This message is sent on behalf of Jeremy Haefner, Provost and Senior Vice President for Academic Affairs

November 20, 2017

Colleagues,

Last academic year (2016-2017), I charged a group of faculty to think deeply and boldly about what is needed to ensure existing and future faculty were positioned for success and preeminence moving forward. The committee was aptly named the *Committee on the Future of Faculty* (the Committee). I charged the Committee to explore a variety of faculty-related issues, including faculty numbers (tenure track and non-tenure track), titles, workloads, and productivity metrics, among others. I urged the Committee to think innovatively about these topics and to provide recommendations that would generate a dialogue during a campus-wide vetting period. The formal charge to the Committee can be found on my website.

After months of information collection and thoughtful deliberation, the Committee has submitted a report that I compliment for its thoroughness, impactful thinking, and extensive analysis. The report is now available to the campus community and begins on the page following this message.

I strongly encourage all faculty to read this report in its entirety. In reading this report, it is imperative to keep in mind the following points:

- **This is a multi-step initiative**. The charge to the Committee was to make recommendations that would stimulate a healthy debate across campus with appropriate vetting by formal and informal governance groups. Recommendations contained in the report will be discussed throughout this academic year at Academic Senate, Council of Chairs, Council of Deans, town hall meetings, and college meetings. Following this vetting stage, I will work with President Munson and the Academic Senate to bring action items forward for 2018-19.
- **The report is the report**. When I charged the Committee, I was explicit that the Committee should feel unencumbered in how it addressed the faculty issues mentioned above. I encouraged the Committee to think freely and to recommend what it felt was needed for advancing RIT. This report is the culmination of the Committee's work. At this initial step, the recommendations are for discussion purposes.
- **There was not consensus on all of the recommendations of the Committee**. With such a broad and substantial charge, the work of the Committee was challenging. Debate and deliberations were rich and insightful, and not all recommendations achieved consensus among Committee members. Nonetheless, there was considerable agreement on a majority of the recommendations.
- **The thrust of the report is not just about sponsored research**. Without a careful and thorough read of the report, faculty may perceive that the Committee is recommending measuring faculty productivity by sponsored research dollars alone. This perception is inaccurate. The analysis provided in the report is an *example* of how sponsored research could be used to help inform faculty workload models, but the report is also clear to point out that similar analyses could be

accomplished using published papers, performances, exhibits, and other forms of scholarly and creative work. RIT is committed to helping faculty achieve preeminence in ways determined most appropriate by each faculty member's discipline.

Lastly, I want to express my sincere appreciation for the Committee's work. The Committee's report will provide an important springboard for further discussion across campus. I look forward to engaging the entire RIT community – faculty, staff, students, and administrators – in that discussion. It is my hope and aspiration that the outcome of these discussions will help RIT make informed and strategic decisions related to the spectrum of faculty work issues.

Sincerely,

Jeremy Haefner, Ph.D.
Provost and Senior Vice President for Academic Affairs
Rochester Institute of Technology

For more information on this and other topics, please visit http://www.rit.edu/academicaffairs

Rochester Institute of Technology

Committee on the Future of Faculty

Report

September 28, 2017

Committee Membership

- Kristen Waterstram-Rich, Professor, CHST, co-chair
- J. Fernando Naveda, Professor, Academic Affairs, co-chair
- Elena Sommers, Principal Lecturer, COLA
- Andrew Herbert, Professor, COLA
- Michael Kotlarchyk, Professor, COS
- Bob Barbato, Professor, SCB
- Brian Landi, Associate Professor, KGCOE
- Glen Hintz, Associate Professor, CIAS
- Naveen Sharma, Professor, GCCIS
- Tracy Magin, Senior Lecturer, NTID

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Preamble

Rochester Institute of Technology (RIT) has experienced change and transition at an unprecedented pace over the last ten years. The shifts of the landscape include moving from a quarter system to a semester system, increased enrollment, a change in focus from a solely teaching focused university to a student-centered research intensive university, and experiencing the national trend seen in most 4-year universities of an increase in numbers of non-tenure-track faculty with respect to tenure-track faculty. The Committee on the Future of Faculty was called together by the Provost to look at very specific parameters as identified below.

> **The Challenge (by the provost)**: How is RIT to respond to the declining contribution of tenure track faculty to the delivery of the curriculum while continuing to progress towards our research aspirations? Is the trend a topic that needs to be addressed at RIT? If so, are there fiscally-responsible innovative solutions, such as new faculty titles or categories that could reverse the trend?
>
> This challenge cannot be ignored and so this charge is a call to action. With this document, I am forming and charging an ad-hoc Committee on the Future of Faculty (CFoF) to respond to this challenge by reviewing faculty titles, learning what other institutions are doing to address this challenge and gather feedback from the RIT community. In the end, I expect a report that will make bold recommendations for our future. The CFoF will not establish policy but its recommendations will inform future policy-making.
>
> **The Charge**: The CFoF will deliver an evidence-based report that shall (i) answer the questions posed in the above challenge; and (ii) provide a set of specific actionable recommendations that will require vetting across the campus.

When considering the challenge and the charge, the committee identified drivers that have served to create the current challenge and also some underlying principles that served to guide the development of recommendations in response to the drivers. (The drivers and underlying principles are provided in Appendix A.) When considering the charge, the committee recognized the current faculty demographics at RIT and solicited feedback from all ranks and positions. In addition, committee members reviewed information and data provided by RIT colleges, the Office of Institutional Research, Budget & Financial Planning Services, pertinent articles and books, and information from other institutions across the country including RIT benchmark institutions. Although there is work to be done at RIT, in our reading it was heartening to see that RIT has many attributes that are not shared by other universities, examples include but are not limited to: all faculty have academic freedom; the benefits for full-time non-tenure-track faculty are the same as tenure-track faculty; there are benefits for adjunct faculty who meet certain criteria; non-tenure-track faculty play a role in the governance structure and are included in curriculum development; there is a rank of non-tenure track faculty that exceeds three years.

In response to the charge, the Future of Faculty Committee report focused on the future of faculty at a particular point in time and the committee has selected RIT 8-10 years from now to best align with the time-frame of the Strategic Plan. It recognizes the tremendous effort that all faculty exert to prepare and deliver a high quality education to our students. The committee's deliberations examined scenarios for the "optimal" number distribution of tenured/tenure track (T/TT) and non-tenure (NTT) track faculty to provide a quality education and enable robust and growing sponsored research along with other scholarship while being fiscally responsible. While considering possible recommendations, the committee members were cognizant of the different types of faculty that exist within the different titles and ranks and the need for the university to include faculty with varied roles among its employees. To achieve its goals and maintain its reputation, the university needs a stable full-time faculty work force on which the

future can be built. With the trajectory of the university toward a higher level of research there is a need for faculty with strong research skills and success in securing sponsored research grants. In areas were sponsored research is not prevalent, there is a need for faculty with high levels of scholarship and national/ international reputations in their field of expertise to further promote the RIT brand. Parallel to the emphasis on research and acclaimed scholarship, there remains a focus on teaching that necessitates having highly skilled faculty who can provide instruction in their area of expertise. In addition, increases in enrollment coupled with calendar changes have led to some instances of unbalanced, increased section sizes.

While the stability of a full-time faculty is necessary to ensure continuity of programs and progress, the university must retain its agility and flexibility to accommodate fluctuations in student enrollment and back-filling of unexpected vacancies of faculty members. This agility and flexibility is achieved by hiring lecturers, adjunct faculty, visiting faculty, or faculty with one-year appointments. The decision to use adjunct faculty in this regard, should remain one of needed flexibility at a point in time rather than a recurrent dependence to teach regularly scheduled classes. It is important to point out that there is more than one reason for hiring adjunct faculty and the faculty are also quite different. In addition to hiring adjunct faculty on an as-needed bases, there will always remain the need for colleges to hire experts in a field to teach when and as often as needed to bring industry or practical experience into the classroom. Adjunct faculty, and at times visiting faculty, who most often have employment outside of RIT, willingly bring their expertise to campus to enhance the offerings in the curriculum. The use of adjunct faculty or visiting faculty strategically to bring such expertise to the classroom should be encouraged, however, only in rare instances should adjunct faculty be hired to offset enrollment anomalies. It may be that a universal workload model or even a use of a common currency for determining workload would be helpful when calculating a college's current need for faculty and types of faculty, predicting future faculty hires, or determining equitable workloads among faculty. However, given the differences or unique aspects among the colleges, it is likely that a proposal for a university-wide workload model would not meet with approval. It is the workload model that will be addressed in the committee's report.

The financial details of sponsored research described in the report are based on STEM areas. Different colleges may be able to match these, others will not, however each college could devise a similar scenario for purposes of achieving desired outcomes. Some of the recommendations included in this report are not commonplace across the United States, however, all recommendations were created within the parameters of the charge and without preference to any existing models at RIT. It is the hope that those reading this report will do so with an open mind, will consider incorporating practices not currently in place in their college, and with acceptance of the tenant that there is a need for change. Aspects that affect faculty workload and those which the committee can agree include the following.

- There is a an increase in the university research initiative accompanied by increased expectations in funding and expectation of increased graduate enrollment to support the initiative
- Not all disciplines are positioned to bring-in sponsored research.
- There is evidence to support the workload opportunity costs for sponsored research. In short what is considered a "balanced" workload is not realistic to achieve high levels of sponsorship.
- Some senior tenured faculty are challenged by the new research and scholarship expectations given that their hiring and promotion occurred at a different time.
- Some lecturers maintain similar workloads to their tenured colleagues but are disenfranchised given salary disparities and a lack of long-term job security.
- There are faculty in every rank that do not teach the number of courses that would be expected with the existing university parameters.

- There is a significant number of course sections that are taught with enrollments below the minimum guidelines.
- There will be a need to revise policies to implement change.

Among the recommendations are strategies to increase sponsored research success and elevate all faculty stakeholders while remaining fiscally responsible and cognizant of the different needs of faculty at different ranks working in different colleges making up RIT. It is important to note, as a possible reflection of the RIT community at large, the committee was not in full agreement of how best to address the changes and needs noted above and were not in full agreement with the recommendations presented in this report. Although the recommendations in the report are for the future, many of the strategies could be implemented sooner to more rapidly achieve the university's strategic goals. The report's recommendations are not intended to provide new policy, but rather to inform RIT's administration and faculty on potential paths forward via data-driven analysis. Some of the recommendations may easily be transformed into committee charges, while others will undoubtedly require community discussion and feedback. Overall, the committee's report is intended to foster awareness on issues that may impact RIT's growth. In doing so, the report suggests strategies that may enable RIT to progress to a fair and equitable environment that embraces sponsored research and fosters faculty success to support the university's educational and scholarship missions.

Faculty Workload and Workload Models

Although a university has several goals, foremost is the goal of offering sufficient courses to meet the needs of students who are enrolled in various programs. The colleges at RIT vary in the types of programs and courses they deliver. The variety of programs include but are not limited to: education that meets external accreditation, degree-related teaching, or deeply engaged in General Education as mandated by NY State[1]. This responsibility falls on the faculty who must collectively teach enough credit hours to cover those courses. At the same time, faculty members have additional responsibilities to create and disseminate new knowledge, to participate in the governance of the university as professionals, and provide service to the community (e.g. RIT, professional, beyond RIT). It is commonly understood that the responsibilities of the faculty fall under the broad categories of teaching, research/scholarship, and service[2]. By policy, the responsibilities vary between tenure-track (pre-tenure and tenured) (TT) and non-tenure-track faculty (NTT). In addition, within ranks, responsibilities, are not uniformly distributed among the faculty; for instance, some faculty will carry a heavy teaching load while others are primarily conducting research.

Current policy (E6.0) defines the responsibilities (and therefore limits the evaluation) of NTT faculty in the lecturer ranks to teaching and service. Tenured and TT faculty have an additional set of responsibilities related to scholarship including seeking external funding, dissemination, completing the activities related to the scholarly product and more. Since NTT faculty are expected to teach in a student-centered research environment, one may infer that there is some level of scholarly and/or professional knowledge that is applied in teaching. Given the many possible ways to distribute the three categories of faculty responsibilities, the creation of workload models to describe the various combinations that are typical among the full-time faculty serve to provide transparency of workload expectations, determine the appropriate workload within a given unit or college, and provide a basis for determining hiring needs. In

[1] http://www.highered.nysed.gov/ocue/lrp/liberalarts.htm

[2] While administrators often have faculty status, this discussion is only concerned with those faculty members who are engaged full-time in teaching, research, and service.

this section we provide a clear and straightforward approach to defining these possible combinations or portfolios.

The committee did not derive much guidance from examining the many different (often arcane) formulas that some universities use to measure faculty productivity. Currently the basis on which faculty workload is calculated is that of a 5-5 teaching load with each of the 5 courses as the equivalent of a 3 credit hour course and percent reductions based on service activity or research/scholarship productivity. The committee observed that a lecturer with no research responsibilities can have an expected assignment of a 4-4 teaching load with the understanding that 80% of the job is devoted to teaching and 20% is devoted to service. This is a common norm at RIT as well as other universities. Consequently, for tenure track faculty, it can be inferred that a 3-3 teaching load with the same service responsibilities would require that 20% of the faculty member's responsibility be devoted to research/scholarship. The same ratio can be applied to any teaching load, so that a one-course reduction would assume a 10% increase in research/scholarship responsibilities, assuming that service stayed the same. Although one course typically generates 3 credit hours and assumes 3 contact hours per week, this is not always the case. Labs, studio time, and even class size can affect a faculty member's teaching load. Consequently, the committee recommends that the university establish course equivalencies to account for all aspects of faculty teaching assignments and expectations not currently accounted for in the present model (e.g. independent study, NTID individualized study – currently referred to as tutoring, class size – or credit hours generated).

