



Department of Mathematics

Criteria for Appointment, Renewal, Tenure and Promotion

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1 Introduction

This document summarizes the criteria to be used for evaluating members at contract renewal, tenure, promotion (RTP), and biennial reviews in the Department of Mathematics. Throughout this document the SFU-SFUFA Collective Agreement 2019-2022 is referred to as SFUCA. SFUCA Article 28 details the procedures and general criteria at the University level.

As extracted from SFUCA Article 28:

Departmental Criteria for Tenure and/or Promotion

- 28.24 *Each department, school, and non-departmentalized faculty or area within a non-departmentalized faculty will draw up and have adopted by the tenure-stream faculty in the department sets of criteria, standards, and methods of assessment for tenure and for promotion in all three areas of responsibility that will be reviewed and either reaffirmed or revised no less than every three years. These departmental criteria should conform to the criteria for assessing teaching effectiveness in this Article, and must be approved by the Dean, copied to the Vice-President, Academic, to ensure consistency with the general University requirements for tenure and promotion contained in this Agreement. Approved guidelines will be copied to the Association.*
- 28.25 *Departments are encouraged to develop departmental criteria for evaluating contributions pursuant to "Criteria for Assessing Diverse Forms of Scholarship" and "Criteria for Assessing Scholarship in the Fine and Performing Arts" that may be particularly relevant to their disciplines.*
- 28.26 *When a faculty member is hired into a tenure track position, they must be given a copy of the most recently approved departmental criteria for tenure. These will be the applicable standards when that faculty member is considered for tenure unless they opt to be evaluated against the department's most recently approved criteria for tenure.*
- 28.27 *When a faculty member is being considered for promotion to Professor, their performance will be measured against the most recently approved criteria for promotion to Professor in existence at the time of consideration.*

References to "research", "research expectations" and "graduate supervision" in this document are applicable to tenure-track faculty members only.

Throughout the document, the term "expected" refers to activities that members should undertake as part of their normal activities; these activities may be assessed in the biennial review or in the RTP process. The term "encouraged" refers to activities that are discretionary depending upon the interests of the member. Both expected and encouraged activities are listed under "Expectations".

2 Expectations

2.1 Teaching Expectations

The Department takes great pride in its teaching efforts. We recognize that many students have had difficulties with earlier mathematics study and require encouragement and support to do well in mathematics. At the same time, we have high standards for and expectations of our students. We expect all members who teach our courses to maintain these standards. Excellence in teaching is demonstrated by mastery of the subject, maintenance of high academic standards, high quality assignments and lecture notes, positive impact on student learning, innovation, and development of academic programs. All members are expected to fulfill an equitable portion of the teaching responsibilities within the Department.

It is understood that the teaching of courses and curriculum development is not a solitary endeavor, and therefore members are expected to consult with colleagues, particularly those who have experience with these courses and curricula.

Members are expected to follow current syllabi, consistent with course descriptions, for the courses they are assigned to teach. Members are encouraged to actively participate in curriculum and program development, and to examine and experiment with alternative or innovative modes of delivery (e.g., technology, teaching aids, methods of evaluations) with suitable feedback mechanisms.

All research faculty are expected to supervise graduate students (and/or postdoctoral researchers) both as senior supervisors and as members on graduate supervisory committees. The number of students supervised will depend upon the research interests of the students and the stage in the researcher's career. Members are encouraged to mentor students at all levels (including high school), and to mentor and advise K-12 teachers. The Department recognizes that quality of research supervision and mentorship is of central importance.

Members are encouraged to offer reading or directed studies courses as appropriate; it is noted that these courses are not credited towards members' teaching obligations. Such courses should be in support of the overall programs in the Department and reflect student interests.

The Department provides teaching release for members at the start of their careers at SFU, for members with significant administrative duties (e.g., Chair of the Department, Associate Chair, Chair of Graduate Studies Committee), or for specially funded positions (e.g., Canada Research Chairs, research intensive periods approved by the Dean – see

SFUCA Article 27.7). This teaching release will modify the relative weighting of expectations (see Section 4.1) for those members.

On occasion, members may be asked or may volunteer to teach extra courses according to the needs of the Department. This results in modified relative weighting of expectations (see Section 4.1) for those members both when they are teaching extra sections and when they are later compensated with lower teaching loads.

