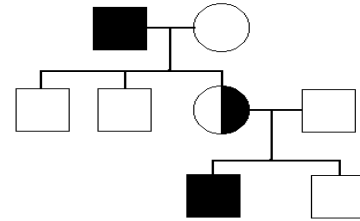


*Department of Genetics  
Graduate Student Manual*



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## **A. Mission Statement**

The Graduate Program in Genetics provides students with a working knowledge of human functional and molecular genetics, genomics, and animal model systems. Students are mentored by exceptional faculty who guide them through their training and enable them to become active members of the scientific community. The departmental curriculum is designed to form the foundation for their future career development through a combination of coursework, seminars, proposal writing, and laboratory-based research. The Department of Genetics provides students with all the skills they need to become successful, independent academic investigators.

## **B. Requirements**

The Graduate School requires that students maintain a minimum grade point average of 3.0 in all course work; however, a student who receives more than two (2) Cs or one (1) or more Ds or Fs in core courses is automatically dismissed. Any instructor who feels that a student in class will be unable to complete the requirements for a graduate degree in Genetics will notify the Department Head in writing, sending a copy to the student and to the Graduate Student Coordinator. Students seeking exemption from any course must request that exemption in writing. The faculty evaluates the request, together with the student's records. As a matter of Departmental policy, exemptions are strongly discouraged.

Students are required to meet with the Graduate Student Coordinator well before registration to discuss course work for the next semester. At the end of each semester, students are evaluated by the faculty with regard to progress and performance. Unsatisfactory performance or unethical behavior, as determined by the faculty, can be grounds for probation or dismissal.

## **C. Registration**

The students will register for classes each semester by filling out a Schedule of Courses form that they receive from the School of Graduate Studies. Once the planned coursework is approved by the graduate student coordinator, the graduate student coordinator or the Major Professor will forward the approved form to the School of Graduate Studies (currently Jack D. Hines III at [jhines@lsuhsc.edu](mailto:jhines@lsuhsc.edu)). If the Major Professor forwards the registration to the School of Graduate Studies, the student must notify the graduate student coordinator about the status of his/her registration and forward a copy of the form to the coordinator within the registration deadline. Failure to do so may not guarantee the tuition waiver and receipt of stipend from the department. A minimum of nine credit hours is required in the fall and spring semesters and six credit hours in the summer semester to be considered as a full-time student.

## **D. Graduate Student Stipends**

Depending on the availability of funds, the Genetics Department awards tuition payment and/or assistantships to a limited number of students. Students who accept assistantships agree to work in the Department for twenty (20) hours per week. Continuation of an assistantship depends on satisfactory academic and work progress.

If at any time a student with an assistantship has a cumulative GPA of less than 3.0, the student's Advisor will be notified. If the student does not bring his/her GPA up to 3.0 after the next semester, the Department Head will notify the student in writing that he/she will lose the assistantship if the cumulative GPA is not at least 3.0 within one semester.

## **E. Graduate Student Leave Guidelines**

The Department's graduate student leave provisions are in alignment with those of the Graduate School, and are universally applied to all Genetics' graduate students, even if they are not financially supported through the Department or University.

When applicable, the Department will utilize the Ruth L. Kirschstein National Research Service Awards (NRSA) leave policy as a guideline for student leave. Those guidelines can be found at the link below:

[http://grants.nih.gov/grants/policy/nihgps\\_2003/NIHGPS\\_Part10.htm#\\_Toc54600187](http://grants.nih.gov/grants/policy/nihgps_2003/NIHGPS_Part10.htm#_Toc54600187)

However, it is recognized that Graduate Students/Assistants do not accrue vacation or sick leave. Therefore, this document serves as an advisory for students requesting a leave of absence from the laboratory.

Any students wishing to take up to one week absence from laboratory work, coursework or other school duties must get prior approval from their advisor and the Graduate Program Director (Graduate Student Coordinator). In the absence of a permanent advisor, the Graduate Program Director should be consulted. With prior approval, stipend payments will be unaffected. Students who do not seek prior approval will be removed from the payroll for a duration equivalent to their absence.

Any students wishing to take more than one week off must adhere to the same guidelines as stated above; however, continuation of stipend payments will be reviewed on a case by case basis depending on the length and reason for the absence.

It is essential for students to discuss any planned absence with their supervisor well in advance, so that the timing of leave can be coordinated with the work requirements of their area.