In looking at the current data on the teaching loads of full-time faculty, it is unclear how and if the current workload guidelines are followed. Once established, the conceptual framework described above could establish a university-wide portfolio system that could guide each college toward the establishment of faculty portfolios that would provide greater clarity in the development of an individual faculty member's annual plan of work as describe in Policy E7.0 Annual Review of Faculty. Since a university-wide portfolio model would serve to better inform a faculty member of responsibilities and could be used by the administration of an academic unit for planning purposes in covering course offerings, it is the recommendation of this committee that a portfolio approach be used within the colleges and units. The construction of a plan of work within a type of portfolio will be designed by the faculty member and their direct supervisor during their review of the faculty "Plan of Work." These supervisors, in conjunction with the leadership in each college will then be responsible for coordinating these individual portfolios to ensure the programs, schools, and the college meet their mission. This individualized approach to faculty responsibilities can improve the evaluation of faculty and lead to increased productivity and satisfaction. Examples of individualized approach within a portfolio model are provided in the research section of this document. It can open the door to promotion and merit increases for those faculty members who feel disenfranchised because their assigned responsibilities have not been tailored to their unique strengths. It can improve planning and assist the college in achieving its mission. Such an approach can increase resilience by allowing for adjustments to portfolios as changes occur within the mission of the college or the individual strengths and weaknesses of a faculty member. It can result in better retention, especially for AALANA faculty members.

Although the university would establish an overall portfolio model, each college could determine any sub-portfolios it wishes to offer, since a portfolio could vary between a 4-4 teaching load for a lecturer who has no research responsibilities to a 1-1 teaching load for a research-intensive professor who is expected to spend 80% of time on research and service. The committee realizes that many colleges have already adopted a portfolio approach, however, the prescribed framework above offers guidance that will result

in more uniformity among the colleges and perhaps more opportunities to create individualized portfolios appropriate for a diverse group of faculty members.

Sponsored Research Impact on RIT Future of Faculty

The evolution of RIT's PhD programs and research ambitions has resulted in a change of its Carnegie Classification of Institutions of Higher Education to now be a "doctoral university."[3] According to US News and World Reports,[4] RIT is nationally ranked at #97 for schools in the National Universities category. RIT has embraced this change by emphasizing its commitment as a student-centered research university as part of the recently adopted 2015-2025 strategic plan: *Greatness through Difference*. Specific excerpts from the plan are as follows:

- RIT will be internationally distinguished as a research university through its focus on and investment in specific inter- and trans-disciplinary research areas identified through a systematic and inclusive selection process.
- RIT will continue adding interdisciplinary Ph.D. programs that are in line with the university's research strategy and will facilitate the participation of undergraduate and master's degree students on funded research teams.
- **(Priority for early implementation)** RIT will maximize the impact and financial support gained through its research programs by collaborating more extensively with business and industry to yield $100M in total research funding annually.

Therefore, RIT has goals to increase sponsored research significantly from the $73M in FY16 to $100M as part of the Strategic Plan. RIT faculty, in particular those in tenure/tenure track (T/TT) lines, are the individuals generally needed to reach this goal. RIT has ~1000 faculty, 70% on T/TT lines, and this means that, if uniform expectations are established, on average, each T/TT faculty member would need to secure ~$143K/year to realize $100M. Alternatively, the future RIT faculty could consist of individuals that specialize in sponsored research who can garner significantly higher levels of funding. In what follows, a review of how the future of faculty at RIT may increase sponsored research while sustaining current levels of teaching is examined, using recent data to benchmark and analyze various workload scenarios.

Faculty Job function: **temporal aspects of teaching and research/scholarship**

RIT faculty are committed to serving our student-centered research university by providing quality education to students while advancing new knowledge through scholarly activities that can elevate the university's reputation. Full-time faculty today have teaching loads that vary from a *teaching-only* workload that comprises teaching the equivalent of 10 courses/year to no teaching load where 100% of time is dedicated to sponsored research, scholarship, service, and/or administration. Each faculty member's workload is customized to meet individual, department, and college-level goals. Given the university's mission, *teaching and sponsored research/scholarly activities and outcomes are both critical and valued*; however, it is important to recognize that the timescales are different for success in each. Provided an individual is properly qualified, teaching is largely a **deterministic** activity, meaning that it has a defined time period to be started and completed. For example, there are fixed times for class, set office hours, specified start and end to semester, etc.; which can be managed with a schedule that describes

[3] http://www.rit.edu/news/story.php?id=56877

[4] https://www.usnews.com/best-colleges/rit-2806; Schools in the National Universities category offer a full range of undergraduate majors, plus master's and doctoral programs. These colleges also are committed to producing groundbreaking research.

known contact/preparation time for successful delivery. Sponsored research on the other hand is often **opportunistic** in nature given the requisite alignment of a faculty member with a funded program announcement. Specifically, when coupled with peer reviews and state of the field, both faculty expertise and novel ideas affect the probability of success. Further challenges are the government/corporate funding cycles and timeliness of proposal submissions. If there are fewer opportunities, it means more attempts are statistically required to succeed which can lead to an open-ended (and significant) time commitment. Thus, the impact of different timescales is a major consideration to create and evaluate annual plans of work, which in turn affect promotion and tenure reviews. Neither teaching nor sponsored research is easy, as both require commitment and significant effort to excel. An analysis of the tradeoffs between teaching and sponsored research that incorporates time scale differences is needed to inform workload decisions that lead RIT to succeed in both missions simultaneously.

Relationship between Sponsorship, Research/Creativity, and Scholarship

RIT policy E6.0, Policies on Faculty Rank and Promotion states that "Faculty responsibilities are divided into the following three categories: (a) teaching; (b) scholarship; and (c) service. The expectations for faculty "scholarship" are described in E4.0, Faculty Employment Policies.

The current policy states that scholarship at the university will encompass five elements of scholarship – discovery, pedagogy, integration, application, and engagement; defined by Boyer. This framework is used to assess faculty scholarship in discussions regarding plans of work and promotion and tenure policies. RIT is committed to funding a certain portion of T/TT faculty's time towards scholarship[5]; however, the provost has stated that certain fields have the expectation to generate external support. All of Boyer's definitions of scholarship require dedicated resources to enable research/creative activities, most notably the faculty member's time, which needs to be funded either through internal or external support. Included in RIT faculty plans of work is a time allocation for scholarship activities (inclusive of Boyer's definition), and thus RIT implicitly provides "funds" for the faculty member to perform the activities. If RIT is not paying for faculty time towards scholarship, then an external sponsor is supporting it. Thus, it is critical to delineate the entity that funds a faculty member's time to support scholarship based on the source of the funding.

Although RIT categorizes all activities involving research, creative arts, and critical inquiry under the umbrella of "scholarship", it is critical to recognize that "scholarship" is a noun. It is typically defined as learning; knowledge acquired by study; the academic attainments of a scholar. Therefore, scholarship is an outcome from an educational or research activity. Conducting research or producing creative works is the engine that drives scholarship, as summarized in Figure 1. Through its strategic plan, RIT aspires to become a student-centered research university, and it is thus expected that faculty involve students in research/creative activities that lead to scholarship. The cost for each research and creative activity varies by what is being done and by whom. Figure 1 provides a list of the expenses incurred for activities and personnel that typically engage in these activities. Undergraduate student engagement can be achieved through independent studies, course projects, and paid work as part-time hourly workers or as full-time cooperative education workers. Graduate education for thesis-bearing degrees (e.g. MS, PhD) often requires the awarding of graduate student stipends to be competitive with other schools who desire such students. Thus, funding is required to engage students in research at all levels, to disseminate research outcome at conferences, and to provide supplies and equipment to enable research activities. In light of

[5] https://www.rit.edu/academicaffairs/sites/rit.edu.academicaffairs/files/docs/2.24.14%20Thoughts%20on%20faculty%20scholarship%20at%20RIT%20FINAL.pdf

RIT's fiscal priorities, the internal dollars that are allocated towards research and creative activities that lead to scholarship need to be determined per individual, department, and college.

Sponsorship leads to the opportunity to engage in research/creative activities resulting in scholarship, as summarized by Figure 1. The sources of faculty sponsorship may be internal from central administration funded from tuition, endowment return, or returned Facilities and Administrative (F&A) costs generated from prior external sponsorship. ***"Sponsored Research" is defined as external financial resources from gifts, grants, contracts, and donors to support research and creative activities.*** This money is often tied to specific outcomes on which the faculty/staff are uniquely qualified to deliver. Returned F&A for reinvestment is different than direct donations or to allocation of tuition revenue on a dollar by dollar basis. For example, $1M in sponsored research funding that comprises direct charges solely eligible for F&A (e.g. personnel effort, supplies, travel, etc.) yields ~$143K in returned F&A dollars to the Office of the Vice President for Research (OVPR), deans, department heads/directors, and principal investigators (PIs) as per RIT policy.[6] Thus, it is essential that these dollars be reinvested strategically to accelerate research and lead to scholarship outcomes.

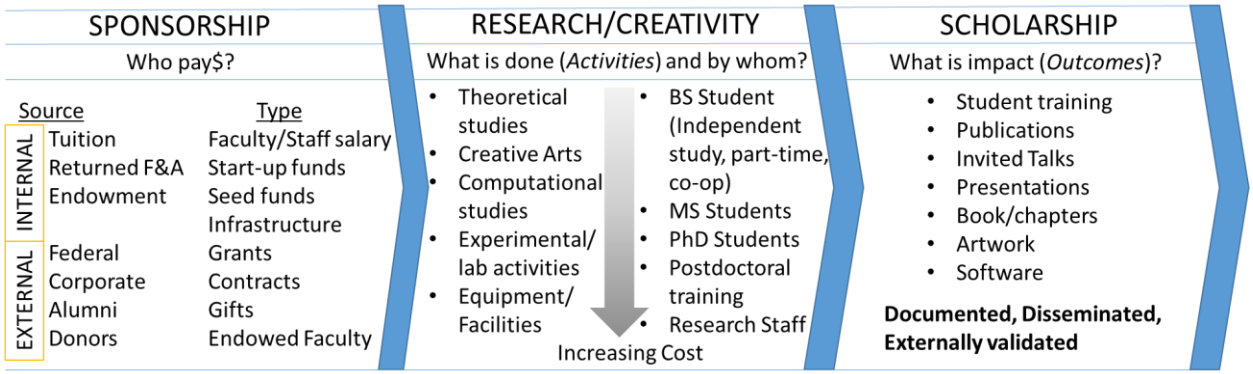

Figure 1. Schematic detailing how internal and external sponsorship supports research and creative activities that lead to scholarship outcomes.

Scholarship outcomes involve the dissemination of ideas through scholarly articles, presentations, literature, artwork, etc. Scholarship outcomes need to be expected from all sources of sponsorship, and when an external sponsor drives the research/creativity, tangible outcomes are often a requirement of the project. If internal support is provided, the need to articulate a set of expected outcomes should be developed through a faculty member's workload incorporated in the plan of work. In general, the documentation, dissemination, and validation of scholarship outcomes are useful to establish productivity, but the impact of scholarship outcomes influences the long term value to RIT. As an example, peer-reviewed conference proceedings do formally qualify as a scholarship outcomes in most fields, but very few end up being cited in high impact journal publications that gain national [international] attention. Some university ranking approaches utilize journal citations and H-index to weight final values, which includes both faculty productivity and impact.[7] Thus, it is imperative that colleges and departments delineate differences between sponsorship, research/creative activities, and scholarship outcomes (e.g. quality of publications, presentations, degree of regional/national/international recognition of research/creative activity, qualifier related to student engagement).

[6] https://www.rit.edu/research/srs/grantsmgmt/Recovered_FA_Return.htm
[7] https://www.topuniversities.com/

In the spirit of fiscal responsibility, RIT needs to balance the internal investment made towards scholarship with its mission to engage students and elevate the institutional reputation. Some fields may need to be fully supported by RIT while others can be predominantly externally funded; in the latter situation, some T/TT faculty may be capable of "buying out" of a portion of their teaching time which enhances RIT internal resources. While some portion of tuition dollars is directed towards scholarly activity, should RIT fully support a significant portion of faculty time (40-50% in some cases) towards research/creativity and scholarship through this means? Alternatively, should those fields that are predominantly supported by RIT focus more exclusively on teaching? If so, what is the appropriate workload plan?

