

“If a man empties his purse into his head, no man can take it away from him. An investment in knowledge always pays the best interest”. Benjamin Franklin

Welcome to the Department of Plant Pathology!

Congratulations on your decision to pursue an advanced degree and include plant pathology as part of your future. The Department of Plant Pathology at the University of Minnesota has one of the longest, broad ranging, and most successful graduate education programs in plant pathology in the world. Since 1905, when the University’s first Ph.D. in plant pathology was awarded, 429 Ph.D. and 426 MS students have graduated. Alumni and faculty from the Department include a winner of a Nobel Peace prize (Norman Borlaug), a Knight in Denmark (Bent Skovmand, 2003), and eleven Presidents of the American Phytopathological Society. This past 2007-2008 academic year, our Department celebrated its 100th anniversary (1907-2007), and the American Phytopathological Society celebrated its centennial (1908-2008) by holding the APS National Meeting in the Twin Cities.

During your time in the Department, I am confident you will be presented with many opportunities for interacting with interesting, thought-provoking and creative faculty, alumni, students and staff. I encourage you to embrace these opportunities and to let your dreams for the future evolve along with them. This is an exciting time for plant pathology and for plant sciences in general. We are in an age of incredible technological advances, which can be brought to bear on a number of longstanding questions about microbes and their interactions with plants. The age of “omics” (genomics, proteomics, metabolic, etc.) coupled with bioinformatic tools provides new opportunities for solving plant pathology problems related to food production, quality, safety, and nutrition, as well as to those pertaining to environmental resources and quality of life. You can anticipate that in your career at the University you will witness and contribute to advances in disease diagnosis, control and prevention.

This handbook is provided as a means for you to quickly familiarize yourself with the rights, privileges and responsibilities of the program. Your suggestions on improving the handbook are always welcome.

I appreciate the enormity of your decision. I know first hand how much time, energy and sacrifice is needed to complete an advanced degree. I also know that an investment in education will take you places beyond your imagination. I sincerely hope your experiences in the Plant Pathology Graduate Program fulfill and surpass your expectations. I wish you much success and congratulate you on becoming part of the second century of plant pathology at the UMN!

Please let me know how we can serve you. My door is always open.

In partnership,

Carol A. Ishimaru

**DEPARTMENT OF PLANT PATHOLOGY
THE UNIVERSITY OF MINNESOTA**

Mission Statement

On September 18, 1990, Faculty and representatives from Academic Professional, Graduate Student, and Civil Service personnel groups from the Department of Plant Pathology met at a retreat and developed a mission statement for the Department. This statement was reexamined and confirmed at a retreat held September 19, 1991. The Statement is printed below.

Mission Statement:

"The mission of the Department of Plant Pathology is to conduct research and education in plant health science emphasizing control of plant disease and relationships among plants, microbes, and the environment."

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ORGANIZATIONAL SUMMARY OF THE COLLEGE OF FOOD, AGRICULTURAL AND NATURAL RESOURCE SCIENCES

The College of Food, Agricultural and Natural Resource Sciences is comprised of six divisions, fourteen academic units (two are held jointly), seven research and outreach centers throughout Minnesota, The Bell Museum of Natural History and the Minnesota Landscape Arboretum. The college also participates in many interdisciplinary centers and cooperatives.

Division of Applied Economics

Division of Bioresources and Bioenergy

Division of Environmental Science, Policy and Management

Division of Food, Animal and Nutritional Sciences

Division of Plant Science

Division of Translational Research and Engagement

Division of Applied Economics

Department of Applied Economics

Division of Bioresources and Bioenergy

Department of Bioproducts and Biosystems Engineering (joint with Institute of Technology)

Division of Environmental Science, Policy and Management

Department of Entomology

Department of Fisheries, Wildlife, and Conservation Biology

Department of Forest Resources

Department of Soil, Water and Climate

Division of Food, Animal and Nutritional Sciences

Department of Animal Science

Department of Food Science and Nutrition

Division of Plant Science

Department of Agronomy and Plant Genetics

Department of Horticultural Science

Department of Plant Biology (joint with College of Biological Sciences)

Department of Plant Pathology

Division for Translational Research and Engagement

Cloquet Forestry Center
North Central Research and Outreach Center at Grand Rapids
Northwest Research and Outreach Center at Crookston
Southern Research and Outreach Center at Waseca
Southwest Research and Outreach Center at Lamberton
UMore Park at Rosemount
West Central Research and Outreach Center at Morris
Department of Agricultural Education (joint with College of
Education and Human Development)

BRIEF HISTORY OF MINNESOTA PLANT PATHOLOGY

(Professor Richard Zeyen)

OVERVIEW

Plant Pathology at the University of Minnesota Historical Perspective

Plant Pathology at the University of Minnesota celebrated its Centennial (100th birthday) in 2007. This Department has a rich, impressive history developed by serving the plant health needs of Minnesota and extending this knowledge nationally and internationally. Its talented faculty, staff and alumni, although little-known within the University of Minnesota, are recognized world-wide for their application and integration of scientific principles to the problem of producing disease resistant, highly productive important food plants, for preserving genetic diversity of these plants, and for their humanitarian efforts to reduce world hunger and combat rural poverty. The alumnus, Norman Borlaug, perhaps best exemplifies them and their efforts. Norman Borlaug is one of only five people to have received the Nobel Peace Prize, the Presidential Medal of Freedom and the Congressional Gold Medal. He shares this honor with Mother Teresa, Martin Luther King, Nelson Mandela and Elie Wiesel.

In 1907 the University of Minnesota, with support from flour milling interests powered by the falls of Saint Anthony on the Mississippi river, the railroad industry and the United States Department of Agriculture, formed the predecessor to the current Department of Plant Pathology. It was the Division of Vegetable Pathology and Botany (agricultural) and was housed in the College of Agriculture on the Saint Paul Campus. It was a response to devastating wheat stem rust epidemics, especially the epidemic of 1904.

Early department faculty, students and alumni were renowned contributors to the science, theory and practice of plant pathology. In particular, they excelled at research into microbial variability and adaptability. They specialized in the understanding and use of genetic control of plant diseases. Minnesota discoveries like “physiological races” for rusts and other biotrophic fungi led to the gene-for-gene theory by the alumnus H.H. Flor. Gene-for-gene was put forward for understanding the interactions of fungal races and plant resistance genes. Minnesota truly was the “Mecca” of understanding microbial variability and the genetic control of plant diseases.

Minnesota has one of the longest established, broadest ranging, and most successful graduate education programs in Plant Pathology in the world. The first Ph.D. degree involving plant disease at Minnesota was awarded in 1905 (Edward M. Freeman). This was two years before the department’s official inception. Dr. Freeman was then appointed head of the fledgling Vegetable Pathology and Botany Department. Since 1907, thousands of students and post-graduate visitors from all parts of the world have partaken of graduate education in Plant Pathology at Minnesota. Through 2008, a total of 429 Ph.D. and 426 MS degrees in Plant Pathology were awarded. Stability, a sense of unity and tradition, written guidelines, graduate student offices, and

experience in mentoring and advising sustain excellence and pride in the Plant Pathology Graduate Program.

For more historical perspectives please see the Department of Plant Pathology's web page - <http://plpa.cfans.umn.edu/>

I. Department of Plant Pathology and University of Minnesota Facilities and Services

A. General Information

The Department of Plant Pathology is housed in Borlaug Hall, Christensen Laboratory, and Stakman Hall on the University of Minnesota campus in Saint Paul. The Department of Plant Pathology Administrative Office is located in 495 Borlaug Hall. There are two departmental conference rooms: 491 Borlaug Hall and Room 302, Stakman Hall. These rooms are scheduled for meetings, classes, seminars, and any other appropriate gathering. Reservations to use the conference rooms for a specific date and time can be made at the receptionist's desk. There is a student lounge/study area located in 401-403 Stakman Hall and a small kitchen in room 411 with a refrigerator, microwave, and sink for general use. The Department occupies laboratory and office space in Stakman Hall and Christensen Laboratory. The Plant Pathology Library is located in 395 Borlaug Hall. Teaching laboratories are located on the second floor (rooms 291, 295, and 296) and lecture room (365) the third floor of Borlaug Hall. In addition, there are general lecture/teaching laboratories in rooms 132 and 136 of Plant Growth Facility West.

Keys. Keys for entry to departmental buildings, (Christensen Laboratory, Stakman Hall and Borlaug Hall) and to other offices and research laboratories which students use can be obtained from the Departmental Administrative Office. There is a \$5 deposit when keys are issued which will be refunded when keys are returned.

Security is important. Campus buildings are locked from 6:00 p.m. to 6:00 a.m. week nights and all day Saturday and Sunday. Many people have access to building facilities during working hours. Keep items of value out of sight, preferably locked in a desk or cabinet. We encourage you to keep your offices and labs locked when you are not around. Windows should be closed for the evening. If you have valuable articles taken from your work place, please report the incident immediately to the University police and the Department Administrative Director.

Desk Assignment. The Chair of the Plant Pathology Graduate Student Organization assigns office space. New students should contact the current chair Ryan Syverson for their desk assignment.

Graduate Student Computer Room.

Computers, scanners, and printers are available for graduate student use. The computer equipment is stationed in 304 Stakman Hall. Guidelines and resources are posted in the computer room.

General guidelines and information for computer usage. The Graduate Student

Computer Lab is intended for use by Graduate Students of the Plant Pathology and Agronomy and Plant Genetics Departments. Access is restricted to these individuals only. Do not share the access codes with anyone! If you don't recognize someone using the computers, please ask them to identify themselves. If they are not a department member, ask them to leave at once.

The software, hardware, and supplies for the computer lab come from student technology fees and funds contributed by the respective departments. Please follow these guidelines:

- * Limit personal use of equipment and supplies.
- * Do not leave the door to the computer lab open for any reason! If there is a problem with the key pad entry, report it to Robb Miller, the Administrative Office in 495 Borlaug Hall or to cfans.help@umn.edu.
- * Use of the Graduate Student Computer Lab requires the activation of your Active Directory Account. Go to <http://www.umn.edu/validate> and then sign-in. See the link located second from the bottom labeled, "Active Directory Account Options" (Note: If you do not have this option, notify cfans.helpdesk@umn.edu immediately). At this link, there should be a large amount of text followed by two check boxes: select those that apply and hit "submit." If there is little text without check boxes, your account has already been activated.
- * You will want to go through the same process for Netfiles, which gives you 5GB of online storage. More information can be found on <http://www1.umn.edu/netfiles/about.html>.
- * When using the computer lab, your data must be saved somewhere other than the computer itself (i.e. a thumb drive, CD, or other storage medium)
- * We cannot install programs onto any of the computers.
- * Computers have scheduled maintenance times which may cause data to be lost.

Computer room access and usage. To obtain access to the computer lab and the computers, please send Robb the following information: Your full first and last name, e-mail address, Department, Office number and building and office phone number. Everyone will be assigned their own access code, which Robb will give out, thereby eliminating the chance of any two or more Graduate Students requesting the same code.

Activating Active Directory Account. As indicated above, everyone using the lab computer will need to activate his or her Active Directory account if you have not already done so. Saving data. The computer will be imaged in such a way that will allow the IT Staff, primarily Robb, to revert the computers back to their original state following a restart. All data will be lost when this is done. Thus, it is important that you save your own data on another storage device such as an external hard drive, flash drive, CD, network share, or netfiles.

Computer maintenance schedule. Currently the PCs, and the Macs soon to follow, are set to update at 10pm every night and will then shutdown once the updates are complete. The computers are locked during this process and any data not saved somewhere other than the computer will be lost.

Scheduling extended usage. With respects to the Maintenance schedule, the PCs are also set to shutdown when idle for 2hours. If there is a program that must run for more than 2 hours or after 10pm at night, notify Robb Miller, so the maintenance schedule can be adjusted to you needs. Please give at least 24 hours notice by sending an email to Robb Miller and the Office Staff in 495 Borlaug.

Updates to Graduate Student Computer Lab. Notices of updates to the computer lab will be posted in the lab, on the Graduate Student Listserv, and also to a central website for all CFANS managed labs.

Hardware resources in the lab. Besides the computers, the computer lab also contains a high volume network printer and two scanners.

Number	Model	RAM	OS	Monitor
4	Dell Optiplex 745	2 GB	XP Pro	19"
2	Core 2 Duo iMac	2 GB	X	20"
2	Core Duo iMac	1 GB	X	20"
1	PowerPC iMac		X & 9	17"

Software. In an effort to standardize the software found in all CFANS-OIT managed computer labs, a computer image was created with software used throughout the college's many disciplines. This image will be applied to all PCs except for the PC connected to the scanner.

Additional Software. If there is any additional software not listed that you need or want to have installed onto the machines, please email the request to cfans.helpdesk@umn.edu and be very specific about the issue so it will be assigned to me or another computer associate within the Plant Sciences Division. It will not be possible to install any new software programs on the computers by Graduate Students effective Fall Semester 2007.

Computer Issues. Please follow these steps first before notifying Robb Miller or cfans.helpdesk@umn.edu. It is possible the issue is either not that severe and can be resolved without assistance or more information about the issue will be needed in order to make the necessary corrections. In either case, follow these steps:

1. Record the error message
2. What were you doing at the time of the message?
3. If the computer seems to be frozen:
 - a. Does the mouse work?
 - b. Does the keyboard
 - c. Does ctrl-alt-del (PC) or command-alt-esc (Mac) work?
 - i. If so, end program that is not responding.
 - ii. Restart the computer if on a PC or try reopening to program if on
 - iii. Mac (Restart the Mac if the program is still experiencing a problem).
4. If the computer is still experiencing problems, bring all information gathered from previous steps to Robb Miller's attention (306 Stakman Hall, ram@umn.edu or cfans.helpdesk@umn.edu if Robb is unavailable).
5. BE PATIENT!

Ordering supplies for the Grad Lab. If there is little or no paper in the computer lab or the printer is in need of toner, please notify Robb Miller in 306 Stakman Hall or the administrative staff in 495 Borlaug Hall. A note will be placed in the computer lab when supplies are on order.

Emailing from the Xerox Machine.

1. Select Email on the LCD
2. Select To: and enter your email address
3. The subject is prefilled, however, you can change it by selecting Subject: and deleting the prefilled contents.
4. Once done, have your paper sitting in the feeder and hit start.
5. When done, hit Clear All to clear all the entries made during the session.

Mail. Graduate student mailboxes are located at the west end of the hallway on the fourth floor of Stakman Hall. Messages and mail are distributed to mailboxes daily. If you plan to be gone for an extended period of time, please let the receptionist know if you need any special handling for your mail. Boxes for outgoing campus mail and U.S. mail are located in 495 Borlaug Hall. The St. Paul Campus post office is located in the lower level of the Student Center.

4th Floor Phone (612/625-4204). A telephone for student use is located in the hallway by Room 411 in Stakman Hall. Instructions are posted above the phone for use of the voice mail system. If you are checking the voice mail system and hear messages for other persons, please leave a note for them on the white dry-erase board in the hallway (and press "2" to save the message). Any problems or repair requests for telephones should be submitted to the Administrative Director. The University publishes annually a student/staff directory, which is useful for finding various departments, services and individuals. A listing of all Department personnel is included in this directory as well as the university website: [http:// www.umn.edu](http://www.umn.edu).

Fax Machine. A fax machine is available in the Administrative Office (495 Borlaug Hall) to send a message/document over the phone line. The fax machine can transmit or receive any image printed on paper -- writing, printing, diagrams and photos. When sending a fax, you will need the complete telephone number, name, city and state of the fax destination. Graduate students and staff will need approval from their project leader to use the fax machine. For further information or assistance in using the fax machine, please contact the Administrative Office.

Job Book. Information regarding available positions in Plant Pathology and related fields is maintained in the "Job Book" kept in the Student Lounge in 403 Stakman. The information includes job opportunity listings with Career Services in the College of Food, Agricultural and Natural Resource Sciences, a listing of positions with the U.S. Department of Agriculture, and various notices of post-doctoral and faculty positions available at other institutions.

Bulletin Boards. The main departmental bulletin board is located outside the Administrative Office in 495 Borlaug Hall. There you will find information on departmental and intradepartmental seminars, conferences, social activities, and other pertinent announcements. A graduate student bulletin board located in 411 Stakman has information on scholarships, fellowships, special course information and other pertinent announcements. There are bulletin boards located on each floor of Stakman Hall and Christensen Laboratory which may be used for supplemental posting of any notices and announcements.

Weekly Newsletter. The weekly newsletter is used for Departmental announcements, seminars, meetings, job vacancies, social activities, and to introduce new people in the Department. The newsletter is posted Fridays on the departmental bulletin board in addition to being disseminated by email to the entire department. We encourage you to use the newsletter for any announcements you might have. Articles should be submitted to the Administrative Office by 4:30 p.m., Wednesday each week.

Xerox Machine. The Xerox machine is located in 411 Stakman Hall. It has an automated accounting system and requires an account number in order to operate it. Graduate students needing to use the Xerox machine for their research project must get an account number from their project leader. For demonstrations on how to operate the Xerox machine or for any problems related to the machine, please see the receptionist or

accounting in 495 Borlaug. There is a coin operated Xerox machine in the Plant Pathology Library (395 Borlaug Hall) which may be used for personal copying. This machine will also accept a copying card which may be purchased from the library in whatever dollar amount you wish to establish.

Departmental Network. Our Department computers are connected to the campus network. All members of the Department are expected to participate in our networking effort. Electronic mail lets you send and receive mail with other users on the campus-wide network or to users world-wide. The Department home page is available on the world wide web at <http://plpa.cfans.umn.edu/>. For training information, see Robb Miller. For questions or additional information, see your advisor or Robb.

Audio-Visual Equipment. The Departmental/Extension audio-visual equipment may be signed out with the secretarial staff in 495 Borlaug Hall. The following equipment is available:

Polaroid 950 Digital Camera, Proxima 6850 and Laptop Computer #2 (on video cart), Epson Projection Unit and Laptop #2 (for road use), VCR, Overhead Projector, Slide Projector, Portable Microphone, Projection Screen, Computer with read-write CD ROM. The Proxima 5900 and computer, located in 304 Stakman Hall, may be signed out with Robb Miller.

Office Staff. The Department office staff serves as a source of information on University procedures and policies. The staff would be happy to help you with any questions or problems you may encounter.

Typing of personal material is not provided. The secretarial staff is available to assist you with Departmental communications and help in using the Xerox and fax machines. If you plan to be off-campus, you should notify the office staff so they can accurately reply to requests for information regarding your work locations and to take messages for you. If you need to meet with the Department Head, (with or without an appointment) you can always find out Dr. Ishimaru's availability by asking Ann Arendt, who keeps her calendar.

The accounting staff will assist you with ordering supplies and equipment. If you would like to order storehouse supplies directly from your computer, you will need the project leader's approval. After you have his/her approval, please see the accounting staff in 495 Borlaug Hall to arrange for training. If you are going to use this system of ordering, you will need to provide a screen print of the order to the accounting staff.

When placing an order with a vendor, a purchase order needs to be completed. The University uses the Enterprise Financial System (EFS), for all purchase orders. Please consult with your advisor as to whether or not you will be authorized to place purchase orders within your lab. Please see your advisor for machine repair orders. All purchases submitted through your labs must be authorized by your advisor.