The request for leave form can be obtained at:

[http://www.medschool.lsuhsu.edu/genetics/grad\\_programs.aspx](http://www.medschool.lsuhsu.edu/genetics/grad_programs.aspx)

## **F. Miscellaneous Regulations**

- The Department has an orientation meeting for incoming students each August. All students are expected to attend.
- Full-time students are assigned a desk and a mailbox in the Student Room for their first two (2) years.
- Students are expected to meet honorable and ethical standards during examinations and while preparing out-of-class assignments. Failure to do so may be grounds for dismissal.
- Drop/Add and late registration charges are normally the responsibility of the student, but this rule may be waived in exceptional cases.

## G. Course Requirements: Doctor of Philosophy Degree- Program

Minimum requirements for the Doctor of Philosophy degree in Genetics are 61 credit hours (including graduate course work, laboratory rotations, seminars and research) as outlined below:

| <b>Courses</b>   | <b>Credit Hours</b> |
|--|---------------------|
| Core   | 31                  |
| Elective   | 10                  |
| Seminar (Genet 299)/Journal Club (Genet 290)                     | 4                   |
| Laboratory Methods (Genet 253)/Dissertation Research (Genet 400) | 15                  |
| Total  | 60                  |

At least third (30) hours of total courses must be with a letter grade. The core requirements include 23-25 of these hours. Electives must provide the other 5-7 hours. The student selects electives with the advice and approval of the Graduate Coordinator and the mentor.

| <b>Core Courses</b>                                    | <b>Credit Hours</b> |
|--|---------------------|
| Human Molecular Genetics (Genet 231)                   | 3                   |
| Introduction to Biostatistics (Bios 6100)              | 4                   |
| Biochemistry (Inter 111)                               | 4                   |
| Cell Biology (Inter 121)                               | 3                   |
| Molecular Biology (Inter 122)                          | 2                   |
| Control of Gene Expression (Inter 123)                 | 2                   |
| Cell Signaling and Cell Cycle Control (Inter 124)      | 3                   |
| Ethics in the Biomedical Sciences (Inter 220)          | 1                   |
| Responsible Conduct in Research (Inter 260)            | 1                   |
| Proposal Writing (Genet 247)                           | 2                   |
| Genetic Epidemiology & Population Genetics (Genet 236) | 3                   |
| Medical Genetics Clinic (Genet 271)                    | 3                   |

| <b>Electives</b>                                     | <b>Credit Hours</b> |
|--|---------------------|
| Epigenetics (Genet 234)                              | 3                   |
| Animal Models of Human Diseases (Genet 242)          | 2                   |
| Cancer Molecular Genetics & Applications (Genet 245) | 3                   |
| Molecular Medicine in Disease (Genet 246)            | 3                   |
| Practical Bioinformatics (Genet 256)                 | 3                   |
| Special Topics in Human Genetics (Genet 291)         | 2-3                 |

**Seminar (Genet 299)**

PhD students are required to present three (3) Seminars in addition to their Dissertation Defense. Students must attend all Seminars sponsored by the Department of Genetics. In addition, students are required to attend at least one seminar per week sponsored by other departments or institutions. After three (3) absences from Seminar, the Department Head will ask the student for an explanation.

**Dissertation Research (Genet 400)**

The Dissertation research must be a contribution of new knowledge in the field of Genetics and be eligible for publication in a major peer-reviewed journal. The student is expected to have at least one first author manuscript submitted and positively reviewed for publication before the dissertation defense.

**Courses for each semester are listed below for (1) Directly admitted Genetics Students, (2) Genetics students from the Interdisciplinary Program (IDP) and (3) MD/PhD students**