2.2 Research Expectations

Tenure-track faculty are expected to have an independent research program. The Department encourages its members to freely investigate areas of their choice within the mathematical sciences. Research areas can be broad or narrow, can be in any area reasonably covered by the Department's mandate (e.g., pure mathematics, applied mathematics, industrial mathematics, computational mathematics, history and philosophy of mathematics, or subfields thereof; contributions can be application driven or education driven), and can be individual or team efforts. It is recognized that Assistant Professors are developing their own research programs while more senior members will have a well-developed program. Research activity should emphasize the production of new knowledge in the field via publication of findings in refereed outlets. Review articles and books synthesizing existing knowledge are recognized as research activity. It is each member's responsibility to provide context regarding their research work, including the modes of collaboration, intended audience for research work, and the choice of dissemination venues.

Research dissemination is extremely important and expected from all members. A balanced program of print/electronic publication, workshop and conference presentations is expected, though it is recognized that patterns will vary with the researcher's sub-discipline. The Department notes that frequency of publication, and the balance between journal articles, books, refereed conference proceedings, and so on, depends very much on the researcher and their field of endeavour. The relevance of citation counts and journal impact assessments are likewise agreed to vary. Recognizing the diversity of the research context for individual members, members are encouraged to describe the suitability (or lack thereof) of the use of particular bibliometric indices in their area of research.

As part of their research program, members are expected to seek research funding from appropriate sources at appropriate levels to support their research program and graduate students.

In conjunction with their teaching responsibilities, members are expected to engage young scholars (postdoctoral fellows, graduate students, and senior undergraduates as appropriate) in their research program, properly acknowledging the trainees' contribution in publications when appropriate. Similarly, members are also encouraged to work with Department colleagues and members of the international research community.

2.3 Service Expectations

All members are expected to fulfill service responsibilities both within and outside the Department. The Department expects less service from junior faculty members (Assistant Professors and Lecturers). Nonetheless, the demographic structure of the Department's population will sometimes mean that junior faculty are asked to take on significant service commitments. If this occurs, the impact this service contribution has on research productivity and/or professional development must be taken into consideration.

The Department recognizes that the terms of certain awards may require reduced service expectations.

The expectations of all members for service activities within SFU, as appropriate, include:

- serving on student committees at the M.Sc. and Ph.D. level
- serving on departmental/faculty/university committees
- serving on Tenure and Promotion Committees (in Math or other departments)
- organizing departmental seminars
- being actively engaged within the Department, which includes regular participation in Department Meetings, providing input to important departmental issues when called for, participating in or leading departmental initiatives, contributing to curriculum development, and/or assisting with requests by the Department Chair as needs may arise.

Service to the academic community as a whole is strongly encouraged and may include:

- refereeing papers for scientific journals
- conference planning and organization
- acting as liaison with regional or national bodies such as NSERC, PIMS, or other institutes and granting agencies
- serving on committees of the Canadian Mathematical Society, Canadian Applied and Industrial Mathematics Society, or like organizations

It is recognized that senior faculty will have enhanced opportunities to engage in this kind of service. Some service contributions to the broader community such as regular seminar series organization, senior administrative positions in scholarly institutes/societies, membership on NSERC grant panels or editorships may represent significant time commitments. In this case, members are encouraged to discuss the balance of their service contributions (within and outside SFU) with the Chair and provide context for reviews.

3 Elements Used in Evaluating Contributions

The items listed in this section are examples of common activities that are used in evaluating contributions and are meant to be neither exhaustive nor exclusive. The quality of contributions is of primary importance – quantity of contributions is a secondary consideration.

3.1 Contributions to Teaching

SFUCA Articles 28.5---28.9 indicate how teaching will be evaluated:

- 28.5. *Success as a teacher is of fundamental importance for evaluating the performance of a faculty member. Matters which should be taken into consideration in evaluating teaching include mastery of the subject, generation of enthusiasm in students, maintenance of appropriate academic standards (including fair and reasonable evaluation of student work), engagement with student experience, and organization and preparation for class. Consideration will be given to the ability and willingness of a faculty member to engage in student supervision, teach a range of subject matter and at various levels of instruction, and to contributions over and above formal teaching, particularly where the contribution is of a time-consuming nature.*
- 28.6. *Teaching effectiveness should be measured or assessed through a combination of methods. Faculty members should be made aware of and must follow the general procedures developed by their units to evaluate teaching effectiveness, as per Article 28.10, [Criteria for Assessing Teaching](#).*
- 28.7. *Faculty members will maintain a teaching dossier, in a format consistent with Department Criteria. The teaching dossier will be submitted to the Chair according to the dates set for tenure and promotion and biennial review as per Articles 30-33.*
- 28.8. *The evaluation of teaching performance will be conducted on the basis of the teaching dossier which will provide evidence for the consideration of teaching effectiveness. Evaluation will be based on the criteria contained in this Article and in compliance with Department Criteria, and must consider all relevant materials in the teaching dossier.*
- 28.9. *Engagement with the student experience will be documented in the teaching dossier and should reflect all courses taught during the period of review. Student comments may be included at the Faculty member's discretion; should the faculty member choose to include student comments, all comments from the relevant course must be provided.*

The Department values teaching as a core mission, and supports members in their teaching activities.

