INTEGRATED BIOSCIENCE

GRADUATE STUDENT

HANDBOOK

THE UNIVERSITY OF AKRON

FALL 2015

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A. Graduate Assistantship/Fellowship

Full-time graduate students pursuing dissertation research may be supported with graduate assistantships, either as teaching (TA) or research assistant (RA) generally for a period of five years. Full-time teaching assistants are expected to work 20 hours per week and must enroll as full-time students (currently 9-15 hours per semester, including research). Summer enrollment is required only if receiving summer pay as a TA or a RA. A student must be in good standing (GPA $\geq$ 3.0) and making adequate progress on degree requirements for a contract to be renewed as either a TA or RA. A student on probation from the Graduate School is not eligible for either a TA or RA.

B. Continuous Enrollment Requirement

Students pursuing a dissertation must be continuously enrolled, as defined by the Graduate School Bulletin, from the time they first enroll for research credit until the dissertation is accepted. This rule applies to both the pre- and post-candidacy periods. They must also meet or consult annually with their PhD Advisory Committee. Any exception to this continuous enrollment must be discussed with, and approved by; the student's advisor and advisory committee, the Integrated Bioscience Graduate Committee and the Graduate School prior to any interruption in studies.

C. Academic Standing

A minimum GPA of 3.0 is required to remain in good standing in the PhD program. The student's GPA will be computed for the degree based on grades in all graduate courses since beginning the program. A student receiving one grade of D or F or 6 credit hours of C or below can be dismissed from the Integrated Bioscience graduate program.

D. Official Policies

This document contains the official rules and guidelines for the Integrated Bioscience PhD program. Any future additions or deletions to these regulations must be approved by the Integrated Bioscience Graduate Committee and the Integrated Bioscience faculty. Students are responsible for the graduate school and program requirements in force at the time of their first enrollment. Students should direct any questions to their major advisor, the Integrated Bioscience Graduate Committee or the Integrated Bioscience Director. All petitions for course waivers, withdrawal from courses, etc. should first be discussed by the student with his or her major advisor. If appropriate, the student will submit a written outline of proposed changes to his/her PhD Advisory Committee who will then forward the approved request to the Integrated Bioscience Director.

E. Committee Hierarchy

- PhD Advisory Committee – oversees the immediate aspects of the student's coursework and research
- Participating Department's Graduate Committee – oversees departmental aspects of student's involvement in program (e.g., TA assignments)
- The Integrated Bioscience Graduate Committee - oversees programmatic aspects of student's program

F. **Advisor and PhD Advisory Committee**

Prior to the completion of the first semester of graduate work, the student must choose a major advisor, who will supervise their program of study and research. While it is recommended that the advisor be a member of the Integrated Bioscience program a student may be mentored by a non-member if an IB faculty member serves as a co-advisor. To facilitate this choice, undecided students may choose to do a lab rotation of up to five faculty members in the program in the first semester in the program. The PhD Advisory Committee shall consist of at least four faculty members (only one of which can be adjunct). At least one of the four must be from outside the immediate field of research, and all committees must have at least one Biology Department faculty member.

G. Program of Study

During its first meeting, the PhD Advisory Committee will review the student's record. The applicability of previous graduate courses from another institution to the doctoral program degree will be considered on a case-by-case basis and a maximum of 12 credits may be transferred from previous graduate courses (see Appendix A). The PhD Advisory Committee will work with the student to prepare and approve the student's Program of Study. The PhD Advisory Committee will conduct the Doctoral Qualifying Examination and Research Proposal defense. At later stages the PhD Advisory Committee will read drafts of the dissertation, certify to the Integrated Bioscience Graduate Committee the student's progress and completion of the Program of Study and recommend to the Integrated Bioscience Graduate Committee that the dissertation is ready to be defended. Copies of a sample Program of Study and Research Proposal can be obtained from the Biology Office for format and examples of information to be included. **The student will meet with the PhD Advisory Committee at least once per year to present a progress report. A memo summarizing the meeting should be placed in the student's permanent file. The student's proposed Program of Study, Doctoral Candidacy Exam and Research Proposal Defense are to be administered by the PhD Advisory Committee no later than the beginning of the third year of residency**.