**Courses for the directly admitted Genetics Students**

| <b>Year 1 (Credit Hours)</b>   | <b>Year 2 (Credit Hours)</b>  |
|--|---|
| <p><b><u>Fall Semester (Required at least 9 credit hrs)</u></b></p> <p>Biochemistry Inter 111 (4)</p> <p>Cell &amp; Molecular Biology – CMB (5)</p> <p style="padding-left: 20px;">A. Cell Biology Inter 121 (3)</p> <p style="padding-left: 20px;">B. Molecular Genetic Mechanisms Inter 122 (2)</p> <p>Ethics in Biomedical Sciences Inter 220 (1)</p> <p>Laboratory Rotation (3) – Rotation #1</p>  | <p><b><u>Fall Semester</u></b></p> <p>Human Molecular Genetics Genet 231 (3)</p> <p>Biostatistics Bios 6100 (4)</p> <p>Population Genetics Genet 236 (3)</p> <p>Genetics Elective Courses</p> <p style="padding-left: 20px;">Cancer Molecular Genetics Genet 245 (3)</p> <p style="padding-left: 20px;">Cytogenetics Genet 292 (3)</p> <p>Laboratory Methods Genet 253 (3)</p> <p>Genetics Journal Club Genet 290 (1)</p>   |
| <p><b><u>Spring Semester (Required at least 9 credit hrs)</u></b></p> <p>CMB (5)</p> <p style="padding-left: 20px;">C. Control of Gene Expression Inter 123 (2)</p> <p style="padding-left: 20px;">D. Cell Signaling &amp; Cell Cycle Control Inter 124 (3)</p> <p>Genetics Elective Courses<sup>¶</sup></p> <p style="padding-left: 20px;">Practical Bioinformatics (3)</p> <p style="padding-left: 20px;">Molecular Medicine in Disease (3)</p> <p style="padding-left: 20px;">Human Epigenetics (3)</p> <p>Laboratory Rotation (6) – Rotation #2 &amp; #3</p> | <p><b><u>Spring Semester</u></b></p> <p>Medical Genetics Clinic Genet 271 (3)</p> <p>Proposal Writing Genet 247 (2)</p> <p>Genetics Elective Courses<sup>¶</sup></p> <p style="padding-left: 20px;">Human Epigenetics Genet 234 (3)</p> <p style="padding-left: 20px;">Practical Bioinformatics Genet 256 (3)</p> <p style="padding-left: 20px;">Molecular Medicine in Disease Genet 246 (3)</p> <p style="padding-left: 20px;">Animal Models in Human Diseases Genet 242 (2)</p> <p>Laboratory Methods Genet 253 (3)</p> |
| <p><b><u>Summer Semester (Required at least 6 credit hrs)</u></b></p> <p>Responsible Conduct of Research Inter 260 (1)</p> <p>Laboratory Methods Genet 253 (3)</p> <p>Biostatistics Bios 6100 (4)</p>  | <p><b><u>Summer Semester</u></b></p> <p>Dissertation Research Genet 400 (6)</p>   |

<sup>¶</sup> Electives from other departments approved by mentor may also be chosen

**Courses for Genetics Students from the Interdisciplinary Program (IDP)**

| <b>Year 1 (Credit Hours)</b>   | <b>Year 2 (Credit Hours)</b>  |
|--|---|
| <p><b><u>Fall Semester</u> (Required at least 9 credit hrs)</b></p> <p>IDP courses</p>   | <p><b><u>Fall Semester</u></b></p> <p>Human Molecular Genetics Genet 231 (3)</p> <p>Biostatistics Bios 6100 (4)</p> <p>Population Genetics Genet 236 (3)</p> <p>Ethics in Biomedical Sciences Inter 220 (1)</p> <p>Laboratory Methods Genet 253 (3)</p> <p>Genetics Journal Club Genet 290 (1)</p> <p>Genetics Elective Courses<sup>†</sup></p> <p style="padding-left: 40px;">Cancer Genetics Genet 245 (3)</p> <p style="padding-left: 40px;">Cytogenetics Genet 292 (3)</p>  |
| <p><b><u>Spring Semester</u> (Required at least 9 credit hrs)</b></p> <p>IDP courses</p>   | <p><b><u>Spring Semester</u></b></p> <p>Medical Genetics Clinic Genet 271 (3)</p> <p>Proposal Writing Genet 247 (2)</p> <p>Genetics Elective Courses<sup>†</sup></p> <p style="padding-left: 40px;">Human Epigenetics Genet 234 (3)</p> <p style="padding-left: 40px;">Practical Bioinformatics Genet 256 (3)</p> <p style="padding-left: 40px;">Molecular Medicine in Disease Genet 246 (3)</p> <p style="padding-left: 40px;">Animal Models in Human Diseases Genet 242 (2)</p> <p>Laboratory Methods Genet 253 (3)</p> |
| <p><b><u>Summer Semester</u> (Required at least 6 credit hrs)</b></p> <p>Laboratory Methods Genet 253 (3)</p> <p>Biostatistics Bios 6100 (4)</p> | <p><b><u>Summer Semester</u></b></p> <p>Dissertation Research Genet 400 (6)</p> <p>Responsible Conduct of Research Inter 260 (1)</p>  |

