

6.0 Research and Creative Activities

Research and creative scholarship provide a vigorous learning environment for our students and provide the ingredients by which the professional development of our faculty is enhanced and by which the quality of the university is judged. They are vital components of the academic life of the university. Accordingly, all research and teaching faculty are expected to become involved in such activities. Departments frequently support research among the faculty by reducing teaching loads for persons who become engaged in research and by designating some departmental operating funds for research. The university provides services in support of researchers, such as computing facilities, laboratory support services, various items of high technology equipment, and library collections.

6.1 Procedures for Research and Scholarship

Research at the university is classified as departmental research, core research, and/or sponsored research. Individual research projects may receive funds under one or more of these categories, as described below.

6.1.1 Departmental Research

Research supported by departmental operating funds and/or through adjustment of teaching responsibilities is called departmental research. In this category, faculty are free to pursue research to enrich their teaching, scholarship, and greater understanding of their discipline.

6.1.2 Core Research

Core research focuses primarily on the needs of Virginia and is funded by state and federal appropriations through the instructional division and Virginia Cooperative Extension/Agricultural Experiment Station. There are six core research sub-programs: agriculture and forestry research, coal and energy research, environmental and water resources research, industrial and economic development research, veterinary medical research, and supporting research. Faculty, who believe their research relates directly to one or more of the sub-programs and is applicable to problems/concerns of the commonwealth, should contact their department head or chair about procedures for securing core research support.

6.1.3 Sponsored Research

Sponsored research is supported through awards resulting from proposals submitted, on a project-by-project basis, by university faculty. Such proposals are submitted to state and federal agencies, corporations, and private foundations. Through sponsored research, faculty obtain the resources needed to conduct expanded research programs and to receive summer research support. Research time may be charged when the work activity and work reported are during the same period. Competitive awards add stature to the recipient and the university; thus faculty are encouraged to seek such support. The only restrictions for sponsored research are that it must not constitute undue competition with commercial testing and research laboratories or with private consultants, and that it is compatible with the primary mission of the university. Questions about the appropriateness of a specific research project should be directed to the department head or chair or to the Office of the Vice President for Research.

6.1.4 Removal of a Principal, Co-Principal, or Lead Investigator

University policy and procedures for removal of a principal, co-principal, or lead investigator are described in section 2.7.7.4.

6.1.5 Preparation of Proposals for Sponsored Projects

The Office of the Vice President for Research assists faculty in obtaining research sponsorship. Policies, procedures, and pre-award contacts are available on the Office of Sponsored Programs (OSP) website at www.osp.vt.edu. Faculty are encouraged to explore research sponsorships by viewing the Office of the Vice President for Research's funding opportunities website at www.research.vt.edu. Program development personnel will consult with faculty regarding research support and will help faculty to locate programs and individuals at government agencies, industry, and private foundations.

Most funding agencies have their own scientific and technical interests and funding restrictions. Therefore prior to writing a formal proposal, faculty are encouraged to review their proposal concept with the appropriate person at the agency to which the proposal will be submitted. Personnel in the Office of the Vice President for Research will help the principal investigator find the appropriate person(s) for such discussions. Faculty may wish to discuss proposal preparation with the appropriate member of their college dean's staff. Before final budget preparation, an OSP official should review the proposed budget. The OSP official can provide information and guidance about university policies

for cost sharing, budgetary matters, confidentiality, publication, and intellectual property undertakings.

The required forms for proposal submission can be found at www.osp.vt.edu. Each proposal requires considerable processing. Whenever possible, the principal investigator should submit the proposal for internal approval two weeks before the deadline set by the sponsoring agency.

6.1.6 Laboratory Services and Facilities

Several colleges and departments maintain shops and facilities for design, fabrication, maintenance, and repair of specialized equipment. The Office of the Vice President for Research can direct faculty to the proper facility.

Environmental Health and Safety Services (EHSS) must be consulted *before* any laboratory is established in a university facility. The EHSS staff determines if the proposed laboratory will meet all necessary facility and laboratory requirements. The staff ensures that all personnel who will be working in the laboratory are familiar with the various university policies, procedures, and publications that cover laboratory operations. These may include laboratory and radiation safety manuals and animal research policies and manuals.

