

M.S. in Occupational Safety and Health Engineering

Degree Requirements

A minimum of 36 credits is required.

Students who lack an appropriate background may be admitted and required to make up deficiencies by taking a program of bridge courses that is designed in consultation with graduate advisors. These courses are taken in addition to the degree requirements and may include undergraduate courses.

Seminar: In addition to the minimum 36 degree credits required, all students who receive departmental or research-based awards must enroll each semester in IE 791 Graduate Seminar.

M.S. in Occupational Safety and Health (courses only)

Required Courses

| | | |
|--------|--|---|
| EM 633 | Legal Aspects of Health and Safety | 3 |
| IE 604 | Advanced Engineering Statistics | 3 |
| IE 614 | Safety Engineering Methods | 3 |
| IE 615 | Industrial Hygiene and Occupational Health | 3 |
| IE 665 | Applied Industrial Ergonomics | 3 |
| IE 685 | Systems Safety | 3 |

Elective Courses

| | | |
|------------------------------|---|----|
| Select six of the following: | | 18 |
| BME 670 | Introduction to Biomechanical Engineering | |
| BME 671 | Biomechanics of Human Structure and Motion | |
| EVSC 603 | Hazardous Waste Operations and Emergency Response | |
| EVSC 614 | Quantitative Environmental Risk Assessment | |
| EVSC 616 | Toxicology | |
| IE 608 | Product Liability Control | |
| IE 661 | Man-Machine Systems | |
| IE 662 | Cognitive Engineering | |
| IE 664 | Advanced Ergonomics | |
| IE 669 | Human Design Factors in Engineering | |
| IE 675 | Safety in Facility and Product Design | |
| IE 681 | Interdisciplinary Seminar in Occupational Safety and Health | |
| IE 682 | Industrial Safety and Health Evaluation | |
| IE 700 | Master'S Project | |
| IE 725 | Independent Research | |
| ME 660 | Noise Control | |

Total Credits

36

M.S. in Occupational Safety and Health (Master's thesis)

Required Courses

| | | |
|--------|--|---|
| EM 633 | Legal Aspects of Health and Safety | 3 |
| IE 604 | Advanced Engineering Statistics | 3 |
| IE 614 | Safety Engineering Methods | 3 |
| IE 615 | Industrial Hygiene and Occupational Health | 3 |
| IE 665 | Applied Industrial Ergonomics | 3 |
| IE 685 | Systems Safety | 3 |

Thesis ¹

| | | |
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| IE 701 | | 6 |
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Elective Courses

Select four of the following:

12

| | |
|----------|---|
| BME 670 | Introduction to Biomechanical Engineering |
| BME 671 | Biomechanics of Human Structure and Motion |
| EVSC 603 | Hazardous Waste Operations and Emergency Response |
| EVSC 614 | Quantitative Environmental Risk Assessment |
| EVSC 616 | Toxicology |
| IE 608 | Product Liability Control |
| IE 661 | Man-Machine Systems |
| IE 662 | Cognitive Engineering |
| IE 664 | Advanced Ergonomics |
| IE 669 | Human Design Factors in Engineering |
| IE 675 | Safety in Facility and Product Design |
| IE 681 | Interdisciplinary Seminar in Occupational Safety and Health |
| IE 682 | Industrial Safety and Health Evaluation |
| IE 700 | Master'S Project |
| IE 725 | Independent Research |
| ME 660 | Noise Control |

Total Credits**36**

¹ Required for NIOSH; trainees; optional for all others.