Criteria for Assessing Teaching

Primary Criteria

- mastery of the subject
- organization and preparation for class
- maintenance of appropriate academic standards (including fair and reasonable evaluation of student work)
- quality of syllabi (where appropriate), exams, assignments, and other course materials such as lecture notes

- new course development and curriculum modification: Efforts for developing new courses and in trying new technologies, techniques, or other experiments in teaching are considered.
- supervision of TAs: The direction and supervision of TAs is important as TAs are often our first line of contact with students who may be experiencing difficulties.
- graduate student supervision, both as senior supervisor and as member of supervisory committees (research faculty).
- supervision of undergraduate research students

Additional Criteria

- engagement with student experience, specifically responsiveness to student pedagogical needs, and the ability to consider student complaints and suggestions.
- coordinating workshops supporting our large service course offerings.
- professional development related to teaching
- teaching awards and nominations.
- directed studies and special projects
- mentoring of students, postdoctoral fellows or other faculty with regard to teaching
- external courses: The number, scope (short, specialized courses), and type. Examples include team-taught courses with other departments, and workshops or short courses at SFU or other universities, for professional societies, or for government agencies.
- availability to students for one-on-one consultations and mentoring
- making special arrangements for students facing learning challenges, e.g., accommodating a blind student.

The Department follows SFUFA Article 28.12 which describes methods used to assess teaching:

28.21. *Specific teaching assessment methods may include but are not limited to:*

- 28.12.1 *review by colleagues through classroom observation and examination of teaching materials;*
- 28.12.2 *self-reflection and teaching philosophy, as described in the teaching dossier;*
- 28.12.3 *the caliber of student work (e.g., projects, theses, and dissertations);*
- 28.12.4 *student experience surveys, subject to the provisions of this Article.*

Peer Classroom Observations

- Summative assessments may be used for RTP (contract renewal, tenure and promotion) cases, and for biennial salary reviews where teaching concerns have been identified in the preceding review.
- ideally a representative sample of the classes the instructor is teaching in the year prior to the review will be observed.
- conducted by TPC members or an independent teaching evaluation committee composed of department members in consultation with the candidate

- ideally at least two classroom observations will be conducted by two different faculty members.
- Candidates are expected to reflect on peer assessments in their teaching dossiers, and describe actions undertaken to address any concerns raised.
- Any faculty member may opt to request peer classroom observations such that both the feedback, and the efforts undertaken in response to this feedback can be included in the member's teaching dossier.

Members should maintain a teaching dossier to document their teaching activities. The dossier should focus on describing specific activities and examples.

A teaching dossier should include

- list of courses taught, students supervised and other teaching related activities
- description of course developments (updates and new courses)
- reflection on class experience and teaching goals
- reflection on feedback received via student experience surveys
- examples of course materials produced by the member such as assignments, examinations, supplemental readings, web sites, electronic study and exam resources, etc.

A teaching dossier may also include

- a statement of teaching philosophy
- comments from student experience surveys. The faculty member must include all comments for a given course (possibly in an appendix), if they want to list **any** comments from that course.
- evidence of student learning, examples of student work
- examples of applications from industry or government agencies or other "real-world" problems brought into the class room
- evidence of contributions over and above formal teaching: educational leadership, scholarship of teaching and learning contributions to the department's teaching program, professional development, outreach etc.
- a list of teaching awards and teaching-related grants received

For the biennial salary review a short (2-4 pages) dossier is appropriate. For RTP cases, the dossier is expected to be more extensive (5-10 pages). Supplementary material should be submitted as an appendix.

The use of student experience surveys is restricted. SFUCA states

28.22. *The University may survey student opinion to provide a gauge of student experience. Aggregate statistical results will be made available to TPCs, Chairs, and Deans, to be considered on the basis of a frequency distribution and not solely an average or mean. Student comments will be available only to the faculty member, Department Chairs, and Deans.*

28.23. *Student comments will not be available to TPCs and will not be used in summative teaching evaluation except as provided for in Article 28.15.*

28.24. *The role of student experience surveys in summative processes of evaluation is*

restricted to assessing faculty engagement with the student experience as described in this Article. Where a unit considers student experience survey data, it must demonstrate that steps have been taken to consider factors impacting the validity of the data, including but not limited to response rate and empirically-proven bias.