<sup>†</sup> Electives from other departments approved by mentor may also be chosen

**Note:** Biological System courses taken by IDP students count for 7 credit hours of electives in their first year of IDP curriculum

### **Required courses for MD/PhD Students:**

- Biostatistics – Bios 6100 – 4 hours (Fall semester)
- Molecular Biology – Inter 122 (B) – 2 hours (Fall semester)
- Control of Gene Expression – Inter 123 (C) – 2 hours (Spring semester)
- Ethics in Biomedical Sciences – Inter 220 – 1 hour (Fall semester)
- Responsible Conduct in Research – Inter 260 – 1 hour (Summer semester)
- Proposal Writing – Genet 247 – 2 hours (Spring semester)
- Elective courses\* – 3 hours [Genet 231, 236, and 271 are elective courses for the MD/PhD students, in addition to other elective courses offered by the Department]
- Journal Club/Seminar – 4 hours
- Dissertation Research – Genet 400 – 15 hours

#### **\*Fall semester:**

Human Molecular Genetics Genet 231 (3)

Genetic Epidemiology and Population Genetics Genet 236 (3)

Cancer Molecular Genetics Genet 245 (3)

Cytogenetics Genet 292 (3)

#### **\*Spring semester:**

Human Epigenetics – Genet 234(3)

Molecular Medicine in Disease – Genet 246(3)

Practical Bioinformatics – Genet 256(3)

Medical Genetics Clinic – Genet 271(3)

Animal Models in Human Diseases Genet 242 (2)

### **H. Doctor of Philosophy Degree**

Students are accepted in the Department of Genetics either with a direct admission to the department or through the Interdisciplinary Program. Students joining the Genetics department from the Interdisciplinary program are required to fulfill the course requirements beginning in the second year (please see page 6 for list of courses).

#### **Advisors & Committees**

In the first year, students are required to complete three (3) laboratory rotations, with an optional fourth four-week rotation. The laboratory rotation familiarizes the student with faculty research and aids in the selection of an Advisor.

The rotation will consist of three 10-week rotations in three different laboratories in the Department to receive introduction to research projects and techniques used in any specific laboratory. At the end of the third rotation the student may choose the laboratory that best suits his/her scientific research goals **OR** if

the student requires additional time, he/she may elect a fourth four-week rotation in another laboratory in the lab of an eligible faculty mentor in the Department (ref. page 4).

Before or during the last semester of the first year of course work the student chooses an Advisor. The Advisor may be any faculty member in the Department with primary or conjoint appointment that has full/associate membership in the status in the graduate school ([http://graduatestudies.lsuhsu.edu/Faculty\\_Membership.htm](http://graduatestudies.lsuhsu.edu/Faculty_Membership.htm)) and who is willing to direct the student's Doctoral Dissertation work. The Advisor helps the student select additional members for his or her Dissertation Committee. Committees for PhD candidates consist of five (5) faculty. The Chairman of this Committee is normally the Dissertation Advisor. In the unusual case that the advisor is not the Chair, the Chair of the committee must also have a primary or conjoint appointment in the Department of Genetics and must be a full /associate member of the Graduate School Faculty. Every Committee must have at least one (1) person from another department. Committee members may be full, associate or affiliate members of the graduate school. The membership of all Committees must be approved by the Head of the Department and by the Dean of the School of Graduate Studies at the time of the Preliminary Examination.

The student is responsible for filing all forms required by the Department and the Graduate School at the proper time. Students will meet with their committee on a regular basis (usually every six to twelve months) to monitor the progress of the dissertation work.

### **Qualifying Examination**

Genetics students must take the departmental Doctoral Degree Qualifying Examination, which requires the writing and revising of a grant proposal following the NIH format. This Exam is offered annually, usually in May. Mentors and examinees receive e-mail notification 30 days before the qualifying examination concerning the test schedule. Subsequently, the students and mentors are reminded about the deadline and time commitment of the examinees 15 days before the deadline. In the final step, the student will make an oral presentation of the written proposal to the qualifying committee members. In certain circumstances, a student who does not meet the criteria for qualification in the PhD program will be allowed to remain in the Master's program.

