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Instructional Technology Group (Mission Summary)

The Instructional Technology Group (ITG) supports and encourages faculty in enhancing teaching, learning and research through the use of technology. As part of Information Technology Services, ITG seeks to meet the evolving information technology needs of Davidson's academic departments through exploration, development, promotion and use of next-generation technologies to support and enrich instruction. This development work takes place in the labs maintained and supported by our department. We also host faculty-led seminars, ITG-led workshops and one-on-one consultation in support of faculty integrating technology into teaching and learning.

The Center for Instructional Technology (CIT), located in the south basement of the Chambers building, is dedicated to faculty development work in all disciplines. In this space, we make available all of the tools needed to create a variety of digital materials, from scanning to rich media. The center consists of high-end Mac and PC machines, region-free DVD and VHS players, media converters, scanners, DVD burners and label makers, color printing, plotter printing, and a wide range of low to high end video, still photo and audio equipment. An extension of the CIT, the Faculty Development Lab (FacDev), resides in the Watson science building to allow easier access for science faculty. For the language faculty, we maintain and support the Language Resource Center (LRC), also in the south basement of the Chambers building. The LRC is a lab and a smart classroom, containing 21 computers and providing students and faculty with services for foreign language video, audio, and computer-based activities. In this space, we support the use of technology to enhance foreign language teaching and learning. For Film and Media Studies, we manage and maintain the Connolly Digital Media Lab a post-production space for editing on a variety of applications. For science faculty, we also manage and maintain instructional laboratories in the Watson, Dana, and Martin buildings. These contain a variety of PC and Mac setups, which require special hardware and/or software to cater to the needs of the laboratory classes. We strive to ensure that Davidson faculty members have access to the technology that enables new methods of instructional delivery, collaboration, and resource sharing. Faculty are encouraged to test emerging technologies along with us in the CIT.

ITG provides server-based tools for faculty and student coursework and research in the areas of course management systems, web authoring, podcasting and streaming media. Along with the network and systems group within ITS, we support the Blackboard Learning System, an online course management tool that allows faculty to interact and provide content for students in an easy-to-use interface inside and outside of the classroom. For courses doing their own web development and database applications, we manage a web server dedicated to academic work, allowing us the flexibility of setting fair use parameters. For courses needing streaming media, we manage a Helix server for on-demand delivery of audio and video. Currently, we are running a pilot Linux/Apache server for podcasting course materials via subscription through iTunes. With all of these services, we provide both front-end and back-end support and training for faculty and students.

ITG has developed internal and external institutional partnerships to effectively promote instructional technology. We have achieved this by interacting with departments and faculty at formal and informal gatherings: numerous faculty meetings, scholarly presentations, student presentations, breakfasts, lunches and dinners etc. These interactions have resulted in new partnerships to further instructional technology adoption. The relationships developed with the Library have resulted in better coordination and collaboration of our efforts to promote and support the use of technology and the sharing of resources. Beyond Davidson, we have forged and deepened relationships with the Associated Colleges of the South (ACS) and the Consortium of Liberal Art Colleges (CLAC).

Our goals for the future will build on the accomplishments thus far. We will continue to develop faculty awareness of instructional technology by showcasing innovative work, offering

workshops, as well as assisting individual faculty explore useful ways of enhancing their teaching with technology. We will continue to collaborate and partner with faculty on funding opportunities. We expect this area of our work to grow as we forge internal and external partnerships. We will continue to support faculty experimentation with new technologies by identifying promising emerging technologies and making them available to faculty.

Structure (policies & procedures)

Business Structure

The Instructional Technology Group and the Center for Instructional Technology and Language Resource Center are dedicated to academic development work. We do not provide support and media services to the general campus at this time. Structurally, we are a sub-group of Information Technology Services, a division of the college's Business and Finance department. Funding for ITG comes from the general ITS budget, determined by the Department of Business and Finance. We work closely with the Vice President of Business and Finance to stabilize equipment cycles for emerging technology labs. All hardware, peripherals and AV equipment are put on a 3-year replacement cycle. By the end of 2003-04 fiscal year, we have replaced about 95% of instructional lab computers older than three years.