All travel and employee reimbursements require approval of your project leader. A travel expense report must be submitted within ten days of traveling. The expense report must be signed by your project leader. University of Minnesota Travel policies are located at web site: <http://travel.umn.edu/polandpro.php>

Additional information regarding university travel and reimbursement can be found at: <http://travel.umn.edu/>

If you currently have direct deposit at one bank and are planning to switch to another bank, it is recommended to stop the direct deposit and receive one "hard" check before starting direct deposit with your new bank. After you receive one hard check, you will need to complete another direct deposit form to start the direct deposit with your new bank. Forms are available from the accounting staff or on-line at HRSS web site (<http://hrss.umn.edu/>). Pay statement information for all University, faculty, staff and student employees is now on-line through the HRSS web site. Employees can view their pay information two days earlier than the official pay day (note that pay is not deposited sooner). Pay information for two years will be on-line from June 17, 2002, onward.

The Administrative Director serves as the Department Human Resources director and could give information and/or sources to contact regarding any personnel matters. As facilitator for the Department Head and coordinator of special functions, the Administrative Director is the source of information regarding Departmental policies and special activities. If you have questions relating to the management of the physical facilities and equipment such as custodial services, room signs and maintenance, see the Administrative Director. Department personnel have access to a number of resources for dealing with any problems which may arise. The Administrative Director can assist you in identifying these resources.

B. Research Facilities in St. Paul

Growth Chambers

We have eleven Conviron controlled environment chambers and one Percival incubation chamber located in 194A Borlaug Hall. They are equipped with fully programmable temperature, lighting, and humidity controls. High humidities and misting are features especially desirable for Plant Pathology research. We also have access to the remaining ~90 growth chambers on campus located in our neighboring departments.

A user fee is assessed to cover operating expenses. Please provide a valid account number before beginning use of a chamber. Be sure to determine if a greenhouse will work as well as a growth chamber before requesting this premium space. Potting materials are provided in 194 Borlaug. Please make certain that you clean up after yourself.

Contact Andy Scobbie for space and service at 612-625-2712 or cell 612-803-8007, 439 Borlaug Hall, or scobb001@umn.edu.

Research Plots

Over 150 acres of usable field space is available at St. Paul. This provides an ideal situation for plot work that needs a nearby laboratory or daily access. Space requests are made at: http://researchfees.cfans.umn.edu/st_paul_campus_resources.htm. Usually space requests are accepted in late winter for the following spring planting. All space requests are generally granted. Larger plots, overflow, or replication studies may need to be planted at the Rosemount Experiment Station, the Sand Plain Irrigation Research Station at Becker, or at the remote Experiment Stations.

The fields will be made ready for planting, marked for rows, irrigated if needed, and treated with herbicides as requested. The user will perform hand weeding and any other research-specific activities. Users must provide an account number for any operations done by Agricultural Services).

For space and service, contact: Mike McClellan or Tom Warnke. Mike can be reached at 612-624-5395 or mccle004@umn.edu. His office is located upstairs in the Small Grains Greenhouse Head House. Tom can be reached at 612-625-1228 or warnk001@umn.edu. Tom's office is located in the Farm shop behind Crops services.

Greenhouses

The University has about 2 acres of greenhouse growing space. The greenhouses, support head houses, teaching rooms, environmental chambers, and high security containment facilities (i.e. BL-2 and BL-3) are collectively referred to as the Plant Growth Facility (PGF). All of these facilities are located just across Gortner Avenue from Stakman Hall. Greenhouse space is assigned on a per experiment basis, though ongoing projects are welcome to retain any space needed. Space requests are made at: http://greenhouses.cfans.umn.edu/Greenhouse_Request_Form.html. Work with your project leader in determining your space needs. For maps of the greenhouses see: http://greenhouses.cfans.umn.edu/Operating_Procedures.html For more information contact Roger Meissner or Pam Warnke. Roger can be reached at 612-624-3631, cell 612-685-4897, or meiss003@tc.umn.edu. His office is in room 158A of Plant Growth Facility West. Pam can be reached at 612-625-3153 or alter002@umn.edu. Her office is in room 158C of Plant Growth Facility West.

Cold storage, general storage, autoclaves, dryers, seed handling

Cold storage is available in 192 Borlaug Hall, 210 Christensen Laboratory, 36 Crops Services, and 7 Crops Research. Label, date, and inventory all items stored in these areas.

General storage is available in several locations. See Andy Scobbie if you need storage space. Do not use greenhouse rooms, hallways, or other common areas for this purpose.

Autoclaves and instructions for their use are in 290 Borlaug Hall and 220 Christensen Laboratory.

Dryers, threshing equipment, seed storage, walk-in coolers, and freezers are available for your use in the Crops Research and Crops Service building. For instruction or assistance, contact Mike McClellan at 612-624-5395 or mccle004@umn.edu. His office is located upstairs in the Small Grains Greenhouse Head House.

There is a new dust collection system in the Crops Research building, this new facility can accommodate many dust producing activities and keep the working environment manageable. If you need to thresh, clean or grind plant or soil samples in this room please contact Andy Scobbie at 612-625-2712 or cell 612-803-8007, scobb001@umn.edu.

C. Outreach Research Facilities- Branch Stations

Our faculty and students have access to Research and Outreach Center (ROC) plot facilities throughout the state. The ROC's at Crookston, Grand Rapids, Lamberton, Morris, and Waseca provide facilities for research under local climatic and soil conditions. ROC's are staffed with scientists from a variety of specialized fields, and each center has its own Head and advisory committee. Three faculty members in our department, Drs. Senyu Chen (Waseca), Char Hollingsworth (Crookston), and Carol Windels (Crookston), are located at ROCs. Departmental research is also done at the Plant Science Research Facilities at the Rosemount Agricultural Experiment Station, which is only 30 miles from campus.

Other smaller facilities are available for plant disease research as necessary. Some collaborative research is carried out on tree diseases with faculty from the Department of Horticultural Science and Landscape Architecture at the Horticultural Research Center and the Landscape Arboretum near Chaska, Minnesota. We also have research projects at the Sand Plain Experimental Farm, located near Becker, on land owned by Northern States Power. The Vocational-Technical Institute at Staples provides land and other support for studies of crops and production practices, mainly on irrigated land. Research there is directed by St. Paul campus scientists and supervised by a university employee. Potato research is done at the Red River Valley Potato Grower's Association Research Farm at Grand Forks, North Dakota. This facility is part of a cooperative agreement with industry, the USDA Potato Lab, University of Minnesota, Minnesota Department of Agriculture, North Dakota State University and North Dakota Department of Agriculture. The cooperative research and extension programs are coordinated between the two states.

The University maintains a forest and biological station in Itasca Park on the east shore of Lake Itasca. This station has housing and laboratory facilities for faculty and students. During the summer months, instructional programs occupy the facilities; however, individual researchers and students can use the laboratories and housing when available.

Itasca Park and surrounding areas provide a wide range of habitats ranging from forested areas to the prairies west of the Park.

The Cloquet Forestry Center, located 135 miles north of the St. Paul campus, provides faculty and students with facilities for research in a variety of forest stands. Housing is available to individuals and groups. The center has a library, laboratories, conference rooms, computer lab facilities and classrooms. In addition, the resident staff are available to help researchers find suitable sites for their projects, and to assist them, if necessary, with field work that involves cutting trees or providing field equipment. The forest covers 3,751 acres of pine, aspen, spruce and hardwood stands. Space is available for experimental plantings.

D. Advanced Microscopy, Imaging and Digital Equipment

The Imaging Center is located in “BioDale.” an advanced instrumentation facility on the “Gopher Way” of the lower floor of Gortner Hall of Biochemistry. The facility has a wide variety of advanced light and electron microscopes that can meet almost any research need. They also have digital imaging, phosphorimaging and fluoroimaging equipment. Equipment is available for use on a fee structure, training is also available.

For descriptions and user information, see: <http://www.cbs.umn.edu/ic/>

E. Fungal Herbarium

The historically significant part of the Mycological Herbarium contains nearly 55,000 collections of Hyphomycetes, Coelomycetes, Uredinales, and Ustilaginales that are contained in packets with the plant tissue they were found on. Most of these collections were purchased by the department earlier in its history, as sets of 'fungi exsiccati'. This part of the herbarium is referred to as the international collection as it represents the collecting efforts of Europeans, South Americans, and North Americans. The herbarium is a mycological treasure of samples that can be used for study.

The Minnesota collection was an important component of the herbarium. At one time, it was the source of named fungi being worked on in Minnesota. Several graduate students and faculty have made valued additions to the Minnesota collections over the past several years. The collection is gradually building and is available for graduate student research where appropriate.

In 2001, the plant disease collections were combined with collections of other fungi to make a large, comprehensive fungal herbarium of over 100,000 accessions. This herbarium is located on the eighth floor of the Biological Sciences Building. Dr. David

McLaughlin (davem@umn.edu) of Plant Biology is the curator. A database is maintained and available on the web at: www.fungi.umn.edu.

F. Plant Pathology Library

Location: 395 Borlaug Hall

Web Site <http://plant.lib.umn.edu>

Telephone: 612-625-9777

Hours of Operation:

See <http://www.lib.umn.edu/site/hours.phtml> for current hours.

Typical hours during Fall and Spring Semesters:

Monday	9:00 AM - 5:00 PM
Tuesday	9:00 AM - 7:00 PM
Wednesday	9:00 AM - 5:00 PM
Thursday	9:00 AM - 7:00 PM
Friday	9:00 AM - 5:00 PM
Saturday	10:00 - 1:00 PM
Sunday	Closed

Typical hours during summer and semester breaks:

Monday - Friday	9:00 AM - 12:00 NOON; 1:00 PM - 4:30 PM
Saturday - Sunday	Closed

The Collection:


The Plant Pathology Library is a subject-oriented library, specializing in plant diseases, plant virology, mycology, nematology, mycotoxicology, and the effects of air pollution on vegetation. The collection contains approximately 10,000 bound volumes of books, periodicals, and Plant Pathology theses. Over 30 current periodicals are received. Online access to journals, indexes & databases and other reference sources is available through the Libraries' website: www.lib.umn.edu

Library Catalog:

Books, audiovisual material, journals and electronic resources can be searched for in the University of Minnesota Libraries catalog, MNCAT. Available online at www.lib.umn.edu/books/. You can limit your search to the Plant Pathology Library under the Advanced Search option.

Journal Articles:

The best journal indexes for finding plant pathology-related articles can be found on this website: http://www.lib.umn.edu/site/spesub.phtml?subject_id=173

Use our "FindIt" button  to link from citations/abstracts found in indexes to the article full-text (if available). The library catalog, MNCAT, can be used to identify both

print and electronic journals available through the Libraries. Any articles in journals not held by the Libraries can be requested through Interlibrary Loan (<https://umn.illiad.oclc.org/illiad/logon.html>).

Circulation Policies

Library users must present their University ID cards (U-Card) to borrow materials. Books and theses may be borrowed for thirteen weeks at a time by faculty, staff, and graduate students. Undergraduates may borrow books and theses for six week periods. Periodicals may be checked out for one day at a time. Books that have been out for at least two weeks may be recalled for another user. If a book or journal article is not owned by the University Libraries, you may request it through the Interlibrary Loan service (<https://umn.illiad.oclc.org/illiad/logon.html>).

Other services:

The Plant Pathology Library offers public printing (10 cents/page), a photocopier (15 cents/copy) and wireless access. The three library computers can be used to access library resources, and also have Microsoft Office software for University-related work. The Library has a slide viewer and TV/VCR.

Course Reserves

Library materials, article photocopies, personal copies of books, videos or other material may be placed on Reserve at the instructor's request. Items on Reserve are shelved next to the current periodicals, and are arranged by the course number. Most reserve items may be checked out of the library for two hours at a time when the library is open. Overnight loans are available one hour before closing, and are due at 10:00 the next morning; 11:00 Saturday for a Friday loan. Items checked out on Saturday are due at 10:00 Monday morning. Electronic reserves are also available. Visit <http://www.lib.umn.edu/site/reserves.phtml> for more information.

Library Annex/Meeting Room

The Plant Pathology Library Annex/Meeting room is available for quiet or group study, meetings and classes. Contact library staff to reserve the room.

G. University Libraries

The Plant Pathology Library is one of 16 libraries that comprise the University of Minnesota – Twin Cities Libraries.

Other libraries on the St. Paul Campus are:

Magrath Library:	1984 Buford Avenue
(Subjects include: agriculture, agronomy, animal science, biology, environmental science, horticulture, plant biology, and soil science)	
Entomology, Fisheries and Wildlife Library	375 Hodson Hall
Forestry Library	B50 Skok Hall
Veterinary Medicine Library	450 Veterinary Science

Other major libraries of the University Libraries are:

Bio-Medical Library	East Bank (Diehl Hall)
Wilson Library	West Bank
(Subjects include: art, business, economics, history, language, literature, philosophy)	
Walter Library/Science & Engineering Library	West Bank
(Subjects include: architecture, chemistry, engineering, geology, mathematics, and physics)	

H. Campus Information

The University of Minnesota was chartered in 1851, seven years before the Territory of Minnesota became a state. It began as a preparatory school, was beset by financial crises during its early years, and was forced to close during the Civil War. In 1869, the University reopened its doors with 9 faculty members and 18 students. Two students were graduated at the University's first commencement in 1873. The first Ph.D. was awarded in 1888 and the Graduate School celebrated its 100th anniversary during the 1987-88 academic year. Today the University is one of the largest in the U.S., with approximately 53,000 students in its degree-granting colleges and schools, and more than 17,000 in Continuing Education and Extension. The main campus is in Minneapolis and St. Paul--the Twin Cities campus. The University system also includes a medium-sized university at Duluth, a liberal arts college at Morris, and a 4-year college at Crookston. Campus tours are available through the Department of University Relations. Campus maps are available in the Plant Pathology Administrative Office.

I. Campus Facilities and Services

The University of Minnesota-Twin Cities Libraries, with a collection of more than 6 million catalogued volumes, ranks 16th in size among American universities. Included in the system are the Bio-Medical Library (health sciences); Walter Library (engineering, architecture, mathematics, physics, geology); Magrath and St. Paul Campus Libraries (agriculture, biological sciences, veterinary medicine); and Wilson Library (social sciences, humanities, archives, special collections). In addition to strong comprehensive research collections, the system offers a full range of reference and information services, including specialized reference assistance, data base literature searching, and library user instruction.

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The Graduate Assistance Office has been established to provide ombudsman services for individuals functioning both as students and as University employees. The office is located in Room 200, Donhowe Building (612-624-7070 or gaoinfo@umn.edu). It handles a range of problems and requests for information including those concerning teaching and research opportunities, tax status of graduate student income, and employee benefits. This office publishes a Handbook for Graduate Assistants. The Graduate Assistant Home Page WEB site is: <http://www.umn.edu/ohr>

Graduate Assistant Health Insurance. You qualify for enrollment in the Graduate Assistant Health Insurance Plan if hours to be worked will meet a minimum 25% appointment (at least 195 hours per semester). You may pick-up an enrollment packet from the office or at the Graduate Assistant Insurance Office at N323 Boynton Health Service. Health insurance premiums are subsidized by the University on a prorated basis depending on the level of your appointment between 25% (195 hours per semester) and 50% time (390 hours per semester). You are also eligible to enroll your dependents for dependent health insurance under the same plan. For details on the current health insurance plan, go to www.bhs.umn.edu/insurance/graduate/index.htm

Bulletins, schedules and handbooks abound at the University of Minnesota. Many are useful. Of particular help to graduate students are the Handbook for Graduate Students, published by the Orientation Office (Graduate Student Information Program) and Publications Center; the Graduate School Bulletin which contains detailed information on requirements for obtaining degrees, and detailed descriptions of all upper division and graduate courses offered by departments throughout the University; the Class Schedules which detail time, place and instructor for specific courses by quarter; and the General Information Bulletin which presents an overview of the University of Minnesota.

International Services. Counseling and advisory services are provided for personnel from other countries by the International Student and Scholar Services, Office of International Education (612-626-7100, Room 190 Hubert H. Humphrey Center, <http://www.iss.umn.edu/>). This office provides assistance to those seeking information about visa regulations; federal, state and local regulations governing foreign nationals; English language; and other educational, social and personal problems.

University Counseling and Consulting Services (Minneapolis campus: 109 Eddy Hall and St. Paul campus: 199 Coffey Hall Phone: 612-624-3323, <http://www.uccs.umn.edu/>) provides assistance to those students who wish to learn more about themselves as they develop in an educational setting. Counseling services include the areas of academic or educational decisions, vocational or career planning, personal or family problems, marital relationships, and other concerns. Assistance is offered to develop reading and study skills. Boynton Health Services also offers mental health services.

Counseling and advisory services are provided for students and scholars from other countries by the International Student and Scholar Services (<http://www.iss.umn.edu/>). This office provides assistance to those seeking information about visa regulations; federal, state and local regulations governing foreign national; financial aid requirements; English language requirements; and other educational, social and personal problems.

The University offers extensive indoor and outdoor athletic facilities and opportunities for use by all students, staff and faculty. The recreational sports program is designed to provide opportunities for students to participate in a wide variety of competitive and noncompetitive, organized and informal sports activities. For detailed information see: <http://www.recsports.umn.edu/>. Gyms are located in Minneapolis and St. Paul (<http://www.recsports.umn.edu/facilities/spg.html>) and house basketball, volleyball and racquetball courts, swimming pools, etc. Outdoor facilities include tennis courts and golf courses.

On-campus and off-campus housing information may be obtained from the Housing Offices: Comstock Hall, 210 Delaware Street SE, Minneapolis Campus and 190 Coffey Hall, St. Paul Campus. You can also visit the websites www1.umn.edu/csc/ and www.housing.umn.edu/offcampus for on-campus and off-campus housing information, respectively.

Bus service between and within campuses. • The Campus Connector provides direct bus service between the St. Paul, East Bank, and West Bank campuses approximately every five to 30 minutes from 7 a.m. through midnight, depending on the time of day and academic year. As an added service, some Campus Connectors offer fast express service connecting St. Paul, East Bank, and West Bank campuses between 7:30 a.m. and 5 p.m. Buses on this schedule can be identified by the Express signs on the front and sides of the bus. Express buses only stop at: Blegen Hall, Weaver-Densford Hall/Transportation & Safety Building, Huron Boulevard Parking Complex, Transitway at Commonwealth Avenue, and St. Paul Student Center. For more details see:
<http://www1.umn.edu/pts/shuttle.htm>

Commuting to campus. Information about the different modes (buses, lightrail, biking, walking, carpooling and vanpooling) of commuting to campus can be found:
<http://www1.umn.edu/pts/>

Parking. For the latest information on parking, please log onto their web site:
<http://www1.umn.edu/pts/parking.htm>.

Check Cashing. Your University I.D. card is required when cashing checks at the Bursar's window (cashier's office). There are several Bursars at the University; however, the closest one to our department is located on first floor of Coffey Hall.

