

DOCTOR OF PHILOSOPHY IN INDUSTRIAL AND SYSTEMS ENGINEERING

Curriculum Structure

The PhD Program (Total 60 Cr Hrs)

| Curriculum Component | Number of Courses | Total Number Cr Hrs |
|----------------------|-------------------|---------------------|
| Core Courses | 5 | 15 |
| Elective courses | 4 | 12 |
| Thesis | 1 | 33 |
| Total: | 10 | 60 |

Industrial and Systems Engineering Thesis Requirement (33 Cr Hrs)

| Thesis course | |
|---------------|--------------|
| Course ID | Course Title |
| DENG 899 | PhD Thesis |

Core Required Courses (15 Cr Hrs)

| Core Requirements (6 Cr Hrs) | |
|--|--------------------------------------|
| Course ID | Course Title |
| DENG 602 | Applied Research Methodology |
| DENG 621 | Graduate Seminar |
| Core Requirements sub-package (9 Cr Hrs) | |
| DENG 603 | Advanced Numerical Analysis |
| DENG 604 | Applied Statistics Techniques |
| DENG 624 | Innovation and Technology Management |
| DENG 625 | Sustainable Development |
| DENG 626 | Modeling and Simulation |

Concentration in Industrial and Systems Engineering (12 Cr Hrs)

| Elective courses | |
|------------------|---------------------------------------|
| Course ID | Course Title |
| IENG 754 | Advanced Decision Analysis Techniques |
| IENG 756 | Supply Chain and Logistics Management |
| IENG 757 | Systems Analysis and Design |
| IENG 758 | Robotics and Automation Technology |
| IENG 751 | Advanced Special Topics I |
| IENG 752 | Advanced Special Topics II |

STUDY PLAN

FIRST SEMESTER (9Cr Hrs)

| Term | Course # | Course Title | Cr Hrs |
|-------|----------|---------------------------------|--------|
| Fall | DENG 602 | Applied Research Methodology | 3 |
| | DENG XXX | Core Required Course I | 3 |
| | IENG XXX | Concentration Elective Course I | 3 |
| Total | | | 9 |

SECOND SEMESTER (9 Cr Hrs)

| Term | Course # | Course Title | Cr Hrs |
|--------|----------|----------------------------------|--------|
| Spring | DENG 621 | Graduate Seminar | 3 |
| | DENG XXX | Core Required Course II | 3 |
| | IENG XXX | Concentration Elective Course II | 3 |
| Total | | | 9 |

THIRD SEMESTER (9 Cr Hrs)

| Term | Course # | Course Title | Cr Hrs |
|-------|----------|-----------------------------------|--------|
| Fall | DENG XXX | Core Required Course III | 3 |
| | IENG XXX | Concentration Elective Course III | 3 |
| | IENG XXX | Concentration Elective Course IV | 3 |
| Total | | | 9 |

FOURTH SEMESTER (9 Cr Hrs)

| Term | Course # | Course Title | Cr Hrs |
|--------|----------|--------------|--------|
| Spring | DENG 899 | PhD Thesis | 9 |
| Total | | | 9 |

FIFTH SEMESTER (12 Cr Hrs)

| Term | Course # | Course Title | Cr Hrs |
|-------|----------|--------------|--------|
| Fall | DENG 899 | PhD Thesis | 12 |
| Total | | | 12 |

SIXTH SEMESTER (12 Cr Hrs)

| Term | Course # | Course Title | Cr Hrs |
|-------|----------|--------------|--------|
| Fall | DENG 899 | PhD Thesis | 12 |
| Total | | | 12 |