Faculty Workload

Faculty Workload Opportunity Cost Related to Sponsored Research/Scholarship/Creative Works

As RIT strives to increase sponsored research, the main issue is the level of sponsored research productivity that is realistic and appropriate for faculty based on established teaching loads. There is a long standing notion in academia that a lower teaching load affords the opportunity to garner higher levels of sponsored research. In order to benchmark current RIT levels, data was collected and analyzed for the 2015-2016 fiscal year for College of Science (COS) and Kate Gleason College of Engineering (KGCOE), representing the two RIT colleges that had at least 20 T/TT faculty who both taught courses and received sponsored research funding during the fiscal year. Only T/TT faculty were used for the analysis since research faculty are not typically required to teach and lecturers do not have sponsored research part of their plan of work. The sponsored research data was acquired from the RIT RAPID database for research awards, whereas the teaching load was collected from RIT SIS for the 2015-2016 academic year. The number of courses/year includes a course with any credit hour level, but does not include graduate seminar, co-op, thesis, continuation of thesis, continuation of project/paper, independent study, or internship. The data extracted focused solely on those faculty that taught and also had sponsored research, and does not include those individuals with significant administrative functions or partial sabbaticals. The data also neglects the effect of other service activities and course release.

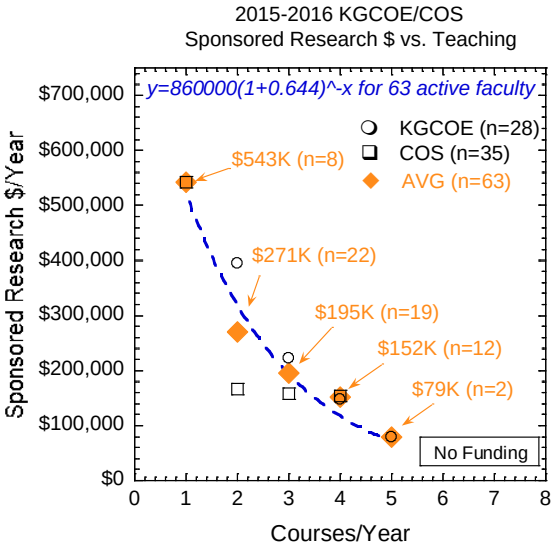

Figure 2. An overlay of the data for the KGCOE and COS active faculty who taught and received sponsored research during fiscal year 2016 (open symbols) and the averaged for both colleges (solid symbols) as a function of teaching load (courses/year). The dashed line curve fit is using the average data points to provide a functional relationship for the nonlinear behavior.

Figure 2 summarizes the data for COS and KGCOE (the open symbols) as well as the average from both colleges (the solid symbols) which can be considered an RIT "STEM average." There were 28 T/TT faculty in KGCOE and 35 T/TT faculty in COS who both taught and received sponsored research awards; this represented ~30% of all T/TT faculty in those colleges. The data clearly shows how sponsored research productivity ($ Awarded/year) increase nonlinearly with decreases in teaching load (the number of courses/year). No sponsored research awards were received by T/TT faculty who taught more than 5 courses. Figure 2 suggests that sponsored research awards increase dramatically when faculty devote more time dedicated to the activity. If faculty have few proposal submissions, then it is statistically less likely they will obtain funding, since overall funding rates for new PIs are typically around 15-20% (for NSF data during FY14).[8] In comparison, the NSF data shows that previously successful PIs average a higher 20-30% funding rate. Figure 2 also illustrates over the range of teaching 2-5 courses/year, each course release [addition] in faculty workload leads to ~$70K/year increase [decrease] in funding. The 63 T/TT faculty actively engaged in both teaching and sponsored research from COS and KGCOE, whose data is represented in Figure 2, demonstrates that there is a "***Funding Opportunity Cost"*** that exists in the tradeoff between research and teaching activities in an annual work plan. This type of benchmark data could be used as a guideline to faculty so they are aware of funding expectations and necessary activities as they implement their work plans. Furthermore, department heads and tenured faculty can have data-driven guidance to evaluate T/TT faculty annual performance and promotion packages, which is less prone to variable judgement when establishing expectations.

Although the current analysis focuses on sponsored research, similar workload opportunity costs could be established for other priorities including submitted proposals, research expenditures, publications, exhibitions and other scholarly disseminations with quality metrics as determined by the college.

In the case of KGCOE, 21 of the 28 faculty with sponsored research awards taught 3 courses or less, and the top 3 faculty in terms of sponsored research during 2015-2016 taught either 2 or 3 courses/year. Data also indicate that sponsored research active faculty in KGCOE were nearly equally committed to undergraduate (across all year levels) and graduate teaching. Specifically, the 2015-2016 average was 2.9 courses/year (1.7 undergraduate and 1.2 graduate). There was some spread in sponsored research data for those faculty teaching 2 and 3 courses – this is attributed to the natural mix of established senior researchers and new hires with a reduced teaching load. Interestingly, the data in Figure 2 align with the KGCOE workload guidance for research-intensive faculty teaching ~3 courses/yr; thus, supporting the use of benchmarking data to assess workload criteria. The KGCOE data in Figure 2 for 2015-2016 were also analyzed to reflect sponsored research per credit hour. The results show that no sponsored research occurs for faculty teaching above 15 credit hours, a quasi-plateau in the range of 7-12 credit hours, and a significant increase in sponsored research for those teaching at 6 credit hours (i.e. 2 three credit hour courses/year).

The data also draw into question whether a balanced T/TT faculty approach is the optimal way to drive sponsored research in an academic unit. Most of the workload models for "balanced" or "blended" in the STEM fields at RIT target at least 4 courses/year, which may limit the amount of sponsored research because of competing demands on time. In fact, the KGCOE data shows a limited number of faculty (i.e. <10% of all T/TT faculty in college) currently perform at a level consistent with the notion of balanced faculty. There are faculty who could achieve higher sponsored research levels with reduced teaching loads. Thus, it is worth exploring competing scenarios that: 1) examine whether the teaching commitments for an academic unit can be met with balanced expectations for faculty, or 2) whether specialization in faculty plans of work towards teaching-intensive and research-intensive portfolios can

[8] https://www.nsf.gov/nsb/publications/2015/nsb201514.pdf

lead to increased sponsorship outcomes. The trends in specialization have recently been described at R1 universities where faculty in STEM research-intensive roles teach fewer than 2 courses.[9] As pointed out by the authors, specialization has become a market-driven outcome at universities which is necessary to enable faculty to compete for funding and notoriety at the national and international level.

Finally, the data in Figure 2 provide a quantitative functional relationship that may be used to examine scenarios with different faculty workloads to predict sponsored research levels for the STEM disciplines. The present analysis uses only sponsored research awards; however, additional analyses could more fully explore this relationship by examining research expenditures in the same fiscal year, awards in the year preceding, or by extracting a multi-year average. In addition, the approach can be extended to individual fields and faculty rank to better define expectations and workload relationships.

T/TT to NTT Ratio

In determining the faculty necessary to ensure that all courses are taught, sufficient funded research is gained, significant scholarship is achieved, and service provided, while maintaining stability and flexibility one must consider the balance among the different ranks of faculty to meet the needs of the college and university. A major aspect of the committee charge was to assess the impact of the current RIT situation where T/TT faculty are presently teaching less than 50% of the total course sections and that the remainder are being taught by NTT or adjunct faculty. The idea that there may be an optimal value is highly influenced by external demands and is no doubt unique to each RIT college as the IAR report data shows in Figure 3. Some colleges have a high reliance on NTT faculty (adjunct faculty and lecturers teach over 60% of sections in COLA; lecturers in NTID teach significantly more than T/TT faculty), whereas other colleges (notably KGCOE) have teaching dominated by T/TT faculty. In any scenario where the university re-balances work plans to increase sponsored research or scholarly activity, there is a competing requirement that all necessary course sections be covered. Going forward, many T/TT faculty will be expected to garner sponsored research funding while the NTT faculty will continue to be expected to focus on teaching. The data shown in Figure 3 suggest only one college is close to the Provost's 50-25-25 target (CIAS). A scenario analysis can be conducted in which the distribution of faculty in terms of workload is varied. To do so, the curve in Figure 2 for T/TT faculty may be employed to explore tradeoffs between sponsored research or funded scholarship (as defined above) and teaching requirements, as well as tradeoffs between teaching requirements and service for NTT faculty while sustaining a full complement of courses taught throughout the year. This is fully explored in Appendix B. The outcomes of this analysis have inspired the committee to propose the 3 scenarios described next.

[9] John G. Cross and Edie N. Goldenberg, "Off-Track Profs: Non-tenured Teachers in Higher Education", MIT Press, 2009.

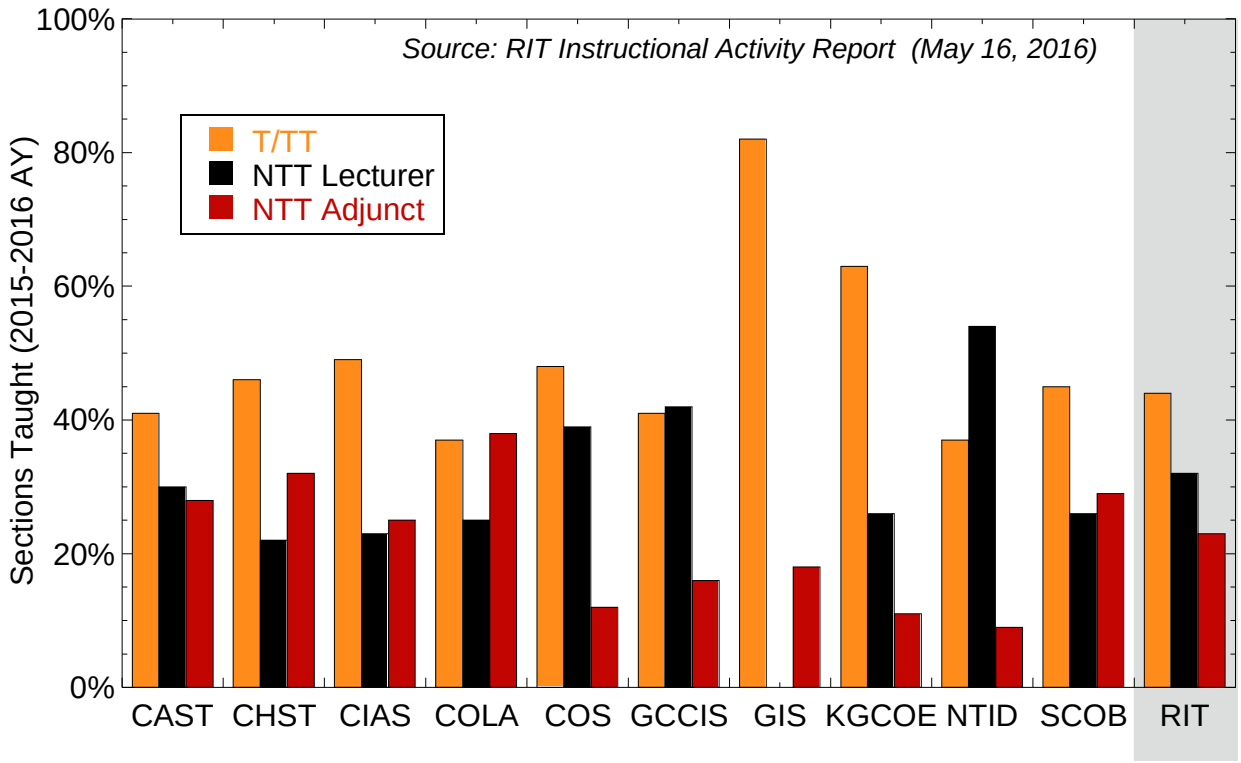

Figure 3. Summary of the RIT Instructional Activity Report (IAR) from May 16, 2016 for each college and RIT overall regarding the percentage of sections taught by faculty type during the 2015-2016 academic year.

Transition Options for Adoption of a Specialized Faculty Model:

These options are provided as possible transitions for moving RIT to an R1 university within the next ten (10) years. The move to R1 status requires an increase in funding while continuing to deliver quality curricula. As with current policies and procedures, it is suggested that with any adoption of change to faculty expectation or responsibilities, the university provide a framework as guidance but the colleges provide specific details in how the option can be applied. Since each of the options include multiple types of faculty, changes would require that colleges and departments determine the percentage of faculty necessary to be research-intensive or scholarship intensive to carry-out the mission of the college with respect to teaching, scholarship, and sponsorship and plan hires accordingly. In addition, since there are multiple types of faculty, it may be necessary to add to each of the options, the change to the pay structure as identified in Option 2 where the /TT faculty member would be at the same rank but being paid at a level commensurate with their job function and consistent with market drivers . The committee recognizes that NTID stands apart and be permitted to have criteria different from RIT as a whole.

Option 1: Set expectations for all T/TT faculty to be sponsored research active, maintain accountability, and develop 2nd assessment period for tenured faculty. The 2nd period would enable a transition to a tenured teaching- intensive role should sponsored research/scholarship wane after tenure. If sponsored research is not feasible for a given area, scholarship of equivalent stature, e.g. national/international reputation would be expected.

a. Assuming a shift in approach towards research-intensive TT hiring can ensure sponsorship levels are satisfied pre-tenure, accountability also needs to be maintained post-tenure to avoid having extrinsically motivated faculty decrease in research productivity (i.e. dropping off the "associate professor cliff"). Thus, it follows that a tenured faculty member is expected to garner the established funding level per year in their respective academic units (e.g. in STEM disciplines based on Figure 2 of ~200K/year if teaching ~3 courses/year). For academic units where sponsored research is not typical or available, an equivalent expectation of high-level and notable scholarship would be identified. A strategy to assure that a candidate's ongoing performance is consistent with requisite sponsored research or scholarship, levels would be based on a formal second promotion review at an appropriate time (e.g. 12-14 years from hiring). This review would also be concurrent with the timing of the promotion decision from associate to full professor. Formalizing such a post-tenure review would provide a clear policy regarding the promotion timeframe, which has been a concern of the recent RIT COACHE surveys. If the tenured faculty member is unable to meet the sponsorship or scholarship outcomes at the 2nd promotion review, there could be a transition to a workload model that allotted a greater percentage of workload to teaching (teaching intensive) or administrative responsibilities if available and appropriate.

b. Current tenured associate professors would have their 2nd promotion review formalized to occur within 6 years and tenured professors would be given the opportunity to transition to research-intensive or teaching-intensive workloads over a similar or shorter time period. The first step would be to assess faculty interest level and capability to establish a research program or notable scholarship production schedule. Alternatively, this would create tenured teaching-intensive faculty whose workload would include a less aggressive scholarship expectation and a teaching load of no less than 6 courses/year.