H. **Program Curriculum**

Before registering for courses, all newly admitted students without an advisor should arrange a meeting with the Integrated Bioscience Director. The philosophy behind the proposed program is one of flexibility and breadth. It goes beyond the current interdisciplinary approach by incorporating integrative components into every aspect of doctoral training. The program curriculum will be individually tailored to each student's research interests and built around a set of core courses that emphasize the theme of Integrated Bioscience, elective courses decided by the student and their advisory committee, seminar courses, and dissertation research. The Integrated Bioscience PhD degree requires 80 credits divided between formal courses (12 credits required courses and a minimum of 9 credits of elective courses), colloquium (4 credits), and research (up to 55 credits). Four core courses (Research Techniques in Integrated Bioscience, Communicating in Integrated Bioscience, Problem Solving in Integrated Bioscience, and Ethics of Science) are required for all PhD students, and unless otherwise approved will be completed within the first year. Elective courses will be determined by each student's PhD Advisory Committee, which will choose from university-wide doctoral-level courses

in designing a curriculum that best suits the student. No undergraduate course may be used to satisfy the PhD course requirements. A maximum of 6 credits of 500-level courses may be applied to the PhD degree course requirement.

1st year
Fall Semester
3100:701 Research Techniques in Integrated Bioscience (Required) 4 credits
3100:702 Communicating in Integrated Bioscience (Required) 2 Credits
3600:665 Ethics of Science (Required; offered alternate years) 3 Credits

Spring Semester
3100:703 Problem Solving in Integrated Bioscience (Required) 3 Credits
3100:797 Integrated Bioscience Colloquium (Required) 1 Credit
Electives determined in consultation with PhD advisory committee

2nd Year
3600:665 Ethics of Science (when not available in 1st year-see above) 3 Credits
Electives determined in consultation with PhD advisory committee

Course Descriptions
Research Techniques in Integrated Bioscience (3100:701) course will introduce and familiarize students to various bioscience laboratory techniques, such as PCR, DNA sequencing, cloning, gene expression, etc. (see below for more details).

Communicating in Integrated Bioscience (3100:702), will be designed to introduce all the participating students to the major tenets of each participating sub-discipline. With the guidance of faculty mentors, each graduate student will be responsible for conveying the major tenets of his/her sub-discipline to the class. This will include lectures, discussions and reading of primary literature (papers designed for a broad audience, such as Science or Nature articles). In the final portion of this class, the students will group together into research teams to begin developing ideas on how to solve a complex bio-problem.

Problem Solving in Integrated Bioscience (3100:703) will then further develop the interdisciplinary groups organized in the previous course by forming teams to solve the complex bio-problem previously outlined.

Ethics of Science (3600:665) will examine the foundational issues surrounding ethics and science as well as consideration of applied ethical issues of scientists, science, new technologies, and society.

Integrated Bioscience Colloquium (3100:797) series will host seminar speakers that specifically use integrated approaches to bioscience research. Students are required to complete 4 credits of colloquium.

Students must take a minimum of 9 credit hours of elective courses (to be determined by PhD Advisory Committee),

I. PhD Candidacy

A student will be considered a PhD candidate only after having passed the Doctoral Candidacy Examination and the Research Proposal Defense. No student may take the Doctoral Candidacy Examinations before the PhD Advisory Committee certifies approval of their preparation. Potential student grievance(s) regarding his/her candidacy will be handled according to the specific grievance procedures outlined in the Graduate Student Bulletin.

J. Doctoral Candidacy Examination

- Scope of Examination: **The comprehensive written examination shall be administered by the PhD Advisory Committee before the beginning of the 5thsemester**. The examination will include basic concepts of Integrated Bioscience as obtained from the candidate's course work, colloquia, and research interests. Because of the broad nature of this program, the specifics of the examination will be tailored to the student's particular area of interest within integrated bioscience by the student's PhD Advisory Committee. All students will be expected to demonstrate an understanding of the theories, philosophy, approach, and methodology of Integrated Bioscience.
- Administration of the Examination
  The main objectives of the examination are: (1) to provide realistic feedback to the student on the level of performance required for a successful dissertation defense, and (2) to identify shortcomings in the student's general and specific knowledge that can be remedied by appropriate study and course work. No topic shall be specifically excluded from the examination. There shall be only two possible outcomes of the examination, determined by majority vote of the PhD Advisory Committee: Pass or Fail. The Examination will consist of two parts: a written exam that is followed by an oral exam. If the student fails either of the exams, they will be given one chance to retake it. A student cannot fail more than one test (e.g., cannot fail the written, pass on a second try, and then fail the oral). Failure to pass the make-up exam or failing more than one test results in dismissal from the program. A brief written report shall be prepared by the Advisor as chair of the PhD Advisory Committee outlining the results of all examinations, regardless of the outcome. This report, indicating areas of both strengths and weakness, will be distributed to the student, the student's PhD Advisory Committee, and the Integrated Bioscience Program Director within one week of the examination.