We use a distributed model for our staff of 3, placing instructional technologists in close proximity to faculty by discipline. Specifically, the instructional technologist for the languages and the instructional technologist for the humanities and social sciences are housed in the Chambers building, adjacent to the CIT and LRC. Our instructional technologist for the sciences is housed in the Watson science building. Our staff includes:

- Kristen Eshleman, Director of Instructional Technology & Instructional Technologist for the Humanities and Social Sciences
- Kyosung Koo, Instructional Technologist for the Languages
- Vacant Position, Instructional Technologist for the Sciences
- Sarah Hatfield, Assistant Instructional Technologist (Student Fellow: a 1-2 year revolving position)

Job Descriptions

Director of Instructional Technology (*see appendix 1*)

Instructional Technologist for the Languages (*see appendix 2*)

Instructional Technologist for the Sciences (*see appendix 3*)

Assistant Instructional Technologist (*see appendix 4*)

Collaborations

Through our Executive Director of ITS, ITG works with IT governance groups on campus in a consultative decision-making process. Those groups include JCIT (Joint Committee on Information Technology) and ACC (Academic Computing Committee). Major campus initiatives such as the New Media Lab and Digital Assets Management are developed in consultation with these IT governance groups.

Collaboration exists between ITG and other departments to provide services for faculty and students. These include the E. H. Little Library, Institutional Research, and Grants and Contracts. As academic work involves information fluency, ITG and the Library will team up to provide expertise in computing and information, often in the form of metadata and research. Over the next year, ITG will work with Institutional Research to assess our services to faculty and students, leaning on their expertise in developing surveys for evaluating existing academic technologies and researching emerging needs across the curriculum. We also assist faculty writing grants that involve technology, working closely with our Grants and Contracts office.

Dissemination

As a way of sharing teaching innovations and ideas, ITG established the “Teaching with Technology Showcase”, a series that runs once or twice each semester, as well as in the summer. Sample event titles from the series are:

- Teaching with Technology in French, German and Biology (February 2003): 3 faculty members from different departments presented pedagogical methods they had developed using instructional technology.
- *Teaching with Technology: Blackboard Summer Fall Institutes*: 45 faculty participants were selected and received Blackboard training in summer 2002. Approximately half (75) of Davidson faculty are now using Blackboard to enrich instruction.
- *“Blackboard: Teaching with Technology Showcase”* (May 2002). 4 faculty were selected to share their experiences and showcase the courses they reshaped with Blackboard.
- *“Exemplary Models in Teaching and Learning”* (March 2002). 3 Faculty showcased Associated Colleges of the South (ACS) funded Information Fluency projects.
- *“Just-in-Time Teaching and Interactive Curricular”* (November 2001). Physics faculty showcased Just-in-Time Teaching (JiTT), an interactive pedagogy constructed around current Internet technologies.

- “Guidelines to Copyright and Fair Use in a New Era of Information Technology” (October 2001). Copyright experts from Smith and Helms, campus attorneys, engaged faculty in discussion about copyright and fair use.

Resources

Center for Instructional Technology (CIT, Chambers B260)

Hardware

- 5 high-end Apple Mac computers (G4 and G5 models)
- 4 high-end Dell GX 280 PC computers
- 3 Canopus media converters
- 1 Sony media converter
- 2 region-free JVC DVD players
- 2 multi-region (NTSC, PAL, SECAM) Video Cassette Recorders
- Rimage volume CD/DVD duplication burner / label printer (50 count)
- 1 HP Color LaserJet printer
- 1 HP LaserJet printer
- 3 HP flatbed scanners & slide scanners
- 4 Olympus voice recorders
- 5 Sony voice recorders w/ Dragon Naturally Speaking voice recognition and Nvivo transcription
- 1 Canon Ulitura Mini DV camcorder
- 2 Canon ZR50 camcorders
- 5 Canon ZR70 camcorders
- 3 Canon GL1 camcorders
- 2 Canon GL2 camcorders
- 2 Azden shotgun microphones
- 2 Audio Technica wireless lapel microphones and receivers
- 3 Canon PowerShot SD500 digital cameras
- 3 Nikon Coolpix digital cameras (995, 3500, & 5700 models)
- Boom stand
- 6 Promaster 6600 tripods
- Additional flash memory and card readers
- 15 Fujitsu ST4120 Tablet PC's
- 2 JVC NTSC monitors for video editing

- 2 JVC miniDV decks
- Sharp NoteVision ceiling mounted projection

Software

- PC – MS Office, MS Publisher, MS FrontPage, Visual Studio, Adobe Creative Suite, Macromedia Studio, Sony AV suite (Vegas, Sound Forge, Video Studio, Audio Studio), Real Player, QT Player, Windows Media Player, Camtasia, SnagIt, Discreet Cleaner, Roxio Media Creator, CuteFTP, iTunes, Windows Media Encoder, Windows Movie Maker, Mozilla Firefox, AbbyFineReader
- Apple – MS Office, iLife, Final Cut HD, Discreet Cleaner, DVD Studio Pro, Macromedia Studio, Adobe Creative Suite, SnapzPro, QT Player, Real Player, Windows Media Player, CyberDuck, Mozilla Firefox

