

TEACHING + TECHNOLOGY FELLOWSHIP PROGRAM

Request for Proposals 2005-06

PURPOSE

To promote interdisciplinary discussions of effective teaching and the development of exciting, innovative uses of technology for teaching at the University of Virginia. The TTI Fellows Program will support at least four instructional fellowships in 2005-06 for well-defined projects that make innovative and effective use of technology for teaching and that show promise for spreading these advances to other faculty members. The program is open to faculty members in any School or academic department with proposals to develop undergraduate teaching. Individuals from the professional schools who secure funding from their school to develop graduate courses are also welcome to apply to TTI so that those faculty and projects can benefit from the interdisciplinary interaction of the program. (Please see in particular the project of Elliott Weiss of the Darden Business School, of Margo Figgins of the Curry School of Education, and of Alf Weaver of the School of Engineering.)

DESCRIPTION OF FELLOWSHIPS

September 2005 – August 2006

Fellows will be provided with the hardware and software as well as the released time (e.g. summer stipend and/or course relief) necessary to complete their projects. Guidance from an Instructional Technology Advisor is also provided. The expected duration of the fellowship will be 12 months, September 2005 - August 2006. Project budgets should not exceed \$20,000.

APPLICATION PROCESS

Application instructions given below and are also available from Deans, Chairs, and the Teaching Resource Center. The guidelines are also available on the Internet at <http://nmc.itc.virginia.edu/TTI>. **Applicants are strongly encouraged to consult with the TTI Instructional Technology Advisors as they develop their proposals.**

DEADLINE

Applications should be forwarded to the Provost's Office, c/o TTI Fellowship Program, Attention: Janet Yunessi, P.O. Box 400308, Booker House, by **Friday, February 11, 2005**. Announcements of TTI Fellowships will be made by the Provost's office in late March. The program will begin with a weekend retreat in late September 2005.

NOTE

Any tenure-track assistant professor awarded a fellowship will have the option of delaying the tenure decision for one year. This option recognizes the significant commitment of time involved in the groundbreaking work of these fellowships. Successful applicants who wish to take this option must request it in writing to the Provost and the appropriate Dean before the start of the fellowship period.

SELECTION CRITERIA

Pedagogical Effectiveness: Projects selected will typically allow instructors to do something better than or other than what is currently being done with traditional technologies. Long-term teaching improvements will generally be foreseen as a result of the project. Applicants are encouraged to include supporting material from the relevant instructional technology and education literature, if available.

Preparation and Feasibility: Where appropriate, precise plans for programming and the use of field-tested software will be described. A timetable for completion and implementation of the project in the instructional program (preferably during the term following the end of the fellowship) should be well thought out and realistic.

Collegiality in Project Development: A TTI Fellowship is more than a solo award. Applicants should indicate a willingness to engage in debate and discussion with other TTI Fellows by participating in the September retreat and monthly meetings that are an essential element of the program. It is probably best not to apply for this Fellowship if travel plans or other commitments will make regular participation difficult. Fellows should also anticipate occasional participation in ongoing campus discussions of instructional technology use.

Plans for Project Dissemination: The proposal should show how the project would impact teaching done in the applicant's school or department by other faculty as well as the Fellow. Projects that develop materials that can be used in other courses and/or that are usable by other faculty members are especially encouraged. The project

should be strongly endorsed by the applicant's school or department, including plans to showcase the work within the department, the University community, and the appropriate professional conferences and journals.

SELECTION COMMITTEE CONSIDERATIONS

The following is offered as clarification of factors the Selection Committee will consider. The Committee will:

- a) strive for a balance of proposals from the Humanities, Sciences and Social Sciences.
- b) consider pedagogy over technology.
- c) carefully consider the feasibility of the project in light of the currently available instructional environment. (It is recommended that authors consult with the Instructional Technology Advisors to TTI while developing proposals to determine if the project can be accomplished with existing university resources and/or establish that it will require upgraded facilities or systems.)
- d) strive to include excellent proposals regardless of the technical expertise of the proposing faculty member. It is understood that participating faculty members will, with limited instruction and support from the Instructional Technology Advisor, be expected to develop a level of expertise and the technical skills to manage projects themselves, during and following the official grant period, and to integrate these into their teaching and research.

TTI FELLOWSHIP PROGRAM GUIDELINES

Please follow this format in creating your proposal. Twelve copies of the completed application should be forwarded to The Provost's Office, c/o TTI Fellowship Program, Attention: Janet Yunessi, P.O. Box 400308, Booker House, to arrive no later than February 11, 2005. An electronic copy of the proposal (e.g. Microsoft Word file) should also be included, if possible, and sent to Janet Yunessi (yunessi@virginia.edu).