K. Research Proposal Defense

The student will work with the major advisor to develop a research proposal to be presented and defended to the PhD Advisory Committee. The presentation of the proposal shall be open to the public. The PhD Advisory Committee shall decide on the time of defense, which should be no later than two months after the Comprehensive Examination. The written proposal shall adhere to general standards of national grant proposals (e.g., NSF, NIH) and must describe the scope and technical details of the student's planned doctoral research. The written proposal must be distributed to the PhD

Advisory Committee at least one week prior to the scheduled Research Proposal Defense.

L. Teaching Requirements

All students must teach a minimum one semester during their program of study (before completion of the student's course work). This requirement can be waived in limited circumstances for students who have continuous funding via research assistantship on their advisor's research grant. If the department in which a TA is assigned requires a class/seminar/workshop of all TAs credit for this class/seminar/workshop will not count towards the total credits required for the degree.

M. Residency Requirement

All PhD candidates must spend no less than three consecutive semesters in residence as full-time students enrolled for a minimum of nine credit hours per semester following their acceptance as PhD candidates. PhD candidates must be continuously enrolled during fall and spring for a minimum of one credit hour of Research/Dissertation from the time they are advanced to PhD candidacy until graduation. Students must be enrolled for a minimum of one credit during the semester their dissertation is defended.

N. Annual Progress Reports

The degree candidate will present an annual written progress report to the PhD Advisory Committee each Spring semester. Unsatisfactory progress as determined by the majority of the Committee may result in dismissal from the program. These reports should be forwarded to the Director of the program for inclusion of the students file.

O. Completion of Research and Defense of Dissertation

All PhD projects must be completed and dissertation defended within 6 years of beginning enrollment. At least three months prior to the UA Graduate School deadline for final acceptance of the dissertation, the student's PhD Advisory Committee must meet to certify that the research is complete and recommend that the dissertation is ready to be defended. Appendix E **Doctoral Dissertation Committee Membership** form must be completed and submitted to the Graduate School at this time. A defense cannot be held until this form has been returned from the Graduate School.

To be eligible to graduate during any given term, a candidate must meet both the preliminary and final dissertation submission deadlines. Each candidate is responsible for consulting the Schedule of Classes, their advisor/department, or the Graduate School to determine these deadlines.

A draft copy of the dissertation is due in the Graduate School prior to the preliminary deadline. The candidate must submit one original, signed dissertation signature page to the Graduate School and submit one electronic copy of the dissertation to OhioLINK. A manual entitled Guidelines for Preparing a Thesis or Dissertation can be obtained online at http://www.uakron.edu/gradsch/current-students/gdlnthesdiss.dot. and the dissertation must conform to these instructions. (2012-2013 Graduate bulletin)

The defense should be scheduled to allow the PhD candidate time for revision and

completion of the final dissertation prior to the University of Akron Graduate School deadline for submission of dissertations. At least three weeks prior to the date of the defense, members of the PhD Advisory Committee must receive copies of the dissertation and a draft of at least one article suitable for publication in a refereed journal. The Dissertation must include an integrative chapter that will outline the student's understanding of the broad implications of his/her research and links to other sub-disciplines.

Each doctoral student must present his or her work at a Departmental Seminar Defense of Dissertation prior to graduation. The Seminar is open to the public, but the Defense is open only to the PhD Advisory Committee and any representatives assigned by the Graduate School. One week prior to the Seminar and Defense of Dissertation, the student will circulate and post an announcement of the time and place, accompanied by an abstract of the thesis. Also, a copy of the dissertation is to be placed in the Center for Integrated Bioscience office for the use of the faculty.

The members of the PhD Advisory Committee, all of whom vote, shall certify the satisfactory completion of the dissertation defense to the Integrated Bioscience Program Director. Consensus among members of the PhD Advisory Committee is desirable; however, a "Pass" can be awarded as long as there is no more than one dissenting vote among committee members.

P.Major Equipment

The PhD in Integrated Bioscience is, by its nature, spread physically across different departments and colleges within the University. This gives the program the advantage of using the considerable combined resources of all participating units. Below we list only the major facilities available in each department involved in the IB program; all students and faculty in the program have access to all facilities. Do not use any equipment without training and permission of the faculty member or staff in charge of that piece of equipment.