Language Resource Center (LRC, Chambers B261)

Hardware

- 17 Dell GX270 PC computers
- 4 Apple G4 computers
- Crestron & Sharp NoteVision ceiling mounted projection system
- 20 Headphones w/ microphone

Software

- PC - MS Office, MS Publisher, MS FrontPage, Macromedia Studio, Sony Video Studio, Sony Audio Studio, Audacity, Olympus DSS Player, Sony VR software, Adobe Acrobat Pro, Adobe Creative Suite, Adobe Bridge, Arabic Now, Cyrillic keyboard & starter kit, CuteFTP, Hot Potatoes, Roxio Easy CD Creator, EuroTalk Movie Talk, iTunes, Windows Media Encoder, Windows Movie Maker, KEY, KEYTip Chinese, LanguageNow!, LION 2, Mozilla Firefox, PowerDVD, ReadIRIS, QT Player, Real Player, Windows Media Player
- Apple – iLife, CyberDuck, Adobe Creative Suite, Adobe Bridge, Adobe Acrobat Pro, Macromedia Studio, Hot Potatoes, KEY, KEYTip Chinese, Mozilla Firefox, QT Player, Real Player, Windows Media Player, Toast

Connolly Digital Media Lab (Chambers B263)

Hardware

- 4 Apple Mac G5 computers
- 2 Dell Precision Workstation 670 computers
- 2 DigiDesign audio mixing consoles

Software

- PC - Avid Xpress Studio Suite (Xpress Pro & DV, 3D, DVD, Pro Tools LE, FX)
- Apple – iLife, Final Cut HD, DVD Studio Pro, LiveType, Logic Pro

Faculty Development Lab (FacDev, Watson B)

Hardware

- 8 Dell PCs (GX240, GX260, GX270, GX280 & GX400 models)
- 1 Apple Mac G5

Software

- .NET SDK, Visual Studio, Sothink SWF Decompiler, Gordian Knot, Vegas, AutoCAD, Adobe Pro, WinRAR, Jmol, Adobe CS, DivX, PyMol, Chimera, Linux, Fedora, Windows Server 2003, Ghost

Science Labs

Hardware

- Physics – 16 Dell PC's (GX240, GX270 & GX280 models)
- Biology – 71 Dell PC's (GX240, GX260, GX270, GX280, GX400, SX260, & SX280 models); 1 Gateway E-Series, 1 Dell Latitude notebook; 1 Toshiba Portege; 24 Apple Mac's (G4, G5 & iMac models)
- Psychology – 34 Dell PC's (GX240, GX280, SX280 & GX400 models); 7 Apple Mac's (G5 & iMac models); 7 Compaq Deskpro PC's; 1 HP Pavillion; 1 Gateway 2000; 2 Toshiba Portege notebooks; 1 Dell Latitude notebook
- Chemistry – 52 Dell PC's (GX270, GX280 & SX280 models)

Software

- Physics – Jbuilder, DataStudio, ghostgum, ghostscript, Macromedia Studio, Mathcad, MikTeX, Orcad Family, Starry Night, WinEdt, EZCosmos, Mathematica, GIMP 2.0, PrintKey, ImageJ, Jedit
- Biology – Egg Timer, JMP, STELLA, Cyberduck, Clicker software, ImageJ, Visicapture, Snapz Pro, EndNote, Python, ArcGIS, Mathematica, plate reader, MatLAB, MAGICtool, KCJunior, NanoDrop, Stratgene, Scitech GLDirect, ScanAlyze, VMD, 157 software + Corel DRAW, BoxCar, Acrobat CS, Presence, MusicMatch, Olympus Digital Wave Player, Minitab, SigmaPlot, DNASTar, Prism4 & ScionImage
- Psychology – SPSS, Bryce Lightning, Carrara Studio, Poser, LineIn, Acrobat Pro, Endnote, Final Cut Pro, Macromedia Studio, Strata3D, SAS, Camtasia, Snagit, soundswell, Bioquant, Qcapture, Adobe CS, pCLAMP, Noldus the Observer, MediaCruise, Leiosoft Video Capture, Main Actor, Sigmaplot, physiological coding software, systat, theascribe, Amos, SuperLab Pro, & Sigmaplot
- Chemistry – Cosmoplayer, cygwin, Gaussian 98W, Mathcad, MDL ISIS, Spartan '04 & Delta