Places to Eat on Campus. A coffee maker, refrigerator and microwave are available in room 411 Stakman. There are vending machines located on the first floor in McNeal Hall and second floor of Borlaug Hall. The microwave 411 Stakman is available to warm vended or your own food. Java City and the Terrace Café are located on the main level of the St. Paul Student Center. Hours are: Java City: 7 a.m. to 7 p.m. Mon – Thurs.; 7 a.m. – 4 p.m. on Fridays. Terrace Café and Subways: 11 a.m. – 6 p.m. Mon – Thurs; 11 a.m. – 3 p.m. Fridays. This spacious café features Subways sandwiches, custom grilled selections, Bene Pizza and a wide range of to-go salads, sandwiches and bakery items. Hours at all of these cafeterias may change during the summer months.

Police Escort Service. The University of Minnesota Police Department offers an escort service to the University community. On the St. Paul Campus, the escorts will take you any where within Larpenteur on the north, Como Avenue on the south, the Fairgrounds on the east, and several blocks west of Cleveland. The service is available 24 hours a day during the school year. Call 612-624-9255 or for more information visit:
<http://www1.umn.edu/police/escort.html>

More complete information on student facilities and services may be obtained from the University of Minnesota General Information Bulletin, published annually and available from the Information Booth in Williamson Hall (Minneapolis Campus).

J. Departmental Programs and Events

Orientation Program. An orientation session is conducted for new personnel in the Department of Plant Pathology yearly. Pertinent information is presented at this session as well as a tour of the Department facilities in Borlaug Hall, Stakman Hall and Christensen Laboratories, the Cereal Rust Lab, and the North Central Forestry facilities.

Awards Ceremony. An annual awards ceremony is held in the spring to present any scholarships or awards to students, employees and friends of the Department. Included are scholarships and awards such as the Frosheiser Scholarship, Kernkamp Scholarship, Stienstra/Meronuck Graduate Student Travel Award, Elwin L. Stewart Graduate Student Travel Fund, Civil Service Excellence Awards, Professional Academic Award, Outstanding Alumnus, Faculty Mentor, and Distinguished Friend of the Department. In addition, any members of the department who have received awards and honors from other University programs or professional organizations are recognized at this ceremony.

Department Socials. There are several traditional social activities which occur in the department annually as follows:

E.C. Stakman Memorial Softball Game/Fall Barbeque/Picnic. The Stakman softball game is an annual event with students playing against faculty/staff. A trophy cup lists the winner and scores for each year. Following the game, a barbeque/picnic is held. This allows department members and their families an opportunity to socialize with other students, staff and faculty.

International Holiday. The Annual Plant Pathology International Holiday party is held in 491 Borlaug Hall or 401 Stakman. This is a wonderful occasion with lots of food brought by many individuals in the department. But the really unique and fascinating feature of this event is the exotic dishes, many typical of foreign lands and holiday feasts.

K. Summary

In conclusion, the University of Minnesota and the Department of Plant Pathology have Department has excellent research facilities available. We also have full access to all of the Minnesota Experiment Station facilities. Please use them fully, but don't abuse them. If we all treat these facilities with care, they will be available in good order the next time that you want to use them.

Safety Training

The University of Minnesota and the Department of Plant Pathology is committed to providing a safe work environment for all faculty, staff, students, and visitors. To satisfy all legal requirements, your supervisor will provide you with information on the safety training you will need. The Department of Environmental Health and Safety at the University of Minnesota provides the following fact sheet the reviews the safety training requirements:

University of Minnesota Department of Environmental Health and Safety

Research Lab Safety Training Requirements

Purpose

To provide an overview of the safety training requirements for University of Minnesota research laboratories. It is the responsibility of each department and laboratory to:

- identify work place hazards
- identify affected employees
- provide employee access to appropriate hazard information
- train employees regarding hazards in the work place upon initial assignment, annually, and when a new hazard is introduced
- keep training records for five years

Training requirements fall into four areas:

- general lab safety training for all lab workers
- training for specific material use
- lab specific training
- building specific access training

Documentation

All training must be documented. Documentation will be automatically entered into an employee's PeopleSoft record for Environmental Health and Safety in-person or on-line training listed below. Employees may view their training record and self report training in PeopleSoft through the Office of Human Resource's Employee Self-Service page, <http://www.hrss.umn.edu/>. Click on Training Registration/History, log in and scroll down to the bottom of the page.

General Lab Safety Training

All University of Minnesota faculty, staff, and students that work in or supervise individuals working in laboratories are required by law to receive training regarding safety issues and practices in their work place. Training is mandated by both the federal Laboratory Safety Standard and the Minnesota Employee Right to Know Act and is required upon hire, at refresher intervals (at least annually), and whenever a new procedure is introduced. Environmental Health and Safety (DEHS) provides basic safety training for new faculty, staff, and students. Three web-based tutorials that are mandatory for all lab workers are available at <http://www.dehs.umn.edu/training/labsafety/>.

- Introduction to Research Safety
- Chemical Safety
- Chemical Waste Management

Each department has a Research Safety Officer (RSO) to coordinate update training. Update training can also be satisfied by repeating the above DEHS training. In addition, RSOs and researchers are welcome to borrow training videos from DEHS. View a list of available videos by scrolling through <http://www.dehs.umn.edu/training/>.

Specific Material Use Training

In addition to the above general training, work with the following materials requires additional training:

Bloodborne and Other Pathogens if work involves human blood, human body fluids, human cells (including cell lines), unfixed human tissue, and/or infectious agents (viruses, bacteria, fungi, rickettsia, prions).

Hazardous Shipping for workers who package and ship hazardous materials, including infectious substances or diagnostic specimens,
<http://www.dehs.umn.edu/training/shiphazmat.html>.

Controlled Substance users must complete training through Regulatory Affairs,
<http://www.research.umn.edu/regaffairs/ControlledSub/index.html>

Animal Users must complete training through IACUC,
<http://www.research.umn.edu/iacuc/training>.

Radiation training is required by the Nuclear Regulatory Commission (NRC) for persons who work in or frequent a radioactive materials area. For further information call Environmental Health and Safety at 612-626-6002.

Lab Specific Training

Each Principle Investigator and/or laboratory supervisor is responsible for ensuring that employees are provided with training about the specific hazards (chemical, physical, and biological) in their laboratory work area. Training must include required procedures and personal protective equipment to reduce the risk of exposure. Training must be provided at the time of an employee's initial work assignment and prior to assignments involving new potential exposure situations. Refresher training must be provided annually. All training, including lab specific, must be documented. See above section on documentation.

Building Specific Access Training

Open design lab buildings may require documentation of some types of training in order for workers to be granted building access. Building management will communicate the training requirements to individuals when building access is requested.

When you have completed any safety training, you and your supervisor must sign the documentation and provide a copy to Todd Burnes the Department Safety Officer either by e-mail burne002@umn.edu or place a copy in my mail box located in the Plant Pathology Department Office, 495 Borlaug Hall and retain a copy in the red safety

portfolio located in your laboratory. Check to make sure you have the proper safety training and documentation. If you have any question, feel free to contact Todd Burnes, Research Safety Officer for the Department of Plant Pathology.

II. GRADUATE STUDY IN PLANT PATHOLOGY: POLICIES AND GUIDELINES

A Summary for New Students in Plant Pathology (2008-2009)

The Department of Plant Pathology offers graduate majors leading to the Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees. In addition, the Department offers the M.S. or the Ph.D. degree with an emphasis in Molecular Plant Pathology. Students in this program will enhance their ability to design and use molecular approaches to investigate plant disease, increase their knowledge of basic science, and emerging strategies for disease control. All students entering the M.S. or Ph.D. programs are expected to have a strong background in basic sciences. Graduate education is designed to help students learn the scientific discipline of Plant Pathology, develop independent and team research skills, and develop communication skills needed by professional scientists. Students seeking experience in teaching and extension activities will find abundant opportunities within and external to the curriculum.

Graduate students select a Plant Pathology graduate faculty adviser who assists them in forming an advisory committee appropriate to their course of study and thesis research project. The selection of a thesis research project for M.S. and Ph.D. degree students is often based upon the research interest of the faculty adviser and funding opportunities.

Prerequisites and Admission Status

Master's degree applicants must have a sound college background in the basic biological and physical sciences and mathematics, including 35 semester credits in biology with at least one course in each of the following areas: botany, zoology, genetics, plant physiology, and microbiology. Applicants must also have completed at least one course in inorganic chemistry, organic chemistry, biochemistry, and physics. If deficiencies exist in the prerequisites, they must be corrected during the first year of the graduate programs. These courses cannot be counted as part of the degree program.

All students accepted into the department with a B.S. degree are admitted initially into the M.S. degree program. After a minimum of two semesters, an exceptionally well qualified individual may elect to change their degree status to a Ph.D. program. Documentation (including evidence of competent writing skills, e.g., publications, proposal for Ph.D. research program) for the change in degree status will be evaluated by the student's Graduate Advisory Committee and the Graduate Admissions and Recruitment Committee along with the Director of Graduate Studies. The decision by these two committees and the Director of Graduate Studies to allow a change of status must be unanimous and must also be approved by the Graduate School. Criteria for the

change include scholastic standing, potential for success in completing a Ph.D. and writing competency. Ph.D. applicants must satisfy all the prerequisites for the M.S. degree program in Plant Pathology or have a Master's degree in Plant Pathology or in a field of natural science.

III. THE M.S. DEGREE PROGRAM

A. General UM Requirements

1. Registration Requirement for the Master's Degree—Master's degree students are required by the Graduate School to complete at least 60 percent of the coursework for their official degree programs (excluding thesis credits) as registered University of Minnesota Graduate School students. With approval of the adviser, Director of Graduate Studies in the major (and Director of Graduate Studies in the minor, if the courses are for a designated minor), and Graduate School, transfer coursework may make up the remaining 40 percent (maximum) of the degree coursework (see Transfer of Credits for the Master's Degree below).

2. Official Program for the Degree—By the time students have completed 10 credits, they must file with the Graduate School an official degree program. The degree program form is available online (http://www.grad.umn.edu/current_students/forms/masters.html) or from the Graduate School, 316 Johnston Hall. In this form, students are required to list all coursework, completed and proposed, that will be offered in fulfillment of degree requirements, including transfer work (Transfer of Credits for the Master's Degree above). If a foreign language is required for the degree, it also is specified on the degree program form. If the degree is being completed under Plan A, students include the proposed thesis title. The members of a student's final examining committee (who are the thesis reviewers for Plan A) are appointed by the Dean of the Graduate School on recommendation of the faculty in the major field at the time the student's official degree program is approved.

A degree program approved by the Graduate School must be on file before reviewers' report, examination, or graduation forms can be released to the student.

3. Changes in Approved Program—Once approved, the degree program must be fulfilled in every detail to meet graduation requirements. Program changes should be requested by completing a Graduate School petition form at (http://www.grad.umn.edu/current_students/forms/masters.html).

4. Preferred Performance Level Requirements—The Graduate School has a preferred performance level GPA of 2.80 (on a 4.00 scale) for courses included on any official Master's degree program. Courses with grades of A, B, C (including a C-), and S may be included in the official degree program, but grades of S are not calculated in the GPA. Students pursuing a Plan A Master's degree are required to register for thesis credits (8777); these registrations are not graded and therefore

cannot be used to meet course credit requirements. At least two-thirds of the course credits included on any degree program must be taken A-F.

5. Thesis Adviser, Thesis Committee, and Mandatory Meeting—All graduate students in Plant Pathology are required to select an adviser and Graduate Advisory Committee and convene a meeting of this said committee by the **end of the first year in residence.**

6. Thesis proposal—A thesis proposal must be submitted to the Graduate Advisory Committee by the end **of the first year in residence.** The proposal must include a literature review, research objectives, and the proposed research approach and methods. The proposal should be considered as a working document that may be modified at a later time as deemed appropriate. It is suggested that each student's Graduate Advisory Committee meet at least once after the initial thesis proposal meeting to review progress of the student and to provide constructive advice on the thesis research.

Students are encouraged to contact their Graduate Advisory Committee members throughout the course of their research program to seek their advice and expertise. It is also important that the Committee be kept informed of the direction and progress of the student's research throughout his or her tenure in the Department.

7. Thesis Credits (Plan A only)—Students must enroll for a minimum of 10 Master's thesis credits (8777) before receiving the degree. Students cannot include thesis credits in the total program credits when determining maximum transfer allowed. They also cannot transfer thesis credits from other graduate institutions, double-count thesis credits between two Master's degrees, or use thesis credits to meet the minimum major and related field coursework requirements for the degree. If possible, students should register for a full load of 14 credits every Spring and Fall semester and 6 credits every Summer semester using PIPa 8777 credits to meet this requirement. For example, if you are taking for Fall Semester the courses of PIPa 5201 (4 credits), PIPa 5102/8102 (3 credits), and PIPa 8200 (1 credit), totaling together 8 credits, you should then register for 6 credits of PIPa 8777 to equal a total of 14 credits.

8. Master's Thesis (Plan A only)—Students must demonstrate familiarity with the tools of research or scholarship in their major field, the ability to work independently, and the ability to present the results of their investigation effectively, by completing a Master's thesis. Further information on thesis preparation is provided elsewhere in this handbook.

9. Thesis Reviewers (Plan A only)—The thesis is read by the entire examining committee, which is appointed by the Dean of the Graduate School on recommendation of the faculty in the major field at the time the student's official degree program is approved. This examining committee consists of at least three

members: two representatives from the major field and one from the minor or a related field.

To permit faculty to allocate sufficient time to read the thesis and decide whether it is ready for defense, students must notify their adviser and other members of the final oral committee at least two weeks in advance that the thesis will be delivered on a particular date. All members of the examining committee must then have at least two weeks to read the thesis after it has been delivered. These are minimum standards.

The entire committee must be unanimous in certifying that the thesis is ready for defense, as indicated by their signatures on the thesis reviewers report form. When the signed form is returned to the Graduate School, 316 Johnston Hall, the student is provided with the final examination report form.

10. Final Examinations (Plan A only)—Candidates for the Master's degree, Plan A, must pass a final oral examination. The final examinations cover the major field and the minor or related fields, and may include any work fundamental to these fields. The final oral for the Master's degree is conducted as a closed examination, attended by only the student and the examining committee.

Final examinations are coordinated by the chair of the student's examining committee. All committee members must be present at the examination; the absence of any member results in an invalid examination. The results of the examinations are reported to the Graduate School on the final examination report form. A majority vote of the committee, all members present and voting, is required to pass the examination. A student who fails the examination may be terminated from the graduate program or may be allowed, on unanimous recommendation of the examining committee, to retake the examination, providing the reexamination is conducted by the original examining committee.

B. M.S. in Plant Pathology, Plan A:

The Plan A (thesis) program requires a minimum of 14 course credits in Plant Pathology and 6 course credits in a minor or related field. Students who wish to complete a designated minor (which is certified on the transcript—unlike the related fields option, which is not) must complete 6 or more credits in a single field. A designated minor must be approved by the Director of Graduate Studies in the minor field. In addition, Plan A requires 10 thesis credits (PIPa 8777). All credits included in the official degree program must be in graduate-level courses. 4XXX courses are not permitted toward degree requirements.

All students lacking an introductory Plant Pathology course are required to complete PIPa 5201: Biology of Plant Disease (PIPa 5201) 4 credits (to count toward M.S. major requirements). Questions on the suitability of previous coursework for meeting these requirements must be referred to the Director of Graduate Studies.

In addition, all students are required to:

1. Enroll in a minimum of four of the following courses, chosen in consultation with the Director of Graduate Studies, adviser, and Graduate Advisory committee:
 - Diseases of Forest and Shade Trees (PIPa 5003) 3 cr
 - Field Plant Pathology (PIPa 5202) 2 cr
 - Biology and Ecology of Fungi (PIPa 5203) 3 cr
 - Plant Disease Management (PIPa 5204) 3 cr
 - Causal Organisms in Plant Disease (PIPa 5101/8101) 4 cr
 - Epidemiology & Genetics of Host-Parasite Interactions (PIPa 5102/8102) 3 cr
 - Physiology & Molecular Plant-Microbe Interactions (PIPa 5103/8103) 3 cr
2. Present one departmental seminar (PIPa 8200) 1 cr
3. Take Thesis Credits (M.S.) (PIPa 8777) with a minimum of 10 cr for Plan A
4. Take 6 credits in a minor or supporting field.
5. Serve as a teaching assistant (TA) for a minimum of 5 weeks *and* enroll in a seminar or workshop on teaching methods.

Effective Fall Semester 2008, M.S. students will be required to TA as part of their degree program. Since the duration of M.S. program is shorter than the Ph.D. program, M.S. students will be required to take a minimum 1.0 credit equivalent of TA experience. The formal “in class” requirement will be serving as a TA for a minimum of 5 weeks. This requirement can be fulfilled in courses such as CFANS 3001, individual modules of PIPa 8101, etc. When M.S. students serve as TAs, they will be given 1.0 credit for this activity under the “topic title” course of course PIPa 8090 (Advanced Procedures and Research in Plant Pathology). This course will be designated “Teaching Plant Pathology” to reflect the activity undertaken by the student and will be listed as such in the official transcripts.

M.S. students also are required to take a seminar or workshop on teaching methods or a related subject. Enrichment courses (i.e. seminars and workshops) on teaching are offered through the Center for Teaching and Learning (CTL), the Digital Technology Center (DTC), UM Libraries, and other UM offices. Each Fall Semester, a “New TA Orientation” is sponsored by the CTL and can be used to fulfill the seminar/workshop requirement.

Language Requirements – A foreign language is generally not required. However, knowledge of a foreign language may be necessary for students doing research in non-English-speaking countries.

Final Exam – The final exam is oral.

Two examples of possible student programs are outlined below:

Example Practitioner Program:

Biology of Plant Disease (PIPa 5201) 4 cr
 Field Plant Pathology (PIPa 5202) 2 cr
 Biology and Ecology of Fungi (PIPa 5203) 3 cr
 Plant Disease Management (PIPa 5204) 3 cr
 Causal Organisms in Plant Disease (PIPa 5101/8101) 4 cr
 Department Seminar (PIPa 8200) 1 cr
 Thesis Credits (M.S.) (PIPa 8777) 10 cr total
 Minor or supporting field 6 cr

Example Pre-Doctoral Program:

Biology of Plant Disease (PIPa 5201) 4 cr
 Biology & Ecology of Fungi (PIPa 5203) 3 cr
 Causal Organisms in Plant Disease (PIPa 5101/8101) 4 cr
 Epidemiology and Genetics of Host-Parasite Interactions (PIPa 5102/8102)
 3 cr
 Physiological and Molecular Plant-Microbe Interactions (PIPa 5103/8103)
 3 cr
 Department Seminar (PIPa 8200) 1 cr
 Thesis Credits (M.S.) (PIPa 8777) 10 cr total
 Minor or supporting field 6 cr

Other Possible Electives for the M.S. Program:

Genetics of Plant-Associated Microbes (PIPa 5302/8302) 3 cr
 Plant Genomics (PIPa 5301) 3 cr.

All students in Plant Pathology (M.S. & Ph.D.) who enroll in courses with dual designations (5000/8000) are required to enroll at the 8000 level.

