

Alfred University
Minor in Biomedical Materials

_____, student number _____, has consulted with me and has my permission to pursue a minor in Biomedical Materials.

<u>Required courses (10-15 credits)</u>		Credits
BIOL 252	Molecular Cell Biology	4
CHEM 310	Basic Organic Chemistry or	3 or 8
or CHEM 315/316	Organic Chemistry I and II	
CEMS 468	Biomedical Materials (or CEMS 568 for graduate credit)	3

<u>Plus 2 courses from the following (6-7 credits):</u>		Credits
CEMS 115	*Materials and Society	4
CEMS 214	*Materials Science II	3
CEMS 215	Microscopy & Microstructural Characterization	3
CEMS 251	*Mechanics of Materials	3
CEMS 334	Polymer Science	3
CEMS 336	Intro to Physical Metallurgy I	3
CEMS 342	Thermal/Mechanical Properties	3
CEMS 368	Introduction to Bioengineering	3
CEMS 434	Polymer Characterization	3
CEMS 436	Physical Metallurgy II	3
CEMS 446	Composite Design and Fabrication	3

<u>Plus 2 courses from the following (8 credits):</u>		Credits
BIOL 302	General Microbiology	4
BIOL 372	Advanced Cell Biology (or CEMS 563 for graduate credit)	4
BIOL 376	Animal Physiology	4
BIOL 402	Immunology	4
BIOL 420	Biochemistry: Proteins and Metabolism (or CEMS 564 for graduate credit)	4
BIOL 422	Biochemistry: Nucleic Acids (or CEMS 565 for graduate credit)	4

Total credit hours 24-30

* Students cannot use two starred courses to satisfy requirements for the minor.

All chemistry, biology and math prerequisites for these courses must also be satisfied (typically CHEM 105/106, BIOL 201/202 and MATH 151/152) and may not count as CEMS Technical Electives (300 & 400 level courses in CEMS); therefore this Minor will require completion of more than 24-30 credit hours.

This Minor in Biomedical Materials could be helpful for students planning to apply for graduate school in the field of Biomedical Engineering, either at Alfred or elsewhere. Students that plan on applying for graduate school at Alfred in the Biomedical Materials Engineering Science (BMES) program may be able to take courses for the minor as graduate credit and reduce the time it takes to complete the Masters of Science degree in BMES. This may also require combining the student's undergraduate thesis research with their graduate thesis topic (consult your major advisor for details).

Student Signature _____ Date _____

Minor Advisor _____ Date _____

I agree to serve as the minor advisor for the above student.

The Minor Advisor should retain one copy and give the student four copies of this signed form. The student should take three copies to the Registrar's Office and retain one copy for reference. The Registrar's Office will send one copy to the student's college office and one copy to the student's Major Advisor.