

TOTAL EXAMINATION PROGRAM
PEO Syllabus of Examinations, 2004 Edition

BIOMEDICAL/BIOCHEMICAL ENGINEERING

INTRODUCTION

A full set of Biomedical/Biochemical Engineering examinations consists of the following, three-hour examination papers and an engineering report. Candidates will be assigned examinations based on an assessment of their academic background. Examinations from discipline syllabi other than those specific to the candidates' discipline may be assigned at the discretion of PEO's Academic Requirement Committee.

BASIC STUDIES EXAMINATIONS

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| 04-BS-1 | Mathematics |
| 04-BS-2 | Probability and Statistics |
| 04-BS-3 | Statics and Dynamics |
| 04-BS-4 | Electric Circuits and Power |
| 04-BS-5 | Advanced Mathematics |
| 04-BS-6 | Mechanics of Materials |
| 04-BS-7 | Mechanics of Fluids |
| 04-BS-10 | Thermodynamics |
| 04-BS-11 | Properties of Materials |
| 04-BS-12 | Organic Chemistry |
| 04-BS-13 | Biology |
| 04-BS-14 | Geology |
| 04-BS-15 | Engineering Graphics and Design Process |

PROFESSIONAL EXAMS – SPECIFIC TO BIOMEDICAL/BIOCHEMICAL ENGINEERING

GROUP A

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|-----------|---|
| 04-Bio-A1 | Biomaterials and Biocompatibility |
| 04-Bio-A2 | Process Dynamics and Control |
| 04-Bio-A3 | Cellular and Molecular Biology and Biochemistry |
| 04-Bio-A4 | Biomechanics |
| 04-Bio-A5 | Enzyme and Microbial Kinetics |
| 04-Bio-A6 | Anatomy and Physiology |
| 04-Bio-A7 | Fluid Mechanics |
| 04-Bio-A8 | Biophysical Measurements |
| 04-Bio-A9 | Bioreactor Design |

GROUP B

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| 04-Bio-B1 | Biochemical Separations |
| 04-Bio-B2 | Prostheses and Orthoses |
| 04-Bio-B3 | Biotransport Phenomena |
| 04-Bio-B4 | Digital Image Processing |
| 04-Bio-B5 | Cell and Tissue Engineering |
| 04-Bio-B6 | Bioinstrumentation |
| 04-Bio-B7 | Robotics and Manufacturing Automation |
| 04-Bio-B8 | Rehabilitation Engineering |
| 04-Bio-B9 | Artificial Intelligence and Expert Systems |
| 04-Bio-B10 | Analytical Biochemistry |
| 04-Bio-B11 | Ergonomics |
| 04-Bio-B12 | Applied Optics/Photonics |

COMPLEMENTARY STUDIES

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| 98-CS-1 | Engineering Economics |
| 98-CS-2 | Engineering in Society - Health, Safety, and the Environment |
| 98-CS-3 | Management Concepts for Engineers |

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| 3.2 | Engineering Report |
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