

FALL / WINTER 2002

FOCUS

NTID

National Technical Institute for the Deaf • Rochester Institute of Technology



TECHNOLOGY IN
EDUCATION



The journey begins. Freshman students arrive on campus in August, excited and perhaps a little nervous, to begin college life with NTID's Summer Vestibule Program. Placement tests, program sampling, and social activities help acquaint them with the campus and one another while preparing them for a successful college experience.



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ABOUT THE COVER

Technology continues to be a key element in the pursuit of an education for NTID/RIT students, including William Pendlebury, a Professional and Technical Communication major, pictured here. The stories on Pages 4 and 6 of this issue, detail two of the newest ways that NTID is employing technology to enhance the educational experience for students.

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NTID

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FOCUS is published by the Marketing Communications Department at the National Technical Institute for the Deaf, a college of Rochester Institute of Technology, Rochester, New York. The views expressed in guest columns do not necessarily reflect the position of NTID or *FOCUS* magazine.

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Coming Full Circle

The ebb and flow of each academic year at NTID aligns in a unique way with the cadence of the seasons. Fall brings with it, particularly for new students, a feeling of adventure and newfound independence. Winter assails the senses with its relentless cold and an innate desire to “hibernate” a bit more and traverse the campus a bit less. Finally, spring brings the promise of longer days, warmer breezes, and perhaps, impending graduation.

In the seven years I have been at NTID, I’ve watched hundreds of students follow this cycle. Their May graduations always are cause for celebration, as they say goodbye to the familiarity of campus life and prepare to test the waters of the “real world.”

Using knowledge and skills learned both in and outside the classroom, these new graduates become engineers, artists, health care providers, computer programmers . . . husbands, wives, parents, coaches, and community volunteers.

As the years pass, their lives continue to change. But, hopefully, their memories of their college years at NTID remain strong and positive, and we take satisfaction in that.

Now we need them, and you, not to forget us.

The decision to financially support NTID has never been more crucial, and for so many worthwhile reasons.

Each family that decides to send a son or daughter to NTID/RIT chooses to do so because they share our belief that education is the key to their children’s future and that

NTID/RIT is the best place to receive it. Even a quick reading of our college’s mission demonstrates how strongly we are committed to that belief.

RIT’s \$300 million capital campaign, *Powered by the Future*, describes four major areas of investment: students, faculty, the campus, and research. Here is how NTID fits into these areas, and why supporting this campaign is critical to NTID/RIT’s future.

Investment in Students

Of particular importance is the financial strength of our student scholarship programs. Continually rising tuition costs, combined with increased competition for students, necessitate the ability to award more scholarship money each year. Increasing the number of endowed scholarship funds gives us the flexibility to award larger scholarships to the same number of students, or the same size scholarships to a larger number of students.

NTID’s 56 endowed scholarship funds last year enabled us to award nearly \$463,000 in scholarships to deserving students.

The result of supporting such students cannot be overemphasized, for when they graduate, they definitively close the earnings gap between themselves and their hearing peers. The average deaf high school graduate earns only 65 percent of what a hearing high school grad earns, but a deaf graduate with a bachelor’s degree in hand from RIT earns 93 percent of what a hearing college graduate does.



Honoring a role model NTID's Hispanic Deaf Club honored Dr. Robert Davila at their annual Cinco de Mayo celebration last spring for his support and tireless efforts to improve educational opportunities for students at NTID. Pictured here with Davila are students Denise Arias, left, and Kelly Lenis.

Investment in Faculty

In the next five years, it is anticipated that nearly half of NTID's current faculty will retire after serving the institute proudly and, in many cases, since its creation almost 35 years ago! We must recruit new faculty who can bring the latest expertise and vision directly from industry to NTID/RIT. We must hire gifted professionals who will devise solutions, introduce innovative teaching methods, and impart new knowledge. And, we must bring to NTID qualified, capable, and enthusiastic teachers who will support and encourage students to prepare for the broader world of work and society and to take pride in their deafness. Endowed professorships will help us do this.

Investment in the Campus

In order to support new technological programs and to promote a new spirit of community, we must transform our campus. We must build attractive facilities that optimize our students' living and learning environments.

The Dyer Arts Center, which opened in October 2001, is at the leading edge of these campus transformations. Both inspiring

and innovative, it dramatically showcases artistic expression within a highly technological environment. It is part of a campus master plan designed to add artistic, cultural, recreational, and social facilities to meet the expectations of a growing student population—and to meet NTID/RIT's desire to provide a well-rounded experience for its students.

Support of Applied Research

As part of its mission, NTID continually seeks out, explores, and adopts new technologies to ensure the success of its students and graduates. We are fortunate that our campus provides the perfect "living laboratory" to test and pilot such technologies, both among deaf people and between deaf and hearing people. Communication and information technologies are developed, adapted, assessed, applied, and adopted at NTID.

Of particular importance is our responsibility to educate corporations about such technologies for employees who are deaf or hard of hearing. We have developed partnerships with a number of business, industry, and government groups who are attuned to the needs of our graduates in these areas. As technology becomes

more complex, the need for qualified workers who can keep their skills current becomes increasingly critical. Our research partners help develop curriculum and provide professionals to teach specialized courses and create co-op opportunities. As part of our support of applied research, we are committed to giving our students every advantage possible as they pursue their careers in the real world.

The Finest Act

Preparing students for the "real world" is what we do best. As we greet them each fall and bid them farewell each spring, we are confident that we have given them a solid educational base from which to grow. Nowhere else in the world can they get the quality education and unique college experience we provide.

This past summer, a group of parents from Barcelona, Spain, visited NTID with their young deaf children to learn firsthand what sort of preparation will be required to have their children ready to matriculate as college students some 10 years from now. Clearly, the world knows about us and values our expertise.

This year—my last as RIT vice president for NTID, as I plan to retire in June 2003—I will devote a great deal of time and energy to soliciting funds, equipment, teachers, and students for NTID. I can think of no greater legacy to leave my successor than a strong position, both educationally and financially, from which to build.

The finest act that those of us who received scholarship support to attend college can perform is to turn around in later years and create similar opportunities for today's young scholars. They deserve the same educational choices and benefits that helped make us what we are today. Truly, there is no more powerful statement to be made about the value of education than this!

Changing the Way Business is Done:

New Technology Offers Easy Access to Services

by Frank A. Kruppenbacher

“It saves me time,” says William Pendlebury. “I used the new system, and I thought it was much faster.”

“When I heard it was online, I thought it was really cool,” says Carrie Brewer. “Much easier, quicker, too, for us all.”

What these NTID/RIT students are referring to is a first-of-its-kind computer intranet application designed exclusively for NTID—the new Center for Baccalaureate and Graduate Studies (CBGS) Management Information System (MIS). This 21st century system processes both academic and non-academic requests for interpreting, notetaking, and tutoring online through a Web-based graphical user interface. It became operational last spring.

The CBGS/MIS, from concept to deployment, collects and assigns support and access services requested at RIT. The state-of-the-art application provides both automated and manual mechanisms for the prioritization and scheduling of resources to address those requests in a completely paperless environment.

“I used the new online system when I registered for my fall quarter courses,” says Pendlebury, a Professional and Technical Communication major.

“What I like about it is that we now are able to request services online, from home or anywhere else.”

Over the past eight years, demand for educational support and access services at RIT has increased 40 percent. This growth has challenged procedures in place for acquiring, prioritizing, and assigning educational support and access services.

“The increasing demand is a positive sign that deaf and hard-of-hearing individuals in the RIT community need and want the quality support and access services we provide,” says Peter Lalley, director of NTID’s Center for Baccalaureate and Graduate Studies.

“A technology-based system is the best solution in this era of increasing demand and declining budgets. The emphasis is on improving efficiency and productivity, while appropriately addressing educational support and access services on this campus.”

Management information systems are built around a series of specialized computer programs working together in real-time, to collect, analyze, and provide data to support operations and decision-making. They can enhance employee productivity and effectively manage consumer transactions.

Scheduling a **NetMeeting**

by Kathy A. Johncox

You're a student and you're desperate. It's the day before your big assignment is due, and you need to see your professor. But you're sick, and the weather is bad, so instead of hiking across campus in a snowstorm carrying tissues and juggling your chicken soup, with a click of the mouse you access your NetMeeting program. Your professor is in the "office" both physically and in cyberspace, and you both log on. You can now communicate

NTID Audiology Department. He discovered that the NetMeeting software, which comes with Windows 2000 (or can be downloaded to use with other versions of Windows), was being used in corporate workplaces to facilitate remote communication with workers assigned off site. MacKenzie thought an innovative use of this resource would be to try to connect deaf students with their instructors at NTID/RIT.