Evidence of Academic Development Work*

Languages

Projects

- French Department - Bilingualizing French Cinema web site for beginning and advanced French learners. This web site currently provides content in French only. In order to accommodate low-proficiency learners of French, an English version of the site needs to be created and linked from the French version. All pages will be linked to their counterparts in the other language. By providing the content in both languages, it will help all level learners comprehend the content. The evidence of work in progress can be found in the following web site:
<http://franklin.davidson.edu/lrc/french/frenchcinematest/fre363.html>
- Russian / Stuart Goldbert: had episodes of the Russian newscast *Novosti* digitized and streamed to his students in beginning Russian classes.
- Self-Instructional Languages / Carole Kruger: digitized versions of two Arabic videos (Al-Kitaab and Alif-Baa) used in Self-Instructional Languages have been streamed and made available to students on campus.
- Spanish / Magdalena Maiz-Pena: had her class record on digital video a Spanish play that they prepared for class. They then edited the play with iMovie, adding titles and special effects. Magdalena Maiz-Pena: also used digital video to deliver two conference presentations. She incorporated images and her own voice-over commenting on and analyzing the images. The presentation was burned to a CD that Magdalena sent to the session chairs.
- Spanish / Luis Peña is using video clips in Spanish 356 (Cine Latinoamericano Contemporaneo). He digitized and streamed short clips from movies that the class is studying. He has made the clips available in Bb. The project includes selected film excerpts from movies not necessarily included on the syllabus. The clips are adapted through a diversity of exercises to the different levels of linguistic, cultural and cinematic competence.
- French / Leon Sachs and Henry Buckley - are using digitized video clips in their French 201 courses. The clips are taken from French-language movies, digitized, and made available on Bb. Professors Sachs and Buckley include dictation exercises that they post in Bb. Students have access to the clips outside of class and the clips are also shown during class.
- French / Alan Singerman: developed a web site for his French cinema course (French 363), including text (bios of the filmmakers, film synopses, stylistic commentary), graphics, and QT video excerpts from the films being studied in the course.
- Spanish / Angela Willis - digitized several short clips for her Spanish 320 (Spanish Literature through the Golden Age). She digitized and streamed several clips from films relevant to the course. The links are made available in Bb where students can view them at their convenience.
- Chinese / Vivian Shen - is in the process of designing a Blackboard site for her Engendering Chinese Cinema class that will use digitized and streamed clips of films. The clips will be made available through Bb.
- Spanish / Kyra Kietrys is currently using iMovie to edit 6 hours of video footage she shot while in Spain. She is developing video materials to use in her courses.
- German / Julie Weber: had her ESL class use iMovie to edit and produce film from footage they shot. The goal of the project is to underscore the iterative nature of the editing process, whether it is for film or writing, and to strengthen skills in critical

analysis. Students work in groups and use a digital camcorder to capture footage and then edit the footage to develop and clarify an argument. For example, one group developed a short movie evaluating the concept of the honor code at Davidson. The notion of the author's relationship to the argument in an evaluative piece was likened to the choice of camera angle in a filmed work.

Workshops

- Web design for various classes in order for the students to present their scholarly work online as a part of class requirements.
- Audio/visual material production: creating, editing, and exporting audio/visual material including video, audio, and graphics.
- One-on-one workshops on various topics (e.g., Blackboard, web design, audio/visual material development, etc.)

Online Instructional material development and delivery

- Multimedia materials for foreign language teaching and learning have been digitized and stored in web space to be streamed online.
<http://www2.davidson.edu/its/instruct/lrc/languages.html> (All materials are password protected.)
- Documents have also been digitized and stored online to be distributed to students.
- Online video tutorials and instructions on using ITG equipments and specialized software have been created for students and faculty.
<http://www2.davidson.edu/its/instruct/lrc/help/index.html>

Consultations

- Collaborative online work space for research project
- Research data collection techniques using current technology
- Effective class material design and delivery
- Introducing new technology for foreign language teaching

Humanities & Social Sciences

Projects

- Anthropology / Dr. Nancy Fairley: Documentary film on Tucker Grove Campground; Working closely to examine secular and sacred tensions at an African-American religious camp meeting in Iron Station, NC. We will film and edit, then submit the documentary to regional film festivals around the South.
- English / Dr. Suzanne Churchill - *Little Magazines: an online bibliography* (http://www.davidson.edu/academic/english/Little_Magazines/index.html); Working closely on a comprehensive, web-based bibliography for Little Magazines; Responsible for the design and maintenance of the site as well as teaching web design and authoring to her students, who will assist on the research and updating of the site as an ongoing project in her upper level course.
- Information Fluency / English / Dr. Shireen Campbell - In this project, students from Shireen Campbell's English 101 course investigated the causes and/or effects of a major historic event—such as its change to co-education, its desegregation, or the impact of the Civil War--at Davidson College. Their investigation resulted in four or five class web pages (<http://www.davidson.edu/administrative/library/archives/Eng101/>), one per team, featuring:
 - A collaborative introduction that contextualized the event at the

- college;
- Links to individual student analyses of specific causes or effects;
- Links to selected archival materials relevant to the team project.