Evaluation of Criteria			
Criteria - essential	teaching dossier	peer observation	Chair or other
Mastery of subject	X	X	
Organization and preparation for class		X	X
Maintenance of academic standards	X	X	X
Quality exams, assignments, lecture notes and other course materials	X		X
course development and curriculum modification	X		X
Supervision of TAs	X		X
Undergraduate student research mentorship	X		
Graduate student research mentorship	X		
Criteria - additional			
engagement with student experience	X	X	X
coordinating workshops if applicable	X		X
Teaching awards and nominations	X		
Directed studies, special projects	X		
Mentoring/leadership in teaching and learning	X		X
External courses	X		
Availability to students	X		X
Special arrangements	X		X
	<i>The purpose of this table is to indicate which forms of evaluations are used for each criterion listed at the beginning of Section 3.1.</i>		

3.2 Contributions to Research

SFUCA Article 28.16 indicates how scholarly activity will be evaluated:

Scholarly Activity. Research achievement is of fundamental importance in the evaluation of the performance of a faculty member. The nature of research achievement will vary by discipline. Consideration should be given to evidence of scholarship reflected in the ability of the faculty member to have their research published or otherwise subjected to appropriate peer evaluation. In judging research, emphasis must be placed on quality as well as quantity. Consideration should be given to the particular conditions of community-engaged research and knowledge-mobilization activities. Consideration should also be given to recognition by national and international professional societies and granting agencies, and special recognition by such societies, agencies or other universities should be noted.

Contributions to research can take many forms:

- peer reviewed publications
- collaborative research projects
- consulting contracts
- posters, abstracts, technical reports
- books
- presentations at conferences and seminars at SFU and other universities
- development of computer software
- organizing scientific programs at scientific meetings or seminar series
- graduate student theses: supervision, external examinations
- industrial collaborations
- any other publications or dissemination
- Non-traditional scholarship, such as:
 - o Knowledge transfer and exchanges with Indigenous groups
 - o Knowledge transfer and implementation for government agencies

Contributions in this area will be evaluated by a combination of the following criteria:

- quality and number of publications. The quality of contributions is evaluated by:
 - peer review and referee comments
 - the quality of outlet where the contribution appears. The Department does not have a formal list of journals ranked by “quality”. Members usually choose research outlets that are appropriate for the quality of the work and the targeted audience.
 - when the paper has multiple authors, the role of the member in authorship. The Department does not have a formal preference for types of authorship, but the contributions of the member in multi-authored papers should be clearly indicated either by a rough percentage or by a verbal description.
 - impact of research, article citation counts
- student summer undergraduate research projects and papers/reports from these projects

- success in research mentoring efforts with students, or with faculty here or in other institutions
- research grants, fellowships, etc.: The quality of research funding should be assessed relative to the peer group (area of research and stage of career) and to the funding organization.
- honours and awards for research achievement, whether internal or external
- role in infrastructure or equipment funding requests

Members are expected to maintain a current curriculum vitae outlining research activities. Authorship lists should be consistent with that in the published works. Members are encouraged to outline their most significant contributions in each time period under review.

3.3 Contributions to Service

SFUCA Article 28.17 indicates how service activity will be evaluated:

General Contributions to the University and to Society. It is expected that each faculty member will be an active participant in the collegial governance of the University. The faculty member's contributions to all levels of the administration of the University should be considered. Account should also be taken of the faculty member's contributions in initiating and participating in seminars, public lectures or similar activities on campus, and of the stimulation and help they may afford to other faculty members of the University. Included in this category are the public service contributions which faculty members may make. It is recognized that certain faculty members or groups of faculty members may have exceptional service duties or expectations due to their membership in a particular group. These contributions should be taken into account in the context of the faculty member's overall contribution encompassing teaching, scholarly activity, and service. There should, however, be a strong focus on the academic content of the contribution by the faculty member in this category.