To use NetMeeting to send video requires an inexpensive video camera hooked up to your computer, which produces the equivalent of a video-phone, where you can see the person with whom you are chatting. That means people who use sign language can communicate with each other face-to-face instead of using the more time-intensive and less personal relay system or even TTY. The program provides a whiteboard that can load graphics and images, like a paper a student has written or a test he or she has taken, and the professor and student both can access it simultaneously and discuss it together. And it offers professors the ability to schedule online office hours where the students can access them in their offices from any computer with a camera and NetMeeting software.

In the early to mid 1990's, telecommunications instructors at NTID began experimenting with desktop videoconferencing (DVC) software to facilitate communication with deaf and hard-of-hearing students, and in a 1999 survey by MacKenzie and E. William Clymer, NTID associate professor, NTID/RIT

Desktop videoconferencing allows students to visually identify a caller and gain information on their mood and emotions by analyzing facial expressions and body movement.

by video, that is, you can see each other and sign to each other or you can chat via text. You even can work together on the English paper you are struggling with, using a screen called a "whiteboard."

You've seen something like this on the sci-fi channel, but this kind of communication means the future is now.

"I came across NetMeeting while researching inexpensive but useful tools that could be used by our students to overcome some of the communication barriers they experience in the workplace," says Doug MacKenzie, assistant professor,



Stephanie Chester, third-year student in NTID's Applied Computer Technology program, works with Professor Jim Mallory (smaller screen) on an experiment using NetMeeting software. "I can imagine how much more confident students can be in their coursework, especially working with hearing instructors," says Chester. "At one point Professor Mallory was trying to explain something and was able to use a paint program to draw examples and type explanations to support his examples. He is able to be in his office and still give students the one-on-one attention they may need to succeed right in their own room." The "whiteboard" (upper left) is where graphic information is displayed, in this instance, computer code for an assignment. The "chat window" (lower left) allows real time text chat. The video window (right) displays images of Chester and Mallory discussing the assignment.

students commented that DVC allowed them to "visually identify a caller and gain information on their mood and emotions by analyzing facial expressions and body movement." Students surveyed indicate there is value in adding another layer of clarity to their communication interactions.

Since then, NetMeeting has been incorporated into the NTID communications studies course offerings for students to evaluate, and has become popular because it inexpensively allows videoconferencing.

James Mallory, associate professor in NTID's Applied Computer Technology

Department, teaches distance learning courses and has widely researched methods for improving the quality and results of online instruction.

"DVC, when combined with other tools, provides an environment for successful remote tutoring sessions. When a student is struggling, I can provide one-on-one attention no matter where he or she is," says Mallory. "I've taught students in Virginia and in Washington from my desk here in Rochester. If they need individual attention, NetMeeting works."

MacKenzie teaches NTID's Internet Communication course, which

introduces students to NetMeeting and the communication tools it offers, including video, text-based chat, file transfer, and application sharing capabilities. (See image above.)

NetMeeting is high-tech, yet easy to use and promotes greater access for students who need to discuss course information or assignments outside the regular class schedule. And it's another way that technology adds to the learning experience. A frantic student need only know the scheduled online office hours of the instructor to get face-to-face help with that English term paper.

Scanning the Horizon

by Kathleen S. Smith

One of last summer's more imaginative movies, *Minority Report*, depicted a futuristic society in which police could predict crimes and intercept criminals before they carried out their heinous deeds.

Director Steven Spielberg added credibility to his film by enlisting some of the world's best-known futurists to help create the backdrops, special effects, and hi-tech gadgetry that made the film believable.

Now imagine, on a smaller and decidedly more educational scale, colleges and universities being able to look into the future to know what the most promising technologies and lucrative jobs will be . . . and then being able to tailor their academic programs to match those predictions.

Sounds a bit Hollywood, but the recently formed Marketplace Scanning Committee (MSC) has its feet firmly planted in Rochester, and in only two years has considerably broadened NTID's perspective on where it should be going in the next decade.

The MSC began its work in February 2000, led by Digital Imaging and Publishing Technology Associate Professor Jules Chiavaroli. The committee's charge is to track national occupational trends that fit the needs and interests of the NTID community.

The 10-member group, which includes representatives from academic disciplines as well as counseling and NTID's Center on Employment, gathers regularly to share information gleaned from research, company visits, published

reports, and consultation with experts nationwide in an effort to remain a leader in offering cutting-edge academic programs.

"The MSC has become the eyes and ears of the college in terms of staying in touch with changes in the marketplace," says committee member Dr. Thomas Raco, director of NTID's Center for Technical Studies. "It also has become the bell ringer for emerging career opportunities that might be viable for our students. Our faculty members are very much in touch with changes that occur in their own disciplines, but the MSC scans the larger marketplace to observe trends that cut across *all* disciplines."

Says committee member Dr. Kathleen Crandall, a 28-year veteran of NTID, "This work struck me as vital to the core mission of our college—to prepare young deaf adults for careers in technology. Thus, it was a committee I didn't want to pass up being part of."

The committee scans the marketplace with two key issues in mind: the *environmental factors* that affect potential academic offerings (competition, the deaf community, the other colleges of RIT, vocational rehabilitation, and industry) and the *marketing mix* (what curriculum the institute might offer and how that curriculum will be offered).

If the group sees strong evidence of an emerging trend, they share their findings with key members of a given academic program and discuss the feasibility of curriculum changes.

In its first year, the committee looked at the emerging fields of geographic information systems (GIS), photonics, and health care. Two new areas were added the following year: biotechnology and human services.

*“The more varied our sources,
the better we can do our job.
We obviously look at industry and
influences such as the economy, the
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external forces that influence our
educational offerings, but inevitably
it’s those working in the field who
see emerging trends first.”*

Jules Chiavaroli, NTID/RIT associate professor



Each of these areas has been growing steadily in popularity as college program choices as well as in post-college job opportunities.

GIS, which connects data with maps and has potential applications in the environmental field, proved to be a model example of how the committee and faculty could work together.

The MSC and NTID’s Computer Aided Drafting Technology faculty decided that offering GIS in “a gradual approach was best because the technology is so complex and potentially costly to implement,” says Chiavaroli. When an existing course was found that had the flexibility and space to incorporate GIS technology into it, no curriculum revisions were needed, software was easily upgraded and tested, and faculty were given time to upgrade their skills in this new area. NTID began offering the course this fall.

A similar situation existed with the field of biotechnology, a hot area in industry and one of the fastest-growing curricular offerings at colleges nationwide, including RIT’s College of Science. Biotechnology and the closely related field of bioinformatics blend elements of health care and information technology, two fields that are current growth leaders in industry.

The MSC has recommended that a curriculum team look at all health

care, including biotechnology, during the coming academic year.

During its first year, the Marketplace Scanning Committee turned to nationally known futurist Dr. James L. Morrison, who visited campus twice to share his ideas on successful marketplace scanning methods.

As Morrison spoke about the importance of using alumni, faculty, and staff members to predict marketplace trends, Chiavaroli found himself nodding in agreement.

“We would be grateful to have anyone from the NTID community—students, graduates, parents, employers—contact us with ideas and/or marketplace data,” Chiavaroli says. “The more varied our sources, the better we can do our job. We obviously look at industry and influences such as the economy, the government, technology, and other external forces that influence our educational offerings, but inevitably it’s those working in the field who see emerging trends first.”

Editor’s note: The Marketplace Scanning Committee welcomes input from readers regarding emerging technologies with which they may be involved. Please contact Jules Chiavaroli at 585-475-6238 or e-mail him at Jules@mail.rit.edu.

The Marketplace Scanning Committee (MSC) tracks national occupational trends that fit the needs and interests of the NTID community.

Learning the Signs: NTID Reinvents the ASL Dictionary

by Karen E. M. Black



Hot off the press NTID Assistant Professor Geoff Poor's long-awaited ASL dictionary has become a reality after seven years in the making.

It was a simple question from one of his students that triggered NTID assistant professor Geoff Poor's idea to develop a revolutionary new product that fills a critical void for people learning American Sign Language (ASL).