C. Plan B Master of Science Professional Degree

The Plan B Master of Science degree requires a total of 20 credits, 14 from within the major and 6 from non Plant Pathology courses. Plan B students also are required to complete one to three projects of about 120 hours of work as stipulated by the Graduate School. The content and procedures for completing the project(s) are to be

determined and approved by the student's major adviser and the Director of Graduate Studies.

D. M.S. in Plant Pathology, Molecular Option

Course requirements for M.S. students wishing to emphasize molecular plant pathology

(Plan A only)

Prerequisite:

Biology of Plant Disease PIPa 5201 4 cr or equivalent AND
Laboratory in Molecular Biology and Biotechnology BioC 4125 or equivalent.

(PIPa) courses (14 credits)

Genomics of Plant-Associated Microbes (PIPa 5302/8302) 3 cr
This course must be taken in conjunction with Current Topics in
Molecular Plant Pathology* (PIPa 5300) 1 cr
Plant Genomics (PIPa 5301) 3 cr OR
Physiological and Molecular Plant-Microbe Interactions (PIPa 8103) 3 cr

Also required:

Department Seminar (PIPa 8200) 1 cr
Thesis credits (PIPa 8777) 10 cr
Six (6) additional credits in Plant Pathology courses.
Serving as a teaching assistant (TA) for a minimum of 5 weeks *and*
enrolling in a seminar or workshop on teaching methods (see above).

* Required for students taking Genomics of Plant-Associated Microbes. Other students may take Current Topics in Molecular Plant Pathology alone.

To meet the Graduate School Master's Degree requirements, 6 credits are needed in one or more related fields outside the major.

Suggested courses:

Molecular and Cellular Genetics of Plant Improvement (Agro 8241) 3 cr
Microbial Genomics (BioC 5361) 3 cr
Molecular and Genomic Evolution (EEB 5221) 3 cr
Molecular Cell Biology (GCD 5036) 3 cr
Plant Cell and Molecular Biology (Pbio 5414) 3 cr

IV. THE PH.D. DEGREE PROGRAM

A. General UM Requirements: The Doctor of Philosophy degree is awarded chiefly in recognition of high attainment and ability in a special subject field as demonstrated by passing the required examinations covering both a candidate's general and special subject fields, and by preparing and successfully defending a thesis based on original research that makes a significant contribution to knowledge in the student's field.

1. Registration Requirement for the Doctoral Degree

Whenever possible, students should register for a full load of 14 credits every Spring and Fall semester and 6 credits every Summer semester using thesis credits (PIPa 8666 or PIPa 8888) to meet this requirement. As of June 2007, the Graduate School limits to 6 (six) the number of credits of PIPa 8666 (Doctoral Pre-Thesis Credits) for which a doctoral student may register in any Fall, Spring or Summer term. The Graduate School limits registrations of 8666 to two instances and 12 credits without departmental permission. With departmental consent, students may register for 8666 up to four times, for a total accumulation of 24 credits in 8666 registration. In special cases, students may exceed the four repetitions and 24 total credits of 8666 with departmental and Graduate School consent. An example: if you are taking for Fall Semester the courses of PIPa 5201 (4 credits), PIPa 5102/8102 (3 credits), and PIPa 8200 (1 credit), totaling together 8 credits, you should then register for 6 credits of PIPa 8666 to equal a total of 14 credits.

Doctoral students are required to enroll for a minimum of 24 thesis credits (PIPa 8888) while writing the doctoral thesis. Students may not register for these thesis credits until the semester after they have passed their preliminary oral examination.

2. Doctoral Pre-Thesis Credits (8666)—These credits are available for doctoral students who have not yet passed their preliminary oral examination but need to be registered in the Graduate School to meet requirements of agencies or departments outside the Graduate School (e.g., loan agencies). Doctoral pre-thesis credits are not graded. Note: Registration for doctoral pre-thesis credits cannot be used to meet any Graduate School degree requirements. As written above, the Graduate School limits to 6 (six) the number of credits of PIPa 8666 (Doctoral Pre-Thesis Credits) for which a doctoral student may register in any Fall, Spring or Summer term. The Graduate School also limits registrations of 8666 to two instances and 12 credits without departmental permission. With departmental consent, students may register for 8666 up to four times, for a total accumulation of 24 credits in 8666 registration. In special cases, students may exceed the four repetitions and 24 total credits of 8666 with departmental and Graduate School consent.

3. Official Program for the Degree—Students are expected to file an official program for the degree during their second year of study; the specific semester depends on individual major field requirements. Students should submit their completed degree program forms to the Graduate School at least one semester before

the term in which they plan to take the preliminary oral examination. The degree program form is available online (http://www.grad.umn.edu/current_students/forms/doctoral.html) or from the Graduate School, 316 Johnston Hall. In this form, students are required to list all coursework, completed and proposed, that will be offered in fulfillment of degree requirements in the major field and in the minor field or supporting program, including any transfer work. If the student's major field requires proficiency in one or more foreign languages, these should be specified as well. The members of a student's preliminary oral examining committee are appointed by the Dean of the Graduate School on recommendation of the faculty in the major field at the time the student's official degree program is approved.

A degree program approved by the Graduate School must be on file before the student is permitted to schedule the preliminary oral examination.

Ph.D. Course Requirements: see below

4. Minor Field or Supporting Program Work—For the doctoral degree, a minimum of 12 credits must be completed in the minor field or supporting program. With a traditional minor, this work is in a single field related to the major; the minor field must be declared before the student passes the preliminary oral examination. If the student chooses a supporting program, it must be composed of a coherent pattern of courses, possibly embracing several disciplines.

5. Official Doctoral Candidacy—Doctoral candidacy is established when a student passes the preliminary oral examination (this includes a grade of "pass with reservations").

6. Preliminary Written Examination—All doctoral students are required to pass a written examination in the major field. This examination covers all work completed in the major field and may include any work fundamental to this field. The results of the examination are reported on the preliminary written examination report form, signed by the student's adviser and the Director of Graduate Studies in the major field. It is the student's responsibility to ensure that this form is received by the Graduate School, 316 Johnston Hall, before scheduling the preliminary oral examination.

7. Preliminary Oral Examination—Students take the preliminary oral examination after completing a substantial part of the coursework and passing the preliminary written examination, but before writing the dissertation.

8. Preliminary Oral Examining Committee—The examination is administered by the committee appointed by the Dean of the Graduate School on recommendation of the faculty in the major field at the time the student's official doctoral degree program is approved. The examining committee includes a minimum of four members: three

(including the student's adviser) from the major field and one from the minor field or supporting program.

All assigned members must be present at the preliminary oral examination; the absence of any member results in an invalid examination.

9. Scheduling the Preliminary Oral Examination—It is the responsibility of the student to schedule the preliminary oral with the examiners and with the Graduate School, 316 Johnston Hall, at least one week in advance.

Before the oral examination can be scheduled, a degree program form approved by the Graduate School must be on file, along with a written examination report form indicating that the student has passed the preliminary written examination.

10. Preliminary Oral Examination Content and Outcome—All doctoral students are required to pass an oral examination in the major field. The preliminary oral examination covers the major field, the minor field or supporting program, and any work fundamental to these areas, including possible plans for thesis research. Unlike the final oral examination, the preliminary oral is conducted as a closed examination, attended by only the student and the examining committee.

11. Ph.D. Thesis—The thesis must demonstrate the student's originality and ability for independent investigation, and the results of the research must constitute a contribution to knowledge. Moreover, the thesis must exhibit the student's mastery of the literature of the subject and familiarity with the sources. The subject matter must be presented with a satisfactory degree of literary skill.

12. Thesis Adviser, Thesis Committee, and Mandatory Meeting—All graduate students in Plant Pathology are required to select a major adviser and Graduate Advisory Committee and convene a meeting of this said committee by the **end of the first year in residence**.

13. Thesis proposal—A preliminary thesis proposal must be submitted to the Graduate Advisory Committee by the **end of the first year in residence**. The proposal will include a literature review, research objectives, and the proposed research approach and methods. The proposal should be considered as a working document that may be modified at a later time as deemed appropriate. It is suggested that each student's Graduate Advisory Committee meet at least once after the initial thesis proposal meeting to review progress of the student and to provide constructive advice on the thesis research.

Students are encouraged to contact their Graduate Advisory Committee members throughout the course of their research program to seek their advice and expertise. It is also important that the Committee be kept informed of the direction and progress of the student's research throughout his or her tenure in the Department. For the Ph.D.

degree, it is advised that the entire Examining Committee be involved as the Advisory Committee, whenever possible.

12. Filing the Official Thesis Proposal with to the Graduate School—At the time of submission of the doctoral program, or not later than the first semester after passing the preliminary oral examination, students must file the thesis proposal form with the Graduate School, 316 Johnston Hall. The form must include the proposed thesis title and a thesis proposal, about 250 words in length, describing the research to be undertaken and the methods to be employed in carrying it out.

13. Delivery of the Thesis to Thesis Reviewers— To permit faculty to allocate sufficient time to read the thesis and decide whether it is ready for defense, students must notify their adviser and other members of the final oral committee at least two weeks in advance that the thesis will be delivered on a particular date. All members of the examining committee must then have at least two weeks to read the thesis after it has been delivered.

When signing the thesis reviewers report form, the reviewers have three options: the thesis is acceptable for defense as presented; the thesis is acceptable for defense with minor revisions; or the thesis requires major revisions and is not acceptable for defense as presented.

The reviewers must be unanimous in certifying that the thesis is ready for defense, whether as presented or with minor revisions.

14. Final Oral Examination—All doctoral students are required to successfully defend their theses in a final oral examination and graduate within five calendar years after passing the preliminary oral examination. To be eligible for the final oral examination, a student must have completed all work on the official doctoral degree program form; must have passed both the written and oral preliminary examinations; must have an approved thesis proposal on file with the Graduate School; must have maintained active status; and must have satisfied the thesis credit requirement. In addition, the thesis must have been certified by the readers as ready for defense.

15. Scheduling the Final Oral Examination With the Graduate School—The student must schedule the examination at least one week in advance with both the committee and the Graduate School. The Final Oral Examination Scheduling Form is available online at: www.grad.umn.edu/current_students/forms/doctoral.html.

When the examination is scheduled, the student's Graduate School file is checked to determine if the student can be cleared to take the examination as stipulated above. If so, the report form for the final oral examination will be forwarded to the chair of the examining committee. If difficulties are apparent, the Graduate School staff will contact the student immediately.

A minimum of 10 weeks must intervene between the preliminary oral and the final oral examinations.

16. Final Oral Examining Committee—The committee must consist minimally of four members: three (including the student's adviser) from the major field and one from the minor field or supporting program. Larger committee sizes may be appropriate for many students. At least one committee member from the minor field or supporting program should represent a graduate program and budgetary unit other than that of the student's major.

Although the student's adviser serves as a member of the final oral examining committee, another member of the committee is designated as the chair and functions in this capacity at the final oral examination. The chair must be a senior member or affiliate senior member of the graduate faculty and may be from either the major field or the minor field or supporting program. The chair and other members of the final oral examining committee are appointed by the Dean of the Graduate School upon recommendation of the faculty in the major field at the time the student's thesis proposal is approved.

All committee members must be present at the examination; the absence of any member results in an invalid examination.

17. Form of the Final Oral Examination—The final oral examination consists of a seminar in which the candidate presents the thesis and to which the scholarly community is invited. The seminar may take place only after the thesis has been judged ready for defense. The examination is limited to the candidate's thesis subject and relevant areas. It will not exceed three hours. A closed meeting between the candidate and the appointed examining committee immediately follows the thesis presentation.

Immediately after the examination, the candidate is excused from the room and a written, secret ballot is taken before discussing the examination. Following the discussion, a second and final vote is taken.

18. Reporting the Results of the Final Oral Examination—To be recommended for the award of the doctoral degree, candidates must receive a vote with no more than one dissenting member of the total examining committee. If the student has clearly passed or clearly failed the examination and all members have signed the final examination report form, the report form must be returned to the Graduate School no later than the first workday following the examination.

The adviser should be responsible for ensuring the inclusion of appropriate modifications and required revisions, if any, in the final thesis. The final oral examination report form should not be signed and submitted to the Graduate School until all revisions have been made. **If the form will be held for more than one**

week, a letter must be sent to the Graduate School stating that the form is being held pending required revisions.

Once the final report form has been returned to the Graduate School indicating that the student has either passed or failed the final oral examination, a hold is placed on the student's records to prevent further registration in the Graduate School. If the adviser indicates that the student needs additional time to make minor revisions to the thesis before it is submitted to the Graduate School, the student is permitted to register for one additional semester. Once the thesis has been submitted, no further registration in the Graduate School is permitted unless the student has been admitted to professional development status or to another major field.

B. Ph.D. in Plant Pathology

Students in the doctoral program usually spend a minimum of three years beyond the Master's degree to obtain the Ph.D. degree. All Ph.D. students must fulfill curriculum requirements outlined below. Doctoral students also complete a minor field of study or supporting courses in two or more disciplines, written and oral preliminary examinations, a thesis based on original research, and an oral defense of the thesis.

The Ph.D. requires a minimum of 17 course credits in Plant Pathology, which may include 5000 and 8000 level courses in Plant Pathology or others approved by the Director of Graduate Studies taken before admission into the Ph.D. program. In addition, students are required to complete 12 credits in a minor or supporting program, and 24 thesis credits (PIPa 8888 to be taken after completing the preliminary oral examination). Upon admission, students should meet with the Director of Graduate Studies, adviser, and Graduate Advisory Committee to determine a suitable course program.

All Ph.D. students must take both of the following courses (if not taken previously):

Epidemiology and Genetics of Host-Parasite Interactions (PIPa 8102) 3 cr
Physiological and Molecular Plant-Microbe Interactions (PIPa 8103) 3 cr

Students must also complete the following:

Supervised Classroom/Extension Teaching Experience (PIPa 8005) 2 cr.

OR Teaching in Higher Education (GRAD 8101) 3 cr

<http://www1.umn.edu/ohr/teachlearn/pff/8101.html>

PIPa 8005 requires that enrolled Ph.D. students serve as TAs for a full semester Plant Pathology course. Thus, students will receive formal pedagogical instruction and also gain practical teaching experience in the classroom. The TA experience can be done concurrently with PIPa 8005 or during a subsequent semester. The final grade for PIPa 8005 will be given upon completion of the TA experience.

Note: Ph.D. students are *strongly encouraged* take PIPa 8005 because it specifically addresses teaching in the biological sciences. They may, however, substitute GRAD 8101 as their formal pedagogical course, but must still fulfill the requirement of serving as a TA for a full semester Plant Pathology course. Students should be aware that GRAD 8101 is a 3.0 credit course.

Two Department Seminars (PIPa 8200) 2 cr

Thesis Research (PIPa 8888) – 24 cr total (to be taken after completion of preliminary oral exam)

Note: One must register for Pre-Thesis Research (PIPa 8666) prior to completing the preliminary oral exam. These PIPa 8666 credits do not count toward the 24 Thesis Research credits needed to graduate.

Minor or Supporting Field 12 cr

Written Preliminary Exam– The written preliminary exam will be held once annually. In September of each year, the Director of Graduate Studies will meet with that group of students planning to take the exam during the next year. The dates for the exam will be selected in September by mutual agreement of the students and the Director of Graduate Studies. The 3 days of the exam must fall within a single week between January 1 and June 15 of the next year. If any student(s) choose not to take the exam on the predetermined dates, they must wait to take the exam with the next year's group of students.

The structure of the exam will be as follows:

The examination will consist of 3 half-day sessions during which students will be expected to answer a total of 9 questions, 3 per day. Questions test general knowledge of Plant Pathology such as would be covered in required courses. All faculty members are invited to submit questions.

Day 1: Cellular, Molecular, and Physiological Plant Pathology. On day 1, there will be two categories of questions. Approximately one-half of the questions on the exam will address cellular, molecular, and physiological plant pathology; the other half of the questions will cover the broad range of general plant pathology. Students will be required to answer at least one question among those offered in the area of cellular, molecular, and physiological plant pathology. Students will answer two additional questions from either category.

Day 2: Whole Plant and Population-based Plant Pathology. On day 2, questions will be approximately equally divided between whole plant and population-based plant pathology, and general plant pathology. Students will be required to answer at least one question among those offered in the area of whole plant and population-based plant pathology. Students will answer two additional questions from either category.

Day 3: Individualized exam. The adviser will be responsible for providing the exam committee with questions to be answered by the student on the final day of the exam. Students will be required to answer three questions on the final day of the exam; the adviser will determine whether or not the student will have a choice of questions. The adviser may, at his or her discretion, choose to include questions from members of the student's Graduate Advisory Committee.

To successfully pass the written preliminary exam, students must achieve a score of 70% averaged over all 9 questions, i.e. it is permitted for students to receive scores on individual questions lower than 70% as long as the average is above 70%. Students pass or fail the entire exam; the possibility of passing or failing only a portion of the exam is not allowed.

Oral Preliminary Exam – Following successful completion of the written preliminary exam, students must pass an oral preliminary exam administered by members of the Ph.D. examination committee.

Final Exam – The final examination is oral, centering around defense of the Ph.D. thesis.

Minor Requirements for Students Majoring in Other Fields - A minimum of 12 credits is required for a doctoral minor. The department offering the minor should be consulted for exact requirements.

C. Ph.D. in Plant Pathology, Molecular Option

Course requirements for Ph.D. students:

Prerequisite:

Biology of Plant Disease (PIPa 5201) 4 cr or equivalent AND

Laboratory in Molecular Biology and Biotechnology (BioC 4125) or equivalent.

Plant Pathology (PIPa) courses (17 credits). These include the Plant Pathology courses required for the M.S. degree with emphasis in molecular plant pathology. These courses can be taken before admission to the Ph.D. program as part of M.S. requirements.

Plant Genomics (PIPa 5301) 3 cr

Genomics of Plant-Associated Microbes (PIPa 5302/8302) 3 cr.

This course must be taken in conjunction with

Current Topics in Molecular Plant Pathology (PIPa 5300) 1 cr * (new course*).

Physiological and Molecular Plant-Microbe Interactions (PIPa 8103) 3 cr

Epidemiology and Genetics of Host-Parasite Interaction (PIPa 5102/8102) 3 cr

Supervised Classroom/Extension Teaching Experience (PIPa 8005) 2 cr

OR Teaching in Higher Education (GRAD 8101) 3 cr

(<http://www1.umn.edu/ohr/teachlearn/pff/8101.html>) (See above for additional information regarding the teaching requirement)

Two Department Seminars (PIPa 8200) 2 cr

Thesis Research (PIPa 8888) – 24 cr total (to be taken after completion of preliminary oral exam)

Note: One must register for Pre-Thesis Research (PIPa 8666) prior to completing the preliminary oral exam. These PIPa 8666 credits do not count toward the 24 Thesis Research credits needed to graduate.

