# Agricultural and Biosystems Engineering

Department Information

- **Department Location:**
  Agricultural and Biosystems Engineering
- **Department Phone:**
  701-231-7261
- **Department Email:**
  ndsu.asm@ndsu.edu
- **Department Web Site:**
  www.ndsu.edu/aben/ (http://www.ndsu.edu/aben/)
- **Credential Offered:**
  B.S.A.B.En.
- **Plan Of Study Sample:**
  catalog.ndsu.edu/programs-study/undergraduate/agricultural-biosystems-engineering/ (http://catalog.ndsu.edu/programs-study/undergraduate/agricultural-biosystems-engineering/)

| Code | Title | Credits |
|---|---|---|
| **Engineering Electives: Select 9 credits from the following:** | | **9** |
| CE 310 | Fluid Mechanics Laboratory | |
| CE 370 | Introduction to Environmental Engineering | |
| CE 371 | Environmental Engineering Laboratory | |
| ECE 301 | Electrical Engineering I | |
| ME 223 | Mechanics of Materials | |
| ME 331 | Materials Science and Engineering | |
| **Chemistry/Biological Science Electives: Select 6 credits from the following:** | | **6** |
| ANSC 357 | Animal Genetics | |
| ANSC 463 | Physiology of Reproduction | |
| BIOC 260 | Elements of Biochemistry | |
| BIOC 461 | Foundations of Biochemistry and Molecular Biology II | |
| BIOC 473 | Methods of Biochemical Research | |
| BIOC 474 | Methods of Recombinant DNA Technology | |
| BIOL 150L | General Biology I Laboratory | |
| BIOL 151 | General Biology II | |
| BIOL 151L | General Biology II Laboratory | |
| BIOL 220 | Human Anatomy and Physiology I | |
| BIOL 315 | Genetics | |
| BIOL 315L | Genetics Laboratory | |
| BIOL 364 | General Ecology | |
| CFS 210 | Introduction to Food Science and Technology | |
| CFS 370 | Food Processing I | |
| CFS 450 | Cereal Technology | |
| CHEM 341 | Organic Chemistry I | |
| CHEM 341L | Organic Chemistry I Laboratory | |
| CHEM 342 | Organic Chemistry II | |
| CHEM 342L | Organic Chemistry II Laboratory | |
| MICR 202 | Introductory Microbiology | |
| MICR 202L | Introductory Microbiology Lab | |
| MICR 350 | General Microbiology | |
| MICR 350L | General Microbiology Lab | |
| MICR 352 | General Microbiology II | |
| MICR 352L | General Microbiology Lab II | |

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| MICR 452 | Microbial Ecology | |
| **Technical Electives: Select 6 credits from ABEN Electives, Engineering Electives, Chem/Bio Electives, or Computer Electives.** | | **6** |
| ABEN 496 - Ag Tech Expo (1 add'l cr.) may be used as a Technical Elective. ABEN 496 - Field Exp./Internship, 1 cr., may be used as an ABEN Elective or as a Technical Elective. A maximum of two credits of ABEN 496 FE/Internship may be counted towards degree requirements. | | |
| **Computer Elective: Select 3 credits from the following:** | | **3** |
| CE 212 | Civil Engineering Graphic Communications | |
| CSCI 122 | Visual BASIC | |
| CSCI 160 | Computer Science I | |
| ECE 173 | Introduction to Computing | |
| GEOG 455 | Introduction to Geographic Information Systems | |
| IME 380 | CAD/CAM for Manufacturing | |
| ME 212 | Fundamentals of Visual Communication for Engineers | |
| ME 213 | Modeling of Engineering Systems | |
| **Total Credits** | | **24** |