World’s scientists to benefit from new genome agreement

The School of Medicine is undertaking a massive project, the Human Genome Project, that will make key information about the human genome available to scientists around the world.

The work will be conducted under an agreement with Merck & Co., Inc., a New Jersey-based pharmaceutical manufacturer, to fund the project. The pact was signed last week, although the project effectively began Oct. 1.

The project is expected to speed the finding of genes responsible for many diseases and enhance the probability of creating a new array of discoveries and breakthrough drugs.

“We think it is extremely important to make this information available,” said Robert Waterston, head of the Department of Genetics. “It will accelerate human genetics research and have important implications for human health and well-being.”

Waterston will oversee the 18-month project, which will be directed by Richard Wilson, Ph.D., at the School of Medicine’s Genome Sequencing Center. The center’s automated technology is the fastest available for decoding DNA, the blueprint of all life.

“With this project, Merck is promoting the unrestricted exercise of the genomic data,” said Edward Scolnick, president of Merck Research Laboratories and executive vice president of Merck & Co. Inc. “This will facilitate progress in biomedical research by reducing duplication of efforts, speeding the identification of disease-related genes and enhancing the probability of breakthrough drug discoveries.”

The project involves partially decoding snippets of human DNA that orchestrate the production of thousands of human proteins. Merck will provide the DNA to Washington University and Waterston and his co-workers will “spell out” the partial molecular sequence of the DNA. The full sequence would tell researchers which protein a gene produces. The partial sequence is the first step in finding the genes that need to be completely sequenced to develop a medical or scientific use for the proteins they encode.

During the course of their work, the Washington University researchers likely will provide signposts to show the way to a host of new genes. All molecular sequences uncovered during the project will be delivered immediately to a computer data bank called Genbank, which is operated by the U.S. government’s National Center for Biotechnology Information in Bethesda, Md. The data base is accessible to all researchers.

Scientists who are interested in studying a particular gene or genes then will be able to get copies of those sequences.

Increasingly, drug and biotechnology companies have teamed up to sequence large numbers of partial gene sequences. But the companies are keeping their findings secret until they are able to determine the commercial usefulness and seek patent protection based on partial knowledge of the gene. The lack of access to the data has frustrated many scientists who believe it has slowed progress in genetics research.

The Merck agreement will play an important role in speeding the mapping of the entire human genome. Much of the human genome work has been done in the United States as part of the $3 billion, 15-year Human Genome Project. The project is already has identified important genes involved in cystic fibrosis, muscular dystrophy and Huntington’s disease.

Most recently, Waterston’s work has concentrated on spelling out the molecular sequence of DNA in the tiny roundworm, C. elegans. His research is funded by the National Institutes of Health Human Genome Project. Sequencing DNA from organisms such as C. elegans has laid the foundation for developing technologies to rapidly sequence human DNA, Waterston said.

Six hundred employees will move to West Campus offices. In the spring, Accounting Services is scheduled to move from its current location on Hampton Avenue into West Campus. The department will be joined by other Hamp- ton-based administrative offices, including the investment branch of Accounting Ser- vices and part of Alumni and Development. When a farm move-out date has been set, the University will begin the process of leasing or selling the Hampton facility, said Richard Rohoff, executive vice chancellor. The new Washington University Shared Billing and Collection Service at the School of Medicine also will relocate to West Campus.

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Researchers are investigating a new technique that allows patients to donate blood right before surgery

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Educators fear its passage Nov. 8 could mean drastic cuts in state funding for higher education
New technique allows blood donation minutes before surgery

School of Medicine researchers are studying a blood donation technique that allows patients undergoing elective surgery to donate their own blood just prior to surgery. The procedure reduces the risks — although already extremely low — of receiving contaminated blood from a blood bank. It also costs less than the more traditional method of donating one’s own blood weeks before surgery. This elective surgery called preoperative autologous blood donation, in which a patient can store several units of his or her own blood several weeks before an operation.

Called Acute Normovolemic Hemodilution (ANH), the new technique allows doctors to donate their own blood just minutes before surgery begins. Instead of making trips to the hospital before admission, patients donate several units of blood just after the induction of anesthesia.

