UNT Biomedical Engineering

Graduate Specializations/Tracks

1. Biotechnology

Leveling courses: None for Biology/Biochemistry and UNT-BMEN majors with Biotech track

For other majors, leveling courses: Biology I and II, Microbiology, Genetics

Suggested coursework for MS degree:

Core – 6 SCH:

BMEN 5940

BMEN 5210

BMEN 5315 or BMEN 5007 or BMEN 5100

Thesis – 6 SCH

BMEN Courses: 9 SCH

BMEN 5317 – Advanced Biotech

BMEN 5313 – Bioengineering of cellular systems

BMEN 5326 – Biomolecular Engineering

Electives: 9 SCH from

BMEN 5331 – Drug delivery and Nano-medicine

BMEN 5325 -Nanotechnology

BMEN 5330 – 3D Bioprinting

BMEN 5327 – Immunoengineering

(For non-thesis option, replace 6 SCH of thesis with 9 SCH of BMEN courses)

2. Biomaterials

Leveling courses: None for Biomedical Engineering majors

For other majors, leveling courses: BMEN 3321 - Biomaterials

Suggested coursework for MS degree:

Core – 6 SCH:

BMEN 5940

BMEN 5210

BMEN 5315 or BMEN 5007 or BMEN 5100

Thesis – 6 SCH

BMEN Courses: 9 SCH

BMEN 5321 – Biomaterials Compatibility

BMEN 5316 – Biopolymers and flexible bioelectronics

BMEN 5318 – Biomedical Implants

Electives: 9 SCH

BMEN 5314 – Advanced tissue engineering and regenerative medicine

BMEN 5324 -Applications of BioMEMS

BMEN 5330 – 3D Bioprinting

(For non-thesis option, replace 6 SCH of thesis with 9 SCH of BMEN courses)

3. Rehabilitation and Biomechanics Track

Leveling courses: None for Biomedical Engineering majors

For other majors, leveling courses: BMEN 3312 - Biomechanics

Suggested coursework for MS degree:

Core – 6 SCH:

BMEN 5940

BMEN 5210

BMEN 5315 or BMEN 5007 or BMEN 5100

Thesis – 6 SCH

BMEN Courses: 9 SCH

BMEN 5311 – Rehabilitation engineering

BMEN 5332 – Soft Robotics

BMEN 5280 – AI for Wearables and Healthcare

Electives: 9 SCH from

BMEN 5324 - Applications of BioMEMS

BMEN 5321 – Biomaterials Compatibility

BMEN 5316 – Biopolymers and flexible bioelectronics

BMEN 5318 – Biomedical Implants

BMEN 5900 – Special Problems

(For non-thesis option, replace 6 SCH of thesis with 9 SCH of BMEN courses)

4. **Bioinstrumentation Track**

Leveling courses: None for Biomedical Engineering majors

For other majors, leveling courses: BMEN 1400, BMEN 2210, BMEN 2320

Suggested coursework for MS degree:

Core – 6 SCH:

BMEN 5940

BMEN 5210

BMEN 5315 or BMEN 5007 or BMEN 5100

Thesis – 6 SCH

BMEN Courses: 9 SCH

BMEN 5310 – Clinical instrumentation

BMEN 5332 – Soft Robotics

BMEN 5280 – AI for Wearables and Healthcare

Electives: 9 SCH from

BMEN 5322 - Medical imaging

BMEN 5316 – Biopolymers and flexible bioelectronics

BMEN 5900 – Special Problems

BMEN 5311 – Rehabilitation engineering

(For non-thesis option, replace 6 SCH of thesis with 9 SCH of BMEN courses)

5. Bioinformatics Track

Leveling courses: None for Biomedical Engineering majors

For other majors, leveling courses: BMEN 1400, BMEN 2210, BMEN 2320

Suggested coursework for MS degree:

Core – 6 SCH:

BMEN 5940

BMEN 5210

BMEN 5315 or BMEN 5007 or BMEN 5100

Thesis – 6 SCH

BMEN Courses: 9 SCH

BMEN 5800 - Biocomputing

BMEN 5820 – Bioinformatics

BMEN 5280 – AI for Wearables and Healthcare

Electives: 9 SCH from Data Science

INFO 5501 – Fundamentals of Data Analytics

INFO 5502 – Analytical tools techniques, and methods

INFO 5505 – Applied Machine Learning for Data Scientists

(For non-thesis option, replace 6 SCH of thesis with 9 SCH of BMEN courses)