   If the tenured faculty are interested in pursuing the research-intensive pathways, then university options during transition could include 1) approving a professional leave to reconnect with collaborators or launch a new initiative based upon the latest research areas, 2) joining a research collaboration with junior or peer faculty who are research active to help with certain aspects of the research – junior faculty would be competing for young faculty awards whereas senior faculty could partner and go after other single or multi-PI proposals, 3) modify faculty salaries based upon job function to incentivize a research pathway, as described in Option 2.

c. Since a teaching-intensive pathway would be established for current tenured faculty, a similar pathway to tenure for principal lecturers could be established with appropriate expectations accompanied by performance and promotion reviews. Current NTT lecturers specialize in teaching which is integral to the educational mission of the university. Tenured faculty provide stability in program delivery and curriculum development, so it is reasonable to establish university criteria and college expectations that develop a path to tenure for teaching-experienced lecturers. A lecturer pursing the title of tenured principal lecturer would have a portfolio of expectations for tenure such as teaching, service, and professional development for which a tenure and promotion process could be established. The three areas of responsibility already exist for lecturers in NTID. Once criteria, expectations, and review guidelines are established, current principal lecturers could be reviewed at their next contract renewal time or three years (whichever is later) to be evaluated for tenure. For NTID,

professional tutoring (also referred to as individualized academic instruction) is included in the work-load model and an equivalency model between individual teaching and a 3 credit hour class exists. Although tenure may be granted to teaching-intensive faculty, salaries would be maintained at market levels, which is expected to be lower than that for tenured research-intensive faculty (calculated as described in Option 2).

d. Scholarship remains an expectation for all tenured faculty, however, the level of scholarship would differ between research-intensive and teaching-intensive faculty, which would include principal lecturers.

Option 2: True Specialization: New TT hires could be either research or teaching-intensive.

a. Another option is to hire TT faculty to be focused as teaching-intensive or research-intensive roles. The teaching and sponsored research expectations for each category would follow the workload opportunity relationship (similar to Figure 2) and be established by each academic unit following a university guideline. Updated promotion and review schedules would need to be established along with specific criteria and expectations before a tenure review. The T/TT faculty member would be at the same rank but being paid at a level commensurate with their job function and consistent with market drivers. This strategy would need to ensure that salary adjustments are made per market levels for research-intensive and teaching-intensive roles (analogous to T/TT vs. lecturer).

b. Such a model could also allow for scenarios where a base salary is provided for teaching and service activities, and then based on research/scholarship expectations and performance receive a supplement (similar to administrative stipends today). This approach could provide additional flexibility and better contain university costs by compensating those contributing to the required job function that market levels demand. The research supplement could also be scaled with success, as an incentive to dramatically increase funding. Where significant scholarship is the model rather than funded research, the supplement could be scaled with success appropriate for the field. In instances where a teaching-intensive faculty member were successful at obtaining sponsored research during their 20-30% effort allocation, it would be possible for teaching-intensive faculty to transition to research-intensive and be eligible for the research supplement. Similarly, if the research-intensive faculty member were not able to meet sponsorship expectations, there could be a transition to teaching-intensive and surrender the supplement. Such an approach provides the most flexibility for performers and requires some administrative management by departments to ensure that all stakeholder interests are met while not leading to primarily teaching or research-intensive faculty. The enhanced tenure review and promotion aspects discussed above for Transition Option #1 would be embraced under this option. Fluctuations in enrollment would be handled by adjunct faculty, lecturers, one year full-time contracted as noted in Transition Option #3 or visiting faculty. The main advantage of this potential pathway is that all faculty would specialize in an area of demonstrated performance, rather than requiring all faculty to fully engage in all elements of teaching and scholarship that compete for faculty time.

Option 3: All new TT hires would be expected to be highly scholarship/research-active as defined by the college; consideration for updating the tenure policy to include external sponsorship (as defined by the college) as an additional criterion and develop 2nd assessment period for tenured faculty.

All newly hired teaching-intensive faculty will be NTT lecturers.

a. A short term strategy would be to hire only tenure track faculty who are research-intensive with clear sponsorship expectations. The university would also consider extending and updating the tenure policy to include sponsorship to maintain accountability. The requirement to meet sponsored research goals becomes a critical emphasis during hiring and promotion (as well as a market driver for higher salaries in TT positions). For example, research-intensive TT faculty would typically teach 2-3 courses/year (i.e. 20-30% of workload) and be expected to focus on sponsorship and research/scholarship as the remaining majority activity with minimal service (i.e. 10%). Often times, teaching loads are reduced by 50% for first two years for new faculty on the tenure track. In a situation where a faculty member has a delayed set of scholarship outcomes or a delay in sponsored research success, then increased teaching in years preceding tenure review can make it difficult to improve sponsorship performance. The data in Figure 2 supports the recommendation that a reduced teaching load should be maintained throughout the TT probationary period in order to increase sponsored research success. In addition, the review and promotion schedule would likely need to be adjusted to reflect the increased sponsored research expectations for the probationary period to allow a reasonable time for success. Borderline tenure cases today regarding sponsorship often resort to discussions of "trajectory" when it comes to candidates who have not produced tangible outcomes. By making sponsorship part of the tenure and promotion process, it eliminates the need for tenure committee members to estimate whether a candidate has a "self-sustaining research program," as clear metrics would be established per academic unit. Specifically, it is recommended that the mid-tenure and tenure reviews be extended by at least 1 to 2 years in order to eliminate marginal cases.

   If the research-intensive TT faculty excelled in teaching during the probationary period, but did not meet sponsorship expectations at time of tenure review, there could be a transition to a NTT teaching-intensive lecturer in lieu of a traditional terminal contract. However, it would be the rare case that a tenure track research-intensive candidate would transition to a NTT lecturer. Their reduced teaching load throughout the probationary period would provide less ability to assess the teaching breadth and handling of many courses if the tenure case is unsuccessful. If the TT faculty earns tenure and is successfully promoted, then the tenured research-intensive faculty would have their annual expectations updated as an associate professor in-line with prevailing workload expectations for teaching and sponsored research in their particular academic unit. All current tenured faculty would align with established workload expectations, including an increase in teaching responsibilities for individuals who are not interested or able to contribute to the sponsored research mission.

b. In the case of the teaching-intensive option, NTT faculty would teach 7-8 courses/year (conventional lecturers at market salaries) and could have 20-30% of workload for professional development and/or activity. Although an option would be to increase NTT lecturer teaching towards the university guidance regarding a maximum equal to 10

courses/year, maintaining a lower level would provide opportunities to infuse professional and scholarly activities into teaching. Current RIT policy E6.0 differentiates lecturer responsibilities based on rank of lecturer, senior lecturer, or principal lecturer. Present policy allows for lecturers to participate in varying types of service activities; however, it clearly states for all lecturer ranks that they are "not expected to conduct scholarship." Since 55% of course sections are presently taught by NTT faculty (see Figure 3), it seems imperative that provision be made to foster a certain workload allocation towards professional development to benefit teaching. A change in policy that would allow lecturers to include professional development as part of the 20 – 30% of their workload as is current practice in NTID.

In general, a strategy should be adopted to hire and retain NTT lecturers for extended multi-year contracts to increase curriculum stability. Short term needs by departments could be better served by hiring in visiting lecturer positions where appropriate. In terms of new NTT lecturer hires, a minimum of two years (preferably three) could stabilize teaching needs in a department as well as provide incentives to attract better talent. The current 3 and 5 year contracts for senior and principal lecturers, respectively, could be scaled accordingly (e.g. 6 and 10 years respectively) in order to provide continuity in the curriculum, as well as offer sustained input for accreditation, curriculum changes, and development of novel courses.

Discussion on Analysis and Transition Options

The scenario analysis suggests that future of faculty hiring and promotion practices need to be structured differently than currently exist. Policies should foster and reward excellence, yet retain flexibility and agility to provide a transitioning pathway for faculty who better align under a different workload. There are many aspects to consider in terms of faculty employment. A key consideration for the university to manage if it elevates sponsored research and hiring of TT faculty with clear sponsored research expectations is how greater start-up dollars for tenure-track hires can be established. To be competitive with peer research universities, it is imperative that start-up packages are raised to a level that attracts and retains top talent. A critical factor for the university moving forward is how such an investment should be attained and managed. Is there ability to establish a permanent university start-up fund with annual operating funds or will key administrators be responsible for generating external support from target donors? Of course, if RIT plans to hire research intensive faculty across different disciplines there will need to be commensurate increases in research infrastructure including space, access to trained support staff and so on.

It is also important to recognize that the workload model is strictly about job function and how faculty expertise aligns with university needs. For purposes of recruitment and hiring, the identification of a faculty member's job function with respect to the allocation of faculty time toward meeting a university and college need is imperative. Faculty responsibilities extend beyond current RIT E6.0 policy to include teaching, *sponsorship*, *research and creativity*, scholarship, service, and *administration*. Salary is based on job function for each faculty member aligned with their position, rank, and field of expertise. Tenure and promotion decisions are made by the university to maintain stability in curriculum and retain top performers; and can be updated to embrace the various workload models. Other strategies to retain top NTT faculty can include longer multi-year contracts (e.g. 10 or 15 years) which can approximate tenure commitment.

The outcomes in the scenario analysis are based on established sponsored research levels during FY16. If the university goal is to drive sponsored research, the analysis suggests a clear need to set expectations with each faculty rank and follow through with accountability to ensure success. This impacts hiring and promotion of new faculty and transition support for current faculty who need to update their skills. Although E7.0 Annual Review of Faculty provides information regarding individual plans of work and the evaluation of faculty, each college and department should also establish workload expectations by faculty rank and year level to show how they are linked to expected outcomes. In particular, a summary of typical activities should be created which gives department specific guidance toward what is considered as successful in a given year. This information should be readily available which could result in better outcomes. In the case of TT faculty, specific sponsorship expectations should be defined and articulated in each college and department to more clearly define reasonable performance levels. An example of a potential workload distribution/plan of work for a new TT STEM faculty member is provided in Appendix C. In the case of a tenured faculty member, the workload opportunity cost model can be established in each academic unit to provide a reference of courses/year to research expectations; factoring in any service or administration responsibilities. In fact, all levels of faculty (including department chairs/heads, and center directors) could have plans of work updated each year to acknowledge annual expectations in terms of teaching, sponsorship, research and creativity, scholarship, service, and administration. Adjustments can be made annually to reflect changes in course enrollment, sponsored research success, and changes in commitments for service and administration.

The data at RIT for KGCOE and COS in Figure 2 supports the notion that specialization provides a means to increase sponsored research while maintaining robust teaching activities. The extent of specialization is a controversial issue, particularly as it relates to the tenure system, since university faculty and administrators promote the "teacher-scholar" model. Therefore, it is important to review how RIT views the model. Per provost communication,[10] the first tenet of the teacher-scholar model is described at RIT as "a healthy balance":

> **At the heart of why RIT embraces scholarship in its academic mission is the underlying principle that scholarly activity enhances our educational effectiveness. In many respects, this principle is best captured by the teacher-scholar model, which RIT, with its strong roots and values in teaching and learning, is perfectly suited to embrace. The teacher-scholar model (i) assumes a healthy balance of teaching and scholarship; (ii) expects that one's scholarship is integrated with and influences the educational experiences of our students; and (iii) supports scholarly activities that are not limited to traditional scholarship of discovery. Simply put, the teacher-scholar is a faculty member who is engaged in scholarship in such a way that this work is integrally fused with the education of our students.**

While a "healthy balance" may be possible for some forms of scholarship, in light of the data in Figure 2, it is worthwhile to question the notion of "healthy balance" in the context of sponsored research. Would RIT be willing to promote and tenure specialists in either research or teaching? Would tenure and promotion committees recognize that above average excellence in one area (teaching or research) might be acceptable with average performance in another? Is it possible to achieve balance on average in the university, while also embracing specialization more fully? The fields that have opportunity for external funding should be required to follow workload opportunity cost guidelines. Such guidelines will need to be established per academic unit. Other fields should establish workload guidelines that maximize RIT's

[10] https://www.rit.edu/academicaffairs/sites/rit.edu.academicaffairs/files/docs/2.24.14%20Thoughts%20on%20faculty%20scholarship%20at%20RIT%20FINAL.pdf

internal investment on research/creative/scholarship activities to enhance reputation and engage students in an educational experience.

