DATE: April 1, 2019

TO: Phillip Anzalone, Chair

College Council Curriculum Committee

FROM: Curriculum Subcommittee

Christopher Blair (Chair), Peter Parides

RE: Final report for major/minor modification to BS in Applied Chemistry 18-14

**COURSE TITLE AND NUMBER:** CHEM4323, Advanced Laboratory Applications of Spectroscopy

**CREDIT HOURS:** 2 credits, 4 laboratory hours

**PREREQUISITES:** CHEM2223, CHEM3312, CHEM3412, CHEM3622

**Catalog Description**

Guided high-level experimentation in research and industrial applications of spectroscopic techniques, grounded in the theoretical principles behind each technique, including Fourier-transform infrared (FTIR), nuclear magnetic resonance (NMR), UV-Vis, fluorescence, dynamic light scattering (DLS) and circular dichroism (CD) spectroscopies. Students create and conduct independent experimental designs from published scientific literature.

**Strengths**

This proposal includes both major and minor modifications to the BS program in Applied Chemistry. The department is changing the course name, credits, and hours of an existing course (Advanced Spectroscopy; CHEM4322/L) from a 4 credit (3 hour lecture, 3 hour laboratory) elective course to a required 2 credit (4 hour) laboratory course (CHEM4323). The new course would replace the currently required second internship course (CHEM4902), which will become an elective. The primary strength of the proposal is to provide students with more hands-on experience in a variety of spectroscopic techniques, which will make graduates more competitive for jobs and entry into graduate programs.

**Weaknesses**

None

**Issues and Concerns Discussed**

The subcommittee provided the proposers with several minor comments, which were adequately addressed. No major concerns were found.

**Subcommittee activities**

After receiving the revised proposal, the subcommittee held a meeting with Provost August, Associate Provost Brown, Dean Vazquez-Poritz, Kim Cardascia, and the proposers (Diana Samaroo, Alberto Martinez) on March 29, 2019. Final revisions to the proposal were completed after additional suggestions were made.