The project repeated the following academic year -

http://www.davidson.edu/administrative/library/archives/acs/main/davidson_home.htm

- Political Science / Drs. Pat Sellers & Mary Thornberry - Teaching Improvement Grant to include oral communication and evaluation in POL221 (Methods & Statistics). Student presentations were recorded and streamed for evaluation and review.
- English / Dr. Paul Miller - ENG293 class - students created short films twice in the semester. They received instruction in the use of camera equipment and Pinnacle Studio editing software as well as Final Cut Pro. The films were streamed for peer review and presentation.
- Anthropology / Dr. Nancy Fairley - ANT257 class - students are creating short ethnographic films
- English / Dr. Zoran Kurmanovich – student narrative videos
- Communications / Kathie Turner – student speech videos
- History / Dr. Barak Kushner - Captured US anti-Japan wartime cartoons and streamed them for students in HIS383 as evidence of propaganda.
- Political Science / Dr. Pat Sellers - Captured and streamed local political ads for student and campus review for POL314 - public policy course.
- Political Science / Dr. Mary Thornberry - Continuing Teaching Improvement Grant to include oral communication and evaluation in POL221 (Methods & Statistics). Student presentations were recorded and streamed for evaluation and review.
- English / Dr. Shireen Campbell - ACS Collaborative Grant to tape student presentation of archival research to be streamed for peer review at Washington & Lee and Furman University. We will also stream video content from W&L and Furman to be included in the joint Blackboard course.

Workshops

- Web design for various classes in order for the students to present their scholarly work online as a part of class requirements.
- Audio/visual material production: creating, editing, encoding and exporting audio/visual material including video, audio, and graphics for DVD, VCD, MPEG4 or streaming media.
- One-on-one and departmental workshops on various topics (e.g., Blackboard, web design, audio/visual material development, etc.) by request.

Online Instructional material development and delivery

- Multimedia materials for teaching and learning have been digitized and stored in web space to be streamed online. (All copyrighted materials are password protected and restricted to students enrolled in the class.)
- Documents have also been digitized and stored online via course web pages or Blackboard for distributed to students.
- Online video tutorials and instructions on using ITG equipment and specialized software have been created for students and faculty.
<http://www2.davidson.edu/its/instruct/lrc/help/index.html>
- Filming, capturing, smil coding and streaming for student presentations. These projects are driven by a campus initiative to improve student communication skills.

Consultations

- Collaborative online work space for research project
- Research data collection techniques using current technology

- Effective class material design and delivery
- Introducing new technology for foreign language teaching

Sciences

Projects

- Biology / ITG is working on web-based information fluency modules for use in Principles of Biology I, an introductory biology course required of Biology majors and pre-med students at Davidson College. Topics covered include: search skills and strategies for discipline specific databases; use of the WWW for information gathering; critical evaluation of data and information; components of scholarly communication in the sciences; and ethical and legal issues of copyright, citations, and plagiarism. The IF modules will have a Dreamweaver front-end and Blackboard-based units. The online format will reinforce exposure to the technology but also allow immediate feedback (Blackboard allows online exercise evaluation). Six modules will be developed. The topics covered will include: an introduction to the technology; search skills and strategies for discipline specific databases; use of the WWW for information gathering; critical evaluation of data and information; components of scholarly communication in the sciences; and ethical and legal issues of copyright, citations, and plagiarism.
- Neuroscience / ITG is working with Davidson's Neuroscience program to apply new information technologies to enhance and expand the study of the brain. JUNE (www.funjournal.org) is a new online journal for undergraduate neuroscience established with ITG's assistance. JUNE serves as a mechanism for faculty to exchange information regarding topics such as laboratory exercises, funding opportunities, new media, curricular considerations, and teaching methods. Neuroscience education at Davidson has recently been significantly enhanced with innovative use of streaming video to provide authenticated access to Just-in-Time instructional video for complicated animal brain surgery. Instructional Technology has also initiated a new project to capture video from high-powered microscopes. This project will involve the machining of special optics to adapt digital video cameras to the microscopes.
- GIS / In collaboration with 9 ACS Colleges (including Furman, University of the South, University of Richmond, Trinity College, Morehouse College, and Rhodes College), ITG has a new initiative to promote the use of Geographic Information Systems (GIS) software at Davidson. GIS is a computer system capable of assembling, storing, manipulating, and displaying geographically referenced information, i.e. data identified according to their locations.
- Genomics / In collaboration with departments of Biology and Mathematics at Davidson, ITG has created a new Computational Genomics Lab. The lab exists to teach a new course on genomics using 3D imaging technology. This cutting-edge facility is probably the first of its kind anywhere. Research 1 universities have 3D viewing in their research labs, but not as teaching labs. The College and our students will get great exposure and opportunities with this new setup. This lab will serve the following curricular needs:
 - Further integration of Genomics and Proteomics in Science Curriculum
 - Further integration of Biology and Math Curricula
 - Further integration Teaching and Research
 - Visualization of Data
 - Model Curriculum from Genomic and Proteomic Paradigms

