TO:	Bruce Mattingly, Dean, Arts and Sciences
FROM:	Math and Sciences Personnel Committee
DATE:	April 1, 2021
RE:	Reappointment and Promotion of Dr. Eric Edlund, Physics Department

The Math and Sciences Personnel Committee consisting of Dr. Karen Downey, Chair (Chemistry), Dr. Robert Darling (Geology), Dr. Rena Janke (Biological Sciences), Dr. Isa Jubran (Mathematics) met virtually on Friday, March 19 to consider the reappointment and promotion of Dr. Eric Edlund, Assistant Professor in the Physics Department. Members of the personnel committee discussed Dr. Edlund's accomplishments documented in his portfolio in the areas of teaching, scholarship, and service. After a 24-hour waiting period, the committee members voted by secret ballot as follows:

Reappointment for two years……..……...4
Reappointment for one year……...……...….0
Promote to Associate Professor……..4
Do not promote to Associate Professor…….0

The committee's vote was based on the considerations outlined below.

Teaching. Dr. Edlund joined the Physics Department in August 2017 and began teaching courses in the department during spring 2018. Since then he has taught:

- PHY 105: Elementary Mechanics and Heat (team taught with Dr. David Kornreich and Mr. Sean Nolan)
- PHY 201-202-203: Principles of Physics I, II, and III
- PHY 357: Intermediate Physics Lab
- PHY 420: Classical Mechanics
- PHY 429/529: Advanced Classical Mechanics
- PHY 495: Independent Study

Whether in preparation for teaching introductory or upper division courses, his syllabi, instructional materials, assessment strategies, and learning tools for students (e.g. problem sets/solutions, scoring rubrics, study guides) provide evidence of purposeful planning and consideration of what students need to support success in physics.

Colleagues, both from the Physics Department and outside the department, have observed his classes and commended his instructional methodology and his efforts to engage students in active learning. Factors affecting CTE scores presented from spring 2018 to Fall 2020 include Dr. Edlund's adapting to "first time" instruction of physics courses at SUNY Cortland, the switch to hybrid instruction during two of the four semesters, as well as a reduction in the number of students completing CTEs online. As with many courses with rigor, high standards and requiring sound background knowledge, written comments from students on CTEs run the gamut from the very positive from those who achieve success with his methods to the negative from those who do not.

Whether in response to suggestions from colleagues or from feedback from students, Dr. Edlund's portfolio provides evidence that he has made modifications in instruction to strike a reasonable balance between teacher-centered versus student-centered methods; he has identified more specific learning outcomes; he has employed varied strategies for engaging students in active learning; and he has become more explicit in explaining what students should be able to do to demonstrate achievement of learning outcomes.

Scholarship. Since his initial appointment in 2017, Dr. Edlund been an active researcher, having had published or accepted for publication six articles, either as sole author or in collaboration with colleagues from SUNY Cortland or colleagues from the Massachusetts Institute of Technology (MIT). Among the publications, he was sole author on the most recent article accepted for publication "Interception and Rendezvous: an intuition-building approach to orbital dynamics" in *The American Journal of Physics* in January 2021. Along with colleagues at MIT, he has done research on the Wendelstein 7-X phase contrast imaging diagnostic" accepted for publication in the *Journal of Instrumentation*, January 2021.

He has involved six undergraduate students in his research, and through his mentorship, three of the six have presented their work at "Transformations," SUNY Cortland's student research and creativity conference. One of the six collaborated with Dr. Edlund on a research project that resulted in a disclosure to the SUNY Research Foundation for the invention of a new design concept for optical engineering "Intuitive Optical Design with Web Technologies." (2020) Additionally, Dr. Edlund and colleagues from Princeton University share a patent on the invention of an "advanced liquid centrifuge." (2019)

Funding for much of his research is shared with a collaborator at MIT and provided through a grant from the U.S. Department of Energy (2018-2021). An application to extend this funding has been submitted and would support Dr. Edlund's continuing research on the Wendelsetin 7-X (stellarator for atomic fusion technology) at the Max Planck Institute for Plasma Physics in Greifswald, Germany. In recognition of his extensive record of scholarship, he was awarded SUNY Cortland's Excellence in Research, Scholarship, and Outreach in 2018 and again in 2019.

Service. Dr. Edlund is the 3+2 Program Coordinator for the Physics and Engineering program. He has served on the Physics Department's personnel committee and participated in two searches. He serves as chair of the department's curriculum committee and has spearheaded adjustments to course prerequisites and facilitated the approval of two new courses through curriculum review. In addition to his work on departmental committees, Dr. Edlund led the department through the its seven-year review, wrote the final report, and facilitated discussion of the results. His service extends college-wide with his participation on the Education Policy Committee and on the committee for the Alumni-Undergraduate Research Science Symposium.

From its unanimous vote, it is clear the committee believes that Dr. Edlund's contributions of teaching, scholarship, and service to the Physics Department, the College, and beyond warrant both a two-year reappointment and promotion from Assistant to Associate Professor.

On behalf of the Math and Sciences Sub-School Personnel Committee:

Dr. Karen Downey
Committee Chair

Committee Members
Dr. Robert Darling
Dr. Rena Janke
Dr. Isa Jubran

cc. Dr. Eric Edlund, Assistant Professor
Dr. Moataz Emam, Chair--Physics Personnel Committee
Dr. Douglas Armstead, Chair-Physics