Research and Scholarship Criteria, Evidence and Standards for Tenure and Promotion

For the Faculty of

Science and Technology

at Mount Royal University

Table of Contents

Scholarship Criteria and Standards Table

Activities	Criteria for hiring	Criteria for Assistant Professor Midterm Review	Criteria for tenure and promotion to Associate Professor	Criteria for promotion to Full Professor based on Scholarship
A. Demonstrate the establishment of a program of scholarship that is feasible with respect to time and resources in the MRU context by normally providing evidence for each of the following criteria:				
1. Formulation of a detailed, well structured and achievable Scholarship Plan.	Recommended	Expected	Expected	Expected
2. Successful funding application if necessary.			Expected	Expected
B. Produce significant outcomes as established in "The Principles of and Recommendations for Assessing Faculty Engaged in Research and Scholarly Activity" (see Appendix C) and normally provide at least two pieces of satisfactory evidence for each of the following criteria:				
1. Scholarly outcomes accepted for dissemination/publication through peer reviewed venues.			Expected	Expected
2. Presentation of outcomes at conferences and/or appropriate venues as recognized by departmental TPC.				Expected
C. Produce additional Scholarly Activities as recognized by the "Addendum on Teaching, Scholarship and Service in the MRU Collective Agreement", and provide at least one piece of evidence for the following criteria:				
1. Additional scholarly activities			Expected	Expected
D. Demonstrate external recognition and distinction by providing at least one piece of evidence for each of the following criteria:				
1. Sustained record of successful scholarship program as determined by the departmental TPC within the MRU context. The candidate must exceed the normal expectations required at the Associate Professor level.				Expected
2. Complete at least *one* of the following activities: a. Invited and acted as a speaker, panel leader, moderator, and/or discussant at national or international meetings or conferences in area of study. b. Acted as editorial board member of journal(s) or other means of dissemination. c. Acted as an external peer-reviewer of any of the outcomes means of dissemination (e.g. journal, map, software, etc.) d. Acted as a legal expert in its field of study if applicable.				Expected
3. Respected figure in their field. Typically justified by, but not limited to, citation rates, impact factors, external references, patents, awards, grants, keynote presentations or other types of recognition.				Expected

Guiding Principles: Criteria and Standards for Assessing Acceptable Evidence in Scholarship

The present document is in accordance with the *Addendum on Teaching, Scholarship and Service* in the MRU Collective Agreement, which states the following:

> Scholarship may include, but is not restricted to, the following activities:
>
> - Research
> - Scholarly and artistic work
> - Professional work
> - Publishing
> - Presenting at, participating in and coordinating conferences
> - Collaborating with, and reviewing and editing the work of, peers
> - Developing primary and secondary texts and learning materials
> - Providing scholarly opportunities for students
> - Scholarship of teaching and learning
> - Dissemination of effective teaching and learning resources and strategies
> - Creation and extension of resources or programs to support teaching
> - Sharing teaching expertise externally
> - Significant leadership in teaching excellence beyond the institution

The following guidelines provide a general overview of the type of acceptable evidence of scholarship activities in the Faculty of Science and Technology, as well as how that evidence should be evaluated.

These guidelines have been created in accordance to the "Appointments, Promotion and Tenure Committee of the General Faculty Council (APTC of GFC) Recommendations on Institutional Tenure and Promotion Criteria" and the "Principles of and Recommendations for Assessing Faculty Engaged in Research and Scholarly Activity (RSA)", approved unanimously by the Science and Technology Faculty Council on March 5, 2010. Examples of acceptable outcomes for research and scholarship activities are stated in Appendix B.

The criteria and standards provided in Appendix B are designed with the objective of consistency and equitability across the disciplines/academic units of the Faculty. Given the diversity of disciplines in the Faculty of Science and Technology, it is expected that not all types of scholarship are appropriate to each discipline. It is the responsibility of the candidates to justify

how their peer-reviewed outcomes are applicable to their profession. It is also incumbent upon the candidate to explain and provide evidence on how they satisfy the criteria and standards for tenure and promotion in the Faculty of Science and Technology. In the event that the criteria are not met, the candidate is required to explain why their circumstances are atypical.