The researchers have data on 60 patients at the recent annual meeting of the American Society of Anesthesiology. Half of those patients used the new procedure; the rest donated their own blood several weeks prior to routine prophylactic surgery. “We’ve been using this new technique for some time now, and we’ve found that it’s just as safe and effective as the more traditional preoperative autologous blood donation,” said Terri G. Monk, M.D., assistant professor of anesthesiology. “We used to routinely transfuse patients in units of all blood — blood from another person — as nearly all of these patients. Now that there is such a concern about infection from blood, we have been able to decrease substantially the need for any transfusion.”

In fact, in this patient population — men having prostate removal surgery — the percentage of patients receiving transfusions from the blood bank has fallen from 70 percent to less than 10 percent. The investigators is to decrease the number requiring blood from the blood bank to near zero.

For the last decade, health professionals have widely endorsed the practice of storing blood prior to surgery. In spite of increased expense, it has become the standard of care. That is especially true for elective surgeries including orthopedic joint replacement surgery and some types of abdominal gynecological operations.

“Before any medical procedure with a fair amount of blood loss and a high proportion of a blood transfusion,” said Lawrence T. Goodnough, M.D., associate professor of medicine and pathology and director of transfusion services at Barnes Hospital. Goodnough and Monk studied 30 male patients scheduled for radical prostate surgery. Each man donated one unit of blood prior to hospital admission. Up to four additional units were drawn at the time of surgery. They compared those patients with 30 others who were chosen retrospectively. The latter group had donated three units of blood prior to hospital admission and had undergone the same surgery and experienced similar blood loss during their operations. Comparing the two groups, the researchers found that the results in terms of safety and effectiveness, but the cost results were very different. Predonated autologous blood cost an average of $185 per unit, compared with a per unit cost of $18 in the ANH group. Goodnough said one reason the costs are so much lower is that the blood never leaves the operating room. “It never has to be tested. It doesn’t have to be inventoried, and it’s available for the patient’s needs before the surgery,” he said. “Plus, we retransfuse all of the blood back to the patients before they leave the operating room.”

Predonation of autologous blood is associated with a high incidence of waste because it is not always transfused into the patient after surgery. Autologous Blood is the safest form of blood because it is the patient’s own. It also adds to the nation’s blood bank inventory, so that the autologous donor does not require blood from a blood bank. Those are not the only reasons, however, that autologous donation is a more standard medical practice before many elective surgical procedures.

While the nation’s blood supply has never been safer, and chances of blood borne diseases are on the decline, there are very low, the public perception of risk is another story. “Every patient I talk to has a great deal of fear of getting blood from another human,” said Monk. “They are all concerned about the risk of a viral infection from blood!” Those concerns have contributed to the rise in popularity of preoperative autologous blood donation.

“Although ANH may seem risky since the autologous donor is blood removed immediately before a surgical procedure, Monk said ANH is safe because the blood is replaced intravenously, with intravenous solution, so the total fluid volume in the bloodstream remains constant. “The amount of red blood cells in the circulation is less than normal,” Monk explained, “and there is enough hemoglobin in the blood to carry the necessary oxygen to the body.” Hemoglobin is the molecule that transports oxygen in the blood. Goodnough and Monk plan to build on this technique by looking at intrinsic and extrinsic blood substitutes attempts to achieve the goal of getting patients through elective surgery without the need for blood from the blood bank.

Jim Dryden
Will teaches "fantastically cool subject"

By the Canadian Association of Physics.

During his first week at Caltech some fellow Canadians suggested he talk to Thorne because as Will recalls they told him, "Oh, man, there's a great teacher, he's a great guy. He teaches relativity, which is a hot subject now." Thorne was grateful for the glowing reference. With Will and a few other top-notch graduate students on board, at the time, Thorne felt he had the "cream of the crop of the world's physics students."

"Using entertainment is especially important in bringing science to the public because not everyone is all that excited by scientific things."

by the Canadian Association of Physics.

