

# UNM Biology Department Graduate Program Student Learning Outcomes

## MS Plan I (thesis):

- A.1. Graduates will demonstrate knowledge of theories, questions and approaches across major areas of biology by discussing questions posed by committee members during the thesis defense at a level expected of a professional biologist or academic colleague.
- A.2. Demonstrate understandings of the conceptual framework, major advances and important methodological approaches within their chosen discipline by discussing questions posed by committee members during the thesis defense at a level expected of a professional biologist or academic colleague.
- B.1. Demonstrate the capacity to design and carry out research to address knowledge gaps.
- B.2. Graduates will demonstrate understandings of ethical issues that intersect with scientific research by passing the evaluation at the required graduate ethics training and carrying out research that follows IRB/OACC and/or other relevant guidelines.
- B.3. Exhibit scientific oral and written communication that is clear, logical, and effective.
- B.4. Demonstrate an ability to convincingly explain the importance and impact of his/her research in lay terms to scientists from other disciplines and the public.

## MS Plan II (non-thesis):

- A.1. Graduates will demonstrate knowledge of theories, questions and approaches across major areas of biology by discussing questions posed by committee members during the oral exam at a level expected of a professional biologist or academic colleague.
- A.2. Ability to connect current outstanding questions in biology to appropriate methods of inquiry and analysis.
- B.1. Ability to list and explain the importance of cutting-edge research topics in a chosen subdiscipline of biology.
- C.1. Graduates will demonstrate understandings of ethical issues that intersect with scientific research by passing the evaluation at the required graduate ethics training.

## PhD:

- A.1. Graduates will explain, compare and critique theories, questions and approaches across major areas of biology by answering questions posed by committee members during the dissertation defense at a level expected of a PhD-level biologist or academic colleague.
- A.2. Graduates will demonstrate an ability to defend or revise the conceptual framework and important methodological approaches within their chosen discipline by carrying out original research that passes the bar of peer-review and by answering questions posed by committee members during the dissertation defense at a level expected of a PhD-level biologist or academic colleague.
- B.1. Demonstrate the capacity to independently design and carry out novel research to address important knowledge gaps.
- B.2. Capacity to evaluate and respond appropriately to ethical issues that intersect with scientific research by passing the evaluation at the required ethics training and carrying out research that follows IRB/OACC and/or other relevant guidelines.
- B.3. Demonstrate scientific oral and written communication that is clear, logical, and compelling.
- B.4. Demonstrate an ability to convincingly explain the importance and impact of his/her research in lay terms to scientists from other disciplines and the public.