

Learning Objectives (October 16, 2004; revised July 20, 2007)

1. Graduates have general knowledge of the biomedical sciences.

Objective 1.1: Graduates have a solid understanding of the concepts of genetics, biochemistry, molecular biology, cell biology, and bioinformatics.

Objective 1.2: Graduates are familiar with the biomedical literature, with particular emphasis in their chosen discipline.

Objective 1.3: Graduates have technical skill in employing the latest technology.

2. Graduates ask meaningful questions and display critical thinking.

Objective 2.1: Graduates can critically evaluate the design, findings, and implications of published biomedical research.

Objective 2.2: Graduates can design experiments, critically examine research data, and troubleshoot protocols.

Objective 2.3: Graduates can write and defend research proposals that persuasively present the purpose, hypotheses, specific aims, experimental design, anticipated results, analysis, and contingency plans.

3. Graduates make significant, original contributions to biomedical research.

Objective 3.1: Graduates can identify researchable questions, conduct critical literature reviews, and design effective laboratory experiments.

Objective 3.2: Graduates have generated research data that advances the understanding of biological phenomena.

Objective 3.3: Graduates have generated ideas, data, and writing of sufficient quality to be accepted by professional peer reviewers.

4. Graduates possess the professional skills required for success as scientists.

Objective 4.1: Graduates recognize ethical issues arising from research and abide by established ethical guidelines.

Objective 4.2: Graduates are reliable, collegial, and professional in their conduct.

Objective 4.3: Graduates can write professional-quality articles and grant applications.

Objective 4.4: Graduates can orally present and discuss research findings in formal and informal settings with students, scientists, and laymen.

Objective 4.5: Graduates successfully compete for postdoctoral fellowships and academic and industry positions.

Objective 4.6: Graduates complete program in a timely fashion.

Objective 4.7: Graduates possess a commitment to lifelong learning.