The book, "Einstein's Unfinished Symphony," was reviewed in The New York Times, not only was reviewed in The New York Times, but also reviewed in The Times. His 1986 book focusing on Einstein's theory of general relativity and the experiments designed to test it was published to its military applications — the U.S. Department of Defense tested the system in a number of scenarios. He received a bachelor's degree in applied mathematics from Harvard University, and a master's degree in theoretical physics. By the time he completed his Ph.D., he had risen to the position of associate professor. Thorne, now the Feynman Professor of Theoretical Physics at Caltech, said, "It was clear from the beginning that Cliff had enormous talent and enormous cognitive abilities. By the time he completed his Ph.D., he had risen to the top — and very impressively. I would say that since the early 1970s, Cliff has been the lead figure in the world among theorists who examine the theoretical foundations for experiments in general relativity. By a fairly large margin, he has been the leader in this field."

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"Using entertainment is especially important in bringing science to the public because not everyone is all that excited by scientific things."

by the Canadian Association of Physics.
Films

Thursday, Nov. 3

Friday, Nov. 4

Tuesday, Nov. 8
2 and 4:30 p.m. Filmboard Feature Series. "The Big Lebowski" (1998), a, film about a Los Angeles man who accidentally causes a是一起大案的发案者。由于案件的复杂性，警方在调查中遇到了一些困难，但最终还是通过细致的调查和证据分析，将犯罪嫌疑人绳之以法。案件的处理不仅展示了警方的专业素质，也引发了社会对公正司法的广泛关注。该案的处理结果不仅得到了受害方的满意，也得到了社会和媒体的一致好评。
Performances
Saturday, Nov. 5
1 p.m. Dept. of Music recital. soprano Elizabeth Peterson, graduate student in voice, and pianist Gall Hinz perform the music of Henry Purcell. Seifert Auditorium. 802-9355.
Music
Saturday, Nov. 5
Noon. Noon show and brunch. benefits the Newman Center, the Catholic student center at WU. The show features full fashioned from St. Louis in Clayton and Charles Brennan, KMOV, radio personality, as master of ceremonies, and $500 for Newman Knight and Newman Lady donations, which will go to the Newman Center. For reservations, call 725-3358.
Saturday, Nov. 12
8 p.m. "Stage Left" series presents Josh Kornbluth. "Knifeman,'" a story of an Einstein wanna-be humbled by the hallowed halls of Princeton, University. Drama Studio, Room 208 Mallinckrodt Center. Cost: $12. 935-6543.
Sunday, Nov. 13
2 p.m. Oregon programs informational meeting. For more information, call 935-5010.
Miscellany
Sunday, Nov. 6
Noon. Food show and brunch. benefits the Newman Center, the Catholic student center at WU. The show features full fashioned from St. Louis in Clayton and Charles Brennan, KMOV, radio personality, as master of ceremonies, and $500 for Newman Knight and Newman Lady donations, which will go to the Newman Center. For reservations, call 725-3358.
Monday, Nov. 7
8 p.m. Overseas programs informational meeting. For more information, call 935-5010.
Performances
Thursday, Nov. 3
7 p.m. Informal dance presentation. "Suzanne Costello: Dancing and Verbalizing Science," a 19th-century woman's view of the physical world. Edison Theatre box office or through Metrotix at 534-1111. For more information, call 935-6543.
'Stage Left' features wit of Josh Kornbluth
Josh Kornbluth brings two of his most hilarious coming-of-age monologues to Washington University for four performances Nov. 6-11 in the Drama Studio. Room 208 Mallinckrodt Center.
Kornbluth presents "Red Diaper Baby," his hilarious and honest autobiographical monologue about growing up on the streets of New York, at 8 p.m. Nov. 10 and 11. "The Mathematics of Change," his story of an Einstein wanna-be humbled by the hallowed halls and heretoglyphic chalkboards of Princeton University, is offered at 8 p.m. Nov. 12 and at 7 p.m. Nov. 13. The performances are part of Edison Theatre's "Stage Left" series.
Kornbluth's theatrical monologues, full of brilliant insights and self-deprecating humor, are written to create witty Allen and monologist/actor Spalding Gray's own "Performance on a Whim:"
Images in "Red Diaper" include Kornbluth's father as a naked Stalingrad, who wakes him up every morning by shouting "to the International!" and Kornbluth's student who organized his fellow kindergartners in a class struggle to overthrow the first grade. Born in the South, raised in Manhattan's Upper West Side, Kornbluth went to the University of Illinois then quit to pursue a writing career. His latest monologue, "The Mathematics of Change," touches on issues of money, status and the importance of family. Kornbluth describes how he ended his struggle for a physics degree at Princeton.
"I structure my monologues around situations that are familiar to everyone, and I have added to it," Kornbluth said.
Kornbluth worked for several years as a journalist in Chicago and Boston and created and hosted a radio variety show called "The Urban Happiness Radio Hour," before moving to the stage in a political comedy revue called "The Gramm-Rudman Act." Universal Pictures has commissioned Kornbluth to write a screenplay based on "Red Diaper," and the original monologue has won a prestigious Drama Desk nomination.
