

EDO Summary

The table below shows the rankings for my Evaluation and Development by Objectives (EDO) for each academic year since my original employment to UTC. Following this table, one can find the department Head overall comments from each annual EDO.

Table 1. Summary of EDO since original UTC appointment

Academic Year	Faculty Rank	EDO Rating
2012-2013	Assistant Professor	Meets Expectations
2013-2014	Assistant Professor	Meets Expectations
2014-2015	Assistant Professor	Meets Expectations
2015-2016	Associate Professor	Exceeds Expectations
2016-2017	Associate Professor	Meets Expectations
2017-2018	Associate Professor	Meets Expectations
2018-2019	Associate Professor	Meets Expectations
2019-2020	Associate Professor	In progress

2012-2013 Overall EDO Performance Rating Recommendation: Meets Expectations

Dr. Albu is off to a great start already having set up a computational laboratory using his start up funds for hardware and software and being actively involved with two undergraduate research students. He has begun this work while completing a master student at Tenn Tech. He has projects in both computational chemistry and experimental physical biochemistry. He assisted in outreach programs to the community, and was active in department meetings, seminars, and special projects. He and I worked together very effectively in teaching physical chemistry laboratory duties. He is sorting out the right level and approach for his presentation of general chemistry lecture here at UTC but he is very thoughtful and well organized in his teaching efforts. A great addition to our department.

2013-2014 Overall EDO Performance Rating Recommendation: Meets Expectations

Dr. Titus Albu provided rigorous and well-planned courses in areas of general chemistry and physical chemistry as noted above. He utilized national standardized exams to assess classroom learning. He directed 3 research student projects. Most significantly he taught as substitute for a significant time period extra Organic Chemistry I (CHEM 3010) and Organic Chemistry I Lab (CHEM 3010L) to help a colleague who had to be out for medical reasons. He served on various department committees, and he was on the Department Committee for hiring a

new Physical Chemistry Assistant Professor. In another significant service to the department he updated and maintained the Chemistry Department website with conversion to the new web operating software.

He directed the research activities of five undergraduate students (Jeff Mc Donald, Taylor Dray, Michelle Smith, Dylan Bryant, Antony Iannotti). He collaborated with Dr. Jisook Kim on a research project focused on protein modifications induced by benzoquinones, with Dr. John Lee on a research project focused on properties of Rhenium complexes with P-based ligands, and with Dr. Edward Lisic of Chemistry Department at Tennessee Tech University on properties of thiosemicarbazones and their complexes with transitional metals. Undergraduate research work (coauthor) was presented at Southeast Regional meeting of the American Chemical Society in Atlanta in November 2014. He submitted a collaborative pre-proposal to Dreyfus Special Grant Program and to NIH. In addition he has three manuscripts in preparation. He had extensive academic experience at Tennessee Tech (with credit toward tenure) prior to join our department and as expected is progressing very well toward a UTC tenure decision next year.

2014-2015 Overall EDO Performance Rating Recommendation: Meets Expectations

Provided Quality teaching as detailed above (in item 1 above) which included:

Prepared and revised lecture materials for all taught lectures – General Chemistry I (CHEM 1110), General Chemistry II (CHEM 1120) and Physical Chemistry II (CHEM 3720) – and made these materials available on UTC Learn

Implemented teaching methods involving pre-lecture assignments, board and/or PowerPoint presentations, study materials, and (online) homework

Assessed critically the efficiency of the teaching methods used in General Chemistry classes and their adequacy toward registered students

Tested students using challenging examinations with a significant emphasis on critical thinking

Used the American Chemical Society's standardized examination in General Chemistry I (CHEM 1110), General Chemistry II (CHEM 1120) and Physical Chemistry II (CHEM 3720) classes as an overall evaluation of student accomplishments in the class

Research detailed (in item 2 above) publications and presentations included:

Number of published journal articles, book chapters or books # = 1

Number of professional research presentations faculty or student # = 1

Number of different CHEM 4997 research students # = 2

Number of students in (URP) or other summer research projects # = 1

Number of significant collaborations with other depts or at facilities # = 1

Service detailed (in item 3 above) but especially worth noting is that it included:

Served on DHON Committees for three students (Patrick Carey, Hendrik Greve, Michelle Smith)

Served in a University Committee (Grade Appeal)

Maintained and updated the Chemistry Department website

Advised and participated in outreach activities sponsored by ACS Student Affiliates Club at the Discovery Museum (children's activity)

2015-2016 Overall EDO Performance Rating Recommendation: Exceeds Expectations

Overview of Research Accomplishments and Professional Service (numbers only):

- *Published journal articles, book chapters or books: 1
- *Research presentations (oral or poster) faculty or students at professional meetings: 2
- *Research presentations (oral or poster) faculty or students at UTC research day: 1
- *Different CHEM 4997 research students during academic year: 1
- *Different CHEM 4995 departmental honors projects: 0
- *Students in undergraduate summer research projects: 1
- *Current collaboration projects with another department or institute: 1
- *New internal UTC grants (include PSRA) received this year: 0 and \$ = 0
- *New external grants received this year: 0 and \$ = 0

*List any University Committees or Roles (not counting department level)

On University Budget and Economic Status Committee

*List any K-12 engagement activities

Organized and participated in Chemistry Day demonstrations at Children Discovery museum.