The smooth functioning of the Department's operations requires contributions from all its members. The service contribution will be evaluated by considering the quality and the extent of the service, together with the role that the member played. Within SFU service activities that deserve special notice include:

- serving on high-profile University-wide committees such as Senate, pension trustees, high-level administrative searches, SFUCA Executive Committee, and high-profile ad hoc committees formed to address critical issues within the University
- serving on faculty committees such as the Faculty Graduate Studies Committee or Faculty Undergraduate Studies Committee
- serving on significant departmental committees; chairing such a committee is viewed as particularly important
- engagement in departmental academic activities, including attendance at department meetings

- successful coordination of infrastructure or equipment grant applications
- engaging in significant outreach activity: public lectures, creation and running of programs for schools

Notable service activities external to SFU include:

- member/chair of an NSERC (or CIHR, SSHRC) Evaluation Committee
- site director or other executive role for PIMS, BIRS or professional societies
- member/chair of granting council committees, e.g. CIHR, NSERC, etc.
- member of reviewer panels for bodies such as CRC, Michael Smith Foundation
- member of other external commissions, panels, review bodies, etc.
- executive member of a scientific society
- lead and associate editorships for scientific journals
- extent of review papers for scientific journals
- engaging in mathematical programs in support of Indigenous groups
- service awards, citations of excellence, etc.

Members are expected to maintain a current curriculum vitae listing service activities.

4 Standards for Tenure-Track Faculty

SFUCA Article 28 outlines general criteria at the University level. The current standards have been reproduced for convenience below¹. After the general policy statement, specific departmental criteria are also listed.

The member is responsible for furnishing evaluation committees with documentation on how the member meets the criteria. Normally, a teaching dossier will be expected for evaluating teaching performance, an up-to-date curriculum vitae and samples of research contributions will be expected for evaluating research contributions, and an up-to-date curriculum vitae is expected for listing service activities. Additional documentation may be supplied by the member as appropriate.

4.1 Relative Weighting of Expectations

SFUCA Article 28.4 indicates:

Categories of Evaluation. A faculty member who is being considered for contract renewal, tenure, and/or promotion and for salary review must be evaluated on the basis of their performance in three key areas of activity: teaching effectiveness; scholarly activity; and service contributions to the University, their

¹ In the event that the SFUCA Article 28 differs from what is listed below, the actual SFUCA language takes precedence.

academic discipline, or the broader community. Faculty members should excel in at least one of teaching effectiveness or scholarly accomplishment. Less than satisfactory performance in any of research, teaching, or service contributions will not meet the expectations of the University.

The Department will give equal weight to teaching and research contributions and lesser weight to service contributions. The approximate weights are 40%, 40% and 20%, respectively. Members at the start of their careers, under special programs or in research/teaching intensive periods as approved by the Dean according to SFUCA Article 27.7 will have this weighting modified appropriately.

4.2 Specific Requirements for Appointment as Assistant Professor

SFUCA Article 28.18 states:

Requirements for Assistant Professor. Appointment to the rank of Assistant Professor presumes a strong academic record and completion of academic or professional training. There should be clear indications that the individual has the aptitudes of a successful teacher, the potential to grow in stature as a scholar as well as a willingness to play an active role in the University. These views should be supported by strong referee reports.

This normally implies that appointments in Mathematics will require a Ph.D. or equivalent competency.

4.3 Specific Requirements for Contract Renewal

SFUCA Article 28 is silent on university wide criteria for contract renewal.

The Department places a high priority on newer members becoming productive faculty members. Consequently, service expectations prior to contract renewal are minimal. As well, there may have been inadequate opportunity to supervise graduate students.

Candidates will be evaluated with reference to the following (not an exclusive list):

- dissemination of research
- success in obtaining appropriate research funding
- the development of an independent research programme
- supervision of research students
- development of effective teaching skills.

4.4 Specific Requirements for Tenure

SFUCA Article 28.19 and 28.20 indicate:

Requirements for Tenure

28.19. A candidate for tenure who is an Assistant Professor will be considered for

promotion to Associate Professor at the same time. Therefore, they must meet the requirements for promotion to Associate Professor set out in Requirements for Associate Professor below.

28.20. All candidates for tenure will be expected to demonstrate that, since the commencement of the tenure-track appointment:

- 28.20.1. *there has been continued growth as an established scholar, as evidenced by the development of a significant program of research and scholarship;*
- 28.20.2. *there has been a sustained commitment to undergraduate and/or graduate teaching and supervision;*
- 28.20.3. *they have become a responsible and contributing member of the University/academic community.*

4.4.1 Research

In the Department of Mathematics, the development of a significant program of research and scholarship is usually understood to involve consistent and ongoing research output since the commencement of the tenure-track appointment, and a research program that is clearly independent of the graduate and postdoctoral supervisors of the faculty member and that exhibits substantial growth compared with research carried out prior to the tenure-track appointment.