And while it took seven years to turn idea into reality, climbing sales figures since hitting the store shelves just a few months ago indicate it was well worth the wait for many.

"One of my students asked me, 'Is there some higher level of ASL vocabulary that we're not being taught?'" Poor, an ASL professor for 19 years, says. "I started thinking about that, and how students learn the basic signs, but struggle to learn the rules that govern how they change to show different meanings—in other words, how they inflect. The sign for help, for example, can change to mean help me, help them, help him for a long time."

Poor says that when people started developing dictionaries, they followed the spoken language model of cataloging words.

"That simply isn't adequate for American Sign Language," Poor says, "because of ASL's rich and complex inflectional systems."

So, Poor thought that if students could better learn ASL's inflectional systems by viewing the signs in different sentences to illustrate different meanings, comprehension would improve dramatically.

But, a great idea doesn't turn into a great dictionary by itself. Poor spent the next four years developing a prototype to demonstrate his idea would work and securing adequate funding to produce a dictionary that would not only improve learning, but serve as a model for all signed language dictionaries.

Poor's persistence paid off two years ago, when NTID was awarded a \$263,000 grant from the U.S. Department of Education. The award came from one of its most competitive programs—the Fund for the Improvement of Postsecondary Education (FIPSE)—which generally funds only 3-5 percent of the proposals it receives. The competition is designed to support innovative projects that hold promise as models for the resolution of

important issues and problems in postsecondary education.

Demonstrating widespread interest in this project, The Pforzheimer Foundation and the Gannett Foundation contributed \$65,000 and \$5,000, respectively.

After two years in development, the *American Sign Language Video Dictionary and Inflection Guide* became a reality, and is now available on a CD that works on both PCs and Macs.

Users have access to 2,700 signs and English equivalents; 2,000 of them are linked to at least one of 650 sentences. Some 1,000 of the signs are grouped by meaning into 26 categories. In addition, a Similar Signs feature allows users to see groups of signs that are similar to the eye, but that may or may not have any similarity in meaning. Users also can choose to view the video in normal or slow speed, as well as choose to see both the ASL sentences and their written English translations simultaneously, or one at a time. An online text section describes ASL inflection and sentence structure, with links to video examples.

"NTID's *American Sign Language Video Dictionary and Inflection Guide* is a much needed resource for ASL students," said Nancy J. Bloch,



Practice makes perfect Susan Stephens, an interpreting student from Kentucky, says she prefers to practice using the *ASL Video Dictionary and Inflection Guide* because of its breadth and depth as well as its ease of use.

it. Everything is laid out very easily."

A professor of ASL and Deaf Studies at Ohlone Community College since 1980, Sandra Lee "Bunny" Klopping, who is hearing, says that other ASL dictionaries are much more limited.

"I like the *ASL Video Dictionary and Inflection Guide* because it includes so many concepts and presents ASL so clearly," she says. "The hundreds of sentences demonstrating how the signs inflect make an incredible difference to the student."

Klopping sees it as a good resource for students at all levels. She plans to purchase enough copies for the college's new lab for sign language students.

"Because the word order of ASL is so different than English, this dictionary also helps the students to

to be shy to practice with deaf people, or if they are in remote places where there are so few deaf people around, they can still practice and learn through this means."

Both Klopping and Malzkuhn say their favorite feature is the availability of multiple meanings and sentences, and would recommend the *ASL Video Dictionary and Inflection Guide* to students, colleagues and parents.

"The price is very reasonable, and the colors and motions beat the two-dimensional black and white pictures in a text at any time, hands down!" Malzkuhn says.

"I think it will be great especially for hearing parents," Klopping adds. "Many parents of deaf children live in areas where ASL is not offered. Sometimes, when children come home from a residential school for the deaf using ASL, their parents don't understand them. This is a great resource for parents to use alone, or to sit down with their children to learn ASL together."

Poor credits his small team of experts with developing a product that fits the needs of everyone. Other project team members assisting in developing content and serving as sign models are Patrick Graybill, visiting associate professor in NTID's Department of Cultural and Creative Studies, and Dorothy Wilkins, director of the Keuka College (N.Y.) ASL Program and a freelance ASL instructor.

The ASL Video Dictionary and Inflection Guide costs \$50. To order, go to <http://www.rit.edu/ntid/dig>, or call RIT's bookstore, Campus Connections, at 585-475-2504 (voice) or 585-475-7071 (TTY).

For more information, contact Poor at dig@rit.edu.

"One of my students asked me, 'Is there some higher level of ASL vocabulary that we're not being taught?'"

Geoff Poor, NTID assistant professor

executive director of the National Association of the Deaf.

Interpreting student Susan Stephens, of Richmond, Kentucky, couldn't agree more.

"There are a million dictionaries out there, but you rarely see the sign in a sentence, which is so important with ASL," she says. "English uses the same word 'run' for run a race, run an errand, my nose is running, or there's a run in my stocking. But in ASL, those are four very different signs. This dictionary is the only product that clearly shows those differences.

"And," she adds with a smile, "you don't have to be a computer whiz to use

start visualizing sentences in ASL order," she adds. "The more repetition, the greater the students' understanding and the better signers they become."

Ohlone Community College ASL Associate Professor Brian Malzkuhn, who is deaf, thinks both deaf and hearing people can benefit equally from the *ASL Video Dictionary and Inflection Guide*.

"Deaf people can double check their own signs because of their variety of family upbringing and educational backgrounds, whether they are residential, mainstream or signed English programs," he says. "Hearing students can benefit because they tend



Garth Arnold

“The deaf and hard-of-hearing community at NTID/RIT feels good,” says Garth Arnold, age 20, a second-year student from Penn Yan, N.Y. Coming from a family and a school where he was the only person with hearing loss, Garth at times felt like he was the only one who was different. He appreciates being one of many here and relishes the social life at NTID/RIT.

“My family and school counselors encouraged me to go to college all along,” Garth says. “I know RIT is a good school, and when I look to the future, I feel very optimistic.”

Garth hasn’t chosen a major yet, but his love of computers is making him lean toward Applied Computer Technology. He describes himself as a “hard-working student,” and received the Presidential Education Award for Outstanding Educational Improvement. Garth plays drums, runs track, enjoys volleyball and is active in community events through the interfaith center on campus. His part-time job as a notetaker for students with visual disabilities fits perfectly with Garth’s belief that “people need to work hard for the good of society. When they enjoy what they have done, they have peace of mind and happiness.”

Future plans?

“Just the American Dream,” he says. “Job, serious relationship, family, home in the suburbs.”



Micah Boudreaux

Baton Rouge, La., native Micah Boudreaux is relaxed, confident, and certain of her direction. The second-year Ophthalmic Optical Finishing Technology (OFT) student came to NTID last year after graduating from Louisiana School for the Deaf.

“When I started looking at colleges during my junior and senior years in high school,” says Micah, “I knew that I wanted a good life and a good future for myself. I chose RIT because of its technology, and the hands-on opportunities it provides.”

Micah credits her father for his encouragement in her decision to attend RIT.

“Dad worried about me a lot,” Micah says. “He kept telling me, ‘You should go to college, it’s important.’ I’m glad he did that for me. I’m learning a lot and having a great time at RIT.”

Micah is doing well in her OFT studies, and she’s focusing extra attention on courses in literature, writing, and mathematics. Active in sports and fitness, Micah was a pole-vaulter on the RIT Women’s Track and Field team during the 2001 season. She also enjoys volleyball and water sports, including kneeboarding and waterskiing. Last spring, she became an Alpha Sigma Theta sister.

“I like to be around a lot of different people—deaf and hearing,” Micah says. “RIT has choices for students. I feel good that all of my experiences here will lead me to a great career, with friendships and memories I’ll cherish always.”

Christian Anazagasti

Growing up in a family that values education influenced 22-year-old Christian Anazagasti’s decision to attend college after graduating from Lexington School for the Deaf.

PROFILES IN COLLEGE

“My mom is my number one role model,” he explains. “She earned her master’s degree after she had kids, and I’ve always thought that was a great accomplishment.”

Christian chose to study Business Management because it combines his interest in technology with his strong people skills. The third-year student from Riverdale, N.Y., thinks the fast pace of the NTID/RIT quarter system forces students to focus and prepares them well for the world of work.

“NTID gives me the chance to experience and interact with the hearing world as well,” he says.

Christian is treasurer of the Hispanic Deaf Club. In the future, he aspires to manage a corporation like his father.