The TPC will assess the significance of a candidate's scholarship as a whole in accordance to the criteria and on the basis of the TPC members' professional integrity and competence.

Especially at the higher expectation levels, activities appear in two or three of the teaching, service and scholarship documents. This is intentional. In cases where one activity is counted in multiple areas, the candidate must be transparent about this dual use and explain what aspects of the activity meet the requirement(s) of each area.

Evaluation of Scholarship

The *APTC Recommendations on Institutional Tenure and Promotion Criteria* give explicit direction to Faculties to develop a "faculty-and discipline-specific interpretation that includes: development of guidelines with respect to acceptable evidence and determination of standards associated with that evidence."

Scholarship Criteria for Tenure and Promotion to the Rank of Associate Professor

The institutional scholarship criteria for tenure and promotion to the rank of Associate Professor specify that (where applicable) the candidate must clearly demonstrate "significant results from scholarship." The criteria are as follows:

- the candidate has established the foundation of an appropriate program of scholarship, feasible with respect to time and resources in a Mount Royal context;
- the candidate has produced significant results within that program of scholarship;
- the candidate has communicated those results as scholarly contributions to one or more relevant fields, through dissemination in appropriate peer-reviewed venues;
- the candidate engages in systematic reflection on scholarly practice.

For tenure-track faculty members in the TSS stream a Scholarship Plan is an essential component of their tenure dossier. In the first year's dossier, the Scholarship Plan must describe the expected projects and anticipated peer-reviewed and other results over the next four years. In formulating the scholarship plan in year one, the candidate should refer to the Faculty of Science and Technology Principles & Recommendations for Assessing Faculty Engaged in RSA which provides examples of the types of scholarship that must be demonstrated.

In each subsequent year, it is expected that the candidate's Scholarship Plan will be updated, revised, and self-assessed, as "systematic reflection" is an explicit criterion. The TPC will consider whether the reflection, revision, and self-assessment demonstrate that a "foundation of an appropriate program of scholarship" is being established systematically by the candidate in each year. At the end of the five-year period, the scholarship plan as a whole must provide evidence to the TPC that the candidate has produced significant results from scholarship.

The TPC will assess results and provide constructive feedback to candidates. It also will respond to the scholarship plan and self-assessment in the annual and mid-term evaluations, giving the tenure-track candidate feedback about his or her progress towards achieving acceptable scholarly results.

The TPC will evaluate the significance of the candidate's results in the context of a Scholarship Plan. In assessing whether the candidate's program of scholarship has produced significant results, the TPC must evaluate the peer-reviewed venues in which the candidate has chosen to disseminate findings and consider whether those venues are appropriate to the candidate's discipline. The peer-reviewed venues a candidate proposes to use must be outlined in the candidate's Scholarship Plan so that the TPC can assess and provide annual feedback on the appropriateness of the venues.

Scholarship Criteria for Promotion to the Rank of Professor on the basis of Scholarship

In accord with the APTC Recommendations approved by GFC, "promotion to the rank of Full Professor will include all the criteria for "significant results from scholarship", plus the following:

- the candidate's scholarship is recognized by peers at the national or international level;
- the candidate's scholarship has had a demonstrable impact on the work of other scholars, professionals, or within appropriate academic or professional communities."

Appendix A - Scholarship

The following tables provide examples of how final outcomes of Research and Scholarly Activities (RSAs) might be organized by typical levels of peer review and the implied newness and impact of the knowledge. This is not meant to be a prescribed list, but rather examples from each category of scholarly contribution.

The scholarship of discovery is work that fits the traditional model of discovery research. This category represents the type of research with which most faculty members in FST are familiar and reflects their training.

The scholarship of integration is work that compiles, interprets and can generate new insights from original research. This type of scholarly work offers an analytical and integrating perspective on other work by addressing the question: Is it possible to interpret what has been discovered in ways that provide a larger, more comprehensive or unique understanding?

The scholarship of application is applied research where theory and practice intersect. This form of scholarship applies new or existing knowledge to a process or for a practical application.