Biology: 5,000 sq.ft. animal housing facility, 2 superspeed centrifuges; 2 ultracentrifuges; cold room and warm-room incubators 6 large -80 freezers; ABI automated DNA sequencer; Transmission and scanning electron microscopes; Fluorescence compound and dissecting microscopes with digital imaging attachments; Histology suite; Several UV/VIS spectrophotometers; Several DNA thermal cyclers.

Chemistry: Molecular Spectroscopy Laboratory containing 6 NMRs; Bruker EleXsys E-500 EPR; a Tektronics TDS680B high frequency (1 GHz) digital oscilloscope, several low frequency (400 MHz) oscilloscopes, Hewlett Packard 4191A 1MHz-1GHz Rf impedance analyzer, Hewlett Packard ESA-E 9kHz-1.5 GHz spectrum analyzer, Wavetek 1062 frequency sweep generator, Bird RF power meter, several digital multimeters (including a Fluke 8060A True RMS Multimeter), precision power supply, PTS-300 frequency synthesizer, BIRD 150 and 500W terminators, superconducting magnet power supplies

Computer Sciences: The department has two computer labs equipped with Intel-based 2.4 Ghz Pentium 4 machines (all the computers are connected to the Ohio Supercomputing Center); 24-processor Linux cluster parallel computer and a 16-node (32-processor) Itanium cluster; campus connections to the VBNS Internet II network (Ohio's fiber-optic Third Frontier Network) and the Ohio Broadband Educational Network.

Engineering: a fully equipped machine shop with four full-time machinists; Scanning Electron Microscopy, Liquid Chromatography with Mass Spectrometer – HP 1100 series HPLC + Bruker Esquire-LC Mass Spectrometer, state-of-the-art nano/electrospray ionization, Luminescence Spectrophotometer – Perkin-Elmer LS-50B Luminescence Spectrophotometer; NAD(P)H Fluorometer – the BioGuide system (BioChem Technology); refrigerated Supercentrifuge – Sorvall RC-5C microcomputer-controlled superspeed refrigerated centrifuge; Shimadzu High Performance Liquid Chromatography (HPLC), Shimadzu Gas Chromatography (GC), UV-Vis spectrophotometer (several), Gel Permeation Chromatography (GPC), Differential Scanning Calorimetry (DSC), Brookhaven Laser Light Scattering Detector, MALDI-TOF Mass Spectrometry.

Polymer Science: Unityplus 750 NMR; Varian Gemini-200 NMR; Varian Mercury-300 NMR**;** Tacnai-12 Scanning Transmission Electron Microscope; Scanning Tunneling Microscope (Nanoscope II); 2 Atomic Force Microscopes (Topometrics Models 2000 & 2010); Atomic Force Microscope, Park Scientific AutoProbe CP M5; Transmission Electron Microscope (JEOL Model JEM-1200EXII); Scanning Electron Microscope (JEOL Model JSM-5310); Vacuum Evaporator (JEOL Model JEE-4C); 14 spectrophotometers (photon, fluorimeter, diode array, UV, Differential Refractometer); thermal analyzers, Molecular Weight Characterization/Chromatography; X-Ray and Surface Analysis; Laminaire Clean Room Facility; Physical, Mechanical, & Rheological Properties

Q. Safety Information

The University of Akron's ***Health and Safety Manual*** (abbreviated ***HSM*** in this Handbook) is the principal source of health and safety information for our campus. The Chemistry and Biology departments have a copy of the ***HSM*** in their departmental offices (KNCL 103 and ASEC D401, respectively). After you have used the HSM, please return it immediately so that others may have access to it. Throughout this section you will find references to the ***HSM*** so that you can obtain more detailed information.

General Laboratory Safety (*HSM*, Sections 3, 5-7, 9, 12, 14, 16 and 18)

Safety procedures are to be followed at all times while working in research laboratories. In addition to familiarizing yourself with the HSM, you and your research advisor should develop an appropriate safety plan for your research project. It should include appropriate handling, disposal and emergency situations. Material Safety Data Sheets can be found on the EOHS website: www.healthandsafety@uakron.edu. You should also be familiar with the safety plans of others working in your laboratory. In teaching laboratories, the lab manuals will

provide the safety rules for those labs. It is an expectation that you will not only be familiar with them but will enforce them for students enrolled in the lab. The general safety rules listed below are to be followed:

All chemicals in each laboratory be properly labeled and dated. The label must be firmly attached.

Chemicals, large glassware and equipment are not to be stored on the floor, and that aisles are kept clear.

