

DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY
Tenure & Recontracting Criteria 2020-21

TERMINAL DEGREE STATEMENT

The terminal degree for the teaching faculty in the Department of Chemistry and Biochemistry is the Ph.D.

ROLE OF CHAIRPERSON

The Department Chairperson/Head (or designee) shall be included in the evaluative process. The Department Chairperson/Department Head serves as a member of the Tenure and Recontracting Committee. While both a Department Chairperson and Department Head can serve on the recontracting committee, only an in-unit Chairperson can serve as Chair if elected by the Department Tenure and Recontracting Committee.

DEPARTMENTAL MISSION STATEMENT

The mission of the Department of Chemistry and Biochemistry is to develop and maintain, as a part of the new campus culture, a rigorous, structured, effective and efficient learning community serving the intellectual needs of a broad spectrum of the University's students within the disciplines of chemistry and biochemistry.

- * For our majors our goal is to develop the analytical, technical and conceptual skills which will allow them to move confidently to graduate work in the disciplines, to productive careers in business, industry or government or to become teachers of science in the public and private schools. As part of our learning community, they will begin as novices and become junior colleagues.
- * For majors in other sciences we will provide the requisite knowledge of the principles of chemistry necessary for the pursuit of their own majors.
- * For majors in other areas we will provide the sound grounding in the essentials of chemistry and physics that will enable them to better understand the world in which they live and the role of science and scientific thinking in their society.

For all our students we will, by precept and example, demonstrate both the highest degree of professional behavior and the responsibilities of the scientist to the larger community.

To attain these goals, we will strive to ensure that course content, to the extent appropriate to the experience and needs of our students, is kept current with new knowledge in the disciplines. Further, these students will have direct access, commensurate with their experience and needs, to significant laboratory experiences and modern instrumentation. There will be continuing attention to developing teaching strategies, including but not limited to those expounded in the University's Vision statement, that will speak to the divergent learning styles of our students; these strategies will be tested, assessed and modified as necessary to meet the particular needs of the Rowan student.

The Department recognizes the need for today's educational practices to truly represent and celebrate the diverse experiences of all students. The Department believes that each person; faculty, students and staff, brings individual strengths, distinct expectations and unique perspectives to the Department. We value diversity in race and ethnicity, gender and gender identity, sexual orientation, socioeconomic status, language, culture, marital status, national origin, religion, age, (dis)ability status, neurodivergence, and political perspective. Students, faculty and staff should be treated equitably and have equal opportunity for success and advancement. To cultivate a culture in which everyone is included and valued, we will enact practices which build and sustain diverse, equitable, and inclusive spaces for students, faculty, and staff. We will also continue intentional analysis of existing policies and practices to correct aspects which contribute to systematic disparities or exclusive cultural norms. These will influence all aspects of the Department, including but not limited to teaching, research, advising, mentoring, and policy. These practices will fall in line with current research and will be regularly evaluated for efficacy.

CRITERIA FOR EVALUATION OF CANDIDATES FOR TENURE & RECONTRACTING

The candidate will be evaluated in the following areas

1. Teaching Effectiveness
 - a. Candidate's self-appraisal of teaching effectiveness
 - b. Classroom observations
 - c. Scores on student evaluations and candidate's response
2. Scholarly and Research Activity (Excluding Instructors)
 - a. Development of an independent, sustainable research program
 - b. Dissemination of scholarly activity
 - c. Mentoring/training students in research
 - d. Actively seeking funding to support research
3. Service / Professional Activity
 - a. Contributions to the Department, College, and University
 - b. Contributions to his/her professional field or discipline

WEIGHTING OF CRITERIA FOR EVALUATION

	Assistant Professors	Instructors
Teaching Effectiveness	50%	60%
Scholarly and Research Activity / Professional Development (Instructors only)	40%	10%
Service	10%	30%

CRITERIA FOR PEER CLASSROOM OBSERVATION

1. Mastery of subject matter discussed
2. Interactions with students:
 - Demonstrates rapport, humor and avoidance of sarcasm
 - Is sensitive towards student difficulties
 - Is flexible and adapts to accommodate student needs
 - Models inclusive language. Avoids statements of overt discrimination, including those based on religion, ethnicity, gender, sexuality, nationality, physical or mental ability. Avoids behaviors which stereotype students or their experiences.
 - Is impartial and respects each student's individual contribution to the classroom
3. Classroom presence:
 - Awareness of physical conditions in classroom
 - Avoidance of distracting behavior and mannerisms
 - Awareness of students as a group and of students as individuals
 - Enthusiasm for subject taught
 - Interest generated in subject matter

