

# UNDERGRADUATE EMBEDDED CERTIFICATE IN BIOLOGICALLY INSPIRED DESIGN

Certificates are available in the following areas of concentration:

- **Biomedical Science**
- **Biomolecular Technology**
- **Bio-Inspired Design**
- **Computational & Quantitative Biology**
- **Environmental Science**
- **Marine Science**
- **Integrative Biology**
- Applied Physiology

For more information about Biological Sciences certificates, [click here](#).

## Program of Study

Certificate programs in Biology and Physiology are available to students from any major. For Biology majors, the Certificate program is a way of customizing your Biology Electives to focus on a particular concentration in biology. For other majors, a Biology or Physiology certificate is a way of enhancing your degree to include an emphasis in biological concepts. Each certificate requires 12 credit hours of approved courses from that certificate's list, at least 9 of which must be at the 3000 level or higher. All courses counting toward the certificate must be taken on a letter-grade basis. Major electives can be counted toward certificates, but courses required by name and number in a student's major program of study will not be counted toward certificates. While students may complete more than one certificate, they may not double-count courses towards more than one certificate or minor. Non-Biology majors are required to include at least 9 credits of BIOS coursework for their certificate, except in the case of the Physiology certificate. Further information is available from **School of Biological Sciences advisors**.

For non-Biology majors:

Additional courses that can count towards any Biological Sciences certificate (*with the exception of the Physiology certificate*):

BIOS 1107/BIOS 1107L, BIOS 2300, BIOS 2310, BIOS 2600, BIOS 2601, BIOS 3450, BIOS 3451 (as long as these courses are not required for the major program of study, and only up to 3 credits of courses at the 1xxx-2xxx level can count). At least 9 credits of BIOS coursework are required for each certificate.

New special topics courses may be added to relevant biology certificates with approval from the School of Biological Sciences. Contact a Biology advisor to request approval.

Code	Title	Credit Hours
BIOS/ISYE/ MSE/ME 4740	Biologically-Inspired Design	3
Three (3) from the following:		9
BIOS 3753	Human Anatomy	
BIOS 3755	Human Physiology	

BIOS 4464	Developmental Biology
BIOS 4471	Behavioral Biology
BIOS 4803	Special Topics (Urban Ecology)
BIOS 4803	Special Topics (Vertebrate Biology)
ARCH 4411	Introduction to Visual Arts
BMED 3100	Systems Physiology
BMED 3110	Quantitative Engineering Physiology Laboratory I

BMED 4400	Neuroengineering Fundamentals
BMED 4500	Cell and Tissue Engineering Laboratory
BMED 4752	Introductory Neuroscience
AE/CHBE/ ME/BMED 4757	Biofluid Mechanics

AE/CHBE/ ME/BMED 4758	Biosolid Mechanics
-----------------------------	--------------------

CEE 3040	Fluid Mechanics
----------	-----------------

ME/MSE 4790	Materials Selection and Design
----------------	--------------------------------

**Total Credit Hours** **12**