### **Preliminary Examination (Prospectus)**

Within eighteen (18) months of satisfactory completion of the qualifying exam, the student's committee must be selected and approved by the Department Head and the first meeting with the Committee must occur. The first meeting with the committee will serve as the institutional preliminary examination.

At least two (2) weeks prior to the Examination date, the Request for Preliminary Examination must be submitted to the Graduate School office. This document formally names the student's Committee and sets the date of the Preliminary Examination (Prospectus Defense). The Prospectus should have the following sections (12 point font and double-spaced):

1. Specific Aims (What do you intend to do?) 1-2 pages
2. Background and Significance (Why the work is important, including a comprehensive literature review of the research topic.) 20-25 pages
3. Preliminary Studies (What has been done to date?) 3-4 pages
4. Research Design and Methods (How are you going to do the work?) 3-4 pages

At least one week before the Preliminary Examination, the student presents a finalized Dissertation Prospectus to the members of the Dissertation Committee. On the scheduled date, the Committee examines the student orally on both the content of the Prospectus and the content of the core courses. The Committee decides whether the student should proceed with the Dissertation research and communicates its decision to the student, the Department Head and the School of Graduate Studies. The Report on the Preliminary Examination must be signed by all Committee members and sent to the Graduate School.

**Final Examination**

After the student has completed the Dissertation project, dissertation committee members should be contacted about scheduling a defense date. All committee members must be notified about the defense date at least one calendar month (30 days) prior to the final examination date. With permission and consent of committee members at least two (2) calendar weeks prior to the Final Examination date, the student must provide all members of the Committee with a finalized version of their Dissertation. In addition, at least two (2) calendar weeks before the Examination, a Request for Dissertation/Thesis Defense must be sent to the Graduate School to set the date for the Final Examination.

Each student presents their Dissertation project to the Department at a regularly scheduled Seminar. Following the public presentation, the dissertation Committee examines the student orally on the scope and content of the Dissertation work. The Committee determines whether the student has passed the Final Examination and communicates its decision to the student, the Department Head, and the School of Graduate Studies.

The Final Examination Report must be signed by all Committee members and then submitted with the Dissertation to the Graduate School. A bound copy of the final Dissertation should be provided to the Department and to each Committee member. There must be at least three (3) semesters between the Preliminary Exam and the Final Exam.

**I. Course Requirements: Master of Science Degree- Program**

Under special circumstances determined by the Department Head, students enrolled for the Doctoral program may be awarded a Master of Science Degree. Requirements for the Master of Science degree are thirty (30) hours of graduate course work, as listed below:

| <b>Subject Area</b>         | <b>Required Credit Hours</b> |
|-----------------------------|------------------------------|
| Core Courses **             | 15                           |
| Electives                   | 7                            |
| Seminar (Genet 299)         | 2                            |
| Thesis Research (Genet 400) | 6                            |
| Total                       | 30                           |

Course work must include eight (8) hours of electives. The student selects electives with the advice and approval of the Graduate Coordinator and the mentor. In addition to course work, the students must write a Thesis and attend all Seminars.

| <b>**Core Courses - Subset of those required for PhD</b> | <b>Credit Hours</b> |
|--|---------------------|
| Introduction to Biostatistics (Bios 6100)                | 4                   |
| Human Molecular Genetics (Genet 231)                     | 3                   |
| Laboratory Methods in Molecular Genetics (Genet 253)     | 3                   |
| Cell Biology (Inter 121)                                 | 3                   |
| Ethics in the Biomedical Sciences (Inter 220)            | 1                   |
| Responsible Conduct in Research (Inter 260)              | 1                   |

## **J. Master of Science Degree**

### **Advisors & Committees**

The Advisor helps the student select additional members for his or her examining Committee. Committees for MS candidates consist of three (3) persons. The Chairman of this Committee is, normally the Thesis Advisor. In the unusual case that the advisor is not the Chair, the Chair of the committee must also have a primary or conjoint appointment in the Department of Genetics and must be a full member/associate member of the Graduate School Faculty. Every Committee must have at least one (1) person from another department. The membership of all Committees must be approved by the Head of the Department and by the Dean of the School of Graduate Studies.

### **Candidacy and Thesis Defense**

After the student and Advisor have determined the Thesis topic and all members of the proposed Thesis Committee have agreed to serve, a committee meeting is held to discuss the thesis research and time line.

