Why should I hire a Biosystems Engineer?

What courses do Biosystems Engineering students take?

- Structure and Modelling in Chemistry
- Computer Programming
- Design in Engineering
- Intro to Statics
- Intro to Electrical & Computer Engineering
- Intro to Thermal Sciences
- Classical and Linear Algebra
- Applied Calculus
- Physics 1: Mechanics
- Written English
- Technology & Society
- Impact of Engineering on the Environment
- Biology for Engineers
- Instrumentation & Measurement
- Mechanics of Materials in Biosystems
- Biosystems Engineering Design
- Physical Chemistry
- Fluid Mechanics
- Solid Mechanics
- Engineering Economics
- Engineering CAD Technologies
- Intro to Numerical Methods for Engineers
- Engineering Mathematical Analysis
- Contemporary Statistics for Engineers
- Essentials of Microbiology
- Kinematics and Dynamics

Want to see more? Visit our website at: umanitoba.ca/engineering/departments/biosystems

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Biosystems engineers help to create new technologies to improve the well-being of humans and animals, and to preserve and enhance natural resources and the environment.

Our program objective is to graduate design-ready engineers prepared for professional practice by providing students with a broad foundation in the application of engineering principles to biological systems. The program is accredited by the Canadian Engineering Accreditation Board.

Strengths of the Biosystems program
• well-developed professional skills
• innovative capstone courses (paper to prototype)
• R & D graduation project
• specialization flexibility
• passionate students who wish to help people, preserve the environment and tackle societal problems!

Biomedical Specialization
The biomedical specialization provides engineers with knowledge of human anatomy and physiology to enhance the understanding of the role to be played by engineers in specific areas within biomedical engineering, such as rehabilitation engineering, clinical engineering, medical imaging, and orthopaedics.

Technical Electives Include:
• Design of Light-Frame Building Systems
• Crop Preservation
• Management of By-Products from Animal Production
• Design of Water Management Systems

Environmental Specialization
The environmental specialization provides engineers with the knowledge to predict environmental impacts due to human developments and to solve problems associated with the environment (soil contamination, pollution, wastewater treatment).

Technical Electives Include:
• Air Pollution Assessment and Management
• Management of By-Products from Animal Production
• Design of Water Management Systems
• Remediation Engineering
• Alternative Building Design