“I admire my father’s management skills, and I’d like to do what he does,” he explains. “I feel that I have good business sense and that I’m creative. I’d like to run my own business and help the community as well.”



Carrie Brewer

Carrie Brewer lives up to her hometown's name.

From Talent, Ore., Carrie excelled in her studies and activities at Crater High School. She was a Presidential Scholar, National Honor Society member, and student of the year in 1998—the same year she was listed in *Who's Who Among American High School Students*.

“College was a big change,” says Carrie. “There are more than 1,000 deaf students at RIT. Now I have a peer group, and I don't feel limited in my choice or number of friends because I'm the only deaf person in my family or community.”

She graduated with highest honors from NTID's Digital Imaging and Publishing Technology program last May and today is enrolled in RIT's Graphic Communication program.

“The idea of meshing art with computer technology has fascinated me since my senior year of high school,” Carrie says. “I want to blend the two fields into a career that I will enjoy after I leave RIT.”

Carrie says that her friends consider her a “down-to-earth” person who balances her studies with fun activities such as downhill skiing, inline skating, and playing softball.

“The most important skill I'm learning at RIT is to be flexible,” says Carrie. “I'd like to spend the rest of my life in Oregon, but right now location doesn't matter to me. Good jobs are challenging to find, so my goal is to get solid working experience, wherever that may be.”



Megan Gehlbach

Never giving up and following her heart and dreams is the motto Megan Gehlbach, 20, lives by. Growing up in Brooklyn Center, Minn., with a deaf mother and brother and a hearing father, Megan chose NTID because of its good technical reputation and because of the college's many resources for deaf students. She also “felt a need for new experiences and to socialize with new people.”

Now a second-year student at NTID/RIT, Megan is majoring in Ophthalmic Optical Finishing Technology.

“I chose this major because I like to work with my hands in the lab,” she explains.

In keeping with her motto, Megan has been involved in NTID Student Congress. She also spends a lot of time studying, making the Dean's List all three quarters last year.

Megan, who attended a mainstream high school, feels that her college experience has been good, and she's looking forward to the future.

“My goal is to finish college and get a good job,” she says. “NTID is preparing me to do that.”

Marissa Clopper

“Do not follow where the path may lead. Go instead where there is no path and leave a trail.” Living the words of Ralph Waldo Emerson, 19-year-old Marissa Clopper is focusing on her interest in biotechnology at NTID/RIT, a cutting-edge field that allows her to create new paths not only for herself, but also for the many others who will benefit from her work.

“I want to do lab research to find cures for diseases and work in the medical health field,” she says.

Now in her second year of study, Marissa is on the Dean's List and is an honor student in the Biology Department. A recent field trip to labs at Strong Memorial Hospital and the University of Rochester confirmed her interest in biotechnology.

“It's exciting because there are a lot of job opportunities in this field,” she says.

Marissa feels NTID/RIT is preparing her well for the future.

“NTID/RIT has a good science program that offers a lot of support services for deaf and hard-of-hearing students,” she explains. “Everybody is friendly, helpful and caring.”

After completing her bachelor's degree in biotechnology, Marissa plans to pursue a master's degree.

“We create our own lives,” she says, “and are capable of going anywhere we strive to reach.”





Carlos Mendez

As the only person in his family to have gone to college, an uncle told Carlos Mendez if he wanted a good future, he should go to college, too, and get a degree. That influential

PROFILES IN COLLEGE

advice led Carlos, age 25, from Pawtucket, R.I. to NTID/RIT and the B.F.A. he will receive next year.

“I chose NTID/RIT because I knew that it had a good program for deaf and hard-of-hearing students,” Carlos says. “This is a very special campus community where there is great diversity. I feel really welcome here.”

Carlos’ major is graphic design, and he hopes to freelance in the advertising industry. His part-time job as a computer and dark room lab technician gives him a lot of people contact, which he really enjoys.

He was president of the Hispanic Deaf Club, is on the NTID Student Congress, and still finds time to explore his artistic side. He played the famous deaf painter, Goya, in an NTID Performing Arts production about artists who overcame disabilities to become successful. The production sold out at NTID, and then played in New York City. For Carlos, performing is all about communicating with people, and he enjoys that challenge.

Thinking back to his uncle’s advice, Carlos says, “Don’t let anything get in the way of your dream.”

Byron Hampton

One of Byron Hampton’s favorite quotes is from jazz musician Cozy Cole: “The more you study, the more you find out you don’t know, but the more you study, the closer you come.” A review of Byron’s academic career explains his affinity for Cole’s words of wisdom.

After earning an associate degree in Architectural Technology from NTID, he worked for engineering and architectural firms for 10 years. Following that, Byron came back to NTID/RIT and received an associate degree in Applied Computer Technology, and now he’s working toward a bachelor’s degree in Applied Art and Science with concentrations in E-commerce and Web development. He plans to pursue a master’s degree in computer science, information technology, or management information systems.

Growing up in Indianapolis, Ind., his mother stressed the importance of education for him and his two sisters.

“The quality of education, the reputation of the school, and the environment of deaf and hearing students together—that is what brought me here,” he says. “NTID has excellent support services, and it’s one of the best colleges for people who are deaf or hard of hearing.”

Outside of the classroom, Byron has logged many hours working as a Web developer/designer for the Rochester Black Deaf Advocates and other organizations. He also applied his skills to a summer job at the U.S. Department of Health and Human Services in Rockville, Md., working in information technology.

“I hope to run my own business in Web development, consulting, and PC hardware repair someday,” he says.



Ibukun Olufolake Odunlami

Originally from Nigeria, 20-year-old Ibukun Olufolake Odunlami, nicknamed Ibu, grew up in Philadelphia, Pa., and attended the Model Secondary School for the Deaf in Washington, D.C. After graduating, Ibu briefly attended another college before transferring to NTID, a decision her parents encouraged.

“I chose NTID because I need a quality education and strong skills to compete successfully in the working world,” she says.

Ibu is a second-year Accounting Technology student, a major she chose because her father and brother also work in that field. She credits her math skills to them.

“I love math, and I love to solve puzzles and figure things out,” she explains.

Ibu is putting her accounting skills to work this year as treasurer of NTID’s Ebony Club.

“There are many good opportunities for deaf and hard-of-hearing students at NTID/RIT,” she says. “I feel good that I am part of this community.”

After graduating from college, Ibu wants to pursue a career in accounting, and someday return to Nigeria, where she hopes to help other deaf people receive a good education.

“If you know what you want, then go for it, don’t let anyone stop your dreams or goals,” she says.

William Pendlebury

Born in Denver, Colo., William Pendlebury, 24, grew up in Topsfield, Mass.

He came to RIT in 1997, and spent some time exploring RIT's many majors before deciding on Professional and Technical Communication with an emphasis on communication media, new media, and writing.

"I like that RIT let me use my time in the beginning to discover the program that was right for me," William says. "I chose RIT for the unique mix of hearing and deaf students and technical and professional studies. It's what I was used to in my family and schooling prior to coming to RIT."

For one of his cooperative work and internship experiences, William worked at Vcom3D, Inc., based in Orlando, Fla. While there, he helped develop SigningAvatar™ software, which uses computer-generated, three-dimensional characters (avatars) to communicate in sign language on specially enabled Web sites.

This past summer William worked for NTID First Year Experiences (FYE) and Summer Vestibule Program, creating brochures and Web sites, and writing articles for the program's publications.

"What I like best about NTID/RIT is that the courses, faculty, and co-op experiences prepare students to work and be productive in actual work settings," says William. "I'm excited because soon I will graduate and get a good job—a job that ideally fits the skills I've learned in technical writing and new media."



Michael Anthony Spady

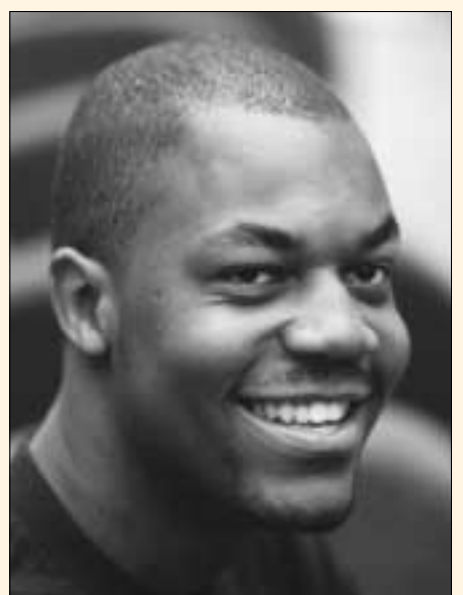
When he arrived at NTID in the fall of 2000, Michael Anthony Spady jumped at the chance to be a member of RIT's track and field team. The standout athlete from Blind Brook High School in Rye Brook, N.Y., has been a consistent finisher, steadily improving over two seasons to become RIT's best triple jumper and the number two long jumper on the team.

