decision analysis. **Students must satisfy all ORIE degree requirements.** Students successfully completing the Concentration may list it on their resume and Prof. Bickel will confirm if requested.

MS Concentration Requirements

- 30 semester hours, 27 of which must be at graduate level, 18 hours must be in ORIE
- Combined GPA of at least 3.3 in Decision Analysis I and II
- Either 3-hour individual project or 6-hours of thesis supervised (or co-supervised) by Prof. Bickel
- No required course may be taken credit/no-credit
- Students must **apply** for admission to the Concentration in Decision Analysis program after completing their first course in decision analysis. Not all students will be accepted.

MS Required Courses (18 hours)

Applied Probability (ORI 390R.1, Fall)
Linear Programming (ORI 391Q.5, Fall)
Decision Analysis I (ORI 390R.17, Fall)
Decision Analysis II (ORI 397, Spring)
Applied Projects in ORIE (ORI 397, Spring)
Statistical Modeling I (SDS 383C, Fall) – Counts as an ORIE course

Note: The timing of the courses listed above is notional. Students must check course schedules via the Registrar's website. Some courses are not offered every year.

Required Master's Report (3 hours) or Thesis (6 hours)

Master's Report (ORI 398R, 3 hours, Fall/Spring) *or*
MS Thesis (ORI 698A/698B, 6 hours, Fall/Spring)

Master's Report or Thesis must be supervised or co-supervised by Prof. Bickel. The report may detail work completed during a summer internship. The thesis must be of sufficient quality and depth that it supports the submission of one journal publication.

Elective Courses (6 to 9 hours)

Choose any courses you like from the list of Approved Electives for the Concentration in Decision Analysis.

Example Degree Plans to Obtain MS Concentration in Decision Analysis

Example Course Sequence with Master's Report

Semester	Course 1	Course 2	Course 3
Fall, First Year	ORI 390R.1: Applied Probability	ORI 391Q.5: Linear Programming	SDS 383C: Statistical Modeling I
Spring, First Year	ORI 390R.xx: Decision Analysis II	MAN 390.6: Org. Decision Making	ME 353: Engineering Finance
Fall, Second Year	ORI 390R.17: Decision Analysis I	STA 287: Decision Modeling	<i>ECO 387L.1: Microeconomics I</i>
Spring, Second Year	ORI 397: Applied Projects ORIE	ORI 398R: Master's Report	<i>MIS 383N: Decision-Support Model.</i>

Example Course Sequence with Master's Thesis

Semester	Course 1	Course 2	Course 3
Fall, First Year	ORI 390R.1: Applied Probability	ORI 391Q.5: Linear Programming	SDS 383C: Statistical Modeling I
Spring, First Year	ORI 390R.xx: Decision Analysis II	MAN 390.6: Org. Decision Making	ME 353: Engineering Finance
Fall, Second Year	ORI 390R.17: Decision Analysis I	ORI 698A: Master's Thesis	<i>ECO 387L.1: Microeconomics I</i>
Spring, Second Year	ORI 397: Applied Projects ORIE	ORI 698B: Master's Thesis	<i>MIS 383N: Decision-Support Model.</i>

Courses are required. Courses are electives and are only examples. Courses are research. Courses in *italics* bring total hours to 36, but are not required for degree program. These can be used to fulfill PhD requirements.

Please note that two years in residence is an estimate for the total amount of time needed to complete an MS in ORIE with a concentration in Decision Analysis. The actual time required may differ and depends upon the availability of funding and student progress. Some students complete the program in fewer than two years.

How to Apply

Students may apply upon completion of their first decision-analysis course. To apply, email Prof. Bickel the following:

- Transcript
- Degree plan showing when second decision analysis course will be taken and timing of Master's Report or Thesis
- Statement detailing your proposed research topic and your career goals

Contact: Prof. J. Eric Bickel, Graduate Program in Operations Research & Industrial Engineering,
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