

Magnetic Materials Track in MSE

(42 units)

| REQUIRED COURSES | <u>Units</u> | <u>Grade</u> | <u>Semester</u> |
|------------------|--------------|--------------|-----------------|
|------------------|--------------|--------------|-----------------|

| | | | |
|--|---|-------|-------|
| 33-225 Quantum Physics and Structure of Matter | 9 | _____ | _____ |
|--|---|-------|-------|

OR

| | | | |
|------------------------|----|-------|-------|
| 33-234 Quantum Physics | 10 | _____ | _____ |
|------------------------|----|-------|-------|

Prerequisites: 33-107 or 33-132 or 33-112

Offered every semester

Should be taken Sophomore Spring or Fall Junior semester.

| | | | |
|--|---|-------|-------|
| 27-432 Electronic, Magnetic & Optical Properties | 9 | _____ | _____ |
|--|---|-------|-------|

Prerequisites: 33-225 or 33-234

Offered every Spring.

Should be taken Junior year

| | | | |
|---------------------------|----|-------|-------|
| 27-715 Magnetic Materials | 12 | _____ | _____ |
|---------------------------|----|-------|-------|

OR

| | | | |
|-------------------------------------|----|-------|-------|
| 18-715 Physics of Applied Magnetism | 12 | _____ | _____ |
|-------------------------------------|----|-------|-------|

Prerequisite: 27-432

Offered every semester.

Should be taken Junior or Senior year.

ELECTIVE COURSES (Choose TWO)

| | | | |
|---|----|-------|-------|
| 18-316 Intro to Data Storage Systems Technology | 12 | _____ | _____ |
|---|----|-------|-------|

Prerequisites: 18-200 or 21-259 and 33-107

Offered every Spring.

Should be taken Junior or Senior year. Appropriate for those interested in the data storage field

| | | | |
|-----------------------------|----|-------|-------|
| 33-338 Intermediate E & M I | 10 | _____ | _____ |
|-----------------------------|----|-------|-------|

Prerequisites: 33-107 or 33-112 or 33-132, 33-231, 21-259 and 21-260

Offered every Spring.

Should be taken Junior or Senior year. Appropriate for those interested in the physics field

| | | | |
|------------------------|----|-------|-------|
| 33-341 Thermal Physics | 10 | _____ | _____ |
|------------------------|----|-------|-------|

Prerequisites: 33-106 or 33-111 or 33-131, and 33-234 or Permission of Instructor

Required Course Prerequisites:

33-112 Physics for Science Students II

33-225 Quantum Physics

33-107 Physics for Engineering Students

27-432 EMOP

33-234 Quantum Physics

33-132 Matter and Interactions II

Offered every Fall.

Should be taken Junior or Senior year. Appropriate for those interested in the physics field

33-349 Intermediate E & M II

10 _____

Prerequisite: 33-338

Offered every Fall.

Should be taken Junior or Senior year. Appropriate for those interested in the physics field

18-303 Engineering Electromagnets

12 _____

Prerequisite: 18-220

Offered every Spring.

Should be taken Junior or Senior year. Appropriate for those interested in the EE field

27-555 MSE Project I

9 _____

Approved Magnetic Materials Research Only

Prerequisite: Junior Standing

Offered every semester.

Should be taken Junior or Senior year.

Required Course Prerequisites:

33-112 Physics for Science Students II

33-225 Quantum Physics

33-107 Physics for Engineering Students

27-432 EMOP

33-234 QuantumPhysics

33-132 Matter and Interactions II