4. Organization and technique:
 - Development of presentation
 - Use of chalkboard and other teaching aids
 - Planning of assignments, laboratory experiments, and evaluations
 - Encouragement and handling of questions from the class.
 - Ability to stimulate thinking
 - Flexibility in use of techniques and materials
 - Use of illustrative examples

CRITERIA FOR PEER LABORATORY OBSERVATION

1. Mastery of subject matter discussed
2. Interactions with students:
 - Demonstrates rapport, humor and avoidance of sarcasm
 - Is sensitive towards student difficulties
 - Is flexible and adapts to accommodate student needs
 - Models inclusive language. Avoids statements of overt discrimination, including those based on religion, ethnicity, gender, sexuality, nationality, physical or mental ability. Avoids behaviors which stereotype students or their experiences.
 - Is impartial and respects each student's individual contribution to the classroom
3. Laboratory presence:
 - Awareness of physical conditions in the lab
 - Avoidance of distracting behavior and mannerisms
 - Awareness of students as a group and of students as individuals
 - Enthusiasm for subject taught
 - Interest generated in subject matter
 - Adherence to safety rules
4. Organization and technique:
 - Development of presentation (if any)
 - Use of chalkboard and other teaching aids.
 - Planning of laboratory experiments and evaluations
 - Encouragement and handling of questions from the class.
 - Ability to stimulate thinking
 - Flexibility in use of techniques and materials
 - Use of illustrative examples

CRITERIA FOR THE USE OF STUDENT EVALUATION DATA AND RESPONSE

The spirit of student evaluations is to solicit the students' collective and individual opinions concerning the instructor's abilities to help the students learn. We do this in spite of the many studies that demonstrate the bias in such data and therefore the data must be used with care and not over interpreted. At some point we must begin to assess if students are learning in a given course and use that data to judge teaching techniques.

In the meantime, a candidate may elect to use any of the many instruments that are available and approved by the department, but use the form consistently for the course of tenure process. For instance, many departments on the campus use the ETS SIR form. Other choices include the nationally recognized Student Assessment of Learning

Gains system for online evaluation. In any case, the candidate should discuss issues that the students perceive to be problem areas.

CRITERIA FOR SCHOLARLY ACHIEVEMENT:

A. Tenure-Track Instructors:

Candidates for tenure and recontracting at the rank of instructor do not have the expectation to develop a research program. Rather, their scholarly and creative activities are designed to focus on maintaining currency in their field to be able to instruct students in the current state of the art in their area of expertise and to use modern pedagogical and technological tools and methods to do so. Candidate written self-appraisal should focus on how they have maintained currency in their area of expertise and their detailed plans for maintaining that currency in a section on plans for future growth. The administration recognizes that engaging in fundamental or applied research activities is one way to stay current, but the research itself is not the goal, but rather one possible mechanism towards achieving the goal of maintaining currency.

B. Tenure-Track Faculty:

Each faculty is expected to maintain currency within his/her chosen field. We recognize that this cannot take place without continued scholarship and research. We fully expect that such efforts will clearly enhance the Department's mission of providing students with a research-rich environment at all levels of coursework.

Scholarship and research activities of tenure track faculty in the Department of Chemistry and Biochemistry are recognized in two general categories: traditional scientific research and scholarship and research and scholarship in science education. The following are not ranked in order of importance.

Scholarship:

- Demonstrated development of an independent, sustainable research program.
- Demonstrated acquisition and sharing of new knowledge within the faculty's field of expertise
- Presentations at national, international scholarly meetings, and regional meetings of the national organization of the discipline.

In all activities, the faculty member's role in the deliverable should be clearly described.

Traditional Research Activities:

- Basic or applied research in chemistry or biochemistry, published in refereed (peer - reviewed) journals.
 - The department does not use metrics such as impact factors to set any minimum standards of significance for a peer-reviewed venue. However, the department recognizes publication in especially selective venues as a significant accomplishment. The candidate should provide some brief discussion of the quality and appropriateness of the journals and other venues in which he or she publishes.
 - Publications with the candidate as the primary corresponding author are given highest priority. Publications co-authored by multiple Rowan faculty are equally valued. It is incumbent upon the candidate to highlight and describe their role in the study and publication.
 - Co-authored publications with corresponding authors outside of Rowan are also valued. It is incumbent upon the candidate to highlight and describe their role and the role of their students in the study and publication.