- Biology / Dr. Verna Case: Senior Colloquium - 5 seniors made video projects as their final project in their capstone major course. To do this, they pooled video footage from a number of different sources and edited this footage using the Pinnacle Studio software. In addition to editing, these students learned how to add music and record their own narration into the project. The final product was thus a high-quality documentary on animal behavior topics.
- Psychology / Dr. Greta – *Psychology Goes to the Movies* - Students study how physical stimuli impinges on sense organs. Short video segments from prominent movies were digitized, streamed, and studied by the students.
- Psychology / Dr. Julio Ramirez: Video clips used to document elaborate surgery procedures. Complex animal surgery is video recorded, digitized and streamed. This collaborative effort between Williams, Wellesley, and Davidson is NSF funded.
- Biology / Dr. Barbara Lom: Students in developmental biology and neurobiology courses use commercial digital cameras to generate still images and short video segments of experimental procedures and data. To create montages and measure parameters of animal growth and regeneration they use Adobe PhotoShop, Scion Image, Pinnacle and iMovie.
- Psychology / Dr. Kristi S. Multhaup: Students in the Fall 2003 advanced seminar on Reminiscence (Psy 377) are studying autobiographical memory and reminiscence by discussing the research literature and doing case studies that will culminate in the streaming media enriched web pages. Each student interviewed a senior citizen in the Davidson area and captured their life stories using media tools (audio, video, images, etc.).
- Biology / Dr. Linda McNally: In Human Biology has digitized a variety of short videos to various infections.
- Biology / Dr. Dave Wessner: Currently developing portrayals of HIV/AIDS in Art, Music, Film and Television.
- Independent Student Video Projects: A number of students sought and received permission to work on short documentaries in place of the traditional paper. In Dr. Wessner's microbiology course, a student compiled a 30 documentary on HIV/AIDS
- Psychology - Creating visual stimuli for psychology experiment. The types of stimuli have been created; still pictures and movies. The still pictures have been extracted from a movie clips and placed on a document that will be shown during the experiment. The movies have been captured from commercial movies and edited to avoid any distractions.

Workshops

- Web design for various classes in order for the students to present their scholarly work online as a part of class requirements.
- Audio/visual material production: creating, editing, encoding and exporting audio/visual material including video, audio, and graphics for DVD, VCD, MPEG4 or streaming media.
- One-on-one and departmental workshops on various topics (e.g., Blackboard, web design, audio/visual material development, etc.) by request.

Online Instructional material development and delivery

- Multimedia materials for teaching and learning have been digitized and stored in web space to be streamed online. (All copyrighted materials are password protected and restricted to students enrolled in the class.)
- Documents have also been digitized and stored online via course web pages or Blackboard for distributed to students.
- Online video tutorials and instructions on using ITG equipment and specialized software have been created for students and faculty -

<http://www2.davidson.edu/its/instruct/lrc/help/index.html>

- Online video tutorials and instructions on using lab equipment and specialized software have been created for students at Davidson and at other institutions, using streaming media and Camtasia.

Consultations

- Academic needs requests for hardware and software across all of the science labs
- Collaborative online work space for research projects and online journals, such as JUNE (Journal of Undergraduate Neuroscience Education)
- Research data collection techniques using current technology
- Effective class material design and delivery
- Introducing new technology for foreign language teaching

** This list provides examples of academic work and is not exhaustive.*

Appendix 1 – Job description for Director of Instructional Technology

JOB TITLE: Director of Instructional Technology (Kristen Eshleman)

DEPARTMENT: Information Technology Services

JOB FAMILY: ITS

REPORTS TO: Executive Director of Information Technology

BASIC FUNCTION: Provides instructional technology leadership by focusing on the development and delivery of technologies that enhance teaching and learning. The Director of Instructional Technology will have supervisory responsibilities for instructional technology staff, and students. The Director will work closely with other members of the Information Technology Services staff, the Language Resource Center, Instructional Services/Media Services, Office of Grants and Contracts, and the Library -- to promote and support the use of technology in the teaching and learning mission of the College.