Minor or Supporting Field 12 cr

Suggested Courses:

Molecular and Cellular Genetics of Plant Improvement (Agro 8241) 3 cr

Cytogenetics (Agro 8231) 4 cr

Statistical Genetics and Genomics (AnSc/MVB 5200) 4 cr

Microbial Genomics (BioC 5361) 3 cr

Computational Techniques for Genomics (Csci 5481) 3 cr

Molecular and Genomic Evolution (EEB 5221) 3 cr

Molecular Cell Biology GCD (5036) 3 cr

Advanced Molecular Genetics (GCD 8121) 3 cr

Structure, Function, and Genetics of Bacteria and Viruses (MICa 8002) 4 cr

Protein Sequence Analysis (MICa 8006) 3 cr

Plant Cell and Molecular Biology (PBio 5414) 3 cr

Laboratory Rotations:

With approval of the Director of Graduate Studies, Ph.D. students pursuing the molecular emphasis may, in their first year of residence, spend 12 weeks in one research laboratory or a 6-week period in each of two laboratories. The effort will be the equivalent to a half-time research assistantship. The purpose is to broaden the students' background in laboratory methods and research approaches before beginning Ph.D. thesis research.

Written Preliminary Exam– The written preliminary exam will be held once annually. In September of each year, the Director of Graduate Studies will meet with that group of students planning to take the exam during the next year. The dates for the exam will be selected in September by mutual agreement of the students and the Director of Graduate Studies. The 3 days of the exam must fall within a single week between January 1 and June 15 of the next year. If any student(s) choose not to take

the exam on the predetermined dates, they must wait to take the exam with the next year's group of students.

The structure of the exam will be as described above (written preliminary exam, Ph.D. in Plant Pathology program).

Oral Preliminary Exam – Following successful completion of the written preliminary exam, students must pass an oral preliminary exam administered by members of the Ph.D. examination committee.

Final Exam – The final examination is oral, centering around defense of the Ph.D. thesis.

Minor Requirements for Students Majoring in Other Fields - A minimum of 12 credits is required for a doctoral minor. The department offering the minor should be consulted for exact requirements.

V. PROGRAM-WIDE REQUIREMENTS AND OPPORTUNITIES

A. Policy for appointment of Graduate Student Advisory Committee and submission of thesis proposal

In order to facilitate progress of students through their graduate programs and to ensure early involvement of students' Graduate Advisory Committee, the following steps are required of all students.

1. All graduate students in Plant Pathology will be required to select a major adviser and a Graduate Advisory Committee and convene a meeting of the committee by the **end of the first year in residence**.
2. A thesis proposal should be submitted to the Graduate Advisory Committee at its first meeting. The proposal will include a literature review, research objectives, and the proposed research approach and methods. The proposal should be considered as a working document that may be modified at a later time as deemed appropriate.
3. It is suggested that each student's Graduate Advisory Committee meet at least once a year after the initial thesis proposal meeting to review progress of the student and to provide constructive advice on the thesis research.

Students are encouraged to contact their Graduate Advisory Committee members throughout the course of their research program to seek their advice and expertise. It is also important that the Committee be kept informed of the direction and progress of the student's research throughout his or her tenure in the Department. For the Ph.D. degree,

it is advised that the entire Examining Committee be involved as the Advisory Committee, whenever possible.

B. Financial support for Plant Pathology Graduate Students: Research Assistantships.

The length of time for Research Assistantship (RA) financial support for an M.S. degree is 2.5 years from the time of admission and 3.5 years for a Ph.D. degree for those students already possessing an M.S. degree. If for some reason it appears that a student will require additional time beyond the stated periods, a petition may be filed to the Graduate Admissions/Recruitment Committee (see the section on Graduate Student Progress Evaluation Report) for an extension of financial support if the student and his or her adviser believe there are special circumstances beyond the student's control that have prevented the student from finishing within the allotted time period. Extensions of financial support for research assistantships will be for periods of no longer than six months in duration.

It is intended that all students on RA's will be subject to the same constraints regarding the time limits described above, regardless of the source of financial support. However, in the case of RA's that are supported through extramural funds, exceptions may be made where unusual circumstances exist that would necessitate extending the time limit for support beyond those stated above. In these instances, the project leader should discuss these circumstances and come to agreement with the Director of Graduate Studies and the Department Head before an extension is granted.

Graduate student policy for probationary status: Students with a GPA of 2.8 or less for two semesters will be placed on probation. If no improvement occurs in an additional semester, their graduate study will be terminated. A cumulative GPA=2.8 is required to graduate from the program.

C. Annual student progress review

All graduate students will be reviewed annually by the Graduate Admissions/Recruitment Committee. The review will serve to evaluate progress and identify potential problems with the academic progress of each student. Students are required to annually provide an updated record of their progress on the Graduate Student Progress Evaluation Report (See Appendix A).

D. Financial issues

Tuition Remission for Graduate Assistants

Tuition reimbursement will be limited to tuition costs for a maximum of 14 credits per semester (Fall, Spring, and Summer). Generally, students take only 6 credits during the summer, which is considered full time status. Costs for any additional credits taken in a given semester will not be reimbursed. NOTE: A manual adjustment will be made by

the Graduate Assistants Office for professional degree programs that set their own tuition schedule. The cap for these programs will be at the top of their full-time tuition band.

FICA (Social Security and Medicare Taxes)

All graduate students employed at the University must meet two conditions for exclusion from FICA tax withholding: 1) students must enroll for a minimum of 6 credits per semester, or 1 credit per semester for Ph.D. students who have passed the oral prelim exam and are working on a dissertation; 2) appointments must not exceed a combined total of 50 percent or 20 hours per week (this applies to all University employment, including assistantships, during the summer as well as the academic year).

E. Policy for research assistants to proceed directly to the Ph. D. degree from the Bachelor of Science degree.

E. Policy for research assistants to proceed directly to the Ph. D. degree from the Bachelor of Science degree.

All students accepted into the department with a B.S. degree are admitted initially into the M.S. degree program. After a minimum of two semesters, an exceptionally well qualified individual may elect to change their degree status to a Ph.D. program. Documentation (including evidence of competent writing skills, e.g., publication, proposal for Ph.D. research program) for the change in degree status will be evaluated by the student's Graduate Advisory Committee and the Graduate Admissions and Recruitment Committee along with the Director of Graduate Studies. The decision by these two committees and the Director of Graduate Studies to allow a change of status must be unanimous and must also be approved by the Graduate School. Criteria for the change include scholastic standing, potential for success in completing a Ph.D. and writing competency. Ph.D. applicants must satisfy all the prerequisites for the M.S. degree program in Plant Pathology or have a Master's degree in Plant Pathology or in a field of natural science.

After a change of status has been made, a student may elect to return to an M.S. program. However, this must be done prior to the time of the Ph.D. preliminary written exam. After this time, failure of the written exam, failure of the oral exam, failure in research, etc., will not constitute an automatic return to M.S. status.

To graduate, all requirements for the M.S. (Master's Core Courses, Seminar) and Ph.D. (Ph.D. Core Courses, Seminars, Thesis Credits) must be completed, both for the major and the minor or supporting program.

F. Plant Pathology Graduate Student Internships

Internship opportunities can provide students with unique exposure to research in other environments, including private industries, federal agencies, other countries, or other

universities. Because of their value to the graduate student experience, the Department of Plant Pathology will offer credit (PIPa 8090) for internships of 3-12 weeks duration. In addition, the Department has developed a small pool of funds that will be awarded competitively to provide travel funds and short-term research assistantship support for students over the course of the internship. Students interested in pursuing an internship are encouraged to contact prospective individuals with whom they may wish to work, or to work with their adviser and Graduate Advisory Committee in exploring potential options. Students are urged to plan ahead.

Students desiring an internship will be required to prepare a 4-6 page proposal for the internship, including a summary of internship goals, description of specific activities, location for the internship, justification for the location, and explanation of how the internship will enhance their graduate program. The internship proposal must include letters of support from both the proposed host and the graduate adviser. Internship proposals must also include a request for and justification of PIPa 8090 credits to be assigned to the internship experience. We expect internship experiences are likely to be assigned from 2-8 credits (S/N)--depending upon their length and the activities involved. Finally, if departmental funding is requested, the internship proposal must include a detailed budget on travel, lodging, per diem, and miscellaneous expenditures.

Internship proposals will be reviewed by the Graduate Admissions and Recruitment Committee in January and June of each year; proposals to be considered are due by the 15th of that month. The Graduate Admissions and Recruitment Committee will approve or recommend revisions to internship proposals, and recommend funding accordingly. Because funds are limited and may sometimes be tied to specific internship experiences (e.g. international experiences), full funding of all internship proposals is not guaranteed.

Within 30 days of the conclusion of the internship, students will be required to submit to the Graduate Admissions and Recruitment Committee a brief written report summarizing their internship experience, including specific accomplishments, contributions to the student's program, effects on future research and career plans, and any plans for continuing collaborative interactions with the host. In addition, students will be required to present a seminar on their internship experience and develop a brief Powerpoint presentation on their experience for posting on the department's website.

VI.

CONSTITUTION OF THE DEPARTMENT OF PLANT PATHOLOGY**CONSTITUTION OF THE DEPARTMENT OF PLANT PATHOLOGY****PREAMBLE**

The Department of Plant Pathology is dedicated to serving students and faculty of the University of Minnesota and the citizens of Minnesota through instruction, research, and service. In fulfilling this mission, the Department adheres to the principles of employment responsibility, academic freedom, and equal opportunity as specified by the Board of Regents of the University of Minnesota *and* holds itself accountable in meeting the needs of its varied constituency. To provide order to these obligations and intentions the Department established the following Articles and By-Laws.

MISSION STATEMENT

The mission of the Department of Plant Pathology is education, research, and outreach focused on plant diseases and the biology of plant-microbe interactions to ensure sustainability of agricultural, forest, and natural ecosystems for the benefit of society.

EXPANDED MISSION- PLANT PATHOLOGY

The mission of the Department of Plant Pathology is to serve the people of the State of Minnesota, and where possible citizens of other states and nations in the diagnosis, understanding, management, and control of plant diseases caused by biotic and abiotic agents, and the deterioration of plant products. The Department also carries on broad-based, fundamental investigations at the practitioner and theoretical level of plant pathogenic and related agents, and their by-products, which affect human endeavors related to food and fiber production and utilization. The beneficial use and genetic modification of microorganisms as agents of plant health and plant evolution, and the genetic modification of plants when related to disease resistance is within the mission of the Department.

This mission is accomplished by research, by extending information to clientele through a variety of methods, and by the formal teaching of undergraduate and graduate courses in plant disease, disease control and management, disease theory at all levels of biological organization from molecular to populations, and plant pathogenic and related agents (including fundamental materials related to mycology, plant virology, plant bacteriology, plant nematology and other biotic agents as well as abiotic agents of plant disease).

ARTICLE I. GENERAL POWERS

Section 1. Distribution of Powers

All powers exercised by the Department of Plant Pathology, in its Constitution and By-laws, are delegated by the Board of Regents in accordance with the Constitutions of the University Senate and by the College of Food, Agricultural and Natural Resource Sciences (CFANS). These powers may be modified at any time by subsequent action of the Board of Regents or by changes in the CFANS Constitution.

Section 2. Departmental Autonomy

The Department shall have autonomy in its internal affairs consistent with CFANS, and University policies, and with appropriate academic and administrative relations with other departments and units in CFANS and the University.

ARTICLE II

DEFINITION OF THE HEADSHIP, FACULTY, ACADEMIC PROFESSIONALS, CIVIL SERVICE, AND STUDENT MAJORS

HEADSHIP, DEFINED

The Department of Plant Pathology has a headship. The Head is the executive officer of the Department and the general duties and authority of the Head are as defined in the the College of Food, Agricultural and Natural Resource Sciences Constitution. The selection, appointment, and term of office of the Head are stipulated in the CFANS Constitution. Specific Departmental duties and responsibilities of the Headship are detailed in the Department of Plant Pathology By-laws Appendix, attached to this Constitution.

Section 1. Faculty

The Faculty of the Department includes three groups: Tenured and tenure-track faculty, Adjunct faculty and ~~Professors emeriti~~ Emeriti faculty.

1.1 State-supported faculty. These faculty include all those appointed to faculty rank by the University of Minnesota and tenured in the Department or employed (paid at least 50% time) by the Department at the Instructor, Assistant, Associate, or Full Professor rank, tenured, tenure track or non-tenure-track. This faculty must assume all contractual obligations and legal responsibilities of a state-supported Departmental faculty member including teaching, research, student advising, service on departmental committees, and voting membership obligations in the General Assembly and Faculty Assembly of the Department.

1.2 Adjunct faculty. These faculty include all those not directly employed as state-supported faculty (paid 50% or more by the Department) but holding Assistant, Associate, or Full Professor rank as approved by the University of Minnesota and approved by 2/3 majority of the Faculty Assembly. Adjunct faculty have the general privileges and obligations of a University of Minnesota faculty member, are expected to serve on departmental committees if elected or

appointed, are requested to attend General Assembly meetings of the Department, and may or may not choose to be considered for voting membership on the Faculty Assembly and General Assembly (see By-Laws, Section I B for voting membership status in the General and Faculty Assembly).

1.3 Emeriti faculty. This faculty includes all those officially recognized as emeritus faculty of Plant Pathology by the University of Minnesota. Emeriti faculty, if in residence, are requested to attend General Assembly meetings of the Department, as honored *guests*, and are required to serve on departmental committees if appointed. Voting membership in the Faculty Assembly and General Assembly does not continue into retirement (see By-Laws, Section I, B-1 & D for voting membership status in the Faculty Assembly and General Assembly).

Section 2. Professional and Administrative Staff (P&A)

Departmental staff not holding civil service appointments, and who are not on tenure-track appointments, and who hold a 75% appointment or greater (whether pursuing a degree program or not) are designated as Professional and Administrative Staff (P&A). Academic professionals should serve on departmental committees when appointed, attend General Assembly meetings of the Department, and must on a yearly basis elect 1 voting member and one alternate to represent them in votes of the General Assembly.

Section 3. Civil Service

The civil service staff of the Department shall include all civil service staff budgeted at, or greater than 75% time in the Department (this includes all persons so defined, irrespective of collective bargaining representation.) Civil Service staff should serve on departmental committees when appointed, attend General Assembly meetings of the Department, and must on a yearly basis elect 1 voting member and one alternate to represent them in votes of the General Assembly.

Section 4. Students

4.1 Majors

Majors in the Department shall include all graduate and undergraduate students registered with the University of Minnesota Graduate School or the College of Food, Agricultural and Natural Resource Sciences for a baccalaureate or post-baccalaureate degree with a major in Plant Pathology (should one exist) or with an emphasis in plant health or plant pathology - defined as the student having taken 2 or more full semester courses in Plant Pathology. Equal status will be granted students with a major that does not specifically fall within the Department but whose major advisor is a voting member of the Faculty Assembly of the Department of Plant Pathology. All majors, here defined, should serve on departmental committees when appointed, attend General Assembly meetings, and must on a yearly basis elect 1 voting member and one alternate to represent them in votes of the General Assembly.

4.2 Non-majors

Non-majors should include all graduate and undergraduate students enrolled in a Departmental course during an academic year but who are not registered as majors, defined above. Non-majors may attend General Assembly meetings of the Department, do not serve on departmental committees, and are not represented in any vote of the General Assembly.

ARTICLE III. THE DEPARTMENTAL GENERAL ASSEMBLY

Section 1. Definition of Plant Pathology General Assembly.

In matters of general departmental interest the deliberative and legislative body of the Department shall be called the General Assembly. Its voting membership shall be composed of a representative from: The Academic Professional & Administrative Staff, The Civil Service Staff, Graduate and Undergraduate Student Majors, and All members of the Faculty Assembly. Voting membership in the General Assembly is as specifically defined in Section I, B-1 of the By-Laws; with the specific voting modes and procedures outlined in Section I, B-2 & B-3.

Section 2. Authority for Setting Policy

The General Assembly shall debate and vote (by those with voting status) on departmental policies as empowered by the Constitution of the College of Food, Agricultural and Natural Resource Sciences, and in the Departmental By-Laws.

Section 3. General Assembly Meetings

The General Assembly shall meet at least twice during the regular academic year, upon call by the Head. Special meetings may be held whenever the Head deems necessary, or when members of the Faculty Council mandate a meeting as specified in the By-Laws.

Section 4. Method of Exercising Powers

The General Assembly shall exercise its powers and responsibilities by assembled action of those eligible to vote. Actions taken by the General Assembly are recorded in written form and become permanent records open to all Assembly members empowered to vote in the Assembly. Voting procedures not specified in the By-Laws of the Department or other procedures not covered should follow Roberts Rules of Order, Newly Revised.

Section 5. Duties and Responsibilities

The duties and responsibilities of the Plant Pathology General Assembly include the establishment of general policies and procedures in matters concerning departmental operations. The General Assembly should debate all issues of concern, but shall not act as a legislative body when considering issues clearly within the established and written domains of Civil Service rules and regulations, Student Governance, or University Policy and Procedures of Faculty domain and responsibility.

ARTICLE IV. OTHER ASSEMBLY GROUPS IN THE DEPARTMENT

Section 1. Definition of Assembly Groups

All departmental groupings mentioned in Article II, Sections 2-4 of this Constitution are free to meet as separate assembly groups providing they have established by-laws that are both attached as appendix items to the Departmental Constitution and By-Laws, and are not in conflict with this Constitution and By-Laws. Thus, Academic Professional Staff, Graduate and Undergraduate Student Majors, and Civil Service Staff may meet as separate and unique assemblies without representation from other groupings. These assemblies shall not act in a legislative mode on

general departmental matters assigned to the General Assembly but shall act in their own interests on matters clearly in the written and established domain of their group.

Section 2. Assembly Group Meetings

Assemblies of groups listed in Sections 2-4 of Article II of this Constitution shall meet on their own schedules and are governed by their respective By-Laws.

ARTICLE V. THE PLANT PATHOLOGY FACULTY ASSEMBLY

Section 1. Definition of Plant Pathology Faculty Assembly

In matters of faculty responsibility and interest, and on items of faculty domain, the deliberative and legislative body of the faculty shall be called the Faculty Assembly. Its voting membership shall be composed of faculty as defined in Article II, Section 1 of this Constitution and Section I, B of the By-Laws; with specific voting modes and procedures outlined in the Department of Plant Pathology By-Laws.

Section 2. Faculty Assembly Meetings

The Faculty Assembly shall meet, as a separate entity, at least once every three months during the academic year upon call by the Head. Special meetings may be held whenever the Head deems necessary, or when members of the Faculty Council mandate a meeting as specified in the By-Laws.

Section 3. Method of Exercising Powers

The Faculty Assembly shall exercise its powers and responsibilities by assembled action in accordance with established, written, University of Minnesota Policies and Procedures, and in accordance with Departmental By-Laws. Actions taken by the Faculty Assembly are recorded in written form and become a permanent record open to all Faculty Assembly members. The Faculty Assembly may invite non-members to assembly meetings. They may also invite administrative staff to assist in recording their discussions and votes, but faculty reserve the privilege of conducting all or a portion of every meeting with only faculty present. Procedures not specified by established Departmental By-Laws should follow Roberts Rules of Order, Newly Revised.

Section 4. Duties and Responsibilities

The duties and responsibilities of the Plant Pathology Faculty Assembly shall include the deliberation of all matters of faculty responsibility and interest, and establishment of policies and procedures in matters of faculty domain.

