These Guidelines for Supporting Innovation, Scholarship, and Research at NTID were developed to contribute to RIT becoming regarded as a premier innovation university, to support developing scholarship expertise of all tenured and tenure-track faculty at NTID, to provide our students with opportunities for participation in research and other innovative scholarship, and to further NTID’s recognition as the national leader in research on the education of persons who are deaf and hard of hearing. This plan includes specific descriptions for the establishment of Strategic Research Centers, Laboratories for Discipline-Based Research, and an Innovation Laboratory Space where faculty will be encouraged to engage students in scholarship and innovation activities. These three settings space will be established in a new building, referred to here as Imagination Hall (pending formal naming), a space designed specifically for the needs of our faculty, staff and students.

Imagination Hall will house a variety of research and innovative projects. It will not be able to house projects that require equipment or activities involving safety concerns. For example, it cannot support “wet” or animal labs, hazardous chemicals, or materials requiring special ventilation or the handling hazardous waste. It is assumed that this space would primarily be dominated by pedagogical/student learning projects, computer-based activities, and educational investigations. It will be designed to support a variety of projects, including entrepreneurial endeavors, software development, and intellectual collaboration.

I. Strategic Research Centers (SRCs)

A. Responsibility/Functions of a Strategic Research Center

An SRC at NTID should serve as an intellectual gathering place for faculty, staff, and students who share researchable questions consistent with the mission and goals of NTID and an incubator for the development of new projects. The SRCs will support the research agenda of the college connected to its mission of serving as a national resource on the education and employment of deaf and hard-of-hearing individuals, particularly in STEM fields. Each SRC will establish a systematic approach to addressing key questions with the potential of enhancing the education and employment of deaf and hard-of-hearing individuals. The goal is for NTID to become nationally and internationally known for its research in key areas related to the mission of the college:

1. Teaching and Learning
2. Communication/Language and Literacy
3. Communication Technology/Access and Support Services
4. Employment, Adaptability to Social Change, and the Global Workplace

An SRC need not be bound by a single question, domain, or approach, but its members should share interests in a clearly definable topic that is judged to have applied implications for one or more NTID audiences as stated in the NTID mission. In addition
to serving as an intellectual home, an SRC will be expected to provide resources (e.g., expertise, mentoring, methodologies, equipment, supplies, space) during the early stages of project development and ongoing collaboration. Over time, SRCs are expected to become relatively self-supporting financially with opportunities for “spin off” projects and perhaps other SRCs. SRCs may include staff whose positions are partially or fully funded by the college.

B. Responsibilities of the Director of the Center

SRC Directors have three primary functions: (1) intellectual leadership, (2) administration of resources, and (3) the providing of feedback to members' home departments with regard to annual appraisals (in that order). With regard to leadership, the Center Directors will be the central links between the work of the SRCs and the other units of the college. They will meet with faculty and professional staff to inform them of the work being done in their centers. They will also invite faculty and staff propose projects that fit with the activities of the center and the goals of the college. Center Directors will also meet with potential funding sources outside of RIT to explore projects of mutual interest. With regard to administration, they will facilitate the development of external funding resources and management of the overall activities of their SRC.

When working in an SRC is part of a faculty member’s plan of work, the SRC Director and faculty member will design an appropriate feedback process to the faculty member’s home department chair. SRC Directors will provide written feedback for the center member’s annual appraisal as identified in the feedback process. This feedback will include a recommendation with regard to an individual's continuation within an SRC. The final decision with regard to an individual's continuation in an SRC will be a joint decision of the individual's department head, the SRC Director, and the faculty member involved. Note that non-continuance may indicate a change of research direction on the part of the individual, a change of research direction on the part of the SRC, insufficient contributions of the individual to the SRC, or the spinning off of part of the SRC to another project or center.

Center Directors must remain active researchers, and while they will not automatically be members of funded projects within the SRC, they may be the PI for one or more projects and/or co-PI on others, so long as this does not distract from their broader responsibilities for the SRC.

