Master of Science in Materials Science

Thesis and non-thesis options are available to students.

Non-Thesis Option

30 total credits - 20 credits of required MTSI courses and 10 credits of electives (a professional paper option is available).

Required courses

Semester 1:
- MTSI 500 (1 credit)
- MTSI 501 (3 credits)
- MTSI 511 (3 credits)
- MTSI 551 (3 credits)

Semester 2:
- MTSI 500 (1 credit)
- MTSI 502 (3 credits)
- MTSI 503 (3 credits)
- MTSI 512 (3 credits)

Summer 1: (optional)
- Discipline specific independent study (e.g. CHMY 592 (up to 3 credits))
- Summer internship in private sector company or government lab.

Semester 3: Discipline specific graduate courses including but not limited to (choose up to 3)

NOTE: If a student selects the professional paper option, one course (3 credits) in either Semester 3 or Semester 4 must be XXX575, Professional Paper/Research Paper from the student's home department (e.g. PHSX 575, CHMY 575, EMEC 575) and approved by the MTSI campus director for the program of study. This course will serve as the mechanism for writing a professional paper.

Acceptable Electives

CHMY 557 (3 credits)
CHMY 558 (3 credits)
PHSX 441 (3 credits)
PHSX 444 (4 credits)
PHSX 461/506 (3/3 credits)
PHSX 531 (3 credits)
EELE 407 (3 credits)
EELE 482 (3 credits)
EELE 556 (3 credits)
EELE 556 (3 credits)
EELE 581 (3 credits)
EMAT 463 (3 credits)
EMAT 560 (3 credits)
EMEC 444 (3 credits)
EMEC 445 (3 credits)
EMEC 467 (3 credits)

Semester 4 (if necessary): Discipline specific graduate courses including but not limited to:

BIOB 524 (3 credits)
CHMY 515 (3 credits)
CHMY 564 (3 credits)
PHSX 446 (3 credits)
PHSX 535 (3 credits)
EELE 448 (3 credits)
EELE 505 (3 credits)
EELE 582 (3 credits)
EMAT 461 (3 credits)
EMAT 462 (3 credits)
EMAT 464 (3 credits)
EMAT 553 (3 credits)
EMEC 445 (3 credits)
EMEC 467 (3 credits)

Note: a MTSI-MS student can take no more than 9 credits of 400 level courses.

Thesis Option

30 total credits


20 credits of required MTSI courses and 10 credits of Master's Thesis 590 from home department (e.g. PHSX 590, CHMY 590, EMEC 590).

Semester 1:
- MTSI 500 (1 credit)
- MTSI 501 (3 credits)
- MTSI 511 (3 credits)
- MTSI 551 (3 credits)

Semester 2:
- MTSI 500 (1 credit)
- MTSI 501 (3 credits)
- MTSI 511 (3 credits)
- MTSI 551 (3 credits)
Semesters 3 and 4 - Master's Thesis 590 from home department (e.g. PHSX 590, CHMY 590, EMEC 590).