All gas cylinders must be properly strapped and secured, and that all gas lines and connections are leak-free.

Each lab contains a working fire extinguisher and that other safety equipment (water sprayers and eye-wash stations) be easily accessible. All safety equipment should be tested monthly and recorded as such. Water, 5 gallons, should be poured down the floor drains once a month to prevent dry traps and sewer fumes in the building.

Each lab contains the proper solvent waste disposal cans. See the following section, B. Waste Disposal, for specifics.

All vacuum pumps have belt guards and trays underneath to prevent oil leakage.

All hose connections must be properly secured to prevent floods. See the following, Flood Prevention section, for specifics.

All electrical cords must be in good condition without cracked, broken or missing insulation or broken plugs. No extension cords are allowed to be used in the lab.

All solvents, acids and bases must be properly stored in safety cabinets.

Each lab should have a copy of the "Emergency Response Guide" displayed.

Appropriate personal protective devices, such as glasses, goggles and gloves be used in any laboratory activity (HMS, Section 16). The Department of Environmental and Occupational Health and Safety, EOHS (972-6866) can help you choose appropriate protective devices. If you feel there is a need for a gas mask, you MUST contact EOHS with your concern before purchasing one.

CONTACT INFORMATION AND PHONE NUMBERS must be displayed on your laboratory door. If your research requires unattended reactions, you should post that information on the outside of your laboratory door. This should indicate the nature of any hazard and your name and a means of quickly contacting you.

Laboratory gloves are prohibited in the hallways to prevent contamination.

Smoking and eating within KNCL and research laboratories is prohibited. Application of make-up is also prohibited.

In the event that you must use a fire extinguisher, contact EOHS (X6866) to have it recharged. If an emergency does occur within the laboratory that you can not control, **contact the Campus Police at extension 7123 or 911**.

Although a dress code does not exist for graduate students while working in research labs, wear clothing that is appropriate for the work you will be doing.

The Department advises that all students have within their immediate possession the phone number where a family member can be reached in case of a medical emergency. If no family member resides within the United States, then list the name of some other individual who can act in the role of guardian.

Waste Disposal (*HSM*, Sections 3, 6, 14 and 18)
The procedures used in the safe and proper handling of hazardous chemical wastes and excess chemicals are prescribed by federal, state, and local laws. The casual attitude of washing wastes down the sink is not only dangerous, but **illegal**.

The Chemistry Department has instituted standard procedures to ensure the safe and legal disposal of all unwanted chemicals. All laboratories should contain at least two (2) 5 gallon red safety cans. One can is to be labeled "Halogenated" and is to be used for the disposal of halogenated wastes only. The other can should be labeled "Non-Halogenated" and be used for all other non-reactive organic wastes. Both cans are to be labeled "Hazardous Wastes" and "Flammable". Acids, bases and other reactive chemicals should be neutralized and then placed in a separate container. All wastes placed in the cans should be recorded by name, amount and date. This information is to be given to the waste coordinator whenever the can is emptied. For unusual wastes and surplus, pure chemicals, visit the EOHS website at www.healthandsafety@uakron.edu for forms to be filled out to order a pick-up.

The following general rules can be used for determining where a chemical should go:

Determine the portion of the chemical mixture that can be termed non-hazardous and can be disposed of more simply, eg. solvent-free solid polymers which can be thrown in the trash and dilute aqueous solutions of non-volatile materials which can be evaporated in the hood and the residue sent for disposal.

Non-hazardous, water soluble organic compounds like acetone, low molecular weight alcohols, glycerol, starches and sugars and neutralized solutions of common acids and bases can be washed down the sink with copious amounts of water.

State law requires that all wastes be picked up every ninety (90) days. This includes all wastes that are contained within each individual research lab. Therefore all safety cans should be emptied at least once a month. To have the cans emptied, please fill

out a Product Waste Pickup form on EOHS website:
www.healthandsafety@uakron.edu. - Waste. Because some chemical wastes require special permits to be transported, eg. PCB's, never wait until the last minute to order a waste pick-up.

The disposal of all radioactive materials should be done under the guidance of either the licensed faculty member supervising your work, or through the approval of the Radiation Safety Officer, or the Radiation Safety Committee.

Another aspect of proper handling of hazardous wastes is to keep a copy of the "Emergency Response Guide" posted inside your lab door. This information may be vital to firemen or policemen in the event of an emergency.