At least two (2) weeks prior to the Defense date, the student must submit a Request for Dissertation/Thesis Defense to the Graduate School, and provide the Committee with a copy of the Thesis. The student presents the thesis work to the Department at a regularly scheduled Seminar.

Following the public presentation, the student is examined orally by the Thesis Committee on the scope and content of the Thesis work. The Committee determines whether the student has passed the Final Examination and communicates its decision to the student, the Department Head, and the School of Graduate Studies. The Final Examination Report must be signed by all Committee members and submitted with the student's Thesis to the Graduate School.

## **K. Additional Information**

- Guidelines for formatting and writing the dissertation
- <http://graduatestudies.lsuhscc.edu/DissertationGuidelines.pdf>
- Upon successful completion of Dissertation, students will submit an electronic copy and a bound paper copy to the Department Coordinator; the bound copy will be housed in the Genetics

Conference Room. Students are also required to provide bound copies of their dissertation to their committee members.

- Forms for School of Graduate Studies:  
<http://graduatestudies.lsuhschool.edu/forms.htm>
- Before making any travel arrangements for study related travel, administration staff (i.e., business manager, assistant business manager, coordinator, etc.) within your department must be consulted. For more information:  
<http://www.medschool.lsuhschool.edu/genetics/docs/Travel.docx>
- Emergency response policy & procedures  
<http://www.medschool.lsuhschool.edu/genetics>

## **L. Faculty Research Interests**

### **Judy Crabtree, PhD, Assistant Professor, Genetics**

- Investigate the etiology and biological processes of endocrine tumor disorders, specifically Uterine Leiomyoma (fibroids) and Multiple Endocrine Neoplasia, Type I (MEN1).

### **Yan Cui, PhD, Associate Professor, Microbiology, Parasitology and Immunology and Genetics**

- Cancer Immunotherapy
- Gene Therapy

### **Edward Grabczyk, PhD, Associate Professor, Genetics**

- Genetic disorders caused by unstable repetitive DNA ("dynamic mutations")
- Interactions between DNA structure, transcription, and replication that elicit repeat expansion diseases such as Friedreich's ataxia

### **Paula Gregory, PhD, Associate Professor, Genetics**

- Research in genetics education for teachers, students, the public, and health care professionals
- Psychological barriers to understanding genetics information and the impact of predictive genetic testing on family dynamics

### **Andrew D. Hollenbach, PhD, Assistant Professor, Genetics**

- Post-translational regulation of transcription factors
- Biochemical mechanisms of chromosomal translocation gene products in cancer formation
- Identification of genetic regulatory elements

### **Yves Lacssie, MD, FACMG, Professor, Pediatrics**

- Dysmorphology  
Birth Defects
- Nosology of genetic diseases
- Delineation of new syndromes
- Cytogenetics & microdeletions
- Dermatoglyphics

### **Michael S. Lan, PhD, Professor, Pediatrics and Genetics**

- Transcription factors in neuroendocrine differentiation
- Transcriptional regulation of insulin gene expression
- Pancreatic islet cell growth and differentiation
- Neuroendocrine cancer gene therapy

### **Wanguo Liu, PhD, Associate Professor, Genetics**

- Genetics and biological roles of Wnt signaling in GI tumor development

- Genetics and functional analysis of DNA damage-response defects in prostate cancer susceptibility

**Diptasri Mandal, PhD, Associate Professor, Genetics**

- Genetic linkage and association analysis of complex disorders, in particular humans cancers
- Investigation of properties of statistical genetic analysis methods through computer simulation

**Donald E. Mercante, PhD, Professor, Director, Biostatistics**

- Experimental design
- Correlated data methods
- Analysis of genetic data
- Clinical trials

**Donna Neumann, PhD, Assistant Research Professor, Ophthalmology**

- Epigenetic Modifications Regulating Ocular HSV-1 Latency and Reactivation

**Augusto Ochoa, MD, Professor, Pediatrics**

- T-cell function, cytokine production, macrophage T-cell interaction, immune regulation, immune dysfunction and disease, as well as tumor immunology.

**Udai Pandey, PhD, Assistant Professor, Genetics**

- Molecular pathogenesis of human neurodegenerative diseases particularly polyglutamine expansion diseases
- Protein degradation pathways in neurodegeneration

**Alistair J. Ramsay, PhD, Professor, Medicine, Microbiology, Immunology and Parasitology**

- HIV/AIDS
- Immunology of TB infection, immunology of vaccination, development of novel strategies for vaccination, particularly at mucosal surfaces.

