Ph.D. graduate education in the School of Medicine at Case Western Reserve University will prepare students for success as future leaders in the rapidly changing biomedical research environment of the 21st century. The curriculum and training environment will be developed and assessed using a framework that is based on the following principles.

1. Recognizing the insurmountable task of covering the complete breadth of an ever-expanding scientific knowledge base, graduate education will stress an interdisciplinary, concept-driven curriculum rather than a content-driven approach.

2. Educational methods will be chosen that stimulate active interchange of ideas among students and faculty. Passive lecture-based approaches will be supplemented with a preponderance of experiential in-class, active learning, team-based learning, and small group, collaborative, student-driven learning experiences.

3. Graduate education will foster a spirit of collaboration among the students and faculty where intellectually safe learning environments are expected.

4. Students will be immersed in a graduate school educational environment characterized by flexibility and high expectations for independent study, self-directed learning, and the development of life-long learning skills.

5. Graduate training programs are the first step in the professional career of a biomedical research scientist. Students and faculty are recognized as colleagues that will adhere to a professional skill set and behaviors reflecting their key positions in society.

6. Students will acquire a mastery of research, a broad understanding of the scientific method, and a core set of competencies including:
   - broad foundational knowledge of their discipline and a depth of knowledge in their field
   - interdisciplinary knowledge of experimental approaches and a technical fearlessness
   - ability to think and communicate clearly in oral and written formats
   - ability to plan and execute experiments
   - ability to read, critically evaluate, and integrate scientific literature
   - ability to choose important research problems, formulate hypotheses and research questions, as well as apply this to research grant proposal development
   - ability to think creatively and acquire creative problem-solving skills
   - broad understanding of ethical conduct of research

7. Every student’s thesis committee will be an integral, consistent aspect of the educational process. Thesis committees will begin meeting early and regularly to ensure a timely progression towards degree.

8. Students and mentors will be mutually respectful, communicative partners in the training experience. They will work together to define, refine, and accomplish each other’s professional goals for the future.

9. Recognizing the changing patterns of the biomedical workforce, an emphasis on the development of a professional skill set beyond the academic research profession will be woven throughout the entire curriculum.