Date

Name of Applicant

Academic Department/School

Supporting Dean/Chair

Please note that it is the applicant's responsibility to give his or her Dean or Chair the Reference Form provided with this application. The completed Reference Form should be sent directly to the Provost's Office, c/o TTI Fellowship Program, Attention: Janet Yunessi, P.O. Box 400308, Booker House, and should reach the Provost's Office no later than February 11, 2005.

I. Project Title and Summary Description (about 100 words)

This information will be used as an "executive summary" in describing the TTI project in documents such as the web site.

II. Pedagogical Aims of Project (Three page limit)

Please explain how your project will apply technology to enhance or replace existing methodologies for greater over-all teaching effectiveness. Is there existing research that indicates the effectiveness of this approach? What do you regard as the long-term improvements in teaching that will result from your project? Are there ways your fellowship can impact courses other than the one for which your project is designed?

III. Preparation and Feasibility (Two page limit)

How do you visualize the stages necessary to complete your project during your fellowship year? Will the programming be done by you or will you require a student programmer? If someone other than you will be writing the programs, what plans have been made for ongoing updates and enhancements? What timetable do you envision for completion of the project? When do you anticipate implementing the results of the project in the instructional program of your school or department?

IV. Evaluation and Assessment (Two page limit)

What criteria can be used to evaluate accomplishments during project development (the Fellowship year)? How can the pedagogical effectiveness of the project be measured? What is "success" for this project? Are there

existing tools, measures, or benchmarks that could be used in the assessment and evaluation of particular aspects of the project?

V. Collegiality in Project Development (One page limit)

Comment on your expectations regarding interdisciplinary discussions with other TTI Fellows (retreat, monthly meetings, and informal exchanges) during the development and early implementation stages.

VI. Dissemination (One page limit)

Include a plan to make others in your department aware of your TTI work. Do you foresee any applications for your work beyond your department? Are there professional channels (such as specific conferences, workshops, or journals) that would be effective ways to communicate the project to a larger constituency?

VII. Brief Summary of Equipment and Support Needed (One page limit)

What sort of equipment (hardware, software, supplies) is necessary for the success of the project? Are there any anticipated training needs? If graduate assistants or other student employees will be involved, what role will they play?

VIII. Budget (Two page limit)

Provide as precise an outline of your budgetary requirements as possible, using the following guidelines. Project budgets should not exceed \$20,000. Rough budget guidelines are included in the accompanying TTI Fellowship Budget Guidelines document, but applicants are strongly encouraged to consult the TTI Instructional Technology Advisors for assistance in developing a realistic budget.

TTI FELLOWSHIP PROGRAM: BUDGET GUIDELINES

I. Introduction

There is no "standard" range for a TTI budget. Projects have varied widely in scope and cost. It is appropriate to request funds for hardware, software, labor support, course release, and summer stipend (capped at \$5,000). Some departments have contributed in one or more of those categories, though co-funding is not a requirement. The purpose of this document is to provide a set of guidelines to help the applicant create a realistic budget for the proposal. These guidelines assume that the applicant may require computer hardware, software, and/or labor support. Our recent experience indicates that the most crucial parts of the budget are funds for labor involved with:

1. the digitization of "analog" materials, such as photographs, slides, sound, video, etc.
2. the development of interactive software components or tools; or
3. web page creation.

Below is a brief description of some of the more important budgetary considerations in each of these areas, including price estimates for each of the items described.

II. Estimates for Typical Project Needs

A. Media Acquisition

Applicants should recognize that the conversion of existing visual material into digital form is a labor-intensive task, in addition to requiring various hardware and software components. For example, to scan a single photograph requires at least three steps: first, the image must be scanned and saved to a file; second, the image may need to be resized, edited for contrast, etc.; and third, information about the image must be added to some sort of an image database. In addition to these basic steps, images often need to be converted into other file formats, edited for specific purposes, and they need to be copied for backing up. In creating a budget, then, it is a good idea to include one or more student helpers, and to make a rough estimate of the number of hours per week of their labor that will be required to scan the images--or whatever other media--one expects to digitize.

An important part of the digitization process is the storage of image or other media files. Image files, which frequently are as large as several megabytes--and therefore cannot be stored on a floppy disk--must be saved on a disk drive large enough to accommodate many of them. A project that involves several hundred images will require significant amounts of storage space. In addition, applicants need to consider three uses for storage space, each of which requires a different storage device. First, media

files need to be saved onto a primary storage device, preferably a disk attached to an Internet-accessible server. Second, media files need to be saved onto a secondary storage location for backup. A number of solutions exist for backing up media files, including saving them onto another server or onto some external device, such as a ZIP, tape, or Jaz drive. CD-ROM storage is another alternative that is useful both as a permanent and robust backup solution, and as a vehicle for the distribution and presentation of one's project.