Tickets are $12, with student discounts available. Tickets are available at the Edison Theatre box office or through Metrotix at 534-1111. For more information, call 935-6543.
Campus activities help area's homeless, hungry
A concert benefiting the St. Louis Area Food Bank will be held during Hunger and Homelessness Awareness Week, slated for Nov. 7-12 at Washington University. The concert is sponsored by Washington University banks — The Scholars and Student Government. The concert will begin at 7 p.m. at 1230 5th St. The Gorgie. The cost is $2 or individuals may bring one or two canned goods.
A food drive and raffle also are planned. Canned food and canned containers will be placed across campus. Raffle tickets cost $1.
Women's Soccer
Last week: Washington 0, University of Missouri-Rolla 0 (OT), Washington 2, Case Western Reserve 1, Kalamazoo 0
This Week: Senior Adj Ana Flanigan, Kankakee, II, earned overall modal honors on the weekend, and scored in each of the 50 finishers for the crown. Flanigan circled the 4.86-mile route in 25:58. Stephonie Jerilyn was second in 26:17, and Constance Brennan took third in 26:45. Flanigan's effort, placing fifth among 50 finishers with a five-kilometer clocking of 19:51.
Men and Women's Cross Country
Last week: at University of Chicago Invitational — Men's 2nd place; Women's 2nd place of 3
This Week: Men's 2nd place; Women's 2nd place
Men and Women's Swimming/Diving
Last week: Washington (women) 117, Missouri-Rolla 132, Washington (men) 99
This Week: 6 p.m. Friday, Nov. 4, vs. University of Chicago/Northwestern State University at Washington University Swimming/Diving meet. Last week: Washington Relays, Millstone Pool
Season Record: Men 0-1; Women 1-0
Senior captain Stacey Topper, Papillion, Neb., won both the 200 and 1,000-yard freestyle races in the meet. Topper was the season-opening win at Williams College. On the men's side, sophomore Jason Price, Edwardsville, Ill., won the 500-yard freestyle and 200-yard backstroke races.
Men and Women's Volleyball
Last week: Washington 3 (15, 15, 15), Carnegie Mellon 3 (11, 4, 3); Washington 3 (15, 15, 15), Chicago 3 (6, 6); Washington 3 (15, 15, 15), Rochester 9 (6, 6, 6); Washington 15 (7, 9, 3); Washington 15 (7, 9, 3), Rochester 15 (1, 4, 8)
This Week: 10 a.m./3 p.m. Saturday, Nov. 5, vs. McKendree College/College of St. Francis, Field House
Season Record: 5-2 (1-0 UAA) (Champion)
Senior middle blocker Amy Albers, Washing- ton, Mo., was selected as the UAA's most valuable player for the regular season and the straight year, along with senior outside hitter Anne O'Donnell, Springfield. Senior setter Stephonie Settner Heather, N.J., for the straight year, Washington's Terri Clements, Joe Workman and Tina Eagles got theatrical work staff were picked by their peers as the UAA Coaching Staff of the Year.
Men's Soccer
Last week: Washington 3, Case Western Reserve 2
This Week: 1 p.m. Friday, Nov. 4, NCAAC South Central Regional vs. Wheaton College, Wheaton, Ill.
Season Record: 14-6 (6-1 UAA)
With the win against Case Western Re- serve, the Bears captured their fifth UAA conference title since 1989. Full-scale forward Scott Engoff, Minn., and Adam Pressman, Franklin, Tenn., scored the game-winning and tying goals against the Spartans.
Sports
Compiled by Mike Wolf, director, and David Moore, ass. director, sports information.
Washington University Record / Nov. 3, 1994
Washington University's annual Holocaust Memorial Lecture will be held at 7 p.m. on Thursday, Nov. 3, in the Auditorium of the Campus Y and Student Union.
Former rabbi of Berlin synagogue gives Holocaust Memorial Lecture
E mst Stein, former rabbi of the Jewish community in Berlin, will give Washington University's annual Holocaust Memorial Lecture at 7 p.m. on Thursday, Nov. 3, in the Auditorium of the Campus Y and Student Union.
"Suzanne Costello: Dancing and Verbalizing Science," a 19th-century woman's view of the physical world. Edison Theatre box office or through Metrotix at 534-1111. For more information, call 935-6543.
"Blue" Gene Tyranny. Steinberg Hall Aud. 7 p.m. Informal dance presentation.
Friday, Nov. 11
8 p.m. Performing Arts Dept. presents "The Seagull" by Anton Chekhov, a 19th-century Russian physician who is considered to be Russia's greatest playwright. Playwright is one of the first important works of modern criticism in English. (Edison Theatre. Cost: $8 for the general public; and $5 for University students, staff and WU faculty, staff and students. 935-6543.
Saturday, Nov. 12
Wednesday, Nov. 9
7 p.m. Overseas programs informational meeting. For more information, call 935-5010.
Tuesday, Nov. 8
3 p.m. Overseas programs informational meeting. For more information, call 935-5010.
As part of ongoing renovations to West Campus, construction crews are transforming the upper floors of the former Famous-Barr building to University office space.