The graduate student must recognize his/her responsibilities as a chemist with regards to proper handling of hazardous wastes with cradle-to-grave liability. Because firsthand knowledge is the most complete, don't delegate authority or expect your fellow students to handle the situation.

Radiochemical Procedures (*HSM*, Sections 3, 7, 16 and 18)

All graduate students who desire to work with radioactive materials or radiation-generating equipment must obtain the approval of the **Radiation Safety Office** prior to beginning any work. Requirements for designation as an authorized user are established within the University's radiation safety program. Graduate students who are not authorized users but work in areas where radioactive materials or equipment is used or stored, are to receive awareness training from the faculty member responsible for the area.

Flood Prevention

We as a department have been taking proactive steps toward minimizing flood damages in our building. Visit Chemical Stores to purchase Dri-Dek (stock # 400050) for your sinks, to prevent plumbing problems. Flo-control can be used to regulate the variation in water pressure. These devices will need filter changes periodically which will be stocked at Chemstores (stock # 100900).

Miscellaneous Laboratory Hazards

Research and teaching laboratories can expose you to a variety of other hazards including:
High vacuum and the possibility of implosions
High pressure (hydrogenation equipment and reaction bombs)
Strong light sources such as UV-vis (photolysis equipment), lasers (*HSM*, Sections 15 and 16) and X-rays (X-ray diffractometer)
High voltages or high magnetic fields *(HSM*, Section 5).
High reactive chemicals or air or water sensitive chemicals.

Special training may be required in these cases. It is always best to know the safe operating procedure, to assess the possible hazards and to know the accident

procedures (*HSM* Sections 6, 7 and 9) for any laboratory activity **in advance**. When in doubt, ask for assistance from your advisor and/or the Department of Environmental and Occupational Health and Safety (972-6866).

Unauthorized or Untrained People
An important way to avoid accidents is to keep unauthorized or untrained people away from laboratory hazards. Always keep doors locked when not in your laboratory. **Report any suspicious persons or activities to the University Police (972-7123).** If possible, conduct office hours for the courses you teach in a classroom rather than a laboratory.

Emergencies
During evening hours and weekends, call 7123, 7415 or 911 for any type of emergency....floods, smells, fire and strange people in the building, etc. ***It is very important that an incident report is filed*** not only for prevention, but insurance purposes. Please don't hesitate to call.

Refrigerators and Freezers
Signage - units must be clearly marked such as "Flammable Materials Refrigerator", "No Food","Food ONLY", Non-Explosive Materials",etc.
Flammables MUST be not stored in domestic refrigerators.
An inventory list for each unit should appear on the exterior of the refrigerator/freezer
Materials/chemicals stored in refrigerators and freezers must be labeled and dated.
Materials can not overstay their welcome in laboratory refrigerators.

Protocol for defrosting a refrigerator or freezer: Each unit must have a drip deck or some type of containment under it. One can be ordered from VWR or Fisher. When defrosting a unit, a hose must be used to transport any water to the floor drain. WATER SHOULD NEVER DRAIN TO THE FLOOR!

Liquid Nitrogen
Liquid Nitrogen is stored in KNCL 133. Training MUST be obtained by Lisa Zickefoose in KNCL 111B before operation of the system. Call her at 330-972-7333 for an appointment. Goggles and gloves must be worn while operating the system. Shoes and pants should be worn, no sandals, shorts or dresses. YOU MUST REMAIN PRESENT IN KNCL 133 AT ALL TIMES WHEN FILLING A DEWAR. If you leave with the system running, your keys will be removed and given to the Department Chair.

R.Miscellaneous Information

ASSISTANTSHIPS
Academic year appointees will work the time frame of the contract while classes are in session, including exam week.

For extended absences, defined as more than 4 working days, you need to obtain prior approval by completing the Leave of Absence Form (**http://www.uakron.edu/hr/docs/certifyleave.pdf**). Your request may be approved or disapproved. You may be offered unpaid leave for the time you will be away.

For absences of 4 days or less that do not impact your assistantship duties, request permission in advance from your research advisor.

Health Services
The Student Health Service is located in the Student Recreation and Wellness Center (Room 260) and is available to all students. Qualified personnel can be found at all times. Depending on the nature of the incident, the clinic may refer the student to Akron City Hospital, located on East Market Street. Further information can be obtained by calling extension 7808.

A student health insurance policy can be obtained for any full-time student enrolled at the University.