**Krzysztof Reiss, PhD, Professor of Medicine**

- Molecular pathways involved in the development of cancer, particularly brain tumors
- Roles of various proteins including growth factors, viral proteins, cell cycle regulators, and proteins associated with cell signaling and DNA repair in the development of brain tumors

**Judd E. Shellito, MD, Professor, Microbiology, Immunology and Parasitology**

- Host defense mechanisms against pulmonary infection
- AIDS and alcohol consumption
- Occupational/environmental medicine
- Silicosis
- Asbestosis
- Malignant mesothelioma
- Inhalation lung injury

- Occupational asthma

**Fern Tsien, PhD, Instructor, Genetics**

- Chromosome instability in cancer
- Genetics education, especially in the fields of Cytogenetics and Epigenetics
- Correlation between DNA methylation with constitutive heterochromatin and gene silencing
- Genetics of the Acadian population

**Luis Del Valle, MD, Associate Professor, Pathology and Medicine**

- Manner by which JCV may disrupt the natural death mechanisms of brain cells
- Relationship between brain tumors and the human polyomavirus JCV

**Guoshun Wang, D.V.M., PhD, Associate Professor, Microbiology, Parasitology and Immunology and Genetics**

- Phagocytic Innate Immunity
- Cystic Fibrosis
- Gene Therapy and Stem Cells

**Regina Zambrano, MD, Assistant Professor, Clinical Pediatrics**

- Dismorphology
- Metabolic Disorders

## **M. GRADUATE STUDENT EXPECTATIONS**

1. All graduate students are expected to adhere to the Graduate School's expectations of graduate study available at <http://graduatestudies.lsuohsc.edu/> & [http://www.medschool.lsuohsc.edu/genetics/grad\\_programs.aspx](http://www.medschool.lsuohsc.edu/genetics/grad_programs.aspx)
2. All graduate students are expected to take primary responsibility to inform themselves about specific regulations and policies governing their graduate studies at the department and Graduate School levels, including ensuring that they meet departmental and graduate school deadlines.
3. All graduate students are expected to conduct themselves in a mature, professional, courteous manner toward students, staff and faculty regardless of their race, gender, religion, sexual orientation, or national origin.
4. All graduate students are expected to manage time effectively for maximum professional development as well as personal health and well being, balance competing demands such as being a student, a graduate assistant, a parent, a spouse, a caregiver, etc. All graduate students must be present in laboratory during normal business operations or as mutually agreed between students and mentor. Students must also attend laboratory meetings as scheduled.
5. To help with professional development and to allay concerns about safety all leave (vacation, absences, etc...) time must be requested on the Grad Student Leave Request Form in accordance with the leave guidelines.
6. Graduate students will be granted time to attend professional meetings and meetings in which they are representing the Department or University. These meetings will not be counted as student vacation time. All students should discuss attendance of these meetings with their advisor prior to planning to attend. Money to attend professional meetings is not guaranteed to any student from the department or their advisor.
7. Stipends will be awarded based on performance (academic and research), funding availability and qualifications.
8. An acceptable Ph.D. dissertation must contain at least one published journal article.

## **N. FACULTY EXPECTATIONS**

### **The faculty advisor is expected to:**

1. Interact with students in a professional, civil, and collegial manner in accordance with University policies and relevant laws.
2. Impartially evaluate student performance regardless of the student's religion, race, gender, sexual orientation, nationality, or other criteria that are not germane to academic evaluation.
3. Promise a reasonable degree of confidentiality in communication with students, taking care not to discuss a student's performance, research results, or behavior with other students.
4. Serve on graduate student committees without regard to the race, gender, sexual orientation or national origin of the graduate student candidate.
5. Acknowledge student contributions to research presented at conferences, in professional publications, or in applications for copyrights and patents.
6. Ensure that a student's experience as a research assistant contributes to his/her professional development and does not impede the student's progress toward the degree.
7. Create in the lab, supervisory relations with students that stimulate and encourage students to learn creatively and independently while respecting the academic freedom for students to express opinions that may differ from those of faculty.
8. Refrain from requesting students to do tasks not closely related to their academic or professional development for the personal advantage of a faculty member.
9. Familiarize themselves with policies that affect graduate students.
10. Respect students' need to allocate their time among competing demands, while maintaining timely progress towards degree.