In November 1993 to ease overcrowding at the University’s 14 other libraries. The West Campus branch houses the older, more valuable and less-used items from the University’s extensive collection. The ground floor also is home to the International Writers Center, which includes the offices of Director William Cass, Ph.D., the David May Distin- guished University Professor in the Humanities, and space for visiting writers. Also downstairs, a new conference facil- ity, containing a meeting room with a seating capacity of 200, a small lounge and a kitchenette, has been in almost constant demand since opening last winter.

The renovation project involves a crew of subcontractors. Spirits Wrecking Co. Inc. handled the interior demolition. ICS is overseeing most of the reconstruction. Mackey Mitchell Associates is the project architect, and McIlraine Engineering Associates is the project engineer.

Susannah Webb
Project Zeues receives three major grants – from page 1

National Challenge Award for $3,002,326

Over five years and involves developing network devices the gay (or lesbian) student will receive multiple research fellowships and training opportunities.

Christopher L. J. Frick, Ph.D., assistant professor of psychology, has received a $742,033 four-year grant from the National Institute of General Medical Sciences for a project titled "Molecular Mechanisms of the Male and Female Reproductive Systems." The research is for a technique called cell tracking, which enables researchers to follow the movement of individual cells within complex biological systems.

Parulkar was instrumental in securing the Project Zeus broadband access program this year were funded.

The award enables Fritz and Watson to travel to Taiwan. His scholarship allows him to continue his research on "What Is Japanese Buddhist Art?" at Depauw University in Greencastle, Ind.

DeeAnna Clift, a doctoral candidate in psychology, presented a paper on "The Defining Features of the White Revolution: Made in New York City?" at the North Central Council of Latin America's annual meeting in La Crosse, Wis. She also presented a poster on "The Effect of Video Games on Children's Social Interaction." The research was conducted in Fullerton, Calif.

His poem is titled "Refrigerator." The authors of recent books on single parent-ship in America will be available for a reading and signing at the event on "What Is Japanese Buddhist Art?" at Depauw University in Greencastle, Ind.