Provided these criteria are met, a publication record of six original high-quality papers appearing or accepted in highly-ranked venues since the commencement of the tenure-track appointment will usually constitute strong support for the research component of the tenure case; for multi-author papers the contribution by the faculty member must be substantial and clearly identified. Dossiers that do not meet this standard will be judged on a case-by-case basis. Consideration will be given, for example, to research of exceptional quality, publication in exceptional journals, importance of the research area, impact of research, and success in recent grant competitions. The quality of research will be determined in large part, but not exclusively, by the referee reports.

4.4.2 Teaching

The Department expects that candidates for tenure will have demonstrated a commitment towards their professional development with respect to teaching. This could be achieved, for example, by participating in courses offered by the SFU Centre for Educational Excellence, or by actively seeking out mentoring and guidance from senior instructors in the Department. Importantly, it is expected that any concerns raised during contract renewal or a biennial review about a candidate's teaching must be addressed in a timely fashion and by seeking suitable professional expertise.

Ideally, candidates for tenure will have taught a reasonably wide range of courses at various levels, including service courses; it is incumbent on the Chair to suggest the appropriate teaching assignments in consultation with the faculty member.

When evaluating a dossier for tenure, consideration will be given to the teaching assessments of previous TPCs. If all assessments are satisfactory, then the teaching requirement would normally be satisfied. If all are unsatisfactory, and there is insufficient evidence of remedial action having been taken, then this would point towards the requirements being unfulfilled. If the assessments are inconsistent, emphasis would be

given to more recent reviews and whether improvement has been clearly demonstrated.

4.4.3 Service

While the service expectations for an untenured faculty member are lower than for their tenured colleagues, there must be clear evidence of service to the Department and/or the University. Possible contributions are membership on committees, curriculum development, departmental outreach activities, or organizing workshops and seminar series.

4.4.4 Appointments with Tenure

In cases where an appointment with tenure is contemplated, the candidate's case must meet at a minimum the University criteria and departmental criteria for tenure.

4.5 Specific Requirements for Promotion to Associate Professor

Promotion to (or appointment as) Associate Professor at SFU requires that the candidate will also be granted tenure. Hence, in almost all cases, the tenure criteria will also have to be satisfied. There may be rare cases where a person is appointed to the rank of Associate Professor without tenure.

SFUCA Article 28.21 indicates:

28.21. *Requirements for Associate Professor. Appointment or promotion to the rank of Associate Professor is based on a record of sustained successful teaching, scholarly achievement, and participation in service to the University and the community. An important criterion is the demonstration of continued professional growth of the individual in their field(s), including recognition as an established scholar that should be reflected in the biennial salary review record. External referees of high academic stature must assess the individual's research contributions.*

The Department places a high priority on newer members becoming productive faculty members. Consequently, service expectations prior to appointment as or promotion to Associate Professor are reduced. They are nonetheless recognized when they are present.

Candidates will be evaluated with reference to the following (not an exclusive list):

- success in obtaining appropriate research funding
- extent of collaboration with other researchers
- establishment of an independent research programme
- undertaking and disseminating research beyond that from the Ph. D. thesis
- successful teaching skills at lower, upper, and graduate levels as assigned by the Chair
- evidence of involvement in graduate student or postdoctoral supervision
- participation in departmental service activities as appropriate.

Normally, letters from independent external referees will be given a high weighting in evaluating the criteria related to research. Such letters form, however, only part of the assessment.

4.6 Specific Requirements for Promotion to Professor

SFUCA Article 28.22 and indicates:

Requirements for Professor. The total overall career contributions of the faculty member in areas of teaching, research, and service to the University and the community will be taken into consideration. The rank of Professor is designed for those who have excelled in teaching and research and demonstrated commitment to service contributions. Appointment or promotion to this rank requires evidence of national or international reputation in their area of expertise, supported by letters from external referees of high academic stature.

Promotion to (or appointment as) Professor indicates that a candidate has a well-established research record, has established themselves as a dedicated teacher, and has served the Department extensively, with evidence of leadership in service functions.

Candidates will be evaluated with reference to the following (not an exclusive list):

- long-term research record and prospects for successful continuation
- national and/or international reputation in research field
- sustained record of success in obtaining external research funding
- long-term teaching performance
- successful graduate student supervision and their high quality of theses
- extent of and role in Departmental service activities.

Normally, letters from independent external referees will be given a high weighting in evaluating the criteria related to research. Such letters form, however, only part of the assessment.

5 Standards for Lecture Faculty

5.1 Definition of Ranks

The SFUCA-CA Article 35 defines the ranks of lecture faculty² as follows:

Lecturer

² The term “Teaching faculty” refers to Laboratory Instructors and Lecture Faculty collectively. The Mathematics Department does not have positions at the rank of Laboratory Instructor.