It is also proposed that the notion of the overall teacher-scholar model is not inconsistent with the specialization approach. The key focus of the teacher-scholar model is on the student experience, and that material presented is up-to-date and infused with relevance and excitement. Of course, expectations would be that faculty engaged in sponsored research would continue to engage students at the graduate and undergraduate level. With the increasing prevalence of teaching faculty (NTT or tenured) through specialization, the teacher/scholar balance can still be maintained. Certain courses could be co-taught by lecturers and research-intensive faculty, so that the intention of teacher/scholar faculty is achieved in the student experience. This would also have the ancillary benefit that lecturers would be exposed to new material, while the research-intensive faculty would also be required to adjust their research perspective so it resonated with the students. Assessment of learning outcomes via testing and also from student evaluations would need to be weighted heavily in evaluating the research-intensive faculty in their ability to resonate with the students.

The present analysis used data from COS and KGCOE which can represent a STEM-based focus to increase sponsored research at RIT. It is worth noting that non-STEM colleges like COLA and CIAS have also had tremendous success in recent years through initiatives in those colleges like The Center for Public Safety Initiatives and The Image Permanence Institute, respectively. Therefore, the ideas presented herein can encompassing all activities at RIT and can be extended through non-government funding sources.

In summary, the ideas and recommendations of the committee could be leveraged as a future RIT initiative: **F**aculty **O**pportunity **R**elating **W**orkload **A**ccountability to **R**esearch and **D**evelopment (RIT FORWARD)!

Adjunct Faculty

The committee focused on T/TT and lecturers for the most part. The data cited in the Kezar and Maxey book suggest that at many institutions part-time (aka contingent or adjunct) faculty make up over 50% of faculty. By comparison, RIT is less reliant on short-term contract faculty than other institutions. Table 1 shows that adjunct faculty on semester contracts teach 20 to 22% of SCH and 22 to 23% of sections. There are pros and cons to hiring contingent faculty. The major positive is that this allows for flexibility. As enrollments in programs and colleges change and fluctuate, RIT can respond by hiring instructors by the semester or by the year (visiting lecturers) to target areas of need. However, as noted above, there are different types of adjunct faculty and although both types allow for flexibility, the reasons for hire and for acceptance of hire are quite different. As a result, one should not mistake this category of faculty as homogenous. Adjunct faculty have a concentrated effort on teaching and are not eligible for service in governance, given the uncertainty of the length of time they will be on campus. Their voices are heard through the fulltime faculty of the respective colleges. They do not contribute to service, so one consequence of hiring contingent faculty is that it increases the burden on full-time faculty for service.

Another consideration of the dependence on adjunct faculty is related to graduate education. As the emphasis on graduate education increases the university should be mindful that almost 1/5th of graduate SCH are delivered by adjunct faculty. This is not sustainable for doctoral programs or research intensive tracks.

Table 1. IAR summary

Percentages

	Ugrad SCH		Grad SCH		Ugrad sections		Grad sections	
	2012-13*	2015-16	2012-13	2015-16	2012-13	2015-16	2012-13	2015-16
TT	49	40	68	62	48	40	69	63
NTT	28	37	12	21	27	35	11	19
Adj	22	23	19	17	24	24	19	18

*last year of quarters. 2013-14 is first year of semesters, a lot of change occurred overall in that year.

Tenure

The granting of tenure assures tenured faculty of academic freedom and requires these faculty to oversee the curriculum and participate in shared governance at the university. In one sense tenure permits the greatest flexibility for the faculty member whilst restricting flexibility for RIT and its administration. Because of the permanence of commitment to hire, tenured lines appear harder to establish. For a tenure-track faculty member, the normal path to tenure includes a probationary period (6 years at RIT), review at various intervals (E5 describes this for RIT) and review by a committee of tenured faculty and recommendations from one's colleagues. Faculty teaching, scholarship and service are assessed during the tenure process. The outcome is either the granting of tenure or a terminal contract. Thus, there is no tenure process without assuming the risk of denial of tenure and subsequent termination as an employee. Currently, it is typical for a candidate for tenure to submit documentation for tenure at the end of year 5, with review in and decision either positive or for tenure or a terminal contract at the end of year 6. Given the increased emphasis on funded research or significant scholarship, the committee does not believe the current time frame is in the candidate's best interest and recommends increasing the time prior to tenure review. It is recommended that the candidate submit the documentation at the end of year 6 with the review of documentation in year 7 followed by a decision on tenure at the end of year 7.

Given the current disparities in workload and in keeping with proposed options above, the committee also recommends a post-tenure review in an established year post hire (e.g. 12-14 years which would translate to 6 or 7 years post tenure)) that would be used for promotion review. The addition of the post-tenure review would serve as encouragement to continue the active research or scholarship program the faculty member initiated to earn tenure.

New Faculty Title/Ranks

The faculty of RIT, in particular the non-tenure-track faculty, hold positions that are not accurately reflected by the current available titles/ranks. The committee reviewed various titles and ranks at universities across the nation as well as other countries. In the Appendix E there are three ranks the committee proposes for consideration.

Summary and Recommendations

Current Status

Quality teaching at RIT has always been and remains to be valued, encouraged and recognized. Tenure and promotion policies require demonstration of faculty prowess in teaching, service and scholarship. With the university's goal to be recognized as a research institution, emphasis on research has been on the increase. This is manifested in new tenure and promotion guidelines, increased interest by faculty and university administration on sponsored research, and the profiles of recently-hired faculty. To ensure RIT's road towards becoming a Research 1 (R1) university, teaching workloads of tenured and tenure-track faculty have been adjusted to provide them the flexibility to engage in scholarly activity. To compensate for the loss of class presence while still meeting RIT's commitment to high-quality teaching, hiring of full-time teaching (non-tenure track) faculty has been on the increase. The table below illustrates RIT's faculty hiring from 2012 through 2016; the figures do not include part-time faculty.

Faculty hires 2012 – 2016	
Total Non-tenure track	214
Total tenure track	128
Tenured	13

The committee recognizes that a significant number of tenured faculty, who are expected to remain employed at RIT, attained their status under RIT's older expectations in which scholarship was broadly defined but which was not aligned with those of an R1 university. At RIT there are faculty in all ranks, including non-tenure track, with reduced teaching loads. The motivation for providing the releases, and the level of teaching reductions vary within and among colleges. In addition, about 20% of all sections taught university-wide are enrolled below the minimum guidelines. The table below shows the percentage of undergraduate sections taught below minimum enrollment guidelines in the fall and spring terms of 2015 and 2016 academic years.

College	**Percent**
CAST	27%
CHST	11%
CIAS	33%
CLA	16%
COS	14%
GCCIS	10%
SOIS	30%

College	Percent
KGCOE	21%
SCB	11%
University	20%

20% of all sections taught in fall and spring terms over the last two academic years represents about 2000 sections taught below the minimum guidelines.

Current minimum enrollment guidelines are provided below although one may question whether they are too low for undergraduate courses given the increase in student enrollment.

Course level	Minimum Enrollment
100	16
200	12
300	12
400 or higher	8
600 or higher	6

In light of the drive toward an R1 institution and in regard to the expectations outlined in the Strategic Plan that affect faculty and student enrollment, each of these scenarios has caused an increase in expense to the university and a shift in the delivery of curriculum.

Below are recommendations by the Committee on the Future of Faculty at RIT for changes to occur over the next 8 – 10 years. It is the belief that these recommendations may serve to foster equity within and among colleges, clarity in expectations of faculty, and greater stability in the ranks of faculty. The guiding principles and drivers considered when creating recommendations are located in the Appendix A.

a. Basis for the Workload Model

Recommendation: Create and implement a convertible basic framework designed to measure teaching load to ensure fair teaching responsibility distribution across campus. The new framework should easily convert to other teaching loads across colleges.

The committee recognizes that current university practice that relies on number of sections taught to measure faculty teaching loads is necessary for metrics used by entities outside of the university, it is inadequate. Due to the varying types of education experiences offered (e.g. labs, studios, independent studies, typical classroom offerings) the current practice does not map to metrics that are currently in use around the university for calculating workload. As a result the current practice does not provide an equitable way to measure teaching workload across campus. Therefore, the committee recommends that a convertible basic metric be defined to measure teaching load to ensure fair teaching responsibility distribution across campus. The new metric should easily convert to other teaching load metrics currently in use at RIT.

Pros
- Metric equating different types of curriculum delivery to a 3 credit hour course to be used and reinforced by all colleges
- Metric would equate efforts associated with different size enrollments
- Easier to determine the full complement of faculty efforts with respect to curriculum delivery
- Easier to determine hiring needs
- Easier to assign appropriate workload

Con
- Challenge to reach agreement on equivalencies

b. Workload Model

Recommendation: Develop university guidelines for a faculty workload model that includes suggested guidance for course release; adoption of a university-wide portfolio model should be considered. In addition, each college should develop a well-defined workload model that is published that follows university guidelines

Following a university guideline, each college or division develop and use a well-defined published workload model[11] for tenure-track and tenured faculty. The College of Science framework is an example of such a model. It is further recommended that there is close monitoring of each faculty member's performance accompanied by follow-through for faculty whose work effort and productivity is not consistent with the college's workload policy or expectations defined in the faculty member's plan-of-work. The framework should provide transparent, clear, and concise guidelines for determining course releases related to service including but not restricted to administrative functions. It is the belief that a portfolio system created with university guidelines may help to provide clarity and equity.

With a workload model, upon college approval, faculty who obtain external funding may be able to buy out a course at 10% of their workload. Teaching responsibilities will be increased for tenured faculty who are not producing the level of scholarship identified by the college as commensurate with the position. This will ensure coverage of courses and equitable distribution of workload. Option for developing workload models are located in the full report.

Pros
- Ability to plan course coverage
- Ability to plan for future hires
- Ease of determining equitable faculty workloads within and among colleges

Con
- Challenge to reach agreement on guidance documents

[11] In most cases this would mean teaching three 3 cr. hr. courses each semester, however, there are many contingencies that would affect this; including: class size, labs, studios, thesis advising, etc. So, each college would determine its own equivalent of a 3 cr. hr. course.

c. Teaching Loads for TT Faculty

Recommendation: Create standardized teaching loads following the guidelines for course release and described below to better ensure equity and consistency within and among colleges.

It is recognized that teaching activities are deterministic in nature whereas sponsored research and notable or significant scholarship is opportunistic in nature. The division of responsibilities within a POW workload should reflect the expected outcomes.

Workload of pre-tenure tenure track (pre-TT) faculty will be customized to a maximum load of two (2) courses in fall term and 2 (two) courses in spring term. In addition, service loads of pre-TT faculty will be gradually adjusted to provide those faculty ample opportunity to develop their research program while allowing them the space to get involved in governance, administrative departmental, college and university matters.

Tenured faculty's standard maximum teaching load will be 3 (three) courses in fall term and 3 (three) courses in spring term in recognition of 20% of time devoted to scholarship/research and 20% of time devoted to service. Any changes in this distribution should be based on additional responsibilities e.g. administrative responsibilities. The distribution can change for tenured faculty whose externally sponsored research program or whose level of scholarship is significant as defined by the college, with agreement with their supervisor and dean. It is important to incorporate accountability with the flexibility that is given to faculty. To this end, the division of workload for each faculty member should be reviewed annually to determine of the appropriate division of responsibility and implement any needed changes.

Pros
- Creation of equity among pre-tenured faculty workloads
- Ability of mid-tenure and tenure review committees to have sufficient data to support recommendations for outcome
- Determination of course coverage made easier
- Serves to meet current course delivery needs
- Facilitate projection of faculty hires
- Ensure adequate time for faculty with successful research and scholarship agendas to continue work or obtain future funding
- Ensure equitable and appropriate release time for scholarship and service for tenured faculty

Con
- Challenge to reach agreement on minimum and maximum teaching workload

d. Scholarship/Research Expectations

Recommendation: Require all tenured faculty to be engaged in significant research/scholarship and that within 10 years all tenured and tenure-track faculty be productive scholars as defined by their colleges and areas of expertise and in line with those of an R1 university.

The committee understands that transition to an R1 university is a lengthy and costly process and that a significant number of currently tenured faculty may better serve the university in a teaching-focused capacity. However, it is also recognized that a minimum level of scholarship should be expected from faculty to remain current in their respective fields. Sponsored research or the acquisition of some external support of scholarship or evidence of scholarship of significance (parameters/specifications to be identified by each college that can be quantified) is a requirement of all tenure track faculty and continuous throughout their tenure.

Pros
- Will support RIT's transition to an R-1 university
- Will help to achieve RIT's strategic plan
- Increases clarity of expectations for pre-tenured and tenured faculty, once "significant" is defined by each college under university guidance

Con
- Possible misinterpretation in the acceptance and recognition of significant scholarship rather than sponsored research

e. Revision to Tenure Model

Recommendation: Increase the time-line for tenure review.

In recognition of the increase in competiveness for funding and publication, the committee recommends that the submission of credentials for tenure and promotion to associate professor occur at the end of the 6th year in the rank of assistant professor for revision and evaluation of credentials to take place in the 7th year. The time-line for the comprehensive mid-tenure review would be adjusted to reflect the change in review for tenure (e.g. after third year).

Pros
- Increased opportunity to achieve success in sponsorship for research or creation of notable scholarship in non-research areas
- Increased amount of documentation to support candidate at time of review
- The extended mid-tenure review allows for additional time for review of performance

Con
- May be seen as a deterrent to applicants for TT positions

f. Post-Tenure Review

Recommendation: Explore implementation of post-tenure review.