Center Directors will be given five-year terms with re-appointment on an annual basis based on annual appraisals and upward appraisals conducted in the first, third and fifth years. The fifth year appraisal will be a summative review. At that time, the SRC Director will either be given another five-year term or return to full-time faculty responsibilities. In the latter situation, the Director may continue to participate in SRC activities in their roles of PI, co-PI, or a team member on individual projects.
C. Initial Establishment of NTID Strategic Research Centers

Initially, there will be a call for proposals to establish up to four (4) new Strategic Research Centers (SRC) to address the four (4) strategic areas of research: (1) Teaching and Learning, (2) Communication/Language and Literacy, (3) Communication Technology/Access and Support Services, and (4) Employment, Adaptability to Social Change, and the Global Workplace. In collaboration with the NTID administration, the Innovation, Scholarship and Research Implementation Committee will issue a call for SRC proposals, review those proposals, and serve in an advisory capacity to NTID’s leadership team regarding the merit of the initial center proposals. Center proposals will include the goals of that SRC, possible projects, potential center members, Center Director, an evaluation plan. Additional information may be requested by Committee prior to review.

D. Number and Responsibilities of NTID Strategic Research Centers

SRCs are places for coordinated research, scholarship, and innovation. The amount of internal and external funding likely to be available is one consideration in establishment of centers. Given the possibility (preference) of extramural funding and recognizing internal constraints, there need not be any a priori limitation on the number of centers at NTID. Responsibilities of each SRC will vary with the individuals involved in the domain of interest, and it is not possible to specify responsibilities within each center in advance. The general responsibilities and functions are described in A. (above).

E. Space/Equipment/Financial Needs of Strategic Research Centers

Up to four new SRCs will be established utilizing space on the first floor of Imagination Hall. The specific space and equipment needs of each SRC cannot be determined a priori. Both will depend on the topic domain of interest, the number of projects and individuals involved, and the likely availability of external funding. The administration will need to determine the level of seed funding potentially available for individual Centers, and each will need to stay within its resource budget (space, equipment, and financial). Importantly, whatever procedure is developed to determine the lifespan of individual centers (see I. below), it is expected that all NTID resources committed to a particular SRC will be "returned to" NTID if a SRC is dissolved voluntarily or involuntarily. Resources obtained through extramural funding, in contrast, may continue to be utilized by the project PI and Co-PIs as long as they continue to pursue research topics that focus on NTID needs and goals. When an SRC is dissolved, distribution of remaining resources will be negotiated between the SRC Director, the PI and the PI’s department chair.

F. How Research Agendas are Determined for Strategic Research Centers

After the initial centers are established, there may still be considerable discussion regarding the development of specific projects and funding sources. The Center Director will facilitate the discussions among PIs and future PIs to establish strategic directions of
research in the Center. The Director and the PIs of specific projects together will identify funding sources to be pursued. A project PI will be the primary determiner of the focus of a project. Projects within a Center need to fall within the general scope of that Center, and there need to be general agreement between a PI within a Center and the Center Director with regard to a research project being appropriate for a Center.

There should also be communication among PIs within a Center regarding their current and planned projects. This does not mean that all members necessarily will be involved in execution of the same project within an SRC, but all are expected to have collegial intellectual input into all projects within a Center. The PI of a grant proposal will determine staffing of individuals on that project, with input optionally provided by the Center Director.

G. How Faculty Become Members of SRCs

Current and future teaching/research "portfolios" of faculty members (and staff members) will not affect how they become part of a Center. SRC members will be people centrally involved in the intellectual pursuit of a common question, both its initial formulation and the expected widening/shifting of focus as the research endeavor unfolds. The addition of new members to a project team, like the research agenda, will be by consensus with final determination made by the PI of that project. Although it is likely that the PI of the project may seek input from the Center Director, this is not a requirement. Recognizing that "research by committee" usually is doomed to failure, it is likely that relatively small numbers of individuals will be involved in any particular project, even if there are several projects (potentially with different or overlapping memberships) in a particular SRC. Individual faculty/staff may seek to join an SRC without any formal procedure, beyond permission of their Department Head, through discussion with the PI of the project they wish to join.

H. Support of SRC from Operational Funds and Extramural Funding

When the initial SRCs are proposed and established, it is expected that some centers already will be funded wholly or in part by existing external grants. Others will begin with seed money from a designated operational fund. This same source of funds may be utilized bi-annually to stimulate faculty research by having an open competition for internal grants similar to the RIT Provost’s Learning Innovation Grant system, but within the college of NTID. A review committee composed of representatives from NTID faculty, the administration, and SRC Directors will evaluate the merits of each proposal and allocate funds accordingly.