35.10 *A Lecturer will have full responsibility for the preparation and instruction of courses, including laboratory courses, and for curriculum development.*

Senior Lecturer

35.12 *A Senior Lecturer will have responsibility for the preparation and instruction of a wide range of undergraduate and graduate level courses, and may be called upon to provide leadership in curriculum development.*

University Lecturer

35.14 *A University Lecturer will have responsibilities that encompass the normal requirements of classroom teaching plus activities in the areas of educational leadership, teaching mentorship and curriculum development. University Lecturers will focus on accomplishments in teaching and educational innovation and the impact on student learning.*

5.2 Elements Used in Evaluating Contributions by Lecture Faculty

Lecture faculty have the same expectations for classroom teaching and related activities that tenure-track faculty do, as given in Section 2.1, with elements to be evaluated in Section 3.1. Below are further examples of typical contributions by lecture faculty.

5.2.1 Workshop Supervision

The Mathematics Workshops (Burnaby: CW – Calculus Workshop, ACW – Applied Calculus Workshop, AW – Algebra Workshop, Q – Q Workshop. Surrey: ACAW – Applied Calculus & Algebra Workshop, IMW – Introductory Math Workshop, PCW – Pure Calculus Workshop) provide teaching support to instructors teaching the Department’s service courses and learning support to the students enrolled in these courses. The TAs in the Workshop provide drop-in tutoring to students; monitor discussion boards associated with online assignments; mark a variety of assessments including assignments and exams; and invigilate these exams. Burnaby and Surrey workshops are operated differently, as Burnaby workshops have the additional support of the “Workshop Operations Coordinator” to share or support some of the tasks in the list below.

1. The Workshop Coordinator is expected to work with and mentor instructors who are teaching courses supported by one of the Mathematics Workshops and to maintain currency in these courses.
2. The Workshop Coordinator assists new instructors with AV requests, key requisitions, and general orientation.
3. The Workshop Coordinator manages and supervises TAs (filling out TUGs, scheduling, workload reviews) and plays an important role in training TAs. They are involved in scheduling of midterm exams, organize scanning of exams for Crowdmark, schedule TAs for marking of exams, and supervise marking of exams.
4. *The Workshop Coordinator is expected to schedule the working hours of TAs, and to effectively train the TAs assigned to the Workshop so that they provide these services efficiently and professionally.*

5. *The Workshop Coordinator must also be available to work with students in supported classes with respect to assignment submission, grade changes, and other administrative functions.*
6. *The Workshop Coordinator is encouraged to implement methods that improve efficiency and/or accuracy of the TAs' work, explore innovative course management methods as they apply to these courses, and support instructors' use of innovative teaching approaches.*
7. *The Workshop Coordinator also trains any future workshop coordinator making available any necessary documentation and templates to run a workshop. When this person takes on a workshop position for the first time, then the Workshop Coordinator provides a mentoring role.*
8. The Workshop Coordinator has sufficient experience with the standards of the department and the currency of the serviced courses to uphold these standards by guiding and supporting instructors teaching these courses.

Evidence of these activities may include

- testimonials, solicited or unsolicited, from students, TAs and/or instructors associated with the workshops;
- demonstration of new software or other innovations to improve efficiency and/or accuracy of TA work;
- implementation of innovative course management methods as they apply to service courses supported by workshops;
- documentation of support for instructors' use of innovative teaching approaches;
- descriptions of time spent advising instructors on the use of Workshop materials;
- surveys of student satisfaction with the Workshop.

5.2.2 Curriculum Development

Lecture faculty are expected to participate in curriculum development. Curriculum development at the course level may also include reviewing and implementing new course content, new textbooks, and/or new software as appropriate. Additional curriculum development may include designing new programs or reviewing and revising existing ones to meet changing demands.

5.2.3 Educational Leadership

Lecture faculty at the rank of Senior Lecturer and above are expected, and Lecturers are encouraged, to explore teaching and pedagogical innovation and to communicate their findings to other faculty members. This may include

- investigating, experimenting with, or maintaining a leadership role in the use of teaching hardware, teaching software, and/or mathematical software;
- investigating, experimenting with, or maintaining a leadership role in the use of alternative modes of delivery for the instruction of courses at any levels, but especially service courses;
- obtaining funding to aid in these activities, especially but not exclusively through competitive programs;
- maintaining an open, online forum for discussion of teaching (e.g., a blog)

- publishing journal articles, especially refereed papers, on educational issues, policy, or pedagogical practice appearing in appropriate educational and/or mathematical outlets;
- delivering conference presentations (contributed, invited or plenary) on these subjects given at appropriate educational and/or mathematical venues;
- being consulted by others for advice and assistance in pedagogical improvements or innovations;
- producing learning materials that can be used by others, whether or not for commercial publication.