ARTICLE VI. COMMITTEE STRUCTURE WITHIN THE DEPARTMENT

There shall be only 5 permanent standing committees in the Department, and they are 1) Graduate Education Committee 2) Undergraduate Education Committee, 3) Science and Outreach Committee 4) Awards and Honors Committee 5) Development, Alumni and External Relations Committee. The charges and memberships of these 5 committees are spelled out in Section II, A & B of the Departmental By-Laws. The 5 Chairpersons of these standing committees constitute Council and its functions and responsibilities are found in Section II, C of the Departmental By-Laws.

While there may be other ad hoc committees established by the action of the General Assembly, Faculty Assembly, or by the Head, such committees shall not duplicate charges given to existing Standing Committees or the Faculty Council, and should be formed only upon exceptional need - see Section II, D of the Departmental By-Laws for specifics.

ARTICLE VII. RATIFICATION, IMPLEMENTATION, INTERPRETATION, AND AMENDMENTS

Section 1. Ratification

The constitutional format for Departmental organization and governance became effective in 1984 upon its adoption by the Department of Plant Pathology faculty as defined in Article II, Section 1. A two-thirds vote of the faculty, by written ballot, was required for adoption (the 1984 vote was 26 in favor, 2 against). Revisions were made again in 1996 and ratified by a unanimous vote).

Section 2. Implementation

Departmental committees, policies and procedures in existence (written form) at the time of the 1996 revision, which were not in violation of this constitution, may continue until modified in accordance with the provisions and procedures established in this constitution and By-Laws.

Section 3. Amendments

This constitution may be amended (after ~~1996~~ 2007) by a two-thirds, ballot vote of the General Assembly members eligible to vote. Amendments shall be proposed by at least 20 percent of the voting membership of the General Assembly.

Proposed amendments shall be presented in writing to all eligible General Assembly voters, at least three weeks prior to amendment balloting.

BY-LAWS DEPARTMENT OF PLANT PATHOLOGY CONSTITUTION

Section I. Department Structure

A) Headship

The Department Head shall perform all duties and assume all responsibilities laid down by the Constitution of the College of Food, Agricultural and Natural Resources Sciences, and by the Constitution of the Department of Plant Pathology, including those dealt within the By-Laws, which by departmental action, become an accepted part of the departmental constitution.

- 1) Role shall be specified by the Constitution College of Food, Agricultural and Natural Resource Sciences Constitution and by the Department of Plant Pathology Constitution.
- 2) Special Duties shall be as specified by the Department of Plant Pathology By-Laws (see By-Laws appendix).
- 3) Review shall be as specified in the College of Food, Agricultural and Natural Resource Sciences Constitution.
- 4) Selection shall be as specified in the College of Food, Agricultural and Natural Resource Sciences Constitution.

B. General Assembly and General Assembly Membership

The General Assembly of the Department of Plant Pathology shall be defined as in Article III, Section 1-5 of the Department of Plant Pathology Constitution. The General Assembly is a forum for deliberation of reports from the 5 Departmental Standing Committees and of general policies and procedures in matters concerning departmental operations. The legislative actions of the General Assembly are through voting procedures of those eligible to vote. The General Assembly must meet at least twice each regular academic year upon call of the Head of the Department, and may meet more frequently as the Head deems necessary. The Faculty Council Secretary may call special meetings of the General Assembly by a 3/5 vote of the Faculty Council.

B-1 Voting Membership of the General Assembly

The voting membership of the General Assembly is outlined in Article III, Section 1, and includes one voting representative and designated alternate, from the Academic Professional Staff, the Civil Service Staff, the Graduate and Undergraduate Student Majors, and all members of the Faculty Assembly. Voting members of the General Assembly from the Academic Professional Staff, Civil Service, and Graduate and Undergraduate Student Majors are chosen according to the respective By-Laws of these groups, respective group By-Laws attached as appendix materials to these By-Laws.

B-2 Voting procedures of the General Assembly

A Quorum shall consist of 60% of all General Assembly members eligible to vote (Article II, Section 1-4 of this Constitution). No binding votes shall be made at meetings for which a quorum is not present.

Written ballots are required for all binding votes taken by the General Assembly.

Majority Vote shall refer to a simple majority of a quorum of the voting membership assembled at the legally convened meeting (Article III, Section 1-5 of this Constitution).

C. Other assembly groups in the Department

Article IV, Section 1, 2, of this Constitution provides for the existence of assembly groups for Academic Professional Staff, Graduate and Undergraduate Student Majors, and Civil Service employees (membership defined by Article II, Section 2-4 of this Constitution). These assemblies are free to meet as separate groupings, providing they have established, written By-Laws that are both attached as appendix items to the Departmental Constitution and its By-Laws, and are not in conflict with this Constitution (see Article V, Section 1, of this Constitution).

Joint Assembly Meetings

Assemblies meeting the above criteria may also meet in joint. Such assemblies should vote annually (in April), by simple majority present, on whether they wish to meet in joint with other assemblies. Once an assembly votes to exercise the right to meet jointly with other assemblies the issue need not be revisited until the next calendar year. Such joint assembly meetings have no Departmental governing status and shall not act as voting entities nor construct By-Laws; they exist solely for information exchange and collegial discussion or debate.

For example, the Professional and Administrative Assembly may meet in joint with the Faculty Assembly if both groups agree by simple majority votes of their respective assemblies. One voted upon the joint assembly meeting may be called by the Department Head or by mutual agreement of the separate assemblies themselves (again a simple majority vote is needed). When such joint assemblies meet either as called by the Department Head or by mutual consent written meeting notices (electronic and hard copy) should be posted. Such meeting notices will clearly state, in writing, that the meeting is a "Joint Meeting of the Assemblies the Professional and Administrative Staff and the Faculty for information exchange and collegial discussion or debate".

Under no circumstances shall a Department Head or any other individual substitute joint assembly meetings for individual assembly meetings. Under no circumstances shall a Department Head or any other individual use a joint assembly meeting as a voting or legislative body.

D. Faculty and Faculty Assembly Membership

Because of the unique contractual and legal relationships and obligations of faculty to the University, Article V, Sections 1-4 of this Constitution provides for the existence of a Faculty Assembly, which in matters of faculty responsibility and interest, and on items of faculty domain, is the deliberative and legislative body of the faculty.

The Faculty of the Department of Plant Pathology shall be defined as in Article II, Section 1 of this Constitution. Faculty Assembly membership is as follows: (1) All tenured and tenure-track academic appointments to the Department are voting members of the Faculty Assembly, (2) For adjunct faculty to be added they must be approved for faculty status by a 2/3 vote of the Faculty Assembly. Adjunct faculty admitted by a 2/3 vote will then be subject to official approval by the University of Minnesota. (3) To become voting members of the Faculty Assembly, Adjunct faculty must be approved by a second 2/3 vote of the Faculty Assembly.

Adjunct faculty who are or become voting members but who cannot consistently attend Faculty Assembly meetings may be asked to drop voting status, or by a 2/3 vote of the Assembly have voting rights revoked. (4) Professors emeriti may be invited to Faculty Assembly meetings as honored guests, by consent of the Head or by a majority vote of the Faculty Assembly, but are not voting members since voting rights do not continue into retirement (Article II, Section 1.3 of this Constitution).

As with other assembly groups, the Faculty Assembly has the right to meet as a separate and unique assembly without representation from other groupings (Article V, Section 1 of this Constitution). Faculty Assembly meetings shall take place at least every three months during the academic year. Special meetings may be called by the Department Head, or by the Council Secretary upon a 3/5 vote of the Council. It is the responsibility of the Head to provide administrative assistance in taking minutes of Faculty Assembly meetings, but Faculty reserve the privilege of conducting all or part of every meeting with only faculty present. Minutes of Assembly meetings need to be approved by the Assembly before being placed in a permanent file kept in the Department Office.

D-1 Faculty Assembly Voting Procedure

- 1) A Quorum shall consist of 50% of all Faculty Assembly members with voting eligibility as defined above. No binding votes shall be made at meetings at which a quorum is not present.
- 2) Majority Vote, except where otherwise stated in these By-Laws shall refer to a simple majority of a quorum. Normally a show of hands is used for voting procedure.
- 3) Secret Ballots shall be substituted for a show of hands if requested by at least 5 voting members. The Council Secretary or a designated Council member shall determine the method of the secret ballot and shall appoint at least 2 other Faculty Assembly members to count the vote in full view of the Faculty Assembly.
- 4). Absentee, circulating or electronic ballots may be used for Faculty Assembly voting when requested and approved by a simple majority vote of the Faculty Assembly. In the case of absentee or circulating ballots these must be returned in a sealed envelop to the Council Secretary or his or her designee. In the case of electronic ballots they must be simultaneously returned to the Department Head and the Faculty Council Secretary. The Council Secretary or designated Council member shall or his/her designee shall count the vote and transmit that vote in writing to

all faculty members. All absentee ballots and circulating ballots must be signed in order to be counted. All ballots regardless of format will be held for a period of at least one year and will be open to examination by any faculty member during that period, and may be brought to subsequent faculty assembly meetings for examination and discussion.

5) Tenure and/or Promotion Votes. Any vote involving granting of faculty tenure is predicated solely upon the evaluation elements outlined in the Departmental Tenure and Promotion Document of 1996 and upon criteria mandated by CFANS or the Board of Regents. Votes involving tenure or tenure-track faculty shall be by secret ballot of only those tenured faculty above the rank of candidate being considered, and be permanently recorded and sent forward with tenure documentation.

Non-tenured members of the Faculty Assembly shall not vote on promotions involving tenure or tenure-track faculty; however, they may be requested to give informal written and signed opinions if requested by the Head or by a simple majority of tenured members of the Assembly.

Non-tenured members of the Faculty Assembly above the rank of the candidate being considered for promotion may vote on all promotions that do not involve tenure-track or tenured faculty.

All votes, whether involving tenure and/or promotion will be counted by the Faculty Council Secretary and 2 other faculty members and will be immediately announced to the Faculty Assembly only, results of such votes remain faculty domain and shall not be relayed outside the Faculty Assembly.

Censure Votes. For activities or lack of activities deemed sufficiently serious, the Faculty Assembly may vote, by a 2/3 majority, a motion of censure towards individual faculty members. Once approved the fate of the censure motion will be decided by a simple majority vote of the Faculty Assembly.

Restrictions on Voting. Any voting procedures established by All-University policies (for example, changes in granting tenure and promotion) shall take precedence over those procedures specified in this By-Law.

Section II. Standing Committees and Departmental Organization

A) Standing Committees

There are five standing committees in the Department, as outlined in Article VI of this Constitution, and they are responsible for caring out committee charges. Determination of implementation strategies, and budgetary recommendations are within each committee's domain. Standing committees shall not, however, be in conflict with Headship responsibilities as defined in the Appendix to these By-Laws. Standing committee progress reports findings must be presented in written form to the Faculty Assembly and the General Assembly, and be approved by the General Assembly. The five Departmental standing committees with designated charges are: 1) Graduate Education Committee 2)-Undergraduate Education Committee, 3) Science and Outreach Committee 4) Awards and Honors Committee 5) Development, Alumni and External Relations Committee.

Membership of Standing Committees

Each committee consists of a minimum of three and maximum of five Faculty Assembly members. The chairperson of each committee must be a voting member of the Faculty Assembly

and is elected for a 3-year term by the Faculty Assembly. Elections for committee chairpersons shall be held in the 4th week of April, yearly. No chairperson of a standing committee may hold consecutive terms as chairperson of the same committee, but may be elected to chair a different committee on a consecutive basis. The initial election of committee chairpersons shall be held on the fourth week of April when mandated. Thus:

** In April of 2008 the Faculty Assembly would elect the Chairs of all Standing Committees. The Science and Outreach Committee would be formed (as below) and serve one year, until 2009. In 2009 the Science and Outreach Committee would, with a newly elected chair, begin a 3-year cycle. In April of 2008 the Awards and Honors Committee and the Development, Alumni and External Relations Committee would be formed and serve for two years. In 2010 these two committees would begin a 3-year cycle. Again, in April of 2008 the Undergraduate Education Committee and the Graduate Education Committee would be formed and serve until 2011, and then continue on a 3-year cycle thereafter.*

The remaining two to four faculty members serving on any standing committee will be appointed by and serve at the discretion of the Head of the Department of Plant Pathology. One of these appointments shall be for a 2-year term and all others for 3-year terms. The Head may reappoint these committee members to consecutive terms if necessary for continuity. The Head must appoint one representative to these standing committees from the following groupings; academic professionals, civil service, graduate and undergraduate student majors; in such headship appointments the Head should seek nominations from these groups through their recognized assemblies (see appendix for By-Laws of these assemblies). Thus each standing committee is restricted to a maximum of 8 members, three to five faculty and one each from the academic professional staff, civil service, and graduate and undergraduate student majors. The Chairperson of each committee is responsible for voting procedures in this committee, and in the case of tie votes the Chairperson decides the issue. Additionally, the Head may appoint 3 ex-officio members to any standing committee; such members have advisory roles but do not have voting rights.

B. Standing Committees and Their Charges

1. Undergraduate Education Committee

- a) The Chairperson of this committee represents the Department in the College's Curriculum Committee.
- b) The committee, in concert with the Department Head, shall annually review tuition revenue generated by undergraduate courses and the amount of tuition revenue credited to the Department by the College. The Committee reports its findings yearly to the Faculty Assembly.
- c) The committee shall review the College's curriculum areas that Departmental courses and proposed courses might fit, either as mandatory or optional parts of programs.
- d) Make suggestions to the Department Head and faculty for action relative to the College's undergraduate and continuing education or distance education.
- e) Interface with the College's and University's non-Graduate School masters programs and the Master Gardner program. Identify participation opportunities for Plant Pathology.
- f) Interface with University honors, and other University of Minnesota teaching opportunities (like LibEd Requirement Courses) and identify participation opportunities for Departmental faculty and staff.
- g) Coordinate peer-teaching evaluations for undergraduate course instructors.
- h) Advertise undergraduate level courses within the University in order to reach prospective students not enrolled in the Department as graduate majors.
- i) Coordinate and continuously upgrade related Departmental Web site(s).

**This committee may never assign faculty or staff to teaching duties; teaching duties are assigned by Head of the Department (see Headship Responsibilities, Item 4 - By-Laws appendix).*

2. Graduate Education Committee

- a) Act as an admissions committee for screening graduate applicants.
- b) Nominate students for fellowships, honors, and awards and assist DGS in preparing nomination packages.
- c) Annually, prepare and ensure rapid grading of Ph.D. written qualifying examinations (the Director of Graduate Studies – a permanent member of this committee - will be in overall charge of exam composition and administration). The DGS has the responsibility for reviewing exam outcomes with graduate students and their advisors).
- d) Conduct annual student progress evaluations with the DGS.
- e) Advertise graduate level courses within the University in order to reach prospective students not enrolled in the Department as graduate majors.
- f) The committee shall review the College's curriculum areas that Departmental courses and proposed courses might fit, either as mandatory or optional parts of programs.
- g) Periodically review the graduate curriculum and student and faculty evaluations of graduate level courses. Make suggestions to the Department Head and graduate faculty for action relative to curriculum and course reviews.
- h) Act on graduate education issues, like teaching, training internships, and fellowship grants, and other items not specifically charged to other Departmental entities in the Department's Constitution or its By-Laws.
- i) Coordinate peer-teaching evaluations of graduate course instructors.
- j) Assist DGS in recruitment of graduate students.
- k) Coordinate and continuously upgrade related Departmental Web site(s).

**This committee may never assign faculty or staff to teaching duties; teaching duties are assigned by Head of the Department (see Headship Responsibilities, Item 4 - By-Laws appendix).*

***The DGS would not be expected to serve as the Chair of the Graduate Education Committee; DGS duties are separate from those of the Graduate Education Committee.*

3. Development, Alumni and External Relations Committee

- a) Work with the Department Head and the College Development Office to facilitate departmental endowment fund raising. Meet at least annually with College Development Office personnel.
- b) Prepare and publish annually the Department's Alumni News Magazine, the Aurora Sporealis. Enclose departmental endowment fund information with each issue.
- c) Advocate for Plant Pathology library resources with the University of Minnesota Central Library System.
- d) Assist Department Head in preparing an annual report on Departmental endowments.
- e) Coordinate and continuously upgrade Departmental Web site(s) to advertise and communicate departmental research, teaching and extension to our alumni and the general public.

4. Awards and Honors Committee

- a) Solicit and select candidates for Departmental awards, honors, and scholarships and conduct the annual Awards and Honors Day for the Department.
- b) When appropriate or when requested by the Head, prepare and submit documentation for teaching awards granted by the University of Minnesota.
- c) When appropriate or when requested by the Head, prepare and submit documentation for International and National awards like APS Fellows and other even more prestigious awards.
- d) Advertise and prepare press releases for the purpose of enhancing department visibility (e.g. items for Phytopathology News etc).
- e) Coordinate and continuously upgrade information on Awards and Honors on Departmental Web site(s), including research grant awards, and publications.

5. Science and Outreach Committee

- a) Coordinate the departmental seminar series with input from the PIPa8200 instructors.
- b) Facilitate interactions for communicating research and outreach programs ongoing within the Department.
- c) Assist the DGS with the graduate student internship program.
- d) Serve as a review and advisory committee for student poster and presentations for local, national, and international meetings.
- e) Promote public engagement of plant pathology through participation in outreach programs, e.g. science fairs, state fair, classes without quizzes.
- f) Update and maintain information on research and outreach efforts, on departmental web site.

C) Faculty Council

The faculty council is composed of the 5 chairpersons of the 5 standing committees described in Section II, A of these By-Laws (See By-Laws Appendix for structural outline). The primary purpose of the Council is to facilitate communication between the standing committees and the

Head, and to relay information from the Head to standing committees. Council shall meet at least monthly during the academic year with the Head.

a. Council Charges

The Council is charged with reading standing committee charges each year and planning courses of action for itself and standing committees.

The Council establishes criteria and provides annual input for faculty merit based salary increases.

The Council, separate from its other functions, also acts as a Tenure and Promotion Committee and Post Tenure review panel to assist the faculty and Head in these endeavors (the Council shall function in this manner except if prohibited by the CFANS or by the Board of Regents). If a Council member is either not tenured nor at equal or greater rank than the faculty member under review then the Head shall temporarily replace that Council member with an appropriate tenured faculty member, recommended by the Council, only for review purposes.

The Faculty Council also acts as a universal ad hoc committee for special needs not covered by standing committees or other special ad hoc committees in the department.

* It is recommended, although not mandated, that no non-tenured assistant professors be elected to serve as a Standing Committee Chairperson and thus a Faculty Council member until they have completed at least 3 full years of in rank service to the Department of Plant Pathology at the University of Minnesota. It is recommended that such faculty be appointed to and do serve on standing committees immediately upon hiring.

2) Council Structure

The Council must elect among itself, by a 3/5 vote, a Council Secretary who must be a faculty member tenured in the Department of Plant Pathology (no non-tenured faculty member shall serve as Council Secretary). The Council Secretary is empowered to call Council meetings, and either General Assembly or Faculty Assembly meetings upon a 3/5 vote of the Council. Assembly meetings originating from the Faculty Council can be called for any purpose consistent with that Assembly's interests and responsibilities.

