Master of Science in Engineering Systems Management (ENSM)

• A program of 36 credit hours, or equivalently, 12 courses.

• Course requirements in three blocks:
  Block A: four courses covering Systems Engineering
  1. ISEN 613 (covering data analytics)
  2. ISEN 625 (covering simulation)
  3. ISEN 640 (covering system thinking)
  4. ISEN 641 (covering system engineering methods)

  Block B: four courses offering Engineering Management
  1. ISEN 608 (covering project management)
  2. ISEN 663 or ISEN 689 (covering engineering management)
  3. ISEN 667 (covering engineering economy)
  4. ISEN 669 (covering engineering decision tools)

  Block C: Four elective courses to form a concentration area (almost any graduate courses, either ISEN courses or non-ISEN courses).

• Currently, the final exam (also known as the oral defense) cannot be waived for this degree but can be conducted online.
Concentration Area Selection

• Block C of ENSM program allows students to take four courses tailored to their own interest. A few examples are:

- Petroleum Engineering concentration

  PETE 618 (Modern Petroleum Production); PETE 630 (Geostatistics)
  PETE 662 (Production Engineering); PETE 664 (Petroleum Project Evaluation and Management).

- Safety Engineering concentration

  SENG 655 (Process Safety Engineering); SENG 660 (Quantitative Risk Analysis);
  SENG 674 (Systems Safety Engineering) SENG 680 (Industrial Hygiene);

- Analytics (receive a Certificate in Applied Statistics in the same time)

  STAT 604 (Computational Stats using SAS and R); STATE 630 (Overview of Math Stats);
  STAT 652 (Stats in Research II); STAT 659 (Categorical Data Analysis).
Concentration Area Selection (continued)

- Public Policy/Homeland Security concentration

INTA 606: International Politics in Theory and Practice; INTA 609: Principles of International Law
INTA 651 National Security Policy; INTA 652: The Role of Intelligence in Security Affairs.

- Industrial & Manufacturing concentration

ISEN 614 (quality control); ISEN 630 (human factor)
ISEN 615 (inventory control); ISEN 654 (manufacturing systems)