Workman's Compensation
In the event of a laboratory accident, Workman's Compensation provides coverage for all medical expenses relating to the incident and may provide compensation for salary loss. All accidents should be reported to your advisor. In the event of a major accident call the Campus Police, extension 7123 immediately. They will notify the proper authorities. For more information concerning Workman's Compensation call the University Benefits Office, extension 7092.

Mail
Each student will have a mailbox in the office of their major advisor's department. Mail is delivered to departmental offices twice daily. Students are encouraged to check their mailbox, because this may be the only way for somebody else within the department to contact you.

Keys
To receive keys for your desk, to the front door, teaching laboratories, and to your research lab, contact the departmental administrative assistant. Notification for pick up will be sent by e-mail. When the graduate student leaves the university or transfers to another department he/she is reminded to return the keys to the key shop located within the University's Physical Plant. The Administrative Assistant will hold the final grade submission until presented with a clear key log.

International Students
Applicants whose native language is not English and who expect to become teaching assistants are also required to achieve a minimum score of 23 on the spoken English portion of the TOEFL-iBT or a minimum score of "Pass" on the U-ADEPT (English

Language Institute Exam). ***Failure to do so will mean you will NOT get a teaching assistantship.***

Revised August 24, 2015

APPENDIX A
REQUEST FOR TRANSFER OF CREDIT
FOR COMPLETION OF GRADUATE DEGREE

CRITERIA FOR ACCEPTABLE TRANSFER CREDIT

1. Up to 12 credits above the baccalaureate required in a doctoral program may be transferred from accredited college or universities. Departments and colleges may set more restrictive limits. The credits must be relevant to the student's academic program as determined by the student's academic department and must fall within the 10-year limit to complete degree requirements if beyond the master's degree. All credits transferred must be at the "A" or "B" level (4.0 to 3.0) in graduate courses.

2. Credits transferred may come from a prior degree. No more than 12 semester credits may be transferred from a single master's degree. Credits earned in prior or concurrent programs at The University of Akron shall be treated in the same manner as credits earned elsewhere. A University of Akron student who seeks to enroll in courses elsewhere for transfer credit here must receive prior approval.

3. A student seeking transfer credit must have full admission and be in good standing at The University of Akron and at the school at which the credits were earned. Transfer credits shall not be recorded until a student has completed 12 semester credits at The University of Akron with a grade-point average of 3.00 or better. Transfer credit from other institutions shall not be computed as part of the student's University of Akron grade point average.

The University of Akron
Graduate School

REQUEST FOR TRANSFER OF CREDIT
FOR COMPLETION OF GRADUATE DEGREE

TO BE COMPLETED BY GRADUATE ADVISOR: Date: _____

_____ _____
Print Full Name (Last, First, Middle) Student ID Number

_____ _____
Graduate Program

Name of Institution Where Courses Were Taken: _____

Course (Prefix, Number, Title)	Semester/Year	Credits	Grade
_____ Official Transcripts on File in the Graduate School _____ Official Transcripts Attached If a doctoral student, this request is for: _____ Transfer of Credit _____ Student's Signature Date	_____ Block Transfer of Credit		

_____ _____
Graduate Advisor Date Telephone Extension and E-Mail Address

_____ _____
Graduate Director Date Telephone Extension and E-Mail Address

____Approve ____Disapprove

_____
Graduate School Date

Join the Graduate School

Please return this form to:

The University of Akron Graduate School Polsky Building
Room 469 Akron, Ohio 44325-2101 (330) 972-7663
Telephone • (330) 972-6475 FAX

CRITERIA FOR ACCEPTABLE TRANSFER CREDIT

DOCTORAL DEGREE

Up to 50 percent of the total credits above the baccalaureate required in a doctoral program may be transferred from accredited college or universities. Departments and colleges may set more restrictive limits. The credits must be relevant to the student's academic program as determined by the student's academic department and must fall within the 10-year limit to complete degree requirements if beyond the master's degree. All credits transferred must be at the "A" or "B" level (4.0 to 3.0) in graduate courses.

1. Credits transferred may come from a prior degree. No more than thirty semester credits may be transferred from a single master's degree. Credits earned in prior or concurrent programs at The University of Akron shall be treated in the same manner as credits earned elsewhere for transfer credit here must receive prior approval.

2. A student seeking transfer credit must have full admission and be in good standing at The University of Akron and at the school at which the credits were earned. Transfer credit shall not be recorded until a student has completed 12 semester credits at The University of Akron with a grade-point average of 3.00 or better. Transfer credits from other institutions shall not be computed as part of the student's University of Akron grade point average.