Volunteered for Battle Academy Banzai Festival.

*List any professional service roles outside UTC

Worked on the GRE Chemistry Exam.

2016-2017 Overall EDO Performance Rating Recommendation: Meets Expectations

Evaluation of Instructional and Advisement Activities:

Dr. Albu is an active instructor in the department teaching numerous courses throughout the academic year and summer. His assignments include general chemistry 1110 and 1120 lectures, chemical literature 3810, chemistry 3710 laboratory, chemistry 4830 seminar, chemistry 4995 Departmental Thesis, chemistry 3720 lecture, chemistry 4830 Seminar, and chemistry 4997 research. Dr. Albu's courses produces 198 and 305 student credit hours in the fall and spring, respectively. He continuously assesses and updates notes relative to the student comments regarding his courses. Dr. Albu uses UTC Learn to post information that will assist student in learning the concepts of the material. To provide additional examples of calculations and material, he uses a program called Connect, which students can utilize for additional practice. He updated the experiments in chemistry 3710 laboratory. To gauge student grasp of the material, he uses standardized exams for his courses. Dr. Albu leads research students in chemistry 4997 to gain experience in analytical thinking. As an advisor, Dr. Albu meets with approximately 20 BS Chemistry majors to ensure they are progressing through their program of study.

Evaluation of Research, Scholarly, and Creative Activities:

Dr. Albu keeps an active research program throughout the year. He exposes his students to computational chemistry and fluorescence spectroscopy. As co-PI, the Wheeler Research fund supports his research in collaboration with a fellow faculty member. Dr. Albu collaborates with Dr. Kim in the study of protein modifications induced by various quinones. He also maintains a collaboration with faculty from Tennessee Tech University investigating the properties of thiosemicarbazones and their complexes with transitional metals. His students presented their work at the regional ACS meeting. He is actively seeking funding for his projects by directing a

student who is preparing a Provost Student Research Award proposal. He is also contributing to the submission of an external MRI-NSF proposal to acquire a High Resolution Accurate Mass QTOF LC-Mass Spectrometer. He is preparing a manuscript for publication from the results of his projects.

Evaluation of Professional Service Activities:

Dr. Albu contributes to the department and university by serving on various committees. He assisted on the development of the department's goals and objectives for the academic year. Dr. Albu serves on the department's Technology and Grote Scholar committees. He is always willing to provide assistance whenever needed. As a member of the RTR committee, he evaluated two packets for reappointment, tenure, and promotion. Recently, Dr. Albu volunteered to chair the general chemistry textbook committee. He is leading the discussion that will lead to the adoption of a new general chemistry textbook. Dr. Albu was an active participant during the search for a visiting professor and lecturer. He sponsored two speakers to the department to present their research as well as to recruit student for their graduate programs. He is active with the local ACS section and a member of the Physical Division of the ACS. Dr. Albu submitted GRE question for the Physical Chemistry portion of the chemistry subject exam. He supported students by writing letters of recommendation for professional programs. His community outreach activities at the K-12 Banzai Event at Battle Academy allowed him to work with these students. Dr. Ablu attended the College Convocation and December 2016 graduation.

Overall Comments:

Dr. Albu is an active member in the department, college, and university. He is adamant about students learning in his courses that he is continuously updating his lecture notes. He introduces new means for students to practice, read, and engage in his classroom. Dr. Albu works to improve his upper division courses by searching new techniques to expose chemistry students to changes they will encounter when they graduate from UTC. His research and faculty collaborations led to presentations at regional meetings as well as results that are in the process of being published. He supports the university's community outreach initiative by participating at local school events. Dr. Albu attended the college convocation and graduation demonstrating his support for our graduates.

2017-2018 Overall EDO Performance Rating Recommendation: Meets Expectations

Evaluation of Instructional and Advisement Activities:

Dr. Albu provided instruction for chemistry 1110, 1120, 3710 lab, 3720 lecture, and 4997. As the course faculty for chemical literature (3820), he organized the lectures taught by departmental faculty. Dr. Albu continues to revise his course material to provide the latest information found in the literature. He developed through an online course program new assignments for both general courses. This material is placed on UTC Learn so that students can access throughout the semester. As new laboratory methods appear, Dr. Albu updates the physical laboratory manual. He uses the American Chemical Society's Standardized test to evaluate his student's ability grasp of the material. Student evaluations range from very difficult but appreciate the manner in which the course is taught and the availability of the online notes. Dr. Albu supports the department's undergraduate research program by directing two students.

