MINOR IN BIOMOLECULAR ENGINEERING

**Description**
This minor administered by the Department of Chemical Engineering, is designed for engineering and science students who desire additional knowledge in the area of biomolecular engineering.

**Application**
To apply for the minor, students are expected to have completed the 8 engineering pre-professional courses shown below with a grade point average of 2.5 or higher and no course with a grade lower than C.

- MAC 2311 - Analytical Geometry & Calculus 1
- MAC 2312 - Analytical Geometry & Calculus 2
- MAC 2313 - Analytical Geometry & Calculus 3
- MAP 2302 - Elementary Differential Equations
- CHM 2045 - General Chemistry 1
- CHM 2046 - General Chemistry 2
- PHY 2048 - Physics with Calculus 1
- PHY 2049 - Physics with Calculus 2

**Requirements**
Students are required to complete the following 15 or 16 credits with a grade of C or higher.

- Biology for Engineers (ABE 2062 or ECH 2062) 3 credits
- Material and Energy Balances (ECH 3023) 4 credits
- Introduction to Biomolecular Engineering (ECH ? - number TBD) 3 credits

Two of the following electives:

- Dynamics of Intracellular Processes (ECH ? - approved by committee) 3 credits
- Quantification of Biological Processes (ABE 4662) 3 credits
- Applications in Biological Engineering (ABE 3000C) 3 credits
- Bioprocess Engineering (ABE 5442) 3 credits
- Special Problems in Chemical Engineering (ECH 4905) 2 credits

(These will be research problems related to Biomolecular Engineering)

Future electives to be added to the above list after they have been approved:

- Biomolecular Cell Mechanics (ECH ?) 3 credits
- Pharmacokinetics (ECH ?) 3 credits
- Transport in Biological Systems (ECH ?) 3 credits
- Cell/Materials Interface (ECH ?) 3 credits

**Resources**
No new resources will be required for this minor.