APPENDIX B
The University of Akron
Integrated Bioscience
IB Graduate Advisor Form
(**To be completed and approved by the end of the student's first semester**)

Student's Name Signature

Student's Advisor Signature

Student's Home Department

Approved: _____
(Director, Integrated Bioscience)

Date: _____

Appendix C
The University of Akron
Integrated Bioscience
PhD Advisory Committee
(To be completed and approved by the end of the student's second semester.)

Student's Name	Signature
Student's Advisor	Signature

Student's Home Department

The following faculty members have agreed to serve on my advisory committee:

Name	Signature	Department
Name	Signature	Department
Name	Signature	Department
Name	Signature	Department

Approved: _____
(Director, Integrated Bioscience)

Date: _____

APPENDIX D

The University of Akron
Integrated Bioscience
Doctoral Candidacy Exam Form

Student's Name

Student's Advisor

Committee Members

Name Department

Name Department

Name Department

Name Department

Approved: _____
(IB Director)

Date of Exam: _____ Time: _____ Location: _____

Exam outcome: PASS FAIL

Explanation and action to be taken:

_____
Advisor Date

APPENDIX E

Doctoral Dissertation Committee Membership Revised 10/03
(Form should be received at least three (3) months prior to defense)

Date: _____

To: Graduate School

From: _____, Dissertation Advisor

Department of _____

Subject: Doctoral Dissertation Committee Selection/Recommendation

The following committee is hereby recommended as the Doctoral Dissertation Advisory Committee* for

_____
(Student's Full Name)

_____
(Department)

		Graduate Faculty Status	
		Category	√ (GS use)
_____		_____	_____
Dissertation Advisor			
_____		_____	_____
Committee Member			
_____		_____	_____
Committee Member			
_____		_____	_____
Committee Member			
_____		_____	_____
Committee Member			
_____	_____	_____	_____
Outside Committee Member	Department		

Approved:

_____
Graduate School Approval

*1. All doctoral committees shall have a minimum of five (5) committee members, including the member from outside the home department. At the discretion of the doctoral advisor or the Graduate Dean, the committee may consist of additional members. A majority of the committee membership must have a status on the graduate faculty which allows them to direct doctoral dissertations.
2. The member from outside the home department must have a status on the graduate faculty which allows him/her to direct doctoral dissertations (Category II). This member ought to be selected so as to be maximally beneficial to the student in the design and conduct of the research, providing a perspective from a related discipline.
3. At the time the doctoral committee, including the outside representative, is constituted the doctoral advisor shall send the entire committee membership to the Graduate School for ratification and approval. If there are any changes to the committee membership thereafter, the doctoral advisor shall send revised committee membership lists to the Graduate School for further ratification and approval.

Appendix F

Doctoral Dissertation Defense Report Revised 10/03

Date: _____

To: Graduate School

From: _____
Dissertation Advisor

Subject: Doctoral Dissertation Defense Results

The doctoral dissertation of _____
(Student's full name)

Was successfully*/unsuccessfully** defended on _____
(Date)

The members of the doctoral dissertation committee hereby record and attest to the above:

Pass	**Fail**	**Doctoral Dissertation Committee Signatures**
		Committee Advisor
		Committee Member
		Committee Member
		Committee Member
		Committee Member
		Committee Member
		Committee Member
		Committee Member

*successfully=no more than one "fail" vote recorded

**unsuccessfully=more than one "fail" vote recorded

Appendix G – Progress Report Check List

	Date Completed
First Semester	
1. Choose Major Advisor	
2. Choose Advisory Committee	
3. 3100:701 Research Techniques in Integrated Bioscience	
4. 3100: 702 Communicating in Integrated Bioscience	
5. 3600: 665 – Ethics of Science	
Second Semester	
1. 3100:703 Problem Solving in Integrated Bioscience	
2. 3100:795 Integrated Bioscience Colloquium	
Second Year	
1. 9 credits of electives	
2. Comprehensive Written Exam	
3. Research Proposal Defense	
Final Year	
1. Write dissertation	
2. Dissertation Defense	
3. Submit signed dissertation	

Appendix H
The University of Akron
Integrated Bioscience
Yearly Progress Report
(To be completed and submitted by August 1 of each year.)

Student's Name	Signature
Student's Advisor	Signature

Student's Home Department

The Advisory Committee met with the student on _____
(Date)

Progress to date: _____ Not acceptable

_____ Acceptable

Comments:

Approved: _____
(Director, Integrated Bioscience)

Date: _____