To encourage productive research and a high level of scholarship and creative work productivity, continuation of quality teaching, and active service to the RIT community, post-tenure review of all

tenured faculty would be completed during year 6 or 7 post tenure. This would occur prior to promotion to professor.

Pros
- Serves to ensure that faculty maintain active research and scholarship post tenure or ensure recognition of significant service (e.g. administration) where it is the emphasis of a faculty member's portfolio
- Supports workload determinations with respect to release time granted
- Provides a structured timeline for promotion
- Serves as a basis for promotion from associate professor to professor

Con
- Change in culture and expectations among current faculty that may not be welcomed

g. Expectations for Promotions and Merit Increases for all Faculty

Recommendation: Faculty workloads shall be reviewed annually by administration (e.g. deans, chairs, directors) to ensure compliance with published guidelines.

Expectations for promotion and merit increases in any rank should reflect the expectations of the workload model for that rank. The workload model should be identified in the faculty member's plan of work (POW).There should be consequences for department heads and deans who are not following policy and for faculty not following the workload model and the plan of work POW.

Pros
- Creation of a more accurate plan of work with respect to workload expectations and accountability to provide basis for faculty expectations and future evaluation
- Provides an incentive for high performance faculty
- Ensures fairness and an unbiased approach to workload distribution

Con
- Reluctance of administrators not to give merit increases when appropriate

h. Teaching Load for Lecturers

Recommendation: Consistent implementation of the university standard workload for full-time lecturers which consists of the equivalent to a 5-5 teaching model, if there is not any service. Any exceptions are to be specified in workload guidelines for course release.

The primary workload responsibilities and expectations of lecturers at all ranks is teaching. Up to 20% of the faculty member's workload may be assigned to service or professional development as negotiated in the faculty member's POW. For example, a lecturer could have a 4-4 teaching load, and the annual evaluation and promotion expectations would then weigh teaching as 80% and professional development or service (or a combination there of) at 20% of the total workload. NTID has a model that can be used as an example.

Pros
- Limits the amount of release time and how it is awarded
- Serves to better plan for course assignment
- Serves to better meet current course delivery needs
- Serves to better plan for future hires
- Serves to allow for 20% of a lecturer's time to be devoted to other efforts that meet with college approval

Con
- Does not allow for current practice of full-time lecturers teaching less than the 4-4 distribution

i. Enhanced Employment Permanency for Senior and Principal Lecturers

Recommendation: Enhance and strengthen letters of appointment for lecturers and increase the appointment periods for senior and principal lecturers to 6 and 10 years, respectively.

As identified in one of the transition options it would be beneficial to increase the length of the appointments of both the senior and principal lecturers. Also, it is recommended that a review of the wording of appointment letters and policy E6.0 as they relate to lecturers take place. After review of current documents, there should be a coordinated effort to work with the Office of Legal Affairs, to modify the letter of appointment for lecturers and wording in policy E6.0, and strengthen the multi-year appointment letters for lecturers.

Pros
- Increase level of applicants for open positions
- Increase stability of lecturer workforce
- Increase morale of lecturers

Con
- Loss of some flexibility – minimal

j. Explore the possibility of job permanency with respect to principal lecturers using one of the options in the report.

It was suggested in one of the transition options that in agreement with the department head and dean, lecturers with at least five years in the Senior Lecturer rank may elect to be promoted to the permanent employment at Principal Lecturer rank. Promotion to Principal Lecturer is not automatic. Criteria at a minimum should include evidence of professional development, evaluation of credentials and work performance. Promotion of this nature would be handled by a committee and process parallel to that of promotion to tenured associate professor. The full-component of criteria would need to be determined as well as the consequences of not earning tenure.

Pros
- Increase morale of lectures

Con
- Creates two dissimilar paths to tenure

k. Principles and Expectations for Deans and Department Head with Respect to Faculty Workload Assignments.

Recommendation: Monitor and adjust, if necessary, Faculty Workload Assignments for entire college to be completed by deans and department heads biennially.

Fair workload distribution is essential to ensure the university's financial, professional and social health of its faculty. To ensure this practice it is recommended that a monitoring of faculty workload assignments occur. Deans and department heads will be required to review each faculty member's workload biennially. This broad workload overview of all faculty in a college, will ensure fairness and consistency among workloads within the college, will increase accountability and follow-up on workload efforts, and will provide information for planning future faculty hires. The review of each faculty member should be conducted by the dean, associate dean(s) and all academic department heads.

Pros
- Increase accountability within a college
- Increase level of conformity within a college
- Increase awareness within a college with respect to faculty workload
- Inform decisions made with respect to faculty hires and course offerings
- Serve to better control courses run with full enrollment
- Serve to ensure appropriate teaching load across the college

Con
- Not a current practice so some department heads may not embrace the level of transparency

l. Faculty Ratio Across Ranks with Respect to Sections Taught

Recommendation: Minimum of 40% of sections taught are by T/TT faculty

College and universities are compared by many factors and many of these comparisons affect the national ranking of a university. Included in the data that is reported and compared are the number of course sections taught by tenure/tenure track, non-tenure track, and adjunct faculty. Currently at RIT, each term a faculty ratio across the faculty ranks with respect to sections taught is calculated from data provided by Institutional Research. Part of the challenge presented to the committee was the evidence of a decline in the percentage of sections taught by T/TT faculty. It has been queried, if there is a ratio to which the university should aspire and if so, what ratio is recommended. The committee recognizes that drivers affect the ratio. If one defines and sets a strategic goal, the ratio of sections taught by faculty of different ranks may vary based on the set goal. Philosophically, the committee believes the university should set a minimum percentage of sections to be taught by T/TT faculty at 40% of the sections.

Pros
- Reflects a student centered research university mission
- Provides a realistic ratio to serve as guidance

- Provides for stability of workforce
- Ensures that majority of curriculum delivery is by full-time faculty, which supports student retention
- Guides faculty hires and types of new faculty lines created
- Serves as guidance for each college as well as university
- Reflects student-centered research university mission

Con
- Supports continuing reduction of TT contributions to the delivery of curriculum

m. Consider Options for Transition in the Report

Appendix A

Principles and Drivers for the Work of CFoF

Principle: Recommendations will benefit all faculty in a student-centered research university.

Drivers:

- Recognition of and appreciate for the work of all faculty, in all disciplines, in all ranks, and in all colleges is critical.
- A recommendation in support of any group of faculty should not be at the expense of another group of faculty.

Principle: Recommendations will be fiscally responsible.

Drivers:

- A recommendation is more viable if affordable.
- A recommendation may be implemented if seen as achievable.
- This is part of the charge to the committee.

Principle: Workload calculations will continue to use the established basis of a full-time teaching load of five 3-credit hour courses (or the equivalent thereof) for each of the fall and spring semesters; the 5/5 teaching load does not include course load release for service or scholarship. Using the provost's memorandum of 6 January 2011 where this workload is defined, lecturers' teaching load with service would be calculated to be 4-4 and tenured faculty with service and scholarship would be calculated to be 3-3. This calculation provides a 20% reduction for each of service and scholarship.

Driver:

- Outside organizations that rank colleges and universities use credit hours or sections taught as a metric in assessment.

Principle: Faculty workloads need to accurately reflect responsibilities and expectations associated with different ranks and titles.

Drivers:

- According to university data, in general, currently at RIT tenured faculty have decreased participation in the delivery of curriculum.
- Reduced teaching loads exist for tenured faculty to reflect their scholarship yet many tenured faculty are not producing scholarship or acquiring funded research at the level expected of a pre-tenured faculty.
- Reduced teaching loads exist for a number of non-tenured-track faculty.

- There does not seem to be consistency with respect to the reduction of teaching loads for faculty within or among colleges.
- Reduced teaching loads of TT and NTT faculty increase the use of adjunct faculty in some areas.

Principle: Transition to an R-1 university needs strategic planning; this includes faculty contributions and planned growth of graduate programs.

Drivers:

- The increase in graduate enrollment in the university's strategic plans affects the workload of some T/TT faculty.
- The goal for an increase in funded research requires an increase in the number of faculty securing and maintaining funded research.
- The time in the pre-tenure process is too short for the competitive market in all fields (e.g. funded research, high-level publication). Currently the time is 5 years before documentation is submitted for tenure review.
- Many tenured faculty do not continue an active funded research initiative (or active publication, active creative exhibits) once tenure is acquired. Currently there does not exist a means to address this drop in productivity.

Principle: Teaching is enhanced by faculty professional development or scholarship. All faculty should have the opportunity to participate in professional development or scholarship to ensure the delivery of quality curriculum at both the undergraduate and graduate levels. Professional development accompanied by secure employment provide a basis for a stable faculty. Non-tenure-track faculty who have achieved the ranks of senior and principal lecturer should have enhanced appointment security and professional development recognized.

Drivers:

- The increased dependence on NTT faculty and the resulting level of participation in the delivery of academic program curricula, needs to be reflected in greater level of employment permanency.
- If professional development is seen as contributing to success as a teacher, NTT faculty should be able to participate in professional development and have that activity recognized in a faculty member's annual review.

Principle: There should be equity within and among colleges with respect to how workload is calculated and reported.

Drivers:

- Outside reports consider sections or credit hours taught by different ranks of faculty.
- RIT colleges differ in workload calculations.
    - Some workloads are calculated by student credit hours generated, others are calculated by credit hours taught or contact hour.

- Student credit-hours-generated better reflect a faculty member's level of responsibility with respect to teaching different size class enrollments and therefor are a more accurate reflection of workload.
- Lack of conversion between credit hour or sections taught and student credit hours generated.
- Not all current workloads reflect the different types of teaching, e.g. independent study.
- Lack of conversion between different types of teaching, e.g. X number of independent studies = 3 credit-hour course

Appendix B: KGCOE Scenario Analysis Data

The KGCOE was used as a case study to evaluate the potential increase in sponsored research by adjusting the workload of T/TT and NTT lecturer faculty while maintaining a constant assumed college budget and course section amount. Faculty salary values can be used to constrain a scenario analysis to maintain a fixed budget for T/TT and NTT faculty. An estimate of KGCOE salaries used for modeling purposes for T/TT and NTT faculty is based on the Provost 2015-2016 Instructional Faculty Benchmarks by College with an average value of $115K and $78K, respectively. The average faculty salaries include benchmark data for all engineering departments and ranks for a given faculty type (T/TT vs NTT lecturer). Thus, a total college budget assumption can be calculated equaling $11.2M using the total number of faculty for T/TT and NTT (combining lecturers and adjuncts to assume 27 lecturers) and the average salary for each. The number of sections taught by each faculty type and the faculty headcount is based on the Instructional Activity Report (IAR) data (RIT Report May, 2016). There is always a small discrepancy between actual headcount values and IAR data based on the calculation methodology. The actual headcount includes faculty on professional leave, other administrative duties, etc.; whereas the IAR number represents the equivalent number of faculty engaged in teaching. In the case of KGCOE for 2015-2016, the IAR headcount was 79 T/TT and 27 NTT/Adjunct faculty. The T/TT faculty taught on average 4.3 sections/year (63% of total sections) and the NTT/Adjunct faculty taught 7.5 sections/year (27% of the total sections). As Figure 3 illustrates, KGCOE T/TT faculty are teaching a considerably higher percentage of sections than other collages at RIT, and second only to GIS T/TT faculty. The sponsored research total for the T/TT faculty during FY16 in KGCOE was obtained from the RIT RAPID database, and totaled $7.6M in awards (where $7.3M was achieved for 28 active PIs who both taught and received sponsored research funding highlighted in Figure 2 since 1 T/TT faculty member had solely research and administrative duties).

A series of scenarios has been constructed to assess how faculty type and workload allocation impact sponsored research funding. All scenarios have the same common assumptions and utilize the same algorithm: 1. Maintain the college budget (from the salary estimate), 2. Maintain the delivery of ~544 sections (from IAR analysis), 3. Maximize sponsored research funding, 4. Vary faculty numbers and converge on optimized solution based on assumptions. Table 1 relates faculty type to number of sections, average salary, and sponsored research. Table values for T/TT and NTT faculty salary are based on the Provost 2015-2016 Instructional Faculty Benchmarks by College with an average value of $115K and $78K, respectively; and the relationship between sections taught and sponsored research are based upon the KGCOE benchmarking data in Figure 2. The title of each faculty type is used for later reference when examining each of the scenarios. The complete summary for each of the 37 scenarios is provided at the end of Appendix B.

Table 1. Scenario analysis assumptions for each faculty type relating the annual teaching expectations, salary, and sponsored research levels.