She also presented a paper on "Copper Mining on the U.S.-Mexican Border: Ecological, Social, and Economic Impact" at the Second International Symposium on Economic History and Implications in Fullerton, Calif.

John E. Holland, D.D.S., M.S., formerly had two other grants, one National Science Foundation Grant and one from the American Historical Association, to study the life of the 19th-century abolitionist Harriet Tubman. He presented his research at the University of College Park in Fullerton, Calif.

Three students in the Joint D.D.S./M.A. Program in Law and East Asian Studies and a student in the East Asian Studies Program have received Foreign Language and Area Studies (FLAS) fellowships for 1994-95 from the Kent Center for East Asian Studies. The center is sponsored by Washington University and the University of Missouri-St. Louis.

Ken Anderson, Robert Baran, Sheila Scheuerman and Nancy Sullivan each received full tuition plus an $8,000 stipend. The fellowships are designed to encourage students to continue language studies during their graduate programs. Anderson, a native of Missouri, is a second-year graduate student in East Asian studies.

They were among 25 recipients of the National Science Foundation's prestigious National Science Foundation Fellowship program.

Trebilcot, a retired professor of anthropology, received a $742,033 four-year grant from the National Institute of General Medical Sciences for a project titled "Molecular Mechanisms of the Male and Female Reproductive Systems." The research is for a technique called cell tracking, which enables researchers to follow the movement of individual cells within complex biological systems.

The purpose of the ILI is to foster excellence in science, mathematics, engineering and technological education. Awards are given for a wide range of scientific disciplines and may be given to projects such as introductory laboratories, courses and non-science majors, encouraging underrepresented groups interest in science, mathematics and engineering, and broadening participation of non-science majors in undergraduate education. The awards are given for a wide range of scientific disciplines and may be given to projects such as introductory laboratories, courses and non-science majors, encouraging underrepresented groups' interest in science, mathematics and engineering, and broadening participation of non-science majors in undergraduate education and the National Institute of General Medical Sciences for a project titled "Molecular Mechanisms of the Male and Female Reproductive Systems." The research is for a technique called cell tracking, which enables researchers to follow the movement of individual cells within complex biological systems.

The award enables Fritz and Watson to travel to Taiwan. His scholarship allows him to continue his research on "What Is Japanese Buddhist Art?" at Depauw University in Greencastle, Ind.

His poem is titled "Refrigerator." The authors of recent books on single parent-ship in America will be available for a reading and signing at the event on "What Is Japanese Buddhist Art?" at Depauw University in Greencastle, Ind.
Hilltop Campus

The following is a list of positions available on the Hilltop Campus. In- terested candidates are encouraged to apply. Positions may be obtained in the Office of Human Resources, Room 118, Hilltop Campus, New Britain, Connecticut 06056. Apply as directed in the advertisement. All positions require an application.

Seismic Deployment Coordinator, Part Time 950028. Department of Earth and Allied Sciences. Responsible for deployment of seismic equipment in the field for geophysical data collection. Requires: Filing and documentation, ability to travel and work with geophysical equipment. Resume required.


Assistant Publications Editor 950002. Office of Human Resources. Responsible for daily clerical work. Requires: High school diploma or equivalent, ability to write report in Microsoft Word, and working knowledge of university office computer systems. Requires: Resume required.

Administrative Secretary 950033. Office of Human Resources. Responsible for making travel reservations, typing, word processing, handling telephone inquiries, filing, and handling routine correspondence. Requires: High school graduate or equivalent, typing 40 words per minute. Resume required.

Library Technical Assistant 950051. Library Administration. Responsible for reading and analyzing library catalog records. Requires: High school diploma or equivalent, ability to work with computers and word processing, demonstrated initiative, self-motivation, and ability to set priorities and work as part of a team. Resume required.

Systems Operator 950312-R. Office of Human Resources. Responsible for performing tasks associated with computer operations and systems. Requires: Bachelor's degree in computer science, minimum two years of experience with mainframe computer systems, and working knowledge of MVS and CMPS. Resume required.

Computer Programmer 1950197-R. Office of Human Resources. Responsible for the development and implementation of computerized data processing systems. Requires: Bachelor's degree in computer science or equivalent, knowledge of computer languages, and programming skills. Resume required.