Faculty who want to propose an SRC after the initial centers are established should generate a proposal and include the same information on goals/objectives, staffing, budget/timeline, and evaluation outlined in the initial call for SRC proposals. Proposals will be reviewed by the NITD leadership team in consultation with the SRC Directors.
A faculty member participating in an extramural grant will not be eligible for continued operational budget funding for the same research project. With regard to extramural funding, it will be the responsibility of individual PIs to propose, secure, and administer budgets in the same manner as is currently the case. There will be no expectation that extramural funding will "pay back" initial operational funding, but such projects will either purchase their own equipment or secure prior administrative approval (through the Center Director) to continue use of equipment purchased through operational funding.

As is currently the case, some F&A funds currently going to NTID administration and home departments should be returned to established SRCs each year to support further research and grant-seeking. Projects that have been successfully funded externally for several years and then lose funding, may re-apply for NTID support for a limited time in order to continue the project while seeking external funding.

I. How Students will be Involved in SRC Research

Students will be involved in SRC research in one of three possible ways:

1. Students may be centrally involved in a faculty member’s research as part of a class project, thesis, or intellectual collaboration.
2. Students may be hired to work as research assistants using available operational or external funding.
3. Students may apply to appropriate external sources for their own funding in order to commit a specific amount of time to a given project within an SRC. It will be the responsibility of the Center Director and the PI to ensure that student activities/time commitments beyond those normally associated with RIT student assistantships are directly related to a student's plan of study and/or career choice.

J. Determining When Work of an SRC is Complete and Transitions to New Centers

It is expected that SRCs are born and SRCs die. The lifespan of an SRC solely supported by external funds will be determined by the lifespan of those funds (but see H. above).

The Center Director and/or appropriate administrative personnel may deem the work of a Center to be either completed or unlikely to secure external funding.

Projects within a particular SRC may obtain external funding and spin off from that SRC. Should sufficient funding be obtained, a request for SRC status can be submitted to the administration. As noted in C. above, an SRC need not be defined by space in any particular location, but will represent a specific line of intellectual pursuit, according the group of individuals involved in that pursuit and the potential for extramural funding.

Should an SRC nearing the end of its lifespan occupy a particular space, the appropriate administrator will accept proposals from other SRCs (currently functioning or potential) to take over existing space and equipment. It is expected that SRC equipment purchased
with operational funds will not be carried to home departments unless the appropriate administrator determines that there is no SRC that can make better use of the equipment.

II. Laboratories for Discipline-Based Research

Programs of discipline-based scholarship and research will be conducted by tenured and tenure-track faculty generally within their academic departments, although such projects could be proposed by faculty collaborating across various departments and/or colleges. All tenure-track faculty members are encouraged to participate in and should consider discipline-based research as part of their plans of work in the area of scholarship and professional activities.

Internal funds may be provided to support tenured and tenure-track faculty initiating scholarship and/or research activities, and faculty will be encouraged to apply for external funds to support ongoing activities.

A. Criteria for Projects Requesting Space in Imagination Hall

The area of Imagination Hall (second floor) designated for discipline-based research will be a place where scholarship within the various disciplines – and not directly associated with SRCs – can occur. In the discipline-based research laboratories, faculty-led teams can engage in innovative discipline based research that emphasizes the involvement of associate-level students, but does not exclude involvement of baccalaureate-level and graduate students. Teams including students at different levels are particularly encouraged.

Any member of the NTID faculty and staff may apply for space in Imagination Hall. Priority will be given to tenured and tenure-track faculty, but it is expected that all projects for which space is requested will satisfy the following criteria:

1. Projects should be related to NTID mission/goals (e.g., as described in Strategic Decisions 2020).
2. Logistics of the project must require unique space (i.e., as available in Imagination Hall, and not just traditional office space).
3. Projects should involve students as role players in the process of research, not just as “test subjects.”

Priority will be given to externally-funded projects, but internally-funded projects may be included in Imagination Hall on a space available basis. Non-funded projects will be replaced with funded projects, as they surface and are appropriate. Priorities for internally-funded projects will include the extent that they address a significant college need, have potential for significant impact on practice, include more than one RIT college, and are multi-year with strong potential for growth/funding/continuation.