"This past year went extremely well for me," says Michael, 21, of New Rochelle, N.Y. "I'm working harder than ever before, and the coaches and my teammates are great. We help each other."

Spady's personal best so far is 20 feet, six inches in the long jump, and 39 feet, 11.5 inches in the triple. He qualified for the 2002 New York State Collegiate Track Conference Championships and captured first place in the triple jump at the Albany Invitational Tournament.

Outside of his athletic pursuits, Michael, an Administrative Support Technology major, acted on stage in New York City in Eugene O'Neil's *The Emperor Jones*, co-produced by NTID Performing Arts and the Interborough Repertory Theater. The show and company was honored with the 2002 Off-Off Broadway Review Award for Overall Excellence.

"I like what I'm doing," says Michael. "Track, my studies, and acting—it's hectic, but I manage it all very well. What's even better is what I'm learning from it."



Christopher Samp

With a major in public policy and NTID Student Congress experience, Christopher Samp is well on his way to a career in government.

At age 19, with a Ph.D. as a goal, Christopher knows he has some years of hard work ahead of him. However, with the support services from NTID/RIT and its "deaf-friendly environment," the coming years won't be as frustrating as his Troy, Mich., high school experience where he was the only deaf student.

"At the Explore Your Future program, I found NTID/RIT had everything I would need to accomplish my goals," says Christopher. "Challenging and relevant classes, social life, on-campus organizations, support services—and it's exciting to be studying at one of the best technical schools in the U. S."

Several scholarships, including the Troy Rotary Club Scholarship for Volunteer Service, attest to his work ethic, but Christopher also makes time to involve himself in RIT's student government and as a member of Sigma Nu fraternity.

Christopher's community involvement started early as a volunteer for a history museum at age 10, and he believes it's important to influence the community to help it grow. A quote that follows Christopher wherever he goes is "Most look up and admire the stars. A true leader climbs a mountain and grabs one."

A Different View of the World

By Kathy A. Johncox

A number of RIT staff members were amazed by the journey they took into the very rich culture and experience of deaf students and colleagues, when they set out to learn American Sign Language (ASL) in the Provost's Program this past summer. Their intent was to learn to communicate with some of the 1,100 deaf and hard-of-hearing students and 80-100 deaf and hard-of-hearing faculty and staff on campus, many of whom use sign language as their primary method of communication. They left this three-week program, not only with the beginnings of a new language, but also with a different view of the world.

Since 1993, RIT's summer Provost's Program has given RIT faculty and staff the opportunity to immerse themselves in ASL instruction and to get a glimpse, from the inside, of deaf culture.

FOCUS interviewed NTID associate

professor Barbara Ray Holcomb, instructor in the program since 1994, and some of her students, to find out who takes the course and why they participate in this unique RIT summer experience. *FOCUS* chatted with Jody Lehr, manager of business admissions in RIT's College of Business; Catherine Powers, human resources services manager; and Johnny Robinson, assistant professor, and animation program chair in the School of Film and Animation.

FOCUS: Barbara Ray, why do you think RIT faculty and staff members want to learn sign language?

Holcomb: I think that as more and more deaf students are pursuing bachelor's and master's degrees, RIT staff are more aware of the number of deaf students on campus. And they are more and more aware of the need to communicate with everyone equally.

FOCUS: What was your agenda for the Provost's Program this summer?

Holcomb: We purposefully planned the program to offer more than ASL. For example, there is a deaf culture component that addresses some preconceived notions that many hearing people have about deaf people. The course also provides a history of people who are deaf and gives hearing people a greater awareness of what it is to be deaf in today's world. And it provides RIT

faculty and administrators with the opportunity to learn that ASL is truly a language, and it is the way that many of our more than 1,200 deaf and hard-of-hearing students, faculty and staff on campus communicate.

FOCUS: With all that happens during the summer to prepare for fall, what motivated each of you to devote three weeks of your summer to this program?

Lehr: I wanted to learn sign language for several reasons. Professionally, I need to be able to communicate with and recruit a new potential market of deaf students for the graduate business programs. And then personally, with ASL so commonplace at RIT, I felt inadequate trying to communicate with both current and potential students and colleagues.

Powers: When I was hired recently as human resources services manager for NTID, I already had some sign language knowledge, but I needed to know more, fast. I had taken other classes in the community, but what was helpful about the Provost's Program was the addition of information about deaf culture.

Robinson: I've taken several sign classes before, and I did so because I have always had deaf students in my classes. I also have a fairly good knowledge of deaf culture from past experience. It's obvious the students are pleased to see I am learning sign and can communicate with them personally. With this program, I saw a way to keep moving forward with my sign skills. The more ASL I learn, the more confident I am, and the more I want to learn.



Facial expressions are an integral component of signed communication because they give inflection to the language. Jody Lehr uses her emerging American Sign Language skills to converse with a classmate.

“I would like to demystify deafness and break down the walls that exist between hearing and deaf culture.”

Barbara Ray Holcomb, associate professor, demonstrates the sign for work. Fifteen or more students participate in the Provost’s Program each summer as part of their personal commitment to communicate equally with both hearing and deaf members of the NTID/RIT community.

FOCUS: What did you learn that will help you on this bilingual campus?

Robinson: I feel better able to understand issues deaf students have, and I have a better idea of what they are trying to achieve. The world has a lot of misconceptions about deaf people. For example, people think that all deaf students use the same level of sign. People have no understanding of the diversity of communication that students bring to the culture at NTID/RIT.

Powers: I agree. Being the human resource contact for deaf and hard-of-hearing faculty and staff is one of the positives about my job. Learning about the unique aspects of living every day with deafness increases one’s sensitivity level immensely.

Lehr: As for me, after three weeks, can I communicate in ASL? Yes, but certainly not fluently. Still, I have a knowledge base to build on and the resources to cross-communicate between hearing and deaf cultures, and that’s what matters.

FOCUS: Did taking this class affect you in any special way?

Lehr: I never realized how unique, important and strong deaf culture and community are. There are such nuances and subtleties that make the culture so rich. What an eye-opener!

Robinson: Actually, on campus when the word gets around that one of the professors knows sign language, even though support services in terms of notetaking and interpreting abound here, more students will go to that person who can communicate more personally for advisement and even

take more classes from him or her. To me, that just shows that personal communication is key.

Powers: We took several field trips during the last week, and when we arrived, we were to turn off our voices and pretend we couldn’t hear or speak. It amazed me when we walked in somewhere, like a mall, or a museum, and sometimes there was this look of fear because some people didn’t know how to communicate with us.

FOCUS: Barbara Ray, do you have an overall goal for students in this summer program?

Holcomb: I would like to demystify deafness and break down the walls that exist between hearing and deaf culture. People think that all deaf people either speak or sign, not that we do both. They think that all deaf people come from deaf families and have the same experience, and that’s not true. I want people to know that deaf people are a unique group, but we are not so different from everyone else.

The summer Provost’s Program is one of many specialty sign language offerings available to faculty and staff every year to increase knowledge of both the language and the culture of deafness, and to, as Holcomb says, “break down the walls between deaf and hearing people.” As more and more hearing faculty and staff take advantage of these unique opportunities, they become confident in their abilities to communicate with deaf and hard-of-hearing students and colleagues, and welcome a different view of the world.



Class Topics

Here’s an overview of what faculty and staff members learn during the Provost’s Program:

Sign vocabulary is the “meat” of the course, and participants learn basic survival communication skills, such as how to introduce themselves, ask directions and carry on a basic conversation.

The role of interpreters addresses the important contribution of interpreters to good communication.

Understanding hearing loss is a quick overview of the reasons for and the results of hearing loss for NTID/RIT deaf students.

Panel discussions with deaf students give students’ perspectives on being deaf.

Panel discussions with deaf professionals give a workplace view of being deaf.

Deaf humor features a stand up comic who makes some interesting and humorous observations about living in a mostly hearing world.

