1. Develop a fundamental understanding of the principles of microbiology and the necessary skills for a professional career in microbiology.

2. Apply the scientific method to questions. Formulate a hypothesis, gather data, and analyze that data to assess the degree to which their work supports the hypothesis.

3. Demonstrate proficiency in the techniques used in microbiology and an ability to critically analyze data and integrate ideas for problem solving.

4. Access the primary and secondary literature and, in combination with their own findings, effectively communicate their ideas both orally and in written form.

5. Learn about and demonstrate personal and professional ethics.