It is a good idea to budget time for media digitization in terms of the material being digitized (number of images, length of video, duration of audio, etc.). Here are some rough estimates for each type of media:

Images 5-15 minutes/image
Sound twice the length (2 minutes for Minute Waltz)
Video 5-10 times the length (5-10 hours for 60 Minutes)

Keep in mind, however, that editing of digitized media, particularly images and video, can significantly add to the time for processing each piece of media. One of the best time-savers is to have high-quality media that will need little user processing.

B. Programming

Another labor-intensive area that should be considered in the budget is programming. Any "interactivity" that the project is expected to have, such as a Web page that contains a form to be filled out, will require programming of one kind or another. The amount and kind of programming will depend on the nature of the project and the applicant's scholarly field. Those in the natural sciences and engineering may need to construct program modules that simulate a mathematically described physical process, such as a differential equation relating to heat transfer. Such modules often require the use of a programming or scripting language. In the humanities, programming often takes the form of marking up and browsing texts with SGML and HTML-based applications or the creating of media archives. In both cases, additional programming might be needed to construct and deliver Web-based interactive projects. Thus, applicants should consider including student help in their budgets. Of course, the same students who help in the area of media acquisition may be employed in programming.

Given the wide variety of programming needs and approaches, we think it is best to gauge programming costs in terms of anticipated hours per week for a given project. Project work may be classified as more or less programming-intensive, and rough time budgets can be estimated:

Light (basic web work, use of existing scripts): 5-10 hours/week
Heavy (interactive modules, database development) 10-20+ hours/week

C. Web-Page Creation

Many TTI projects have made heavy use of the Web to deliver digital content. The design complexity and media-richness of each web page has an effect on the amount of time it takes to create each page, but we've found that the biggest time investment is in gathering the materials for the individual web pages -- generating text, digitizing media, developing interactive components. Nevertheless, there is a learning curve for both creating an effective site and page layout scheme and for learning the tools to implement the web site.

Time estimates are difficult without knowing the individual nature of the specific project, but as a rough guideline assume at least an hour per page. This figure is a good balance between the slow pace of design at the beginning of a project as different layouts are attempted and tools are learned and the pace at the end of the project where text is essentially pasted into an existing template.

III. Existing Resources and Availability

To support those engaged in the creation of instructional technology projects, the University provides public hardware and software facilities for the acquisition of media and for programming. In addition, TTI Fellows have special access to the Robertson Media Center located in Clemons Library, and to the Instructional Technology Advisors (ITAs). Ideally, a Fellow will use the Digital Media Lab (DML) and ITAs to acquire training and technical support, and for access to specialized hardware and software. Applicants should consider purchasing some of their own hardware and software for the actual creation of their projects, in order to facilitate development. However, we have found in many cases that it is far more cost-effective to use the TTI money to fund students to

use the existing equipment, software, and expertise available in the DML and other digital centers for the bulk of the project work.

TTI Fellows will receive storage space for their projects on a server, but those who need more space for the long-term may purchase a hard disk to be attached to that server, or they may wish to add a storage device to a departmental or personal server. The various digital centers on campus also have the capability to create CD-ROMs.

IV. Student Labor

The going rate for student assistants is about \$10-15 per hour. In most cases, the primary motivator for the students is the experience with the technology as opposed to purely financial rewards.

Students of all ages and from all disciplines have been successful as assistants on TTI projects. But applicants should realize that some programming languages and tasks are complex and may require special training. Students with the appropriate experience in the needed language or tool significantly increase the pace of the project. We have found that media digitization and much web page creation is easily within the grasp of most students.

TTI FELLOWSHIP PROGRAM: RECOMMENDATION FORM

Please return recommendations to the Provost's Office, c/o TTI Fellowship Program, Attention: Janet Yunessi, P.O. Box 400308, Booker House, by the deadline date, February 11, 2005.

Applicant
Department and School
Dean/Chair providing reference

Please give a candid evaluation of the project for which this applicant is applying. The Selection Committee would appreciate your assessment: (1) of the project in terms of its importance to the instructional program in your School or Department; (2) of the applicant's ability to bring the project to completion during the fellowship period; (3) of the likelihood of a long-term impact of the applicant's project on the teaching mission of the School or Department as a whole.

TTI FELLOWSHIP PROGRAM CONTACT LIST **Instructional Technology Advisors to TTI Fellows**

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