Field trips take the class to a mall, the zoo, and Genesee Country Museum, where class members “turn off their voices” and experience what it is like not to be able to communicate verbally.



Cultural celebration
Hispanic Deaf Club advisor Jeannette Vargas, left, dances with student Gabriel Oramas at the club's annual Cinco de Mayo celebration last spring.

Paving the Way for Latino Student Success

by Pamela L. Carmichael

When Denise Arias came to NTID/RIT four years ago, she was, like most college students, a little apprehensive about being away from home for the first time. As a Latino student, she also was concerned about finding cultural understanding and support on campus. It didn't take her long to discover that the diverse environment at NTID/RIT offers just what she had been hoping for—a vibrant Latino community that makes her feel at home.

"NTID/RIT is a wonderful place for Latino students," says the 22-year-old Administrative Support Technology student from Sunset Park in Brooklyn, New York. "The diversity on campus provides opportunities to meet all kinds of people. And, with all of the Latino organizations and activities, there are plenty of opportunities for socializing."

The changing demographics of the United States population indicate that the ethnic diversity on college campuses will increase in coming years. According to the National Center for Education Statistics, college enrollment is projected to increase nearly 20 percent by 2011, and the Pew Hispanic Center reports that the majority of these college students will be minorities, including a substantial and growing number of Latinos.

Historically, however, only a small percentage of Latinos complete college. The Pew Hispanic Center reports that only 16 percent of Latino high school graduates between the ages of 25 and 29 have earned a bachelor's degree as compared to

nearly 37 percent of white high school graduates in the same age group.

While RIT offers a number of resources to enhance Latino student success, including ALANA (African-American, Latino, Asian, and Native American) Cultural Affairs and the Latin American Student Association, NTID has developed additional resources specifically for Latino students who are deaf.

New Latino students are introduced early to campus resources designed especially for them. NTID's Hispanic Student Support Committee contacts Latino students and their parents even prior to their arrival on campus and invites them to a special reception held during NTID's summer orientation program for new students. The committee, led by Dr. Gerard Buckley, NTID associate dean for student affairs, was formed last year and includes faculty and staff members as well as representatives from NTID's Department of Counseling Services and Student Life Team.

"We host the reception because we want Latino students and their families to know right from the start that we're available to assist them," says committee member Jeannette Vargas, senior staff assistant for NTID's Division of College Advancement. "Latino students sometimes lack confidence and often don't have a strong academic foundation, so we want to give them extra support to help them grow and succeed here."

Vargas has been a mentor for Latino students and a liaison for parents for more than six years. Because she is fluent in Spanish, many Spanish-speaking parents call her with questions or just to check on their sons or daughters.

"Family is the most important thing in Latino culture," says Vargas, "and staying in contact is especially important. I'm proud to help facilitate that."

Vargas often will relay messages from parents to students, who frequently stop at her office between classes to chat.

"Latino students need someone they can talk to who understands their culture—someone they can bring their issues to," she says. "They're becoming adults, but they need guidance and direction as well as encouragement and nurturing."

NTID's Student Life Team also plays a key role in providing resources that support Latino student success. A program known as Educators Fostering Friendship, Ethnicity, Culture and Teamwork (EFFECT) provides



Members and friends Denise Arias, center, with fellow Hispanic Deaf Club members, Kelly Lenis, and Christian Anazagasti.



Stopping to chat Karey Pine, signing at right, chats with students at the Hispanic Deaf Club booth at NTID's annual Applefest, a fall gathering of students, faculty and staff.



A warm greeting Carlos Mendez, right, greets Dr. Robert Davila at NTID's Applefest.

multicultural student support and programs and activities related to cultural diversity. EFFECT's programming includes Deaf Hispanic Celebration Week, an annual event that features guest speakers, workshops, and other activities to educate the campus community about Latino culture.

"We want to encourage cultural understanding," says Karey Pine, Student Life Team manager. "And we want deaf Latino students to know that we care about them and are sensitive to their cultural perspective.

"We have a lot of resources for Latino students, and the more comfortable they are with the environment we create, the more likely they will be to seek out those resources when they need them."

Sometimes, creating a comfortable environment can be as simple as providing ethnic foods at student events.

"Latino students tell me that they really appreciate the opportunity to enjoy traditional foods," says Pine. "It gives them a taste of home, and it gives non-Latino students a taste of Latino culture."

Another key to creating a positive environment for Latino students is providing role models for them.

"Any time we have a presentation or other activity, we always strive for cultural diversity in the presenters," explains Pine. "It's very important that our staff is sensitive to diversity issues, especially as the demographics of incoming students continues to change and more ALANA students enroll."

A new Student Life Team effort is the ALANA Peer Mentor program, which pairs first year ALANA students with older ALANA students for one-to-one mentoring.

"It's important for experienced students to help new students adjust to college," says Arias, who works as an ALANA peer mentor. "It makes it easier when you share the same culture and can relate to one another's issues."

In addition to her peer mentor duties, Arias also is president of the Hispanic Deaf Club (HDC) this year.

"Hispanic Deaf Club promotes a common bond in the Latino community at NTID/RIT," she says. "It's a good way for students to be

active and involved, and it helps all Spanish groups understand and accept one another."

Carlos Mendez, a graphic design student from Pawtucket, R.I., agrees.

"HDC is like a family," says the 25-year-old, who is a member of the club and of the Student Life Team's EFFECT group. "It provides a system of support and guidance for deaf Latino students."

"HDC also helps non-Latinos gain a better understanding of Spanish culture," Arias adds. "It's a great place for students to socialize and develop organizational skills that prepare us for the working world."

Vargas, who serves as an advisor to HDC, sees other benefits for students as well.

"HDC helps students learn responsibility and gain leadership skills," she explains.

The club sponsors events geared toward cultural enrichment, participates in community service projects, and organizes fund-raising activities.

"It's important for me to give back to my culture," says Vargas of her work with Latino students. "I want Latino students to be proud of who they are and to learn how to represent our culture proudly. And I want to see them succeed."

Arias sees NTID/RIT as a good start on the road to success for Latino students.

"RIT offers a good education and experiences that will have life-long benefits for Latino students," she says.

"NTID/RIT is a wonderful place for Latino students. The diversity on campus provides opportunities to meet all kinds of people. And, with all of the Latino organizations and activities, there are plenty of opportunities for socializing."

Denise Arias, NTID/RIT Administrative Support Technology student

Parsons Foundation Looks to the Future

by Kathy A. Johncox

Ralph M. Parsons probably would have loved to visit one of NTID's high-tech, "smart" classrooms. As a businessman who brought together engineers, designers, and problem-solvers to create space launch facilities and nuclear plants, Parsons had his focus firmly on the future. It's no wonder, then, that his foundation should have an abiding interest in NTID's students and their success in the classroom — and in life.

The Ralph M. Parsons Foundation of Los Angeles, Calif., was established in 1961 with a sweeping purpose — to encourage and support projects and

programs beneficial to the world in which we live. Of particular interest to the foundation are the fields of education, technology and the sciences at institutions of national stature.

NTID's longstanding relationship with the foundation began in 1988 when the college requested help in establishing the NTID Emergency Student Loan Fund to provide short-term loans to students needing temporary assistance paying for rent, tuition, fees and books. Over the years, this fund has provided hundreds of students with short-term financial assistance, making it possible for them

to stay in school. Since then, the foundation has assisted with funding for equipment for NTID's Science and Engineering Computer Lab and for the college's Manufacturing Processes Laboratory, as well as supporting a project to connect residence hall rooms to the campus-wide computing network. Of the foundation's ongoing support, Dr. James DeCaro, NTID professor, and immediate past dean, says, "Relationships are built on trust. In our first endeavor, the Parsons Foundation took a leap of faith that we would do what we said we would do, and we delivered what we promised. Trust is what it's all about."

In 2000, DeCaro, then handling international projects for NTID, approached the foundation about supporting research into the study and application of emerging technologies that would have a profound impact for people who are deaf. He wanted to explore whether automatic speech

NTID: An Outstanding Investment



▲ Exploring their future When you are a teenager, making choices for the future is not easy. However, these high school juniors from all over the country got a head start. They enjoyed the unique opportunity to explore different career possibilities and have a taste of campus life during NTID's Explore Your Future (EYF) program. These EYF scholars were sponsored by a generous gift from the Lucent Technologies Foundation. If you or your organization would like to help more deaf and hard-of-hearing young people choose their career path, contact Eliza Coyle at 585-475-6222 (v/TTY).