- Co-authored publications with the candidate's former advisor(s) are common during the early period at Rowan and are valued, although it is incumbent upon the candidate to highlight and describe their contribution to the work. During their time at Rowan, we expect that candidates develop a publication record independent of former advisors.
- Mentoring research students in projects, especially those that lead to publications or presentations by the student at scientific meetings.
- Oral or poster presentations of research.
 - Presentations at national and international scientific meetings are most highly valued. Presentations of research at regional meetings of the national organization of the discipline are also valued. It is incumbent upon the candidate to highlight and describe their role and the role of their students in the study and presentation.
 - Generally, presentations (talks) are more highly valued than poster presentations, although it is incumbent upon the candidate to highlight and describe the impact and value of any presentation venue.
 - Presentation of research via invited talks in appropriate University and industrial venues are also valued.
- Development and submission of funding proposals to federal, state, and private-foundation funding agencies is expected.
 - The candidate is expected to pursue external funds for other direct costs required for the execution of his or her research. The department does not specify any dollar amount, only that the candidate is able to demonstrate the ability to obtain sufficient funds to maintain research productivity.
 - This includes all forms of external funding, though greatest weight is given to competitive programs that incorporate peer review in the evaluation process. Unfunded, favorably reviewed submissions are valued as evidence of scholarly effort.
 - It is incumbent upon the candidate to highlight and describe the fundability and/or future potential for fundability of a given project.
- Business, industrial, and public body consultancies and contracts.
- Unpublished research leading to patents / intellectual property through the University.
 - It is incumbent upon the candidate to highlight and describe their role in the intellectual property and clearly indicate authorship and roles of co-authors of a patent/disclosure.
- Unpublished ongoing research in science.
 - This is especially important in early pre-tenure reviews. It is expected there is a lag time between starting a new research laboratory and initial deliverables.

Science Education Research:

Scholarship of pedagogy includes the conduct, presentation, and publication of peer-reviewed research on the teaching of the chemistry at any level. This category distinguishes scholarship of pedagogy from research in the chemistry subfield for which the candidate was hired. If a candidate were hired as a scholar of chemistry education, then this distinction would not exist and scholarship of pedagogy would be considered the same as the candidate's area of research for evaluating publications and presentations.

- Research in science education, published in refereed journals.
- Writing and publication of science textbooks, laboratory manuals or computer software. (Publication by commercial off-campus publishers)
- Presentation of papers, posters or invited lectures at professional meetings.

- Contributions towards instructional improvement e.g., new demonstrations, laboratory experiments, visual aids, application of computers, developing new software.
- Development and presentation of scientific material in off-campus workshops for business, industrial and public constituencies.
- Development and submission of funding proposals to federal, state, and private-foundation funding agencies.

External Evaluation:

The Memorandum of Agreement now requires that **candidates for tenure** provide an evaluation of their research by an external reviewer at another institution with expertise appropriate for assessing the candidate's research. The Department will consider more than one reviewer if the candidate wishes to provide more. The Department will ask the external reviewer(s) to comment on:

- The quantity and quality of the candidate's research, and
- The merit of the candidate's accomplishments in scholarship taking into account Rowan's infrastructure, institutional support for research and other institutional factors that affect research productivity.

CRITERIA FOR SERVICE TO UNIVERSITY COMMUNITY

The following activities are considered in judging the contributions of a candidate to the Department and College.

- Active participation in Departmental discussions concerning the regular business of the Department.
- Service on Departmental Committees (regular or ad hoc).
- Service on School Committees (regular or ad hoc).
- Service on College Committees (regular or ad hoc).
- Development of new programs, courses or syllabi.
- Writing grants to obtain funding for curricular or instrumental improvements.
- Participation in student-related activities.

CRITERIA FOR SERVICE TO THE WIDER AND PROFESSIONAL COMMUNITY

The following activities are considered in judging the fulfillment by a candidate of his/her professional responsibilities.

- Active participation in professional societies (Leadership positions including chair of significant committees, organizing or presenting workshops and symposia).
- Attendance at professional society meetings and conferences.
- Membership in professional societies.
- Participation in public activities (committees, boards, panels) where the individual's professional expertise is requisite for appointment.
- Participation in outreach activities to elementary, middle and high schools. This includes such items as speaking to classes, demonstrations, judging science fairs, etc.
- Other activities e.g., review of textbook or journal manuscripts, review of academic science programs at other institutions, review of grant proposals, interpreting science to the public.