We consider the Scholarship of Teaching and Learning to reside within, and across, these categories.

Table A1. Examples of Evidence for the Scholarship of Discovery

Table B1: Possible final outcomes of RSA in the Scholarship of Discovery
• peer-reviewed journal article(s) • peer-reviewed article(s) in proceedings of a conference • invited talked or keynote presentation at a conference • editorial role in relevant journal(s) • peer reviewed book chapter(s) • peer-validated discipline specific outcomes including, but not limited to geological or geographical maps, software and open source projects • work conducted as a reviewer in academic journal(s) • peer-reviewed extended abstract(s) in proceedings of a conference • peer-reviewed abstract and poster presentation at a conference

Table A2. Examples of Evidence for the Scholarship of Integration

Table B2: Possible final outcomes of RSA in the Scholarship of Integration
• peer-reviewed journal article(s) • book or textbook writing/publication • textbook chapter writing /publication • article(s) published in magazines after editorial review • peer-validated discipline specific outcomes including, but not limited to geological or geographical maps, software and open source projects • peer-reviewed film/documentaries • editorial role in relevant journal(s) • work conducted as a reviewer in relevant journal(s) • peer-reviewed abstract and poster presentation at a conference • work as a member of a M.Sc. or Ph.D. thesis defence committee

Table A3. Examples of Evidence for the Scholarship of Application

Table B3: Possible final outcomes of RSA in the Scholarship of Application
• peer-reviewed journal article(s) • peer-validated government documents • peer-validated specialized technical reports • peer/field-validated materials • peer-validated discipline specific outcomes including, but not limited to geological or geographical maps, software and open source projects • editorial role in relevant journal(s) • work as a reviewer in relevant journal(s) • technology transfer from the institutional setting to a company • an innovation, patent or invention • contract work in industry • peer/field validated design work • development and acceptance of new standards documents for a field • work as a member of a M.Sc. or Ph.D. thesis defence committee

Appendix B – Scholarship Challenges

Few faculty members were involved in RSAs prior to the establishment of the TSS work pattern, and their accomplishments should be recognized and celebrated. With the increased number of faculty engaged in RSAs, and the variety of RSAs they bring to MRU, it is difficult for the university to provide adequate or even minimal support to all TSS faculty members.

Faculty engaged in RSA in the FST face a number of challenges, including:

1. The process for human research ethics is fairly new to MRU, and only recently (November 2010) a process for *medical* human research ethics was put in place, permitting faculty at MRU to apply for medical ethics through the University of Calgary ethics board. There is more to be done in this area, including education of faculty about the processes involved and training of faculty in human and medical human research ethics.
2. The process for animal care and animal research ethics is in the development stages. There is still work to be done in this area.
3. Most FST departments do not have a well-established history of faculty members participating in scholarship.
4. With a dramatic increase in faculty engagement in RSAs there is an insufficient level of funding to support the multitude of research and scholarly programs. This is reflected in constrains on:
    a. Personnel – Limited funds for student salaries; scientific research typically requires extensive technical training and there are no graduate students for faculty to work with; many faculty are anxious to involve undergraduate students in their research, but there is a limited selection of B.Sc. degrees and some senior students continue to transfer to other institutions, limiting the number of skilled third and four year students currently available
    b. Equipment – Traditional start up funds for equipment are not negotiated at time of hiring at MRU, hindering the ability of most faculty in the FST to pursue RSAs in their field of training
    c. Space – Even if the challenges of personnel and equipment were resolved, research facilities for the sciences are still very limited or non-existent for most faculty at MRU, this includes both laboratory space and student data analysis space
    d. Time – Teaching and service focused workload and scheduling constraints limit the time for research activities
    e. Paperwork - Increased requirements to complete multiple reports and forms in order to get students involved in field work and research

f. Changing policies and procedures - Larger, established universities have larger support networks of legal teams and research office staff to guide researchers with the required policies and procedures. New novel research programs frequently run into unexpected challenges that conflict with developing policies and procedures.

Increased institutional support at overcoming the above constraints will be an important part of fostering an environment of successful external grant applications.