ESSENTIAL FUNCTIONS:

- Oversee the management of instructional computing facilities for academic departments; assist department chairs in the long-range planning and life cycle management of instructional computing facilities; serve as a technical resource to academic departments and liaison with Information Technology Services staff.

Hands-on management and maintenance of instructional and research computing facilities in academic departments. Work closely with faculty members who use to these facilities to ensure that the computing facilities support teaching and research functions.

Estimated time: 45%

- Supervise Instructional Technology staff and students. Coordinate program and activities with other Instructional Technologists and the larger team of staff within Information Technology Services who support technology throughout the institution.

Meet with Instructional Technology Group professional staff weekly to plan instructional support. On a daily basis coordinate all instructional activities.
Estimated time: 20%

- Stay informed of developments in academic applications of technology and developing programs around them;
Maintain communication with peers at other colleges. Maintain communication with product vendors. Research emerging technologies.
Estimated time: 1%

- Develop and deliver documentation, workshops, and other resources to assist faculty with the integration of information technology into the curriculum. Help faculty increase their capacities for effective technology-based teaching and learning.

Provide workshops and one-on-one training opportunities for faculty; Workshops include topics such as advanced features of Blackboard, improving teaching and learning with TabletPCs, database design, HTML authoring in Dreamweaver and Frontpage, flash animation, Intro to iMovie, Intro to FinalCut. Collaborate with faculty on funding opportunities.
Estimated time: 30%

- Work with Executive Director of Information Technology Services to plan new facilities for technology use; develop technology use policies; and organize speakers and panels on topics relating to faculty use of technologies.

Weekly meeting with supervisor, Mur Muchane, to keep him posted on ITG activities.
Estimated time: 2%

- Perform strategic planning for technology implementation and use at Davidson as a member of the Information Technology Services Management Team.

Meet twice a week as part of ITS Management and ITS Directors to plan, coordinate, and share information on IT functions.
Estimated time: 2%

- Participate in team-based management of Information Technology Services -- including planning, evaluation, and administration of work and services.

Serve on ITS working groups to plan new services and maintain existing services.
Estimated time: 10%

- Participate in departmental faculty meetings and faculty groups, and campus committees.

Meet regularly with individual faculty members and department chairs to learn of their needs, provide advice and consultation, and keep them apprised of ITS and ITG work. Serve on institutional committees
Estimated time: 5%

Appendix 2 – Job description for Instructional Technologist for the Languages

TITLE: Instructional Technologist for the Languages (Kyosung Koo)

DEPARTMENT: Information Technology Services

JOB FAMILY: ITS

REPORTS TO: Director of Instructional Technology

BASIC FUNCTION: Responsible for managing the functions of the Language Resource Center. Will work closely with faculty and students to help them acquire the conceptual and technical skills necessary to benefit from the vast potential of new computer technologies in the study of foreign languages and cultures.

ESSENTIAL FUNCTIONS:

- Maintain language computer lab.

Set up PCs and Macs for LRC; image machines; troubleshoot all hardware and software issues; purchase and install scanner for students; research and purchase software to support language teaching; manage server.

Estimated time: 20 %

- Manage the day-to-day operations of the lab (e.g., help individual students use course software; support instructors who hold classes in the lab; troubleshoot individual computers where necessary; supervise work study students at the Help Desk).

Manage student workers; train student workers in: all language-related programs, language features of Office, Dreamweaver, MovieMaker, iMovie, audio editing, scanning, OCR scanning. Recent language student training offered: LRC student assistants trained to lead intro to software for Self-Instructional Languages, training sessions

Estimated time: 30 %

- Facilitate faculty development in the area of computer pedagogy and support materials creation by faculty at the Mac and PC workstations (e.g., webpage creation, working with hypertext, downloading from the Web, use of Foreign Language templates);

Provide workshops and one-on-one training opportunities for faculty; Workshops include topics such as Using Video in Language Teaching and Using the Web to Facilitate Course Management.

Estimated time: 45 %

- Maintain a local area network (maintain and administer Mac or NT servers).

Estimated time spent maintaining local area network: 5 %

- Possibly teach one or two foreign language courses per year.

Teach French 201 Spring 2004.

Estimated time: 3 hours week in class

Appendix 3 – Instructional Technologist for the Sciences

TITLE: Instructional Technologist for the Sciences (Open)

DEPARTMENT: Information Technology Services

JOB FAMILY: ITS

REPORTS TO: Director of Instructional Technology

BASIC FUNCTION: Assist faculty using various technologies to support their teaching. The Instructional Technologist will work closely with other instructional technologists already working in foreign languages, humanities, and social sciences as well as with other Information Technology Services staff.