D. Other Committees

Other or ad hoc committees may ~~shall~~ be established by action of the General Assembly or Faculty Assembly, or by the Head following consultation with the Faculty Council. A Committee established in this manner can only exist for 12 calendar months, and is automatically terminated at that time interval. Such committees shall not duplicate charges given to existing Standing Committees, and should be formed only upon exceptional need.

1) Committees established by the General Assembly or Faculty Assembly shall be terminated by the General Assembly or Faculty Assembly, unless they exist for 12 months...then they are automatically terminated. The Head shall terminate committees established by the Head; unless they exist for 12 months, after which they are automatically terminated.

2) Normally no tenure-track, but non-tenured faculty member, academic professional, student, or civil service employee shall be asked to serve on more than one standing or ad hoc committee.

Section III. Amendments to By-Laws

These By-Laws may be amended (after 2007) by a 2/3 written ballot vote of the General Assembly members eligible to vote. Proposed amendments shall be presented in writing and made available to all voting General Assembly members, accompanied by petition signed by at least 20% of the voting members of the General Assembly, at least three weeks prior to amendment balloting.

APPENDIX TO DEPARTMENTAL BY-LAWS
Headship Responsibilities - Plant Pathology

- 1) Know and carry out the duties and responsibilities of department heads as stated in the College of Food, Agricultural and Natural Resource Sciences Constitution. Interact with all levels of university administration, promote departmental stature.
- 2) Act as the contact between the College of Food, Agricultural and Natural Resource Sciences Constitution and higher administration and the Department. Relay policy from College and University sources and, the Departmental responses back to college and University in a timely and clear manner.
- 3) Abide by and support Departmental Constitution and By-Laws. When changes are desired, work with the faculty, staff and students in making necessary changes.
- 4) Budget preparation for Department, and budget review for grant proposals.
- 5) Assign faculty and staff responsibilities in teaching and other necessary activities.
- 6) Evaluate, through individual consultation, faculty performance. Initiate tenure and promotion procedures for faculty, and follow through. Assign merit pay increases to faculty relative to performance evaluation, while considering Faculty Council recommendations.
- 7) Development, implementation, and evaluation of Departmental policies.
- 8) Supervise and evaluate administrative, clerical and general departmental support staff.
- 9) Present an annual "state of the department" report for the General Assembly. Use report contents as the basis for preparing the Department CSREES, Graduate School and other administratively requested evaluations and review.
- 9) Maintain departmental records.
- 10) Establish and maintain public relations with governmental agencies, commodity groups, and alumni.
- 11) Call faculty assembly and departmental staff meetings for information, policy, implementation, and other purposes, as provided in the Departmental Constitution and By-Laws.
- 12) Protect departmental integrity and autonomy.
- 13) Review departmental goals and suggest revisions.
- 14) Provide leadership for departmental endowment efforts and prudent endowment fund management.
- 15) Promote faculty development, participation in college and university committees and governance structures, and in professional societies and obligations.
- 16) Resolve and prevent conflicts within and external to the Department.

- 17) Know the entire curriculum organization of the department and know class schedules.
- 18) Seek outside funding opportunities for the Department and its programs.
- 19) Motivate faculty and staff towards departmental goals.
- 20) Know the research, extension, and teaching activities of departmental faculty and staff.

Faculty Responsibilities

- 1) Teaching and instruction as assigned by the department Head.
- 2) Curriculum development and policy
- 3) Research
- 4) Extension and Outreach
- 5) Director of Graduate Studies (proxy)
- 6) Recommendations for selection of faculty
- 7) Recommendations for tenure and promotion of state-supported faculty
- 8) Space assignments
- 9) Determine faculty membership
- 10) Active participation in departmental, college, and University committees.
- 11) Call faculty meetings for committee reports and faculty issues.
- 12) Budgetary recommendations where appropriate, i.e., capital and equipment requests for department-wide items, maintenance and enhancement of departmental facilities.
- 13) Participate in departmental goal setting and implementation of policy.
- 14) Promote and support Departmental goals and policies within the University and to the public.
- 15) Abide by and support Departmental Constitution and By-Laws. When changes are desired work with other faculty to bring about changes.

APPENDIX - HISTORICAL FOUNDATION OF 1984 CONSTITUTION

FROM: Committee on Departmental Organization and Communications (Pfleger, Roelfs, Wilcoxson, Meronuck, & Zeyen - Chair).

TO: All faculty members, Department of Plant Pathology (please review document and feel free to contact any committee member for clarification - Faculty Meeting at 1:30 p.m., Wednesday, March 14th, 1984 in room 401 Stakman Hall

FROM: R.J. Zeyen - Committee Chairperson

COMMITTEE PROCEDURE

The Committee's first step in determining an organizational structure was to identify the role and responsibilities of the headship and the faculty (defined here as those faculty who are tenured, tenure-track, or hold graduate school appointments) in the Department of Plant Pathology. These roles and responsibilities are listed on attached pages. The second step was to solicit from graduate faculty members their views on departmental organization from a faculty perspective. The third step was to examine the current departmental structure relative to suggested changes submitted by faculty members, and suggest a model for structural organization.

COMMITTEE FINDINGS

Current departmental structure and communications. The existing Departmental structure consists of 16 committees in which faculty participated (attached). Many of these committees have narrowly defined subject areas or appear to overlap areas, do not meet on a regular basis, and have unclear functions (are they policy, planning, implementation, or advisory?) It is also unclear to whom the current committees report their activities (to the head only, to the faculty, to the faculty-staff-student or whole department?). What is clear is that some faculty are frustrated by this structure, feel ill informed, and sometimes feel that committee effort within the department is wasted.

Communication among faculty on matters of professional concern, departmental plans and objectives, and college-level policy appears weak; some faculty feel cut off from timely and clearly stated information. There is no mechanism for committee's to relay findings to the faculty, or for faculty serving on college or university committees to get information to the faculty as a whole. There is no mechanism for calling faculty meetings other than by the head of the Department. There is no faculty-elected group that represents the views of the faculty and knows the workings and findings of the main departmental committees that the head can regularly consult with on issues or for an immediate updating of committee activities and findings.

COMMITTEE RECOMMENDATIONS

Faculty submitted models on organization & committee synthesis of these. Most faculty submitted models were quite similar, so the committee made a synthesis of these models and created the attached model for departmental consideration. This model distinguishes between "the faculty" as a group (THE FACULTY ASSEMBLY - ORGANIZATIONAL CHART) that has distinct functions, purposes, and professional interests from the "departmental faculty-staff-

student" or whole department body. Within this model is the recognition that the head should call meetings of both groups, but the faculty has the right and obligation to meet as a separate entity on matters of faculty concern. None of the "powers" of the headship are diminished by this model organization; however, faculty responsibilities are focused by the committee structure. The model also recognizes that the head and department have other committees in which the faculty may or may not participate; committees that are mandated (Grievance for example)

In terms of responsibilities and interests of the faculty the model represents several factors that the committee viewed as necessary, these are:

1) Reduce the number of departmental committees in which faculty participate to a minimum, and make committees multiple purpose and more active in interrelated areas of faculty interests and responsibilities. Thus, the recommendation is that only five multiple-purpose, standing committees of direct faculty interest be permanent - these are - PHYSICAL RESOURCES; EDUCATION; RESEARCH; EXTENSION & COMMODITIES; AND PUBLIC INSTITUTIONAL, & ALUMNI RELATIONS (SEE ATTACHED DIAGRAM). The suggested interest areas for these committees are listed on the diagram and the committee functions are; policy, planning, implementation, and fiscal recommendations.

2) Increase faculty communication on matters that affect faculty directly in areas of faculty responsibility. Multiple purpose committees achieve this goal by having a minimum of 5 faculty familiar with the functions of each committee.

3) To establish a faculty elected, "Faculty Council" for working with the department head. The members of this council, in this model, are the chairpersons of the 5 standing committees elected for 2 year terms (except in the year of initial implementation when 3 of the 5 chair would be 1 year terms - see below) by the faculty. In the initial year of implementation the chair persons would be elected as follows to insure continuity and rotation:

- | | | |
|-----------|---|----------------|
| <i>a)</i> | <i>Education Committee - Chair elected for a 2 year term.</i> | <i>1984-86</i> |
| <i>b)</i> | <i>Public, Institutional, and Alumni Relations - Chair
elected for 2 year term.</i> | <i>1984-86</i> |
| <i>c)</i> | <i>Research Committee - Chair elected for a 1 year term.</i> | <i>1984-85</i> |
| <i>d)</i> | <i>Extension and Commodities Committee - Chair elected
for a 1 year term.</i> | <i>1984-85</i> |
| | <i>Physical Resources Committee - Chair elected for
a 1 year term.</i> | <i>1984-85</i> |

Following the year of implementation all chair elections would be for 2 year terms. The "Faculty Council" would elect its own secretary who would have the authority to call council meetings, faculty meetings for the purpose of presenting committee reports, election of chairs of the 5 permanent committees, and on other matters of faculty interest. In this model, no chairperson could repeat him or herself as chair of any standing committee (no consecutive terms), although an individual may be elected to chair a different standing committee in a consecutive pattern... i.e., the chair of the Education Committee would serve 2 years and not be allowed a consecutive term but might be elected to chair any of the other 4 committees at the end of the 2 years as Education Committee chairing. Continuity in committees would be the responsibility of the headship by appointing the faculty members; 2 for 1 year terms, and 2 for 2 year terms. The 5 faculty members (faculty elected chairs and head appointed 4 members) of these committees

would be the only ones with voting powers in the committee, other representation would be ex officio (non-voting members).

4) That faculty not be assigned more than 2 standing committees in any academic year, because these multiple-purpose committees will be very active. The 5 standing committees require 25 faculty members to fill these need, insuring that all faculty can participate but need not have over 1 or 2 standing committee assignments.

5) The head have an elected faculty group that he/she can work with for immediate advice and counsel, for direct input into standing committees, and for promoting head-faculty communication (the 5 faculty elected chairpersons constitute a "Faculty Council" for this purpose). The Faculty Council would also serve as a tenure and promotion review board, could call faculty meetings for committee reports or other business that has direct bearing on faculty interests, and could take on short-term issues on an "ad hoc" basis for items that are not covered by standing committees.

BY-LAWS OF THE STUDENTS IN PLANT PATHOLOGY ASSEMBLY

ARTICLE I - GENERAL

Section 1: The official name of this organization shall be the Students in Plant Pathology Assembly.

Section 2: The Students in Plant Pathology Assembly shall operate as a non-profit organization

Section 3: The Students in Plant Pathology Assembly shall abide by the applicable rules and policies of the University of Minnesota pertaining to student organizations.

Section 4: This Assembly shall exist for the following purposes: a. To provide academic activities of timely interest to members on contemporary aspects of plant pathology and related sciences. b. To provide social activities and events for the membership. c. To participate in formulating and implementing policy of the Department of Plant Pathology according to the department's Constitution and By-Laws.

ARTICLE II - MEMBERSHIP

Section 1: Voting membership is open to all Plant Pathology students at the University of Minnesota.

Section 2: Membership is open to all students without regard to race, creed, color, sex, national origin, or handicap.

Section 3: Graduate and undergraduate students in Plant Pathology, or students of faculty who are members of the Department of Plant Pathology, shall become active members by attending any regular meeting of the organization. An Assembly member shall be considered inactive when he/she is not present at two consecutive meetings.

Section 4: Any member may be impeached for misconduct (for example - failure to perform duties, attendance, misuse of funds, etc.). The member/ officer shall be given a seven (7) day notice and an opportunity to defend him/herself. This impeachment vote shall require a 2/3 majority vote.

ARTICLE III - OFFICERS

Section 1: The officers of this organization shall consist of Chairperson, Vice-chairperson, and Secretary/treasurer.

Section 2: All officers must be currently enrolled students at the University of Minnesota. Exceptions to the requirement are permitted for graduate students upon receipt of a letter from the Director of Graduate Studies of the student's department certifying that the student is actively pursuing a degree.

Section 3: Officers shall be elected before the end of spring, assume responsibilities on the first day of summer quarter, and serve for a period of one year. Nominations for officers shall be made and seconded at a regularly scheduled meeting. The Secretary/treasurer shall distribute a

secret ballot to all members, and officers shall be elected by plurality of the votes returned to the Secretary/treasurer.

Section 4: The duties of the officers are as follows:

- a. Chairperson - Call and preside over all regular meetings of the organization and serve as Chairperson of the Executive Committee. Act as official representative of the club at other meetings and events.
- b. Vice-chairperson - Assist the chairperson and assume his/her responsibilities when he/she is absent. The person shall serve as the graduate student representative on the Council of Graduate Students, or the person shall find another graduate student to serve as COGS representative.
- c. Secretary/treasurer - Record and produce minutes of and attendance at all meetings. Handle the organization's correspondence. Handle all financial transactions of the organization. Maintain thorough and accurate records of all transactions. Produce financial reports during the first week of each academic quarter. Administer election of officers as described in Section 3.

ARTICLE IV - COMMITTEES

Section 1: Executive Committee - Consists of the elected officers and all committee officers. Sets meeting dates for the organization. Sets membership dues with approval of the membership. Determines committee assignments. Acts on behalf of the organization during the summer.

Section 2: Special committees may be established to carry out special assignments as mentioned in the organization's by-laws or as approved by the membership at a regular meeting.

ARTICLE V - MEETINGS

Section 1: A regular meeting shall be held once each month during the academic year. A special meeting may be called and convened by the Executive Committee or by a petition of ten percent of the active membership.

Section 2: A quorum shall be present in order to conduct official business of the organization. A quorum shall consist of 50 percent of the active membership plus one.

Section 3: Decisions of the organization shall be enacted by a majority vote of the active membership present.

Section 4: Members shall receive a written notice one week in advance of all meetings.

Section 5: Members may submit signed absentee votes to the Secretary/Treasurer for any issue listed on the agenda. This action shall maintain active status for an individual.

ARTICLE VI - FINANCIAL MATTERS

Section 1: The organization shall not provide monetary gain, incidentally or otherwise to its directors or membership.

Section 2: Unless otherwise specified by the membership at the time of dissolution of the organization, residual assets shall be distributed to the following not-for-profit organizations according to the proportions below:

Department of Plant Pathology (University of Minnesota) 100%

ARTICLE VII - BY-LAWS

Section 1: By-laws may be proposed by the membership and may be adopted or amended by a majority vote of those present at a meeting when a quorum is present.

ARTICLE VIII - AMENDMENTS

Section 1: Amendments to the constitution may be proposed by any member of the organization. Such proposals shall be submitted in writing to the Executive Committee for a first reading to the membership at the regular meeting prior to the meeting at which the proposed amendment is to be voted on.

Section 2: Duly proposed amendments shall be submitted to a vote of the active members providing a quorum is present. A two-thirds majority vote in favor shall be required for adoption of such amendment.

By-Laws of the Academic Professional Staff of the Department of Plant Pathology

Authorization of Organization

The Professional Academic Staff (P&A) of the Department of Plant Pathology, i.e., all staff not holding civil service appointments, who are not on tenure track, nor on state supported faculty appointments, and who hold 75% appointment or greater (whether they are pursuing a degree program or not), hereafter referred to as P&A, was established and authorized in the 8 month of 1996 by the University of Minnesota Department of Plant Pathology under article II Section 2.

Purposes:

- 1) To elect a representative and an alternate to the College of Food, Agricultural and Natural Resource Sciences (CFANS) Professional Academic Advisory Council if requested.
- 2) To inform and advise the Department Head of Professional Academic domain issues. This would include adhering to the University of Minnesota Professional Academic rules and regulations.
- 3) To elect voting representatives to the department committees and to the Department Assembly.
- 4) To participate in the University Senate structure.

Membership

The P&A membership shall consist of any employee (and those non-civil service and non-faculty employees) holding a 75% time or more appointment. Members are eligible for voting rights, committee service and election to office after they have passed their probationary period in the Department.

Election and Duties of Officers

The officers shall consist of Chairpersons and Secretary (Chairperson Elect). A Chairperson and Secretary will be elected at the first meeting. Their term is for one year and they assume their responsibilities in January. The term of office for each is one year and in January a new Secretary is elected. A vacancy created by the Chairperson shall be filled by electing a replacement at the following meeting. Election shall be by secret ballot and based on a plurality of votes.

Duties of the Elected Officers

Chairperson

- Prepare and distribute meeting agenda
- Organize and chair bi-annual meetings
- Represent P&A as a voting member at the Department Assembly
- Provide information to P&A members on a quarterly basis
- Inform P&A members of domain issues Secretary (Chairperson Elect)
- Secretary (Chairperson Elect)
- Record and distribute minutes of all meetings to members and Dept. Head
- Maintain files and distribute pertinent information
- Schedule room for meetings
- Represent the P&A as an alternate (voting member in absence of Chairperson) at the Department Assembly
- Become Chairperson the second year
- Handle all financial transactions.

Meetings

Annual meetings will be held in January of each year. A minimum of two meetings a year will be held. A quorum shall be present in order to conduct official business. A quorum shall consist of 50% of the active membership plus one.

By-Laws and Amendments

By-Laws and amendments may be proposed by the membership and may be adopted or amended by a majority vote when a quorum is present.

THE CIVIL SERVICE EMPLOYEES OF THE DEPARTMENT OF PLANT PATHOLOGY BY-LAWS

Authorization of Organization

The Civil Service Employees of the Department of Plant Pathology organization (hereafter referred to as CSEPP) was established and authorized in April 1987.

Objectives

The objectives of this organization are as follows: to elect a representative and an alternate to the College of Food, Agricultural and Natural Resource Sciences (CFANS) Civil Service Advisory Council, informal and advise the Department Head of civil service domain issues, and recommend civil service representatives to the department head of Plant Pathology committees. The organization would adhere to University of Minnesota Civil Service rules and regulations.

Membership

The CSEPP shall consist of any non-academic civil service employee holding a 75% time or more appointment. Members are eligible for voting rights, committee service and election to office after they have passed their probationary period in the Department. The CSEPP accepts all persons as defined above irrespective of collective bargaining status.

Election and Duties of Officers

The officers of SCEPP shall consist of Chairperson and Secretary (Chairperson Elect). The secretary will be elected at the annual April meeting and officers will assume responsibilities on May 1. The term of each office shall be for one year, with the Secretary becoming Chairperson the second year. A vacancy created early by the Chairperson shall be filled by the Secretary and a new Secretary shall then be elected by the CSEPP. A vacancy created by the Secretary shall be filled by electing a replacement in a special session.

Duties of the Elected Officers

Chairperson

- Prepare and distribute meeting agenda
- Organize and chair quarterly and special meetings
- Represent the CSEPP as a voting member at the Department Assembly
- Provide information to members as needed

Secretary (Chairperson Elect)

- Record and distribute minutes of all meetings to members and Department Head
- Maintain files and distribute pertinent information
- Schedule and set up room for meetings
- Represent the CSEPP as an alternate (voting member in absence of Chairperson) at the Department Assembly
- Become Chairperson second year

Meetings

Quarterly meetings will be called by the chairperson. Special meetings will be called as needed. The election meeting will be held each April.

Voting

All adoptions of by-laws, amendments, elections and voting shall be adopted or amended by a majority vote when a quorum is present.

