



Read each statement below carefully. Please answer honestly so you can determine whether or not you should take this course. If you have never practiced this knowledge or skill before, please rate with a “1.”

If you answer 80% or more of the questions with a 3 or 4, you probably do not need to take this course.

Rate each of the statements below using the following scale:

1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree.

1. I am a good reader of scientific and historical documents.
2. I am a good writer about science, history, and literature.
3. I can recognize and state the central argument of an historical essay.
4. I know the five Mertonian norms and can use these to explain how sociologists approach the scientific enterprise.
5. I am able to determine whether research is scientific by using historical, philosophical, and sociological criteria.
6. I am able to judge whether a scientific statement is falsifiable.
7. I can analyze a primary source document in order to develop an original historical interpretation.
8. I know the history of evolutionary thought pre-Darwin, including “argument from design” and “the great chain of being.”
9. I can explain Darwin's mechanism of evolution by natural selection and how evidence from the fossil record, comparative anatomy, and biogeography support his theory.
10. I can apply the theory of natural selection to a modern-day example.
11. I can explain Mendel's breeding experiments with pea plants.
12. I know what a gene is, what an allele is, what dominant or recessive alleles are, and how to distinguish between a genotype and a phenotype.
13. I can use a Punnett square to make predictions about inheritance in monohybrid crosses and to make predictions about inheritance in dihybrid crosses.



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Pretest

14. I can design and analyze the results of a test cross and recognize the phenotypic results of a genetic cross and use this information to infer the inheritance pattern for a trait.
15. I can calculate genotype, phenotype, and allele frequencies and use the Hardy-Weinberg principle to make calculations about a population's gene pool.
16. I know the difference between microevolution and macroevolution.
17. I can explain how evolutionary novelties might develop, what an adaptive radiation is, and what the importance of extinction is to evolution.
18. I know the three sub-orders of primates, the three families of hominoids, and how the human skeleton makes bipedalism possible.
19. I understand the differences between the out-of-Africa hypothesis and the multiregional hypothesis of human origins.
20. I can use a phylogeny diagram to make statements about primate evolutionary relationships.
21. I can explain how a progressionist view of human history relates to Darwin's biological theory of evolution.
22. I can locate articles in an online newspaper archive.
23. I can read and summarize short newspaper articles.
24. I can analyze the possible consequences resulting from a decision involving bioethics
25. I can explain the social consequences of the eugenics movement.
26. I understand why ethics is relevant to the study of evolution and genetics.
27. I can write a persuasive essay that makes an ethical argument.