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Scholarship Funds

Foundations that contributed to NTID Endowed Scholarship Funds

Max and Victoria Dreyfus Foundation, Inc.

Individuals who have contributed financial support to programs and scholarships benefiting students and faculty at NTID

Ms. Eugenie R. Bradford

Dr. Robert R. Davila

Dr. James J. DeCaro

Mr. Donald J. Landry

Mr. Matthew Scott Moore

Mr. Wendell S. Thompson

Ms. Dorothy B. Wadsworth

Dr. Gerry Walter

Margaret J. Webster, Estate

Loretta F. Wolf, Estate

Gifts-in-Kind

Gifts of material or equipment from businesses or individuals that support students and faculty at NTID:

D.T. Hansford Manufacturing

Luxottica

Guy C. Wonder III

And We Can't Forget ...

The following foundations and corporations have made a significant investment in NTID this year:

Action Electric Sales, Inc.

Procter and Gamble Fund

VITAC

Our sincere thanks to all who have recognized NTID as a special place worthy of their investment. These gifts of financial support, goods and services were received through September 30, 2002.



Smart teaching Dr. Kathleen Crandall uses the ASR technology with its “smart whiteboard” to complete group exercises with students in her English writing class.

recognition (ASR) technology could be used as a supplement to sign language and, in the future, become an important component of support services for deaf students. ASR is the computer-driven transcription of spoken language into readable text in real time, as the words are being spoken. A team of NTID faculty members asked the Parsons Foundation to help them apply and perfect this new ASR technology for several different purposes, one of which was classroom use.

Today, the Parsons Foundation funds a prototype classroom at NTID that uses ASR technology to enhance the teaching and learning process for deaf students.

Dr. Kathleen Crandall, associate professor in the English Department at NTID, is using ASR in her classes. As she is teaching, she speaks into a microphone attached to a computer that prints her words on a “smart whiteboard.” An added benefit is that

she can then print out the information and distribute it to students.

“NTID’s research team is pioneering the use of ASR in a different way — as a visual tool to teach English — a language that, for deaf students, is best learned by seeing it,” says Crandall. “The students really like it. For one thing, it’s 21st century high-tech stuff. Also, because these students depend on a visual mode of learning, ASR helps us teach English by focusing on the students’ strongest receptive skill, not their weakest.”

If Ralph Parsons were alive today, he would appreciate that NTID is in the forefront of using technology to improve education for deaf and hard-of-hearing people.

“A foundation like Parsons that is willing to take a risk on an innovative project, something that has potential, like ASR — that is a partner with whom we can do very exciting things,” says DeCaro.

Dyer Arts Center Update

In its first year, the Dyer Arts Center, in addition to housing seven different professional artists’ exhibits, provided a beautiful and inspiring location for student exhibits and awards ceremonies as well as receptions and presentations, most notably the National Advisory

Group meeting. The arts center was open during several of the NTID Performing Arts productions so that children and adults from the Rochester community could see the work of a variety of artists and NTID faculty.

The following exhibits welcomed the 2002-2003

academic year:

September 7 - October 4: “Return to the New World,” an exhibit of paintings by Steve Carpenter in the Williams Gallery

September 9 - October 7: “Windows (on a Macintosh),” Digitally Enhanced Photography by David Perlman

If any individual, group or corporation would like to sponsor an exhibit, contact Jill Pranger in the NTID Development Office at japnod@rit.edu or 585-475-6304 (v/TTY).

◀ **School for American Crafts Exhibit** The work of deaf artists, Erik Richard Gustafson and Cale Owens, students at RIT’s School of American Crafts, was featured in the Williams Gallery of the arts center.



▲ **You’ll walk the plank** Captain Hook, played by NTID alumnus and local businessman, Matthew Moore, schemes to use Wendy, played by Jenamarie Daviton-Sciandra, as bait to capture Peter Pan during the NTID Performing Arts and MSM Productions, Ltd. presentation of *Peter Pan*, directed by Jim Orr. Moore’s *Deaf Life* magazine was a major sponsor of the production, which was the first ever full-scale adaptation of J.M. Barrie’s classic play presented in American Sign Language by deaf actors. The production also included voice performers, making it accessible to all audience members.



▶ **Reach for the Stars!** RIT’s Fifth Annual Celebration of Scholarship recognized both scholars and those who make scholarships possible. Dr. Albert Pimentel, a member of the RIT Board of Trustees, center, and scholarship recipient Minoru Yoshida, right, a fourth-year Business/Computer Science student, chat at the reception prior to the scholarship dinner.



A Wise Investment

When you give to one of NTID’s endowed scholarship funds, you invest in the future of students studying engineering, applied computer technology, public policy, imaging and publishing as well as more than 200 other majors. With your help, these students will be productive members of their home communities—and of the global community as well. When you receive your letter or phone call this winter, please say “yes” to the future—and give to the endowed scholarship fund of your choice.

W. Scot Atkins

by Kathleen S. Smith



the ability to motivate others and have them accept your ideas and way of thinking.”

W. Scot Atkins lives by these principles every day and his unwavering belief in the simple values of integrity, competence, and ethics, which have allowed him to make a quick ascent up the corporate ladder.

Atkins is senior vice president of human resources for Communication Services for the Deaf (CSD) in Sioux Falls, S.D., a private, nonprofit human service agency and telecommunications service provider that serves an estimated 15 million users in 30 states.

Atkins returned to RIT this fall to accept the 2002 NTID Distinguished Alumnus Award,

which recognizes the professional accomplishments of graduates and the manner in which these accomplishments reflect positively on RIT.

“This award not only honors Scot for his achievements,” says NTID Dean T. Alan Hurwitz, “it also expresses our appreciation for representing his alma mater in such a prominent way.”

Atkins, who received a bachelor’s degree in Business in 1989 and a master’s degree in Career and Human Resource Development in 1992, was a human resources administrator with Sprint before joining CSD in 1995. At that time, CSD had two telecommunications call centers and 300 employees. Today, the company has eight call centers and approximately

1,900 employees in 14 states.

Atkins’ responsibilities include the oversight of employee relations, recruitment, personnel records, compensation and benefits, safety and health, and training.

“Scot is a wonderful asset to our company,” says CEO Benjamin Soukop. “His background, experience, and credentials not only bring a higher level of credibility and recognition to his department, but to the entire organization.”

“I would like to see more deaf and hard-of-hearing people enter the human resources field,” says Atkins. “Through my example, and examples of others in the field, I hope they will.”

“Successful people are those willing to share their wisdom with others.”
“Success isn’t measured in riches or possessions, but in

Heather (Rowley) Langton

by Frank A. Kruppenbacher



are deaf or hard of hearing.

Heather (Rowley) Langton, 26, a 2001 graduate of NTID’s Master of Science in Secondary Education of Students Who Are Deaf or Hard of Hearing (MSSE) program, says that, her initial fascination with American Sign

Language (ASL) started at a young age.

“When I was in third and fourth grade,” says Langton, “my friend and I learned to use fingerspelling to communicate during class when we weren’t supposed to be talking. From that time on, I was interested in ASL and the way that some people could speak with their hands.”

Langton never knew any deaf individuals until her sophomore year at a college in Florida, where she met a student who was deaf. Langton practiced communicating and interacting with her classmate using only ASL, and the two are friends to this day. While completing her undergraduate degree, Langton’s interest in sign language grew and she knew that she wanted to teach deaf children.

“I felt it was important,” Langton recalls, “that I to go to a college where faculty use ASL and deaf and hearing students are in classes together. I wanted to become fluent in sign language, and I wanted dual certification. NTID fit my requirements perfectly.”

Today, with both deaf education and secondary mathematics certifications, Langton works for Pikes Peak Board of Cooperative

Educational Services based in Colorado Springs, Colo., where she lives with her husband, Thomas. She teaches mainstreamed deaf and hard-of-hearing students in grades K-12 in two public school systems, and she’s working on her certification in elementary education.

“The MSSE program has been a huge asset for me,” says Langton.

“There’s nothing like the feeling I get when a student comes back to me and says, ‘You are the reason I have an ‘A’ in reading,’ or ‘You helped me to be the best writer in my class,’” says Langton.

“I found out after I graduated from NTID, that, as a teacher, I really do influence people for generations to come. It’s a humbling and exhilarating responsibility.”