6.1.7 Ownership and Control of Research Results

The university asserts its right to the results of research funded wholly, or in part, with university resources. University ownership of intellectual properties is covered in policy 13000, "Policy on Intellectual Properties." These ownership rights extend to all permanent, visiting, or research faculty, staff, wage employees, and students.

The faculty principal investigator or project leader is expected to manage the university's ownership of research results and material (including all data) that best advance the standard routes of publication, presentations, and other usual means of dissemination of research results for that particular field. Creation of intellectual properties must be disclosed to the university by the prescribed route.

It is the responsibility of the faculty principal investigator as project leader to preserve the research material and results in the manner that is customary to the field. This includes all notebooks,

computer files, samples, specimens, prototypes, etc. germane to the veracity and validity of the research claims.

In the event that the faculty principal investigator or project leader permanently departs the university, it is the responsibility of that person's department head or chair to determine the disposition of the research materials and results.

It is the responsibility of principal investigators, student thesis chairs, and dissertation committee chairs to preserve the confidentiality of research material and results and to establish who may have access to them. Normally, access is limited to university faculty, staff, and students involved in generating these materials and/or needing access to them for *bona fide* research or administrative purposes.

6.1.8 Classified Research

The university discourages the undertaking of research programs when the sponsor wishes to impose secrecy on the research or its publication. This applies to both industrial and federal security classification. In general, the restrictions necessary to meet the security requirements for such research are incompatible with a university atmosphere. However, the university does recognize that individual investigators may wish to work in areas that have classified aspects, and may therefore need access to classified information. To accommodate this need, the university has a continuing security program administered by the Office of Sponsored Programs in accordance with government regulations.

6.1.9 Securing Theses and Dissertations

The graduate school may secure theses and dissertations for up to one year for purposes of obtaining a patent or for other proprietary reasons. To secure a thesis or dissertation, an electronic thesis/dissertation (ETD) approval form must be completed and signed by the thesis or dissertation author and by his or her advisor, with a request that the thesis or dissertation be secured. Securing involves the withholding of the thesis or dissertation from any publishing process.

6.1.10 Publication of Research

Because of its importance to the faculty, department, and the university, assistance is offered faculty in publishing the results of creative scholarship and research. Department heads or chairs can help determine how best to complete and publish the results of research projects. Page charges and other publication costs made by refereed journals may be paid from research funds with the approval of the department head or chair.

6.1.11 Supplemental Grants Program

The supplemental grants program provides funds to support travel to international conferences for presenting invited papers and for establishing international collaborations. Designed to promote professional development, to encourage the involvement of faculty in international activities, and to enhance the international reputation of the university, the program supports requests from tenure-track faculty. Funded by the Virginia Tech Foundation, the program is administered by the Office of the Vice President for Research. Awards of up to \$1,000 supplement funding from the applicant's home academic unit, college, and (as necessary) personal funds. Requests must be submitted no later than 30 days before the proposed travel. Additional information, application forms, and guidelines may be found on the Office of the Vice President for Research website at www.research.vt.edu.

6.2 Affiliated Research Faculty

Occasionally, individuals outside of university employment are identified to team with university faculty to enhance research opportunities through academic departments. To support these associations, the university has developed the affiliated research faculty program. Additionally, this program can address occasions where a university faculty member has a spouse or partner who also has professional academic credentials, but who has not found appropriate employment opportunities. The vice president for research reviews nominations from departments and colleges and approves appropriate applications.

Applicants must have academic credentials equivalent to those of university faculty, including the terminal degree normally required of faculty in the discipline. Applications for appointment must have the endorsement of the head or chair of the Virginia Tech department relevant to the applicant's discipline.

Typically, an affiliated research faculty member will have non-salaried adjunct status in the academic department of his/her discipline. The appointment is initiated by the host department submitting to the vice president for research a letter of support, applicant's *curriculum vitae*, and a P85 form (Request for Unpaid Faculty Affiliation with Virginia Tech Academic Department), approved by the department head or chair and dean. The appointments may be up to three years and are renewable. The rank should be the research faculty designation commensurate with the credentials of the candidate. (See the *Special Research Faculty Handbook*.)