By-laws

By-laws may be proposed by the membership at any meeting when a quorum is present.

STANDING COMMITTEE MEMBERSHIP

GRADUATE EDUCATION COMMITTEE	EXPIRATION
James Bradeen, Chair	July 2011
Senyu Chen	
James Kolmer	
Dean Malvick	
Civil Service, Ann Arendt, Todd Burnes	July 2009
Professional Academic, Dave Long	July 2009
Graduate Students, Jon Menke	July 2009
UNDERGRADUATE EDUCATION COMMITTEE	
James Kurle, Chair	July 2011
Robert Blanchette	
Linda Kinkel	
Jonathan Schilling	July 2009
Civil Service, Karen Hilburn, Todd Burnes	July 2009
Professional Academic, Charlie Barnes	July 2009
Graduate Students, Tammy Kolander	July 2009
SCIENCE AND OUTREACH COMMITTEE	
Nevin Young, Chair	July 2009
Dirk Hoffmeister	
Yue Jin	July 2009
Jenny Juzwik	July 2009
Les Szabo	July 2009
Civil Service, Dimitre Mollov, Karen Wennberg	July 2009
Professional Academic, Dean Herzfeld	July 2009
Graduate Students, Atenia Garza	July 2009
AWARDS AND HONORS COMMITTEE	
Carol Windels, Chair	July 2010
Charla Hollingsworth	July 2009
Corby Kistler	July 2009
Ben Lockhart	July 2009
Civil Service, Roxanne Denny, Carol Anderson	July 2009
Professional Academic, Noah Rosenweig	July 2009
Graduate Students, Liangliang Gao	July 2009
DEVELOPMENT, ALUMNI AND EXTERNAL RELATIONS COMMITTEE	
Debby Samac, Chair	July 2010
Marty Carson	July 2009
James Percich	July 2009
Brian Steffenson	July 2009
Civil Service, Carol Anderson	July 2009
Professional Academic, Jason Brantner	July 2009
Graduate Students, Greg Reynolds	July 2009

EQUAL OPPORTUNITY STATEMENT

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status, or sexual orientation. In adhering to this policy, the University abides by the requirements of Title IX of the Education Amendments of 1972; by Sections 503 and 504 of the Rehabilitation Act of 1973; by Executive order 12246, as amended; 38 U.D.C. 2012, the Vietnam Era Veterans Readjustment Assistance Act of 1972, as amended; and by other applicable statutes and regulations relating to equality of opportunity.

Inquiries regarding compliance may be directed to Patricia A. Mullen, Director, Office of Equal Opportunity and Affirmative Action, 419 Morrill Hall, 100 Church Street, S.E., University of Minnesota, Minneapolis, MN, 55455, (612) 624-9547, or to the Director of the Office of Civil Rights, Department of Education, Washington, D.C. 20202, or to the Director of the Office of Federal Contract Compliance Programs, Department of Labor, Washington, D.C. 2021

APPENDICES

Appendix A

STUDENTS: DUE BY OCTOBER 8 TO MS. ANN ARENDT

Department of Plant Pathology

University of Minnesota

Graduate Student Progress Evaluation Report

Student _____ Date _____

Advisor _____

Degree Program: M.S. _____ Ph.D. _____

Date admitted to present program _____

Expected date of graduation _____

1. Prerequisites and Entrance Requirements

•Have you fulfilled all entrance requirements?

YES

NO

•If no, please indicate which requirements have NOT been met, and indicate when you plan to fulfill these requirements.

2. Current academic standing

•What is your current cumulative Grade Point

Average? _____

•Have you filed your degree program with the Graduate School? Your degree program should be filed with the Graduate School by the time that students have completed 10 credits at the University of Minnesota. The degree program will include all coursework, completed and proposed, to be used in fulfillment of degree requirements; the proposed thesis title; and the members of the student's thesis committee.

YES

NO

If yes, indicate the members of your thesis committee.

•Have you met with your graduate committee? Our program requires that students convene a meeting of their graduate committee during the first year in residence.

YES

NO

If not, when do you anticipate meeting you're your committee?_____

•Have you prepared a thesis proposal? Our program requires that a thesis proposal be submitted to the graduate committee at its first meeting. The proposal is viewed as a working document that may be modified as appropriate throughout the graduate program.

YES

NO

•Has your thesis proposal been added to your permanent file?

YES

NO

•Have you completed all of your coursework for the degree? Please refer to the graduate student handbook for details on the course requirements for the program.

YES

NO

If you have not completed all of your coursework, when do you anticipate having coursework completed?_____

•Have you filed for ADVANCED STUDENT STATUS?

YES

NO

Note that you must file for advanced student status with the Graduate School well in advance of the semester in which you hope to be registered as an ADVANCED STUDENT. If you have not yet filed, when do you anticipate doing so?

3. Please indicate your assessment of progress towards your intended degree.
4. Identify 2 significant professional accomplishments of the past year.
5. Please identify one or more significant professional goals that you intend to accomplish over the coming year.

FACULTY: DUE BY OCTOBER 22 TO MS. ANN ARENDT

Department of Plant Pathology
Advisor Report
Graduate Student Program

Student _____ Date _____

—

Advisor _____

Degree Program M.S. _____ Ph.D. _____

Date admitted to present program _____

Expected date of graduation _____

Please indicate your assessment of the student's progress towards the intended degree.

Signature of the Major Advisor _____

I have seen this report and agree with the assessment _____

I have seen this report and do not agree with this assessment for the following reasons:

Signature of the Graduate
Student _____

Appendix B

GRADUATE SCHOOL FORMS

Graduate School forms are available on the Graduate School web page –
http://www.grad.umn.edu/current_students/forms/index.html

Appendix C

MUTUAL RESPONSIBILITIES IN GRADUATE EDUCATION AT THE UNIVERSITY OF MINNESOTA, APPROVED BY THE GRADUATE SCHOOL EXECUTIVE COMMITTEE 5/28/97

Preamble

A major purpose of graduate education at the University of Minnesota is to instill in each student an understanding of and capacity for scholarship, independent judgment, academic rigor, and intellectual honesty. Graduate education is an opportunity for the student to develop into a professional scholar. Graduate research and teaching assistantships offer an apprenticeship experience in the academic profession as well as financial support. It is the joint responsibility of faculty and graduate students to work together to foster these ends through relationships that encourage freedom of inquiry, demonstrate personal and professional integrity, and foster mutual respect. This shared responsibility with faculty extends to all of the endeavors of graduate students, as students, employees, and members of the larger academic community.

High quality graduate education depends on the professional and ethical conduct of the participants. Faculty and graduate students have complementary responsibilities in the maintenance of academic standards and the creation of high quality graduate programs. Excellence in graduate education is achieved when both faculty and students are highly motivated, possess the academic and professional backgrounds necessary to perform at the highest level, and are sincere in their desire to see each other succeed.

The following principles illustrate what students should expect from their programs and what programs should expect from their students, to help achieve this excellence.

Principle 1: INFORMATION ABOUT POLICIES AND PROCEDURES

The Graduate School and graduate programs are responsible for providing students and prospective students with access to information about their graduate program, areas of specialization, degree requirements, and average time to completion of degrees. Graduate programs are responsible for providing access to information about graduate student financial support in the program, such as the prospects for fellowships, assistantships or other financial support and the proportion of students receiving financial support. In addition, graduate programs should provide students and applicants with information about career experiences of graduates of the program. All such information should be presented in a format that does not violate the privacy of individual students. Programs are encouraged to provide relevant information in their handbooks, websites or other readily accessible formats.

Students are responsible for keeping themselves informed about current policies of their program and the Graduate School that affect graduate students. Students and alumni also have a responsibility to program inquiries about their career development.

Principle 2: COMMUNICATION ABOUT ACADEMIC STATUS

The Graduate School and graduate programs are responsible for providing students with information about their individual academic status: who in the Graduate School and in their graduate program is responsible for communicating to them about admission issues and progress through the degree program, how the communication will take place, and the possibility for appeal to a third party for assistance in resolving disputed issues.

Students are responsible for communicating with the Graduate School and their graduate program about changes in their circumstances that affect their status and progress toward the degree.

Principle 3: RESEARCH CONTRIBUTIONS

Individual faculty as research directors are responsible for providing students with appropriate recognition for their contributions at conferences, in professional publications, or in applications for patents. It is the faculty member's responsibility to clarify the principles for determining authorship and recognition at the beginning of any project.

Students are responsible for discussing their expectations regarding acknowledgement of research contributions or intellectual property rights with the appropriate person(s) in the research team, preferably early in the project.

Principle 4: UNIVERSITY GOVERNANCE

Departments and graduate programs are responsible for defining specific opportunities for student participation on committees as they deem appropriate. The University recognizes that graduate students make important contributions to governance and decision-making at the program, department, college, Graduate School and University level; specific roles for participation are defined at each level by the level by the relevant governing bodies. For example, University Senate policy requires student membership on faculty search committees. Students are responsible for participating in University governance and decision-making that enrich the campus community.

Principle 5: RESPECTFUL EMPLOYMENT CONDITIONS

University faculty and staff are responsible for assuring that graduate students are able to conduct their work, as students or students/employees, in a manner consistent with professional conduct and integrity, free of intimidation or coercion. Students who are employees also have the protection of all University employment policies and laws. Graduate programs are responsible for providing clear communication to students about the possibility for appeal to a third party for assistance in resolving disputed issues.

Students are responsible for reporting unprofessional conduct to the appropriate body or person, as defined in the academic or employment grievance policy; they should be able to do so without fear of reprisal. Students are responsible for acting in a respectful and fair manner toward other students, faculty, or staff in the conduct of their academic work or work they may do in connection with an assistantship.

Principle 6: CONDITIONS OF EMPLOYMENT

The University (through its departments, research project or other employing units) is responsible for providing to prospective graduate assistants a written offer of financial support before a response to the offer is required. Such communication must indicate their salary and the terms and conditions of their appointment, including the general nature of the work they will be performing, duration of employment, and whether and how this employment is tied to their academic progress. The details of specific teaching or research assignments may need to await later written clarification.

Students are responsible for accepting the conditions of employment only if they believe they are qualified and able to complete the tasks assigned. Students have a responsibility for communicating in writing any changes in their circumstances that affect their ability to fulfill the terms and conditions of their employment.

Principle 7: SAFE WORKING ENVIRONMENT

Supervisors are responsible for providing a safe working environment for graduate students, and for developing and publicizing safety policies and training programs to achieve that goal.

Graduate students are responsible for helping to maintain a safe working environment, for adhering to safety policies, for participating in training programs and for reporting safety violations to the proper authority.

OTHER UNIVERSITY DOCUMENTS may provide information and guidance relevant to the graduate education experience. Board of Regents, Code of Conduct, adopted 7/12/97 (www.regents.umn.edu/policies/academic/Conduct.pdf).

Board of Regents, Academic Freedom and Responsibility, adopted 9/8/95 (www.regents.umn.edu/policies/academic/AcademicFreedom.pdf)

Graduate Assistant Office, Handbook for Graduate Assistants (www.umn.edu/OHR/GAO/)

University Senate, minutes, April 19, 1990

Student Conduct Code (Gopher: U of M Campus Information/Information for Students/Student Conduct Code)

Appendix D

PLPA 8200 PLANT PATHOLOGY SEMINAR, 2008-09

To: Students and Faculty in Plant Pathology
From: Seminar Instructors (James Bradeen, Les Szabo and Jennifer Juzwik)
Subject : Graduate Student Seminar Policy

The graduate student seminar is a class in which students will have the opportunity to practice and develop good scientific communication skills. Students will summarize current literature and critically examine the research topic. The seminar should provide each student with an opportunity to explore an area of plant pathology that they may not otherwise investigate. The presentation should be an in depth analysis that evaluates the strengths and weaknesses of the reviewed research. Students should also present what they believe are the next logical steps in advancing this area of research.

The Graduate Student Seminar is like any other formal graduate course taken for credit. The seminar must be evaluated using the Uniform Grading Policy of the University of Minnesota.

Grading for the seminar is A – F scale. Students are expected to achieve a grade of B or better for the course. Only the Seminar Instructor(s) or designated stand-ins can assign a letter grade for the student seminar. That does not however preclude others in the audience (other faculty members, P&A personnel, staff and students) from providing qualitative, constructive comments that can only assist the speaker in improving his/her future presentations. We strongly encourage that practice and appreciate any input. Students registered for the class are required to provide peer evaluations for fellow students. The Seminar Instructor(s) and the Seminar Advisor for the student have responsibility to provide assistance, direction and guidance to the student in preparing and practicing for the presentation.

The Seminar Instructor(s) must approve the seminar topic and the choice of the Seminar Advisor for each student in advance. The seminar topic must not be related to thesis research and the Seminar Advisor cannot be the student's graduate or thesis advisor or a current seminar instructor. The Seminar Instructor(s) have sole authority to determine the appropriateness of any proposed seminar topic.

The faculty Seminar Advisor has all the same responsibilities as an Instructor, working closely with the student advisee and providing all the needed direction and guidance to assist the student in presenting a successful seminar.

The seminar consists of a 50-minute class period. Each student seminar must include adhere to a time frame determined by the seminar instructors and must allow time for follow up of questions and discussion. The subject of presentation must be immediately relevant to the science of plant pathology.

A seminar presentation will concentrate on a critical review or evaluation of a few key papers in the area of coverage.

A PowerPoint (or similar) presentation is required. The department will reimburse any cost incurred in preparing the illustrations.

Every student giving a seminar shall rehearse the seminar well in advance with the Seminar Advisor, according to the course guidelines.

The abstract must clearly reflect the contents of the seminar presentation and must be immediately relevant to the selected seminar topic. Abstracts will strictly follow guidelines of the American Phytopathological Society Annual Meetings with the addition of a list of key references in journal format.

A seminar abstract is due to the Seminar Advisor 7 working days in advance of the seminar. The Seminar Advisor is expected to provide input and to approve the final version of the abstract.

The approved abstract must be distributed electronically to all members of the department at least 2 days prior to the scheduled seminar.

The Seminar Instructors and/or the Seminar Advisor will meet with the student speaker soon after the seminar to review the evaluations and communicate the final letter grade.

Appendix E

DEPARTMENTAL SCHOLARSHIPS

DISBURSEMENT PROCEDURE FOR THE FRED I. FROSHEISER SCHOLARSHIP

Qualifications: Graduate student majoring in plant pathology at the University of Minnesota. Candidate must have demonstrated outstanding abilities in scholarship, research and all aspects of graduate studies based on at least 1 year of a proven performance record in graduate school. This fellowship is a cash award (about \$1,000) given only once to a specific awardee. Students are eligible for only one departmental fellowship/scholarship per year.

Submit: Letter of application, resume, and three letters of support (including one from current faculty advisor, and if from another institution, one letter also should be from a former faculty advisor) to Department Administrative Director.

Applications Due to the PAIR Committee by the beginning of April.

DISBURSEMENT PROCEDURE FOR THE M.F. KERNKAMP FELLOWSHIP

Qualifications: Graduate student with a minimum of one calendar year in residence and majoring in plant pathology at the University of Minnesota. Candidate must have demonstrated outstanding abilities in scholarship, research and all aspects of graduate studies, including participation in departmental activities. Scholarship is not awarded on basis of financial need. This fellowship is a cash award (about \$1000) given only once to a specific awardee. Students are eligible for only one departmental fellowship/scholarship per year.

Submit: Letter of application, resume, and three letters of support (including one from current faculty advisor) to Chair of the PAIR Committee by early April.

Appendix F

MEMBERSHIP IN PROFESSIONAL SOCIETIES

Opportunities exist for students to become members of professional societies. The advantages of this association are many. Once a graduate student accepts a research assistantship, that person is, in fact, a professional scientist because an assistantship is not a scholarship--one is paid for the performance of an investigation. As a benefit of membership, each organization provides one or more journals and has a placement service for help in employment upon graduation. During one's graduate career, a student is encouraged to present a paper or a poster at the annual meetings and usually only members are accorded this privilege. Similarly one must be a member to publish in the society journal, although only one of the authors on the paper needs to be a member. This policy varies with the society. Usually theses are written using the format of a given professional journal in which the student is most likely to publish his/her results. Several societies are appropriate societies to join. A few are listed below:

American Phytopathological Society, 3340 Pilot Knob Road, St. Paul, MN 55121 -- 651/454-7250. Dues for 2006 are as follows: \$67 for regular, \$24 for student, \$45 for post-doc (includes PHYTOPATHOLOGY NEWS, but does not include journal(s). Journal(s) optional: three journal rates for members ONLY within the U.S. PHYTOPATHOLOGY - \$68; PLANT DISEASE - \$68; MOLECULAR PLANT-MICROBE INTERACTIONS (MPMI) - \$73.

International Society for Plant Pathology. Dr. Richard E. Falloon, President, New Zealand Institute for Crop & Food Research, Private Bag 4704, Christchurch, New Zealand. Membership is \$20 per year and a bimonthly newsletter is available. Dues can be sent to APS or the treasurer: Dr. Chuji Hiruki, 4-10 Agriculture/Forestry Centre, University of Alberta, Edmonton, Alberta, Canada T6G 2P5.

Mycological Society of America. The journal MYCOLOGIA appears bimonthly. Membership dues are \$50 at student rate. Dues can be sent to: MYCOLOGICAL SOCIETY OF AMERICA, Attn: Linda Hardwick, P. O. Box 1897, Lawrence, Kansas 66044-8847, Phone: 1-800-627-0629.

Other societies include American Association for the Advancement of Science, American Institute of Biological Sciences, Botanical Society of America, Canadian Phytopathological Society, and the Society of Nematologists. Others are apparent from an inspection of journals displayed in the Plant Pathology Library.

Appendix G

LIST OF KEY PEOPLE

Department Head - Dr. Carol Ishimaru, 5-9736, 495 Borlaug Hall

Administrative Director - Ms. Carol Anderson, 5-9226, 495 Borlaug Hall

Director of Graduate Studies - Dr. Brian Steffenson, 5-4735, 310 Stakman Hall

Computer Support Specialist – Robb Miller, 5-2721, 306 Stakman Hall.

Lab Safety Officer – Todd Burnes, 5-6231, 101 Christensen Lab

Seminar Committee: Dr. James Bradeen, 5-1211, 312 Stakman Hall, and Dr. Les Szabo, 5-3780, Cereal Disease Lab, Mr. Ryan Syverson 5-4204, Dr. Nevin Young, 5-2225

Standing Committee Chairpersons (Faculty Council):

Graduate Education Committee - Dr. James Bradeen, 5-1211, 312 S

Undergraduate Education Committee – Dr. James Kurle, 5-3167, 312 S

Science & Outreach Committee – Dr. Nevin Young, 5-2225, 320 Cargill

Awards and Honors Committee – Dr. Carol Windels, 218.281.8606, Crookston

Develop, Alumni & Ext Rel Com. – Dr. Debby Samac, 5-1243, 317A CL

Chairpersons of Constituent Groups

Ms. Carol Anderson, Civil Service, 5-9226, 495 Borlaug Hall

Mr. Ryan Syverson, Graduate Students, 5-4204, 404 Stakman Hall

Dr. Charlie Barnes, Professional Academics, 5-1756, CDL