ANNUAL EXPECTATIONS	**FACULTY TYPE**							
	NTT	NTT	Teaching	Balanced	Balanced	Research	Research	Research
	Lecturer-8	Lecturer-7	T/TT	T/TT-Teach	T/TT	T/TT	T/TT +	T/TT ++
Sections	8	7	6	5	4	3	2	1
Salary	$ 78,000	$ 78,000	$115,000	$ 115,000	$ 115,000	$ 115,000	$ 115,000	$ 115,000
Sponsored Research	$ -	$ -	$ -	$ 79,000	$ 149,000	$ 223,000	$ 395,000	$ 664,000

The first consideration is whether the KGCOE could achieve all constraints by having balanced T/TT faculty. If faculty could achieve a "Balanced T/TT" workload according to KGCOE data in Table 1 (which includes teaching 4 courses/year and receiving $149K/year in sponsored research funding), the college would need 29 additional T/TT faculty (representing an additional $4.3M in salary budget – more than a 38% increase over today) to cover all course sections. Although the budgetary constraint is not met by

this approach, it is still useful to consider its implications. If the sponsored research funding level were achieved for Balanced T/TT faculty, the college would realize $20.1M annually; a dramatic increase of 165%! Given that <10% of T/TT faculty in KGCOE presently are performing according to the Balanced T/TT relationship in Table 1, there would be an implementation challenge of moving primarily teaching active T/TT faculty with $0 in sponsored research today and changing expectations to result in Balanced T/TT faculty realizing $149K/year.

Alternatively, the scenario analysis can consider how a workload shift could impact sponsored research for the college with the current number of faculty in KGCOE. Figure 4 shows how modifying the T/TT faculty workload could increase sponsored research even with small variations in the number of sections NTT lecturers teach (from 7-8 sections). In this scenario, the existing number of faculty are constant (106 total), but faculty expectations are modified. Specifically, the analysis varies the number of T/TT faculty who teach 6 courses (no sponsored research) and those who teach 1-5 courses whereby their sponsored research is an outcome in accordance with Table 1. The shift in expectations to increase the number of research active T/TT faculty can have a dramatic influence on sponsored research, while at the same time, meeting course section requirements. Various scenarios have been explored to show combinations of T/TT and NTT teaching loads. One concern with this approach is that teaching T/TT faculty would be doing slightly less teaching but paid considerably more than NTT lecturers and the disparity would need to be justified. Also, this approach has some challenges: It may be difficult for most primarily teaching active T/TT faculty with $0 in sponsored research today to be successful, even with expectation changes, to obtain sponsored research funding. The key outcome of this scenario is that the % sections taught by faculty type does not need to shift dramatically to yield a significant change in sponsored research. What would need to change is the communication of expectations and the requisite accountability in performance according to a workload opportunity relationship, like data shown in Figure 2.

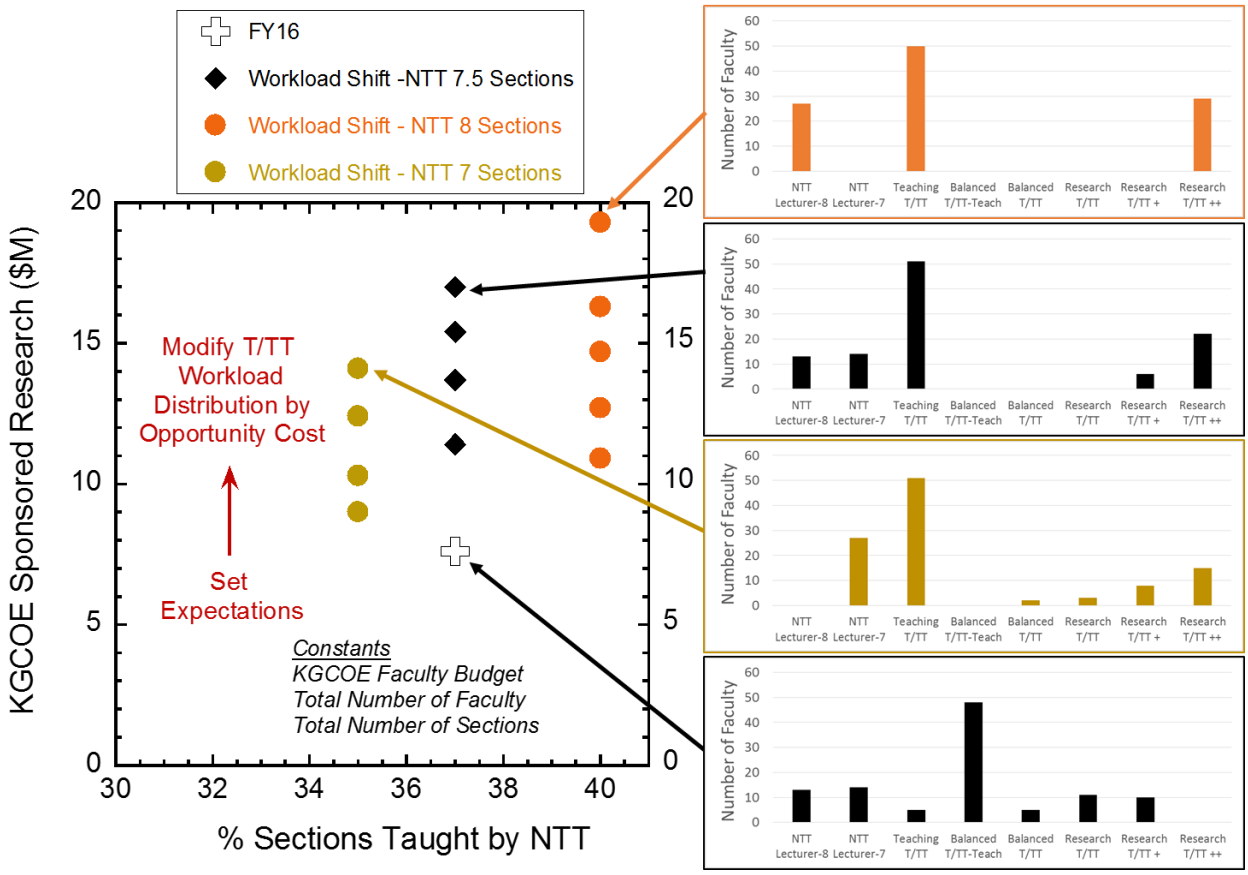

Figure 4. Scenario analysis results for KGCOE to determine increase in sponsored research for the college by setting faculty expectations and modifying the T/TT workload distribution with the opportunity cost model. The total number of faculty (106), total number of sections (~542 from IAR), and estimated college budget from the Provost Benchmark report were held constant. The data considers the impact of NTT lecturer workload varying from 7, 7.5, and 8 sections per year.

The relative percentages of course sections taught by T/TT and NTT faculty are critical values to benchmark and useful quantities to characterize various scenarios that lead to different funding results. As highlighted in Figure 4, the analysis shows that modifying workload distribution can increase research by around *2x*, provided those not contributing to sponsored research contribute more to the teaching enterprise. That data, along with additional scenario considerations like setting expectations that all T/TT faculty, are sponsored research active, further shifts the faculty workload towards specialization and are compared in Figure 5. The results, in general, show that increasing the fraction of sections taught by NTT can increase funding at a constant faculty budget. When all T/TT faculty are engaged in sponsored research, and the workload accountability is preserved, the sponsored research can increase by *3x* over FY16 levels. Ultimately, sponsored research can increase significantly as the ratio of lectures to tenure track increases if specialization is adopted with corresponding enhancement of *4-5x* over the FY16 level. There is a clear inflection in the NTT ratio around 70% that relates to specialization. In constructing the analysis, the NTT lecturer teaching was not increased greater that 8 courses/year, but based on the university guidance regarding a maximum equal to 10 courses/year, the sponsored research totals could increase further. Overall, the analysis shows that defining and maintaining a particular T/TT:NTT ratio is not a sufficient metric to manage faculty workload, particularly when competing interests like sponsored research vary dramatically.

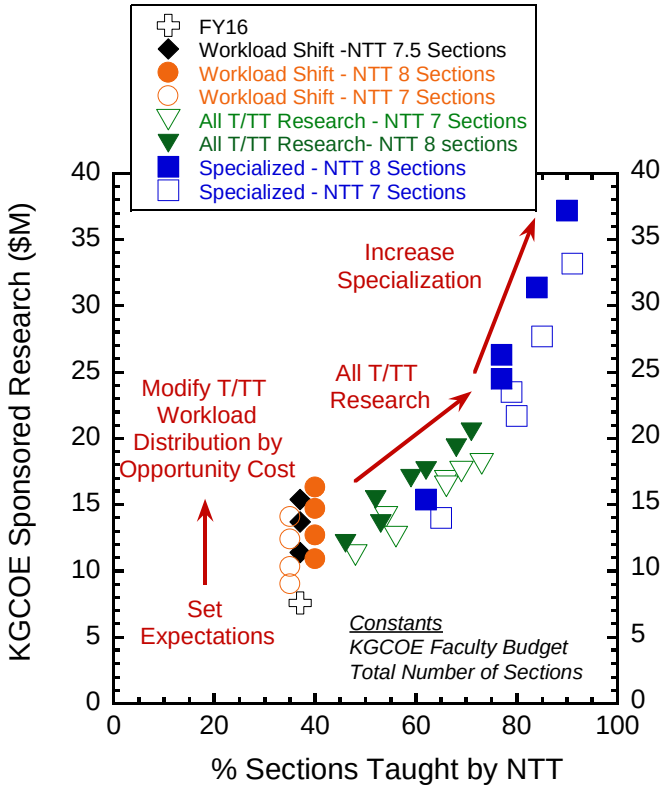

Figure 5. Scenario analysis results for KGCOE to determine increase in sponsored research for the college with comparison of data from Figure 4, as well as establishing that all T/TT faculty garner sponsored research, and an increase in faculty performance through specialization based upon the opportunity cost model. The number of sections (~542 from IAR), and estimated college budget from the Provost Benchmark report were held constant. The all T/TT research and specialized data considers the impact of NTT lecturer workload varying from 7 and 8 sections per year.

Based on the results in Figure 5, the pathway to greatest sponsored research involves specialization of faculty, both in research and teaching. Data suggests that promoting the notion of balanced T/TT faculty could at best achieve ~50% increase in research goals within the scenario constraints. Given the limited number of faculty currently performing at the "balanced" or "blended" level in the KGCOE/COS assessment (i.e. <10%), that pathway is unlikely to be successful, and a new message encouraging specialization should be fostered. ***The analysis outcomes indicate that RIT should foster specialization by promoting "Research-Intensive" and "Teaching-Intensive" faculty as a strategy to increase sponsored research.*** The specialized faculty would be hired with the job function linked to the annual expectations. During transition, the teaching-intensive faculty could be legacy tenured faculty who elect not to pursue sponsored research as well as NTT senior and principal lecturers. Faculty workload would be adjusted away from a uniform distribution of time across all areas resulting in majority and minority allocations leading to "Research-Intensive" and "Teaching-Intensive" faculty. Based on Figure 2, research-intensive faculty would teach 2-3 courses/year, representing an appropriate allocation of 20-30% for the minor workload activity based on the role. Similarly, teaching-intensive faculty would spend 20-30% of time on research/creative activities (i.e. ~1-1.5 days

Options to Maximize Sponsored Research

1. Set faculty expectations using workload model and maintain accountability.
2. Establish flexibility to modify faculty workloads such that all T/TT conduct research.
3. Increase specialization towards research-intensive and teaching-intensive faculty.

equivalent/week). Ultimately, each department and college would provide necessary guidance on what "Research-Intensive" and "Teaching-Intensive" faculty mean in their units.