ESSENTIAL FUNCTIONS:

- Oversee the management of instructional computing facilities for Science departments; assist department chairs in the long-range planning and life cycle management of instructional computing facilities; serve as a technical resource to the departments and liaison with Information Technology Services staff.

Hands-on management and maintenance of instructional and research computing facilities in Sciences departments. There are approximately 230 computers in the teaching and research labs. Many of these computers are connected to scientific instrumentation. Work closely with every faculty member who uses to these facilities to ensure that the computing facilities support teaching and research functions.

Estimated time: 45%

- Assist faculty in the development and use of technology to enhance instruction and achieve the pedagogical goals of their courses.

Work with faculty in the sciences who want to use technology in their courses and in their research. These projects cover the spectrum and include beginner, intermediate and advanced instruction on every tool we have available to faculty and their courses, including but not limited to: electronic documentation, electronic presentation, online course development, website authoring, high-end printing, graphics and image creation and manipulation, film/video/audio recording, capturing, editing and streaming, DVD creation, and online survey and database creation and analysis.

Estimated time: 35%

- Develop and deliver documentation, workshops, and other resources to assist faculty with the integration of information technology into the curriculum.

Time here is included in the above estimate, as most of my work is handled as needed in a one-on-one approach and is included in my assistance to faculty.

Estimated time: (Included in above)

- Discover and publicize technology resources useful to faculty in their teaching.

This includes summarizing existing software and hardware via emails to faculty and through updates and changes to our existing ITG website. Discovery occurs through internal ITS meetings as well as through my own research into existing software and new features added through product updates and upgrades.

Estimated time: 5%

- Keep abreast of emerging technologies that have potential value for teaching, learning, and research.

Emerging technologies are best found through training, conferences, conventions, web research and educational publications.
Estimated time: 5%

- Coordinate program and activities with other Instructional Technologists and the larger team of staff within Information Technology Services who support technology throughout the institution.

Attend ITG staff meetings for approximately one hour every week, but also via phone conversations and email to discuss current projects, coordinate resources goals for all faculty based on the current and projected technology needs in teaching and learning. Additionally, I serve on ITS committees and working groups to coordinate our efforts with the other ITS groups on campus.
Estimated time: 5%

- Participate in team-based departmental management -- including planning, evaluation, and administration of work and services.

During ITG staff meetings (weekly)
Estimated time: 5%

Appendix 4 – Assistant Instructional Technologist

TITLE: Assistant Instructional Technologist/ITS Fellow (Sarah Hatfield)

DEPARTMENT: Information Technology Services

JOB FAMILY: ITS

REPORTS TO: Director of Instructional Technology

BASIC FUNCTION: Assist faculty using various technologies to support their teaching. The Instructional Technologist will work closely with other instructional technologists already working in foreign languages and the sciences as well as with other Information Technology Services staff.

ESSENTIAL FUNCTIONS:

- Assist faculty in the development and use of technology to enhance instruction and achieve the pedagogical goals of their courses.

Work with faculty with certain software or hardware setups, but most of the foundation for new technology's implementation is done via Mur.
Estimated time: 5%
- Develop and deliver documentation, workshops, and other resources to assist faculty with the integration of information technology into the curriculum.

Developed a number of guides for using for using technology and/or instructed students and faculty in use of hardware and software setups for both lab and personal use settings.
Estimated time: 15%
- Discover and publicize technology resources useful to faculty in their teaching.

Web research, looking for newer more efficient tools to accomplish of instructional technology goals. Includes occasional testing of products in labs.
Estimated time: 15%
- Coordinate program and activities with other Instructional Technologists and the larger team of staff within Information Technology Services who support technology throughout the institution. Participate in team-based departmental management -- including planning, evaluation, and administration of work and services.

Attend weekly staff meeting and serve on ITS working groups
Estimated time: 10%
- Assisting student projects

Represents a variety of work, to working with students one-on-one for survey or webpage projects, as well as specified functions in ITG services such as poster printing, etc.
Estimated time: 10%
- Administering Biology, Physics, Psychology and Chemistry computer labs.

Includes image building and management when labs are not in use, as well regular maintenance in verifying computers are up to date and operating in a smooth, transparent manner. Additionally requires upgrading hardware/software setups as technology becomes available, and responding to mid-semester faculty requests for new services to be implemented in labs. Lastly includes purchasing and management of licenses for software and hardware upgrades/replacements.
Estimated time: 35%
- Managing students and Miscellaneous task

Chief contact for work-study students. Responsibilities include setting work schedules, and delegating routine tasks on a weekly basis to ITG workers. Also includes working along side students on some projects.
Estimated time: 20%