Evaluation of Research, Scholarly, and Creative Activities:

Dr. Albu continues to participate in the department's long-standing and successful undergraduate research program. His work encompasses two areas of research: Computational Chemistry and fluorescence spectroscopy. He directed two students that led to the presenting two papers at our regional meeting of the American Chemical Society in North Carolina. Dr. Albu's student presented their work at UTC's ReSEARCH Dialogues in 2018. He co-authored a publication in the journal *Inorganica Chimica Acta* from collaborative research. He collaborates with Dr. Kim, UTC faculty, and Dr. Lisic, Tennessee Tech University, on projects investigating protein modifications and properties of thiosemicarbazones, respectively. Dr. Albu seeks internal and external funding to support his lab. Students in his lab have been awarded a Provost Student Research Award. His students submitted two SEARCH grants that will be used to fund research material and fund travel to present their project results. Dr. Albu is a co-PI for an Major Research Instrument sponsored by NSF.

Evaluation of Professional Service Activities:

Dr. Albu serves on department's technology, RTR, and Grote Scholarship committee. At the university level, he is a member of the Budget and Economic Status Committee. He met with candidates who are being interviewed for two positions in the chemistry program. Dr. Albu is sought to review manuscripts in the *Journal of Coordination Chemistry* and the *Journal of Molecular Catalysis A*. To support undergraduate research, he served on a Departmental Honors committee that culminated in thesis. Dr. Albu was the faculty leading the selection and adoption of our general chemistry textbook. He coordinated with the publisher to schedule a demonstration and prepare the custom textbook that is used in both courses. As a means to expose students to other research faculty, Dr. Albu invited Dr. Lisic to present his work to students taking our seminar class. He supports students who are seeking graduate work by writing letters of recommendations. He is an active member of the local ACS Chemical Chapter and Physical Chemistry Division. Dr. Albu attended graduation and volunteers at Battle Academy.

Overall Comments:

Dr. Albu supports the activities of the department, college, and university. He continues to provide a learning environment where students have the opportunity to grasp chemical concepts through face-2-face instruction as well as the material he post online. His research led to publications at conferences and journals. Dr. Albu's collaboration provides an avenue to expand his students experience and knowledge. He support the college and university by attending graduation and as a member of a university committee.

2018-2019 Overall EDO Performance Rating Recommendation: Meets Expectations

Evaluation of Instructional and Advisement Activities:

Dr. Albu taught nine courses throughout the academic year and summer. He is adamant about providing the students the most current chemical information, and he spends his time updating his courses. During the course of the year, he continues to provide research opportunities to students. Dr. Albu had students register in his chemistry 4997 and 4995. The latter course is one that is time intensive requiring continuous observation in the laboratory. Dr. Albu conducted an assessment on his teaching to gauge student learning. He also uses the on-line program

“Mastering Chemistry” to assign homework for both general chemistry courses. In his upper division courses, he manages the physical chemistry I Lab as well as upgrading the laboratory manual. He also advises ten chemistry majors in their required courses.

Evaluation of Research, Scholarly, and Creative Activities:

Dr. Abu continues to maintain a collaborative research program. He places emphasis on involving undergraduate students. He balances his teaching obligations while directing two research students throughout the year. Dr. Abu also directed one of his students through a Departmental Honors thesis. The thesis project is intensive to the fact that the student is required to complete a thesis and defend their work to a faculty committee. Dr. Abu maintains collaboration with a UTC faculty and faculty from Tennessee Tech University. As a result from the research conducted with his collaborators and students, he coauthored a poster presentation at the ACS chemical conference and coauthored a manuscript.

Evaluation of Professional Service Activities:

Dr. Abu actively serves within the university and the department. He is a member of the university Learning Environment Committee. He is also a member of the department's Grote Scholar committee, RTP committee, and active in the search committee for the Department Head. Dr. Abu reviews manuscripts for publications in peer-reviewed journals. He hosted a guest speaker who presented their research and spoke with students regarding their graduate programs. Dr. Abu participated in the December 2018 graduation ceremony. He is active in the local ACS Chapter and the Physical Chemistry Division of the American Chemical Society.

Overall Comments:

Dr. Abu continues to seek methods that will engage students in his classroom and learning. He uses various techniques that will provide students the resources to learn the subject he teaches. Dr. Abu's research engages students in the laboratory leading to a poster and manuscript publication. The research opportunity he provides student challenges their critical and analytical thinking skills. Through his involvement in the university and department, he served on various committees. He also participated in the undergraduate commencement program celebrating with our graduates.