ANNUAL EXPECTATIONS	FACULTY TYPE									MODEL RESULTS					
	NTT Lecturer-8	NTT Lecturer-7	Teaching T/TT	Balanced T/TT-Teach	Balanced T/TT-Teach	Balanced T/TT	Research T/TT	Research T/TT +	Research T/TT ++				%		%
Sections	8	7	6	5	5	4	3	2	1			KGCOE	Sections	Sponsored	Sponsored
Salary	$ 78,000	$ 78,000	$ 115,000	$ 115,000	$ 115,000	$ 115,000	$ 115,000	$ 115,000	$ 115,000	Total		Salary	Taught	Research	Research
Sponsored Research	$ -	$ -	$ -	$ -	$ 79,000	$ 149,000	$ 223,000	$ 395,000	$ 664,000	Faculty	Sections	($M)	by NTT	($M)	Increase
BASELINE 2015-2016	27 NTT/Adjunct taught ~7.5 sections/year				79 T/TT faculty taught ~4.3 sections/year and $96,550 in sponsored research						544	11.2		7.6	
Estimation of KGCOE faculty	13	14	5	46	2	5	11	10		106	545	11.2	37%	7.3	
SCENARIOS															
1: Eliminate all NTT and have just Balanced T/TT						135				135	540	15.5	0%	20.1	165%
2: Shift Workload - Opportunity Cost	13	14	35		3	10	15	16		106	544	11.2	37%	11.4	50%
2: Shift Workload - Opportunity Cost/Research +	13	14	40		4	6	8	12	9	106	543	11.2	37%	13.7	80%
2: Shift Workload - Opportunity Cost/Research +	13	14	45		2	4	4	8	16	106	542	11.2	37%	15.4	103%
2: Shift Workload - Opportunity Cost/Research ++	13	14	51		0	0	0	6	22	106	542	11.2	37%	17.0	123%
3: KGCOE Workload Model - high NTT	27		20			30	29			106	543	11.2	40%	10.9	44%
3: KGCOE Workload Model - high NTT/Research +	27		30			16	16	17		106	542	11.2	40%	12.7	67%
3: KGCOE Workload Model - high NTT/Research +	27		37			9	12	12	9	106	543	11.2	40%	14.7	94%
3: KGCOE Workload Model - high NTT/Research ++	27		42			2	9	12	14	106	541	11.2	40%	16.3	115%
3: KGCOE Workload Model - high NTT/Research ++	27		50			0	0	0	29	106	545	11.2	40%	19.3	153%
3: KGCOE Workload Model - low NTT		27	33			17	29			106	542	11.2	35%	9.0	18%
3: KGCOE Workload Model - low NTT/Research +		27	37			15	15	12		106	540	11.2	35%	10.3	36%
3: KGCOE Workload Model - low NTT/Research +		27	45			6	10	10	8	106	541	11.2	35%	12.4	63%
3: KGCOE Workload Model - low NTT/Research ++		27	51			2	3	8	15	106	543	11.2	35%	14.1	85%
4: T/TT faculty research expectations - high NTT	31				21	25	30			107	543	11.2	46%	12.1	59%
4: T/TT faculty research expectations - high NTT	35				20	18	18	18		109	542	11.2	52%	15.4	102%
4: T/TT faculty research expectations - high NTT	40				10	18	18	24		110	544	11.2	59%	17.0	123%
4: T/TT faculty research expectations - high NTT	42					23	23	23		111	543	11.2	62%	17.6	132%
4: T/TT faculty research expectations - high NTT	46					10	25	31		112	545	11.2	68%	19.3	154%
4: T/TT faculty research expectations - high NTT	36					36	37			109	543	11.2	53%	13.6	79%
4: T/TT faculty research expectations - high NTT	48						30	35		113	544	11.2	71%	20.5	170%
4: T/TT faculty research expectations - low NTT		37			21	25	26			109	542	11.2	48%	11.2	47%
4: T/TT faculty research expectations - low NTT		42			19	17	17	16		111	540	11.2	54%	14.1	86%
4: T/TT faculty research expectations - low NTT		51			5	14	18	26		114	544	11.2	66%	16.8	121%
4: T/TT faculty research expectations - low NTT		51				20	21	22		114	544	11.2	66%	16.4	115%
4: T/TT faculty research expectations - low NTT		54				10	24	27		115	544	11.2	69%	17.5	130%
4: T/TT faculty research expectations - low NTT		43				35	33			111	540	11.2	56%	12.6	65%
4: T/TT faculty research expectations - low NTT		56					30	29		115	540	11.2	73%	18.1	139%
5: Specialized Faculty – High NTT	52						21	21	20	114	541	11.2	77%	26.3	246%
5: Specialized Faculty – High NTT	57							29	30	116	544	11.2	84%	31.4	313%
5: Specialized Faculty – High NTT	42						69			111	543	11.2	62%	15.4	102%
5: Specialized Faculty – High NTT	52							62		114	540	11.2	77%	24.5	222%
5: Specialized Faculty – High NTT	61								56	117	544	11.2	90%	37.2	389%
5: Specialized Faculty – Low NTT		61					20	18	18	117	541	11.2	79%	23.5	210%
5: Specialized Faculty – Low NTT		66						28	25	119	543	11.2	85%	27.7	264%
5: Specialized Faculty – Low NTT		51					63			114	546	11.2	65%	14.0	85%
5: Specialized Faculty – Low NTT		62						55		117	544	11.2	80%	21.7	186%
5: Specialized Faculty – Low NTT		70							50	120	540	11.2	91%	33.2	337%

Appendix C: Example of workload distribution/plan of work for a new TT STEM faculty member

Prior to mid-tenure review – example only

Annual Plans of Work Workload %	Expectations/Activities	Outcomes to meet expectations
Teaching - 40%	• 2 courses/year (due to 50% release) including new development and delivery • Develop understanding of accreditation process and review • Prepare accreditation assessment documentation	• Meet curriculum requirements for accreditation • Contribute necessary items for assessment • Manage course delivery to maintain student evaluations at department average. • Respond to peer feedback and student evaluations in updating course offering
Sponsorship - 25%	• Attend grant writer's boot camp; apply for relevant RIT seed funding; attend external funding opportunity discussions and workshops/conferences. • Collaborate with senior faculty as Co-PI (internally and externally as RIT PI) to establish mentoring relationship and field credibility. • Apply to new faculty programs focused on young investigator and CAREER programs. • Explore and apply to relevant state funding and industry opportunities	• Submit 1-2 proposals as PI/year • Submit 1-2 proposals as Co-PI/year • Increase competitiveness of declined proposals
Research/ Scholarship - 25%	• Use startup funds strategically to equip lab/hire personnel • Recruit students including MS or PhDs to join group • Participate on Thesis/Dissertation Committees • Supervise undergraduate students in research through independent study, part-time, and/or co-op. • Collaborate with colleagues to develop research thrust areas and participate in visits by hosting speaker(s)	• Publish 1-2 journal articles/year • Present at 1-2 [inter]national conferences • Present 1-2 invited talks • Recruit at least 1 graduate student to join group • Supervise at least 1 undergrad/year in research

	• Leverage external contacts to receive invited talks • Focus on disseminating successful results to highest dissemination venue; co-authorship is good; postdoc papers ok	• Member of at least 1 thesis/ dissertation committee • Host 1 external speaker as potential collaborator
Service - 10%	• Professional activities including journal reviewer, proposal reviewer, funding review panel; conference [co]-chair/organizer; professional society • Department activities include engaging in faculty/staff meetings to enhance program; participating in accreditation and advisory board meetings; engaging in faculty/staff department searches; advising undergraduate students	• Solicit participation as proposal reviewer • Multiple journal reviews • Conference/society involvement

Years after mid-tenure and prior to tenure review

Annual Plans of Work Workload %	Expectations/Activities	Outcomes to meet expectations
Teaching - 40%	• 2-4 courses/year(due to appropriate release) including new development, refinement, and delivery • Contribute to ongoing accreditation process, strategy and review in department • Prepare accreditation assessment documentation	• Meet curriculum requirements for accreditation • Contribute necessary items for assessment • Manage course delivery to maintain student evaluations at department average. • Respond to peer feedback and student evaluations in updating course offering
Sponsorship - 25%	• Emphasis on external funding focused on young investigator and CAREER programs. • Collaborate with senior faculty as Co-PI (internally and externally as RIT PI) to establish mentoring relationship and field credibility. • Target PI opportunities that best align with research expertise	• Submit 2-3 proposals as PI/year • Garner research funding to support students and group (e.g. $80-100K/year) • Submit 1-2 proposals as Co-PI/year

	• Explore and apply to relevant state funding and industry opportunities	
Research/ Scholarship - 25%	• Establish a series of research results in a given field to establish notoriety. • Active supervision of several students across all levels; Advise students including MS or PhDs • Thesis/Dissertation Committees Supervise undergraduate students in research through independent study, part-time, and/or co-op. • Collaborate with colleagues to develop research thrust areas • Leverage external contacts to receive invited talks • Host 1 external speaker as potential collaborator • Focus on elevating impact of research results to highest dissemination venue; corresponding authorship expected	• Publish 1-2 journal articles/year • Present at 1-2 [inter]national conferences • Present 1-2 invited talks • Primary advisor for at least 1 PhD student • Supervise at least 1 undergrad/year in research • Member of at least 1 thesis/dissertation committee
Service - 10%	• Professional activities including journal reviewer, proposal reviewer, funding review panel; conference [co]-chair/organizer; professional society • Department activities include engaging in faculty/staff meetings to enhance program; participating in accreditation and advisory board meetings; engaging in faculty/staff department searches; advising undergraduate students	• Multiple proposal reviews • Multiple journal reviews for multiple journals • Conference/society leadership/organization

Appendix D. Creating a system of *Instructor Tenure* for Non-Visiting Principal Lecturer Faculty with Terminal Degrees/PhDs, brought forward for consideration by some committee members.

Currently at RIT:

All Non-Visiting Lecturer Faculty/w Terminal Degrees/PhDs: 80[12]

(Principal: 5, Senior: 29, Lecturer: 46)

All Non-Visiting Lecturer faculty, regardless of degree: 240[13]

Considering that:

1) an established system of increased job permanency for Lecturer faculty is a key recruitment and retention tool for highly qualified faculty, and

2) a broad and growing front of research shows that the system of "permanently temporary" faculty appointments has negative consequences for student learning,

1. The first recommendation is the creation of a system of *Instructor Tenure* for Principal Lecturers with terminal degrees/PhDs.

2. Features of *Instructor Tenure* include the following:

a) Full-time current Principal Lecturers with terminal degrees/PhDs would be converted to tenure-track positions with no change in rank, or course load. Some change in pay is suggested. Currently, this would mean converting 5 positions at RIT.

b) *Tenured Instructors* will be expected to:

--continue to conduct service on the Departmental, College, and University level as appropriate (no new policies needed)

-- continue be engaged in professional development as appropriate to their fields (no new policies needed)

3. Senior Lecturers with terminal degrees/PhDs:

c) Who have completed a probationary period not to exceed five years would be offered permanent employment status equal to tenure, or *Instructor Tenure*, after a satisfactory Final Review.

d) Final review will include 2 parts: a standard Departmental Merit Review evaluation and a Review by a Promotion Committee.

e) A new policy for *Instructor Tenure* would need to be created for *Instructor Tenure Promotion Committee*.

f) Create avenues to accommodate *Tenured Instructors* whose research benefits the trajectory of the Departmental development and RIT strategic plan.

[12] 3 Visiting Professors and 27 Visiting Lecturers are excluded from this number

[13] 53 Visiting Lecturers and 3 Visiting Professors are excluded from this number

g) Keep the current system of Visiting Lecturer faculty (regardless of degrees) to allow the University system flexibility and agility.

4.Immediate policy change recommendation is to extend Lecturer contracts as follows: Lecturers' 1 year contracts to 3 years (year 1 being a probationary period after which a 3 year contract is granted), Senior Lecturers' 3 year contracts to 5 years, and Principal Lecturers' 5 year contracts to 8 years.

Appendix E. Suggested New Faculty Titles/Ranks

Policy E6.0 provides the listing of and definitions for faculty ranks and titles. Over time the delivery of curricula has developed (e.g. interdisciplinary work, combination of clinical practice and didactic work, internal and external collaborations) and necessitated the creation of a wider variety of faculty titles in the non-tenure-track faculty ranks. The following faculty titles are proposed to more accurately reflect the work of different categories of non-tenure-track faculty. If the title is to be a promotable rank, rather than a title, criteria of each title as well as expectations for promotion would have to be developed where appropriate. When developing criteria and expectations it will be important to take into consideration the existing criteria for the lecturer ranks. The creation of new titles will provide for consistency across campus and therefore a better understanding by all the positions held by members of the faculty.

Professor of Practice

Professor of the Practice of _____

Associate Professor of the Practice of _____

Assistant Professor of the Practice of _____

Possible examples of descriptors:

- Applies to a practitioner who through teaching and practice at RIT shares knowledge and experience in the profession
- Full-time NTT faculty
- Appointment in a an academic unit
- Area of expertise requires board national or state licensure or certified credentialing
- Required to maintain professional credentialing associated with the initial hire
- Requirements to include teaching, service, and clinical service
- Must provide professional clinical service to RIT registered students, faulty, and staff free of charge
- In rare cases a shared position with an outside agency may be considered
- Length of appointment
- Promotion criteria

Pro

- Meets the needs of existing individuals in academic units that provide clinical services and teach, but do not have an appropriate title recognize by their profession

Con

- Not readily understood by RIT campus
- Title may want to be used for purposes other than intended

Fellow

Fellow in ___

Possible examples of descriptors

- Full-time NTT; non-renewable, non-promotable
- Awarded for no more than 2 years
- Often used for an individual in transition from completing a terminal degree in their field of expertise and working in their field of expertise

Pro

- Could provide colleges with the opportunity to hire in a line, different from visiting, while awaiting a TT line to open
- Could provide 2 additional years toward completing requirements for tenure
- Could allow the title of visiting professor to be restricted to filling a vacancy or inviting someone to share their expertise on a visiting basis

Con

- "Fellow" has different meanings in different professions.

Faculty in Residence

____ in Residence

Possible examples of descriptors

- Full-time NTT; non-renewable, non-promotable, with no intention of hire
- Awarded for a maximum of 1 year (additional information to be determined)
- Expected to be a rare occurrence
- Suffix in Residence is preceded by the creative specialty in which the faculty member is engaged: e.g., Artist in Residence, Composer in Residence, Writer in Residence
- Primary responsibility of in-residence faculty members will be the public sharing of their craft, means may be devised to allow them to teach in other ways as well.
- In accordance with their specialized knowledge or skills, it is expected that in-residence faculty members will give public performances (recitals, lectures, readings, exhibits, etc.).

Pro

- Provides a title to more accurately reflect the purpose for an appointment as in the suggested description and for which RIT does not have a title

Con

- None

Appendix F: Additional Items

The follow items are outside of the committee charge, but could be further considered by RIT administration:

- Future of Faculty to support graduate enrollment - Explore the role of undergrad vs grad faculty in terms of teaching and research expectations -- growing MS or PhD by 30% will change dynamic
- Faculty buyout is not included in the model and can create teaching bandwidth without affecting the college budget.
- Impact on sponsored research services with the growth in funding – need for more administrative and legal support; Additional liaisons between academic affairs at OVPR could result in Associate Deans for Sponsored Research or Provost Faculty Associate for Sponsored Research Success
- What an "equivalent course" is in terms of class size, contact hours, etc.
- What specific criteria will enhance RIT's reputation? Analysis of key rankings' criteria relevant to RIT can also inform on workload activities which can elevate standing.