6.3 Policy on Intellectual Property

In December 1991, University Council approved a revision of the policy that outlines intellectual property (IP) ownership criteria, resolution of ownership questions, and responsibilities of university employees concerning intellectual properties. This section provides a brief summary of the policy. The policy may be found at www.policies.vt.edu.

The policy establishes an Intellectual Properties Committee, chaired by the associate vice president for research programs, responsible for ownership review and inventorship review. This committee is responsible for making the appropriate recommendations to the provost concerning interpretation or conflicting issues that arise regarding specific IP matters.

6.3.1 Ownership of Intellectual Properties

For purposes of this policy, creations are divided into two groups: the traditional results of academic scholarship (i.e., textbooks, literary works, artistic creations, and artifacts) and the novel results of research such as products, processes, machines, software, biological technology, etc.

Intellectual properties in the first (traditional) group benefit the university by their creation and continued use in teaching, further development, and enhancement of the university's academic stature. The presumption of ownership is to the author(s). Thus unless there is explicit evidence that the work was specifically commissioned by the university, the IP rights remain with the author(s) and the university rights are limited to free (no cost) use in teaching, research, extension, etc. in perpetuity.

In the second group, the strong presumption of ownership is to the university with the originator having a right to share in the benefits derived there from. Thus, unless there is convincing and

explicit evidence that the IP was developed without the use of university resources and/or facilities,¹ ownership of the IP rests with the university and the originator(s) are obliged to sign the appropriate legal assignment documents upon request.

6.3.2 Obligation to Disclose

While it is recognized that faculty mission and expertise are concentrated and directed in areas other than commercial utilization, originators of new technology are strongly encouraged to err on the side of submitting a disclosure when in doubt as to its commercial potential. Timely (i.e., before publication or other enabling non-confidential disclosure) submission of a disclosure to the university may also be critical to the value of the IP and is strongly encouraged.

To the extent (and as soon as) the researcher/inventor/creator obtains research results that may be considered an IP and recognizes that they may have potential for commercial utilization, there exists an obligation to bring these results to the attention of the university in the form of a disclosure.

6.3.3 Revenue Sharing

Net revenues generated by the successful commercialization of intellectual properties owned by the university (whether or not protected by patent and/or copyright) shall be shared between the university and the originator(s) of the IP. Revenues subject to sharing include royalties, licensing fees, incentives, etc. received by the assignee licensor organization, less certain costs/expenses. Specifically excepted from sharing are payments received and designated for specific purposes such as sponsored or unrestricted research grants, services to the university, research equipment and/or materials, consulting fees to researchers, etc. These payments will go directly to the designated entity and purpose.

¹ Resources and/or facilities may include, but are not limited to, any of the following: use of equipment, laboratory, or office space; university time of originator and/or personnel under his/her control; funds supplied by the university and/or funds originating from sponsored research projects and/or donations to the university/affiliated companies, etc.

6.3.4 Management Responsibility

Virginia Tech Intellectual Properties, Inc. (VTIP), a non-profit corporation affiliated with the university, has been established and charged with the mission of protecting and utilizing intellectual properties for the benefit of the university. (See section 7.4.8.)

All intellectual properties assigned to the university shall flow to VTIP by assignment for operational management. The intellectual properties committee (through its evaluation coordination board) makes appropriate input and recommendations as to disposition and priority of individual IPs. Suggestions to VTIP from the originator(s) on the handling of their IPs are also appreciated.

VTIP has responsibility for funding of patenting costs, marketing, and licensing technologies, and fostering economic development resulting from start-up companies using Virginia Tech technologies. These activities are coordinated with the inventors whose industry contacts often provide valuable marketing leads.

Invention disclosures should be sent directly to VTIP, using the form available on their website at www.vtip.org. It is recommended that faculty contact VTIP sooner rather than later. If an invention appears in print before a patent application is filed, the ability to obtain worldwide rights is lost.