Form E-1-A for Boston College Core Curriculum

Department/Program __PHYSICS__________ May 2022

1) Have formal learning outcomes for the department’s Core courses been developed? What are they?

(What specific sets of skills and knowledge does the department expect students completing its Core

courses to have acquired?)

The Department of Physics Core courses share with the university’s Natural Science Core the same

desired outcomes, namely that at the completion of a Core course students will have:

a) expanded their understanding of the principles, body of knowledge, and investigative strategies

that comprise physics and its technological applications;

b) developed a scientific literacy that will promote curiosity, respect for the scientific method, and

general awareness of the limitations of scientific conclusions;

c) recognized the role of scientific discovery, past, present, and future, in interrelated concerns

such as human health, societal well-being, and planetary sustainability; and

d) appreciated the role of physics in defining their relationship with the natural world and their

position within the cosmos.

These outcomes are accomplished through presentation of fundamental principles in classical

and/or quantum principles, including logical and mathematical analysis techniques (at a level

appropriate for the course) and historical background into the investigations that led to the

development of those principles. All courses include connections of physics principles and

current physics research to the development of solutions to problems in healthcare, protecting

the environment, and overall societal well-being.

2) Where are these learning outcomes published? Be specific. (Where are the department’s expected

learning outcomes for its Core courses accessible: on the web, in the catalog, or in your department

handouts?)

The complete list of outcomes is published on the Department of Physics “Undergraduate Program”

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All physics faculty members who teach Core courses participate in interpreting the evidence, for

example, by administering and analyzing results from