

Computer and Engineering Skills Assessment

Research experience is not required for admission, but we need accurate information in order to assess your previous experience and match selected participants to the most appropriate projects. Please complete both sides of this roster by indicating the number of weeks (months, years, **check mark is unacceptable**) and type of experience or study you have in each category. If you only conducted a few experiments, you may list for example: 2 exps. Place an asterisk next to the experience you do not have now but expect to have by the beginning of the program.

	College Lab Experience	College Courses	Work Experience
COMPUTER SKILLS			
Programming languages:			
4GL			
Basic			
C			
C++			
Fortran			
JAVA			
LISP			
Pascal			
Perl			
PROLOG			
tk/tcl			
X-window			
Motiff			
Builder accessory			
Applications:			
Data bases			
E-Mail			
Graphics			
GUI builders			
Image analysis			
Modeling			
Charmm			
Frodo			
X-plor			
Networking			
Signal processing			
Simulations			
Statistics			
Word Processing			
Other (specify)			
Other (specify)			
Other (specify)			
Machines & Operating Systems:			
Digital			
Dos/Windows			
Macintosh			
Silicon graphics			
Sun			
Unix			

	College Lab Experience	College Courses	Work Experience
ENGINEERING SKILLS			
General:			
Data acquisition			
Data analysis			
Experimental Design			
Experimental Methods			
Machine Shop			
Statistics			
Chemical:			
Diffusion			
Fluid dynamics			
Heat transfer			
Reactions			
Reactors			
Other (specify)			
Electrical:			
Analog simulation			
Circuits			
Circuit modeling			
Electrodes			
Instrument integration			
Signal processing			
Systems integration			
Other (specify)			
Mechanical:			
Biomechanics			
Materials science			
Materials testing			
Stress, strain analysis			
Structural mechanics			
Specialized:			
Image analysis			
Robotics			
Mathematics:			
Analytical geometry			
Differential equations			
Matrix algebra			
Numerical analysis			
Parameter ID			
Statistics			
Vector calculus			

Scientific Background and Skills Assessment

	College Lab Experience	College Courses	Work Experience
A. Field of Work			
Biochemistry			
Biomechanics			
Biomedical Engineering			
Cell Biology			
Genetics			
Immunology			
Materials Science			
Metallurgy			
Microbiology			
Molecular Biology			
Neurobiology			
Pharmacology			
Physical Chemistry			
Physiology			
Virology			
Other (specify)			
Other (specify)			
1. General Laboratory Methods			
Buffer preparation			
pH measurement			
Making solutions			
Sterile technique			
Record keeping			
Other (specify)			
2. Quantitative Methods			
Protein assays			
DNA/RNA assays			
Enzyme assays			
Other (specify)			
Other (specify)			
3. Analytical Methods			
Chromatography:			
Thin-layer			
Column			
HPLC			
Gas/Liquid			
Spectrometry:			
UV/VIS			
IR			
GC/MIS			
NMR			
CD			
Other (specify)			
Ultracentrifugation			

	College Lab Experience	College Courses	Work Experience
Analytical Methods (cont.)			
Electrophoresis:			
PAGE			
2-D Gels			
Agarose			
SSCP			
Western blotting			
Protein expression			
Protein purification			
Other (specify)			
4. Microscopy			
Light microscopy			
Fluorescence			
Transmission EM			
Scanning EM			
Tissue Preparation:			
Light			
EM			
Frozen sections			
Cytogenetics			
Histochemistry			
Other (specify)			
5. Recombinant DNA			
DNA/RNA isolation			
Plasmid preparation			
Restriction mapping			
cDNA synthesis			
Cloning			
Construct preparation			
Library screening			
Southern hybridization			
Northern hybridization			
PCR			
Sequencing			
Translation			
Transfection			
DNA chip analysis			
Other (specify)			
6. Tissue Culture			
Cell culture			
Organ culture			
Cell transformation			
Cell fusion			

Scientific Background and Skills Assessment (Continued)

	College Lab Experience	College Courses	Work Experience
Tissue Culture (cont.)			
Animal passage			
Media Preparation			
Other (specify)			
7. Microbiology, Immunology & Virology methods			
Antibody production			
Antibody purification			
RIA			
ELISA			
Organism culture			
Handling pathogens			
8. Animal Handling			
Animal care			
Animal surgery			
Do you object to working with rats or mice?		Yes	No
9. Radioisotope Methods			
Radiotracers			
Radiolabelling			
Scintillation counting			
Gamma counting			
Radiation monitoring			
Other (specify)			
10. Computer Technology			
Mainframe			
Micros			
PC			
Excel			
Powerpoint			
html			
Graphics			
Other (specify)			
11. Writing			
Editing manuscripts			
Manuscript writing			

If you have skills or experience that are not indicated on this roster, please include this information in the spaced provided below.

Microbiology & Virology Methods

Physiology Methods

Patient Contact

If already employed at BCM, please list any skills specific to your duties not indicated on these forms.

Independent Study: Please list any participation in undergraduate independent research projects

List Publications (if any):