Just as NTID/RIT prepares deaf and hard-of-hearing individuals to fill the nations’ need for skilled technicians and professionals, the university also is preparing talented hearing individuals to address a critical need for excellent teachers, counselors, and service professionals for students who

Robert Rademacher

by Frank A. Kruppenbacher

Attending NTID/RIT creates in students a Renaissance of sorts. As culture, learning, and discovery flourish, deaf and hard-of-hearing individuals at RIT develop a wide array of interests. Many refine these pursuits into areas of technical and professional expertise that positively influence society.

Robert Rademacher is one such modern-day Renaissance man. The 38-year-old computer engineer, originally from Ithaca, N.Y., came to NTID in 1982. With interests in math, physics, and electronics, he pursued studies in electromechanical technology, and earned an associate degree in 1988.

“Although I have been deaf from birth, I am very confident in my abilities,” says Rademacher, who now resides in Las Vegas, Nev. “I have a strong sense of curiosity from my upbringing,

and I believe it is up to me to be knowledgeable. My time at NTID certainly influenced where I am today.”

After NTID, Rademacher enhanced his skills and knowledge in computer engineering, software and hardware development through various employment opportunities and by reading and studying on his own. He developed many cutting-edge products and patented technologies that are being used in the wireless and electronic payment industries today.

In 1994, Rademacher founded Grapevine2, one of the first Internet bulletin board communities for engineers, and later expanded it to include basic Internet access and e-mail to wireless data systems. In July 2000 he sold the company, and worked with Nye County, Nev., building a computer network for

five local townships and making the county's 911 Center accessible with TTY software. From that success, Rademacher moved on to establish Boundless Depot, a telecommunications firm specializing in communications solutions for deaf and hard-of-hearing individuals.

He also is the lead UNIX engineer behind the highly successful *DeafDigest*, a weekly series of two e-mail newsletters sent free to more than 40,000 subscribers.

With his firm on a fast track for growth and success, Rademacher's goals are to continually upgrade his business with technical enhancements. He is guided by his belief that deaf people will use wireless technologies to open new opportunities for themselves,



and to be able to interact with the hearing community without restrictions.

“My life experiences and being educated at NTID have taught me to take the initiative,” says Rademacher. “If I need to know something, I read, study, and learn. If people don't know how to work with deaf people, I help them, and we work together. I believe that if opportunities are worth the time, and they help people, then go for it!”

Maria Elena (Garcia) Alvarez

by Frank A. Kruppenbacher

“Life is beautiful,” exclaims Oakland, Calif., resident Maria Elena (Garcia) Alvarez, a 1994 graduate of NTID's Electronic Publishing and Printing Technology program.

A decade has passed since Nebraska native Alvarez, 29, first arrived at RIT from her home near Omaha.

“I spent my childhood dreaming of attending college,” Alvarez says. “I fell in love with NTID when I attended the Explore Your Future Program in 1990.”

During her time at NTID, Alvarez was a student assistant in printing careers for Freshman Seminar classes, layout/designer for NTID Student Congress' newspaper, the *Eagle's Eye*, and an assistant in the printing lab.

She attended RIT at a time when NTID's visual communications programs were in transition from traditional printing production to electronic and now digital imaging and publishing technology.

“I loved learning how to combine my interests in art with computers through desktop publishing,” Alvarez says. “My teachers at NTID helped me so much to visually balance my design work and bring my technical skills up to a level where I could compete in the workplace.”

After graduation Alvarez returned home to Nebraska and joined the *Bellevue Leader*, and later the *Midlands Business Journal*, where she performed various newspaper layout and production tasks. She also worked

for a wholesale thermographer doing design and color separation work for business cards, envelopes and letterhead.

“With patience and flexibility I've been able to move ahead, learn new skills, marry, and raise a family,” says Alvarez.

In 1997 Alvarez married Sostenes “Sly” Alvarez, a graduate of NTID's Civil Technology program, and the couple relocated to the San Francisco Bay area where Sostenes was born and raised. They have a three-year-old daughter, Selena Esmeralda.

Since her move to California, Alvarez has worked as a DocuTech specialist producing handbooks for national companies and textbooks for colleges. In 1998, Alvarez joined



Boise Solutions (formerly Boise Cascade Office Products), in Menlo Park, Calif.

“Life is beautiful when you know what you truly want to do and can make it happen.”

Lessons in Cross-College Teamwork

by Porsche L. Haag

Using only a blueprint and his skilled, steady hands, third-year NTID student Chris Peterson crafted a wrench that has saved RIT engineers, if not taxpayers, precious time and money. The tool was specifically designed for use on a light-armored vehicle (LAV) on which a team of engineers at RIT's Center for Integrated Manufacturing Studies (CIMS) is working.

The project is one of several that are paving the way not only in cross-college education, but also in strengthening the unique relationship between deaf and hearing students and faculty at NTID/RIT.

"There is mutual benefit to be gained by collaboration between NTID and CIMS," says Jeff Heintz, a staff engineer in CIMS' National Center for Remanufacturing and Resource Recovery (NCR³).

CIMS engineers are working on two LAVs and one High Mobility Multipurpose Wheeled Vehicle (HMMWV) on loan from the Office of Naval Research, which is coordinating efforts with RIT to undertake engineering analysis on the three vehicles. The CIMS team is working to rid the HMMWV of electrical malfunctions and the LAVs, which are amphibious, of suspension problems. Part of this effort involves a coordinate measurement machine (CMM), used by CIMS' engineers, with the help of NTID faculty, to measure and model components to help diagnose failures.

Under the guidance of Dr. Raymond Grosshans, associate professor in the Industrial and Science Technologies department at NTID, Peterson's wrench was used to disassemble planetary gears located within the eight hubs of the LAVs. His work has made a significant impact on the



Inspecting the work Bill Morris, mechanical technician, right, chats with Chris Peterson, left, about the wrench he created for use on a light armored vehicle at RIT's Center for Integrated Manufacturing Studies while engineer Jeff Heintz looks on.

progress of the vehicle analysis.

"The blueprint was my map," says the 20-year-old Computer Integrated Machining Technology major. "It helped me figure out the design of the wrench, then I used a lathe and numerical computer machines to put it together."

"We are grateful to NTID and Chris because we don't have direct access to custom tools and parts," says Heintz. "The military is very protective of its maintenance inventory, and it's hard for the engineers here to get access to the proper materials."

There are other benefits to working on these types of projects.

"Students who participate in cross-college tasks such as this one take away a great sense of teamwork," says Jane Doctor, a senior mechanical technician at NTID. "Their level of creativity also is heightened because there are no ordered instructions for them. They have to use the skills that they've attained in classes

along with common sense to solve real-world challenges."

"Interacting with real-world materials and ideas leaves a lasting impression on both students and professors," adds Heintz. "This is a very worthwhile opportunity for students to get involved, and it's definitely work they can be proud of."

Previously, NTID students have worked on Baja-style cars in conjunction with RIT's College of Engineering.

"All of our experiences with NTID have been great," says Nabil Nasr, director of NCR³ and CIMS. "It makes things much easier for us to work in coordination with NTID. We are focused on continuing work with the college to get students and faculty involved."

"Young people are our seeds for the future," adds Doctor. "And that's why it's so important to give them opportunities like this to explore new ideas and expand their minds."



Collegiate champions! The NTID team brought home the championship at the 2002 College Bowl competition at the National Association for the Deaf (NAD) Conference in Washington, D.C. Pictured here at the NTID victory celebration in September are, left to right, team coaches Barbara Ray Holcomb and Dr. Christine Monikowski, both associate professors in NTID's Department of American Sign Language and Interpreting Education, and team members Pam Siebert, Adam Stone, and Sarah Stallard. (Andrew Phillips is not pictured.)



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CHANGE SERVICE REQUESTED



Portrait of An Indian Policeman During British Rule
1962, oil painting by Helen C. Dyer

A special gift Believing that art is an important component of a well-rounded college education, longtime friends and generous benefactors of NTID, Joseph F. and Helen C. Dyer, contributed the lead gift to fund the development and construction of the arts center that bears their names.

Helen, who passed away in September 2001, was an avid artist who saw expression through art as especially meaningful and beneficial for people who are deaf.

This year, Joseph Dyer donated *Portrait of An Indian Policeman During British Rule* to NTID's permanent art collection in memory of his wife. The painting is on display in the Dyer Arts Center, which opened in October 2001.