B. Space/Equipment Needs for Discipline-based Research Laboratories

The diverse range of NTID research activities necessitates that the building’s infrastructure support a variety of space configurations. It also needs to be flexible to accommodate change and re-structuring as new research efforts emerge.
Guidelines include:

1. The overall space in design and function will be “deaf friendly” in order to create an environment that meets the needs of deaf individuals, in layout, visual features, and acoustic characteristics.
2. General space will be able to accommodate computers, projectors, meeting tables, video conferencing, meeting rooms etc.
3. Special architectural considerations may include sound/acoustic controls, secured space, accessibility ergonomics (e.g. easy line of sight, lack of visual noise, inclusion of attention devises, and appropriate lighting).

To the maximum extent possible, the discipline-based labs will contain shared equipment and resources, as well as individuals with the expertise related to research and development activities. These resources should be organized and made available to the community in a manner similar to the services that are offered by the Educational Technology Resource Room (ETRR) of the NTID Educational Design Resources Department. The ETRR provides access to specialized equipment and expertise related to sophisticated educational technology and applications to the NTID community in a centralized location.

C. How Discipline-based Research Will Be Supported/Funded in Departments and in Imagination Hall

It is a significant task for individual academic departments within NTID to support the logistics associated with grants received by faculty and staff. University and federal requirements for compliance with research policies and budgetary regulations necessitate such support. Internal funds will be made available to support the preparation of proposals, and management of budgetary, personnel, and reporting functions for discipline-based projects.

D. How Students will be Involved in Scholarship through Discipline-based Research

Discipline-based research will be more relevant and better reflect student perspectives if students are academically involved in research activities and not simply serving as “subjects.” Both graduate and undergraduate students will be invited to participate in the research centers. Current strategies under consideration to ensure student participation include:

1. Identifying programs from which graduate and other students could be recruited.
2. Recruiting deaf and hard-of-hearing students enrolled in RIT graduate programs.
3. Co-op experiences for NTID/RIT students could be used for supporting some student involvement in discipline-based research.

With increasing frequency, NTID has been receiving requests for post-doctoral opportunities as well as inquiries for other advanced degree students to come to NTID to
further their educations. This could provide additional talent to support discipline-based research.

III. Innovation Laboratory (Second Floor)

A. Purpose of the Innovation Laboratory

The Innovation Lab space will primarily be a place where associate-level students, with the guidance of faculty, are involved with innovative research and development, entrepreneurial initiatives, and related teaching. Use of Innovation Lab space will not exclude the involvement of baccalaureate-level students, especially those working on teams with associate-level students and will not be limited to those individuals who have received funding; this space is open to all.

For a project to be included in the Innovation Lab, an internal review by an oversight group will be necessary.

B. Space/Equipment Needs for the Innovation Laboratory

Flexible, experimental classrooms and meeting rooms will be included in the layout of the Innovation Lab. The central design characteristics of this area is that it should be adaptable so it can be physically modified in order to evaluate different environmental, space characteristics, presentation methods, and educational/access technologies. A significant feature of the adaptable learning spaces will be the ability to unobtrusively observe and document interactions between students, faculty and support service providers.

In a similar fashion, a specially designed space for conducting private interviews, focus groups and discussions where the events could be recorded for analysis will be included in the mix of space in the new facility. This type of space will used for a variety of educational and development activities. Within this space there could also be a specially designed user-interface lab related to individual use of technology.

Strategies to increase community participation in Imagination Hall should be investigated (e.g., teaching, lectures, discussion to generate interest and encourage involvement).

Types of space to be included in Innovation Lab:
1. Smart meeting space (“idea incubation area”)
2. Smart classroom space
3. Temporary project space
4. Telepresence video conferencing systems

The lab space should be equipped to allow individuals to access their personalized desktop from any workspace rather than be tethered to a particular computer. An added benefit would be up to 90% reduction in the amount of power consumed by desktop computers, thus promoting green technology in the lab.
C. **How Innovation Labs Will Be Used to Foster Undergraduate Innovation Activities**

The innovation lab will emphasize associate-level student work led by NTID faculty (or in some cases, alumni advisors/consultants) and supported by students. In this way, the Innovation Lab space and effort is differentiated from the RIT Innovation Center, where students design and lead projects with support from faculty. The Innovation Lab should be perceived as a place to brainstorm and develop ideas with the potential of becoming funded projects.

**Attachments:**
1. Floor plan of Imagination Hall
2. Call for Strategic Research Centers