

Science

Microscope a Glimpse Into Future

Susie Bennett

The new electron microscope center, located in Morgan Jones, is definitely a glimpse into the future of science here at St. Andrew's. Fortunately, it's a very good glimpse. According to Dr. Leon Applegate, the mastermind behind the whole project, the EM center has three purposes. Its main purpose is to serve as a teaching tool. Secondly, it will be used for research, by both professors and students. Last of all, it will be used for show, mainly to prospectives and their families.

For people familiar with Morgan Jones, the EM center is located in the main lab, near the instrumentation room. For those not familiar with Morgan Jones, just ask someone, preferably Leon. He loves to show people around the center and is also happy to answer any questions you might have about it.

The layout of the EM center makes a lot of sense. When you first walk in, you are in a basic classroom, complete with desks. Directly in front of you is the room that houses the SEM, or scanning electron microscope. To the left is the room that houses the TEM, or the transmission electron microscope. To the right is the prep room, used for the preparation of samples for viewing in either of the two microscopes. Each of these three rooms look onto the classroom through large glass windows. This facilitates the teaching aspect of the center: it allows the professor to use the SEM or the TEM, or to prepare a sample for viewing, while the entire class watches. The class can sit comfortably in their desks and watch instead of having to all crowd into a tiny room, which was how it was before

with microscopes.

One of the best aspects of the center has to do with a 25-inch high-resolution color T.V screen which sits up above the SEM room. The screen is easily in view of all of the occupants of the classroom. The SEM is hooked up to this screen and everything that is magnified by it can be seen on the screen. Since the screen on the SEM itself is only about 7 or 8 inches in diameter and is also in black and white, this is quite an improvement. In addition to being hooked up to the T.V screen, the SEM is hooked up to an IBM compatible computer. This computer serves a very special purpose. When the SEM magnifies an image, the image can be sent through the computer. In the computer, the image is digitized by an imaging board. This process has many practical applications. First of all, it converts the two-dimensional image from the SEM into a three-dimensional image. The three-dimensional image allows you to observe depth, height, and other things that you simply cannot see with a two-dimensional image. Also, using the computer keyboard, you can manipulate the image almost any way you want to. It will be possible to see the back of the object, the side of the object, etc. You would also be able to zero in on things that you want to see in more detail. Of course all of these things will be fully visible to the classroom via the T.V screen.

All of these things may seem terribly hard to understand. However, if you are interested in it, don't despair. During Winter Term, Leon offers a class in Electron Microscopy. The class is very informative, and will give you all you'll ever need to know about the two electron microscopes. So, if you're a science major or if you're just interested in it, sign up. You won't regret it.

Improvements Planned for Micro Lab

DeTamble Library's microcomputer lab is slated for improvements this year, including a new room, new software, and better hardware.

The new room, to be built on the south side of the library, is scheduled to begin before the end of the term. The room will provide a ground floor area for all the microcomputers including the Artronics graphics computers. The new room will be designed to provide a "pleasant, stable working environment" for students.

New software is now in for both the Kaypro and IBM microcomputers. Valuable learning and application software packages were added over the summer months. There is software designed to teach you to type, to solve calculus equations, to graph, to help you with Spanish, to model, rotate, and map the stars, to tutor you for the GRE, to simulate protein synthesis, mitosis and meiosis, to teach you to use a computer, to create a timeline, and more. A mouse Tool device has been installed on the hard drive of one of the Kaypros, as well as a Paint and Drawing program. All software packages are available at the circulation desk, all you need is your valid St. Andrews i.d.

Tutors, on-duty for afternoon, evening, and weekend hours, are prepared to answer questions or help with problems in any computer field, but especially in their area of specialty.

Tutors and their specialties are: Kat Caridakis (Lotus 123, C language,

Turbo Pascal, Assistant Series, and Wordstar); Rob Collins (dBase III+, Turbo Pascal, Word Perfect, Wordstar, Basic, and PC Paint); Terrie Cloud (Wordstar, Turbo Pascal, Framework, and dBase III+); Phil Nolette (Turbo Pascal, Basic, Lotus 123, Wordstar, and dBase III+); Oscar Gallego (H.T.P.M. and de Silva Spanish Tutor); and Bobby Simpson (Wordstar 2000+, Assistant Series, dBase III+, and Lotus 123).

The microcomputer lab is open all hours that the library is open.

WORKING STUDENTS:

When you fill out your Form W-4 or W-4A, "Employee's Withholding Allowance Certificate," **remember:** If you can be claimed on your parent's or another person's tax return, you generally cannot be exempt from income tax withholding. To get it right, read the instructions that came with your Form W-4 or W-4A.



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Health Sciences Club Concerned with Issues

Susie Bennett

If you are a biology major, a chemistry major, a psychology major or if you are just interested in the health field, then the health sciences club is just for you. It is a club that is concerned with current health and safety issues and how these issues affect us.

The club usually meets every two weeks, on Tuesday nights at 9 o'clock in Wilmington main lounge. Usually, there is a speaker, such as a doctor, a nurse, or an EMT. Just two weeks ago, at our last meeting, we had Darin Lawrence, an EMT, speaking. He gave us a feel of exactly what it was like to be involved in saving a person's life in an emergency situation. He brought some commonly used equipment along with him and even demonstrated how it was used on a few club members, myself included. All in all, it was very interesting.

The two faculty advisors are Dennis McCracken and Michael Torres. Being a club member is a good way to get to know both of them on a more personal level. This helps you to feel more

comfortable with them in an academic setting.

Future activities of the club include a campus wide party, Toilet Talk, and a party for club members and all other science majors. Our campus wide party is Mash Bash, which is held in February. It is held in Farrago and everybody dresses up like their favorite Mash character. There are prizes for the best costume. Toilet Talk is basically a health awareness activity. Club members make up handouts with information concerning health related subjects, such as AIDS, venereal diseases, drug and alcohol abuse and suicide, to name a few. These handouts are then taped up in bathroom stalls all over campus. Hence the name Toilet Talk. Our other party is called Senior Roast. It is held off campus, usually at one of our advisor's houses. It includes a barbecue and a Dean Martin-like roast of all the graduating science majors. It really is a great time.

So, if you're interested in the health sciences club come to our next meeting. It will be posted around the campus and also in "Comings and Goings."

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