Associate Professor, Part Time 950111. Department of Biology. Requires: Doctorate, minimum of five years experience in teaching as an associate professor or equivalent, and ability to train and develop students. Resume required.

Special Project Assistant 950254-R. Office of Human Resources. Responsible for handling special projects in the office. Requires: High school graduate or equivalent, typing 35 words per minute. Resume required.

Addressing employee questions and concerns of student staff, customers and peers. Requires: Bachelor's degree in business administration or related field, and working knowledge of university office computer systems. Requires: Resume required.

Project Coordinator 950110. Office of Human Resources. Responsible for coordinating and implementing projects. Requires: High school graduate or equivalent, ability to set and prioritize, and working knowledge of university office computer systems. Resume required.

Student Educational Services 950018. Office of Human Resources. Responsible for handling student issues, and ability to travel and work with geophysical equipment. Resume required.

Assistant Professor 950017. Office of Human Resources. Responsible for preparing and presenting lectures. Requires: Ph.D. in Earth and Allied Sciences.

Data Assistant 950017. Office of Human Resources. Responsible for handling student records, and ability to travel and work with geophysical equipment. Resume required.

Writing Skills Specialist, Part Time 950009. Department of Education. Responsible for working with students to improve their writing skills. Requires: Bachelor's degree in English or related field, and working knowledge of university office computer systems. Resume required.

Cashier, Part Time 950004. Access Office. Responsible for handling cash transactions. Requires: High school graduate, ability to work with computers, and working knowledge of university office computer systems. Resume required.

Director of Human Resources 950001. Office of Human Resources. Responsible for the overall management of the human resources department. Requires: Bachelor's degree in human resources, and working knowledge of university office computer systems. Resume required.

Health Services. Responsible for handling student issues, and ability to travel and work with geophysical equipment. Resume required.

Special Project Assistant 950254-R. Office of Human Resources. Responsible for handling special projects in the office. Requires: High school graduate or equivalent, typing 35 words per minute. Resume required.

Program Analyst WUSBCS-JH 950017. Office of Human Resources. Responsible for the development and implementation of computerized data processing systems. Requires: Bachelor's degree in business administration or related field, and working knowledge of university office computer systems. Requires: Resume required.

Director of Enrollment Services 950001. Office of Human Resources. Responsible for the overall management of the enrollment services department. Requires: Bachelor's degree in business administration or related field, and working knowledge of university office computer systems. Requires: Resume required.

Director of Information Systems 950001. Office of Human Resources. Responsible for the overall management of the information systems department. Requires: Bachelor's degree in business administration or related field, and working knowledge of university office computer systems. Requires: Resume required.

Director of Human Resources 950001. Office of Human Resources. Responsible for the overall management of the human resources department. Requires: Bachelor's degree in human resources, and working knowledge of university office computer systems. Resume required.

Health Services. Responsible for handling student issues, and ability to travel and work with geophysical equipment. Resume required.

Special Project Assistant 950254-R. Office of Human Resources. Responsible for handling special projects in the office. Requires: High school graduate or equivalent, typing 35 words per minute. Resume required.

FACILITORS for application programs in a patient registration data base. Requires: Bachelor's degree in business administration or related field, and working knowledge of university office computer systems. Requires: Resume required.

Office of the Network Coordinator 950011. Office of Human Resources. Responsible for handling student issues, and ability to travel and work with geophysical equipment. Resume required.

Program Analyst WUSBCS-JH 950017. Office of Human Resources. Responsible for the development and implementation of computerized data processing systems. Requires: Bachelor's degree in business administration or related field, and working knowledge of university office computer systems. Requires: Resume required.

Director of Human Resources 950001. Office of Human Resources. Responsible for the overall management of the human resources department. Requires: Bachelor's degree in human resources, and working knowledge of university office computer systems. Resume required.

Information Systems 950001. Office of Human Resources. Responsible for the overall management of the information systems department. Requires: Bachelor's degree in business administration or related field, and working knowledge of university office computer systems. Requires: Resume required.