5.2.4 *Pedagogical and Professional Development*

Lecture faculty at the rank of Senior Lecturer and above are expected, and Lecturers are encouraged, to engage in professional development with regard to teaching and pedagogy. This may include

- attending seminars, workshops, meetings, conferences, and so forth on teaching and/or on education specific to mathematics;
- reading and reporting on recent developments in these areas.

5.2.5 *Service and Outreach*

Lecture faculty are expected to assume a leadership role in outreach activities for the promotion of mathematics within the University and to the community at large, and are expected to serve on departmental, Faculty, or University committees.

5.3 Criteria for Promotion to Senior Lecturer

SFUCA Article 35.13 states

Appointment at or promotion to Senior Lecturer will require demonstration of:

- 35.13.1. *excellence in teaching;*
- 35.13.2. *examples of educational leadership;*
- 35.13.3. *involvement in curriculum development and innovation and other teaching and learning initiatives;*
- 35.13.4. *continuing pedagogical/professional development;*
- 35.13.5. *an appropriate level of involvement in service to the academic profession, to the University, or to the community.*

The Department has no specific additional criteria for promotion to Senior Lecturer.

5.4 Criteria for Promotion to University Lecturer

In accordance with Article 35 of the Collective Agreement between SFU and SFUFA, the rank of University Lecturer in the Department of Mathematics at SFU recognizes candidates who have demonstrated excellence in teaching, the pedagogy of teaching and learning in mathematics, while maintaining exceptional contributions to teaching and service.

SFUCA Article 35.15 states

Appointment at or promotion to University Lecturer will require demonstration of:

- 35.15.1. *sustained record of excellence in teaching;*
- 35.15.2. *distinction in the field of teaching and learning including demonstrated innovation resulting in a positive impact on student learning;*
- 35.15.3. *sustained record of excellence in educational leadership;*
- 35.15.4. *sustained and innovative contributions to curriculum development, course design, and other initiatives that advance the University's ability to excel in its teaching and learning mandate;*
- 35.15.5. *an appropriate level of involvement in service to the academic profession, to the University, or to the community.*

The candidate must have a sustained record of excellence in teaching a range of courses in mathematical sciences at various levels of instruction.

The candidate is expected to have significant recognition in the mathematics education community as evidenced by diverse contributions to the teaching and learning of mathematics. This could include, for example, service on editorial, management and planning boards, conference organizing committees, or boards of national and international societies.

SFUCA Article 35.58.2 states (excerpt)

For promotion to University Lecturer, at least four letters of reference from referees of high academic stature at "arm's length" from the Member, at least two of which should normally be external to the University, must support promotion to this rank. Referees internal to the University will normally be from a Faculty different from the Member. Referees will be chosen in the same manner as those for research faculty promotions.

These letters will be given considerable weighting in evaluating the criteria for promotion to University Lecturer. It is essential that referees demonstrably have the appropriate expertise to judge the candidate's record against the criteria for promotion to University Lecturer, i.e., referees demonstrably must have the appropriate expertise. Such letters, however, will form only part of the assessment. Letters from non-SFU sources are encouraged.

5.5 Specific requirements for promotion to Professor

SFUFA-CA Article 28.23 indicates that a University Lecturer may be promoted to Professor in some cases:

A University Lecturer may seek promotion to Professor following the Requirements for Professor outlined above [in Article 28.22, given in Section 4.5].

The Department criteria for this promotion are the same as those for promotion to Professor from Associate Professor as given in Sections 3.2 and 4.6. It is, however, recognized that the area of scholarship may be in educational and pedagogical contributions rather than in science research.

Signatures

Dean of Science, Dr Michael Silverman _____

Department Chair, Manfred Trummer _____

Version History

Based on February 2017 version approved by the Dean. Reflecting the new SFU-SFUFA Collective Agreement.

Updated to reflect new language and article numbering in 2019-2022 SFU-SFUFA Collective Agreement. Clarified the evaluation of teaching effectiveness to be compliant with the Collective Agreement and Faculty of Science Guidelines. Most changes are in section 3.1. Minor editorial changes. Final changes based on feedback from Associate Dean Learning and Dept meeting of Jun 28, 2022.

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