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<thead>
<tr>
<th>Faculty</th>
<th>Email</th>
<th>Office Location</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Larry Hunter, Ph.D., Director of CPBS Professor, Dept. of Pharmacology</td>
<td><a href="mailto:Larry.Hunter@ucdenver.edu">Larry.Hunter@ucdenver.edu</a></td>
<td>AMC Campus RC1-S, 6101</td>
<td>303-724-3574</td>
</tr>
<tr>
<td>Robin Dowell, Ph.D. Assistant Professor, Dept. of Molecular, Cellular and Developmental Biology</td>
<td><a href="mailto:Robin.Dowell@colorado.edu">Robin.Dowell@colorado.edu</a></td>
<td>CU Boulder Campus Porter Biosciences, B160A</td>
<td>303-492-8204</td>
</tr>
<tr>
<td>Debra Goldberg, Ph.D. Assistant Professor, Dept. of Computer Science</td>
<td><a href="mailto:Debra@cs.colorado.edu">Debra@cs.colorado.edu</a></td>
<td>CU Boulder Campus Engineering Center, 734</td>
<td>303-492-9344</td>
</tr>
<tr>
<td>Katerina Kechris, Ph.D. Assistant Professor, Dept. of Biostatistics and Informatics</td>
<td><a href="mailto:Katerina.Kechris@ucdenver.edu">Katerina.Kechris@ucdenver.edu</a></td>
<td>AMC Campus Building 500, W3133</td>
<td>303-724-4363</td>
</tr>
<tr>
<td>Robin Knight, Ph.D. Assistant Professor, Dept. of Chemistry and Biochemistry</td>
<td><a href="mailto:Rob@spot.colorado.edu">Rob@spot.colorado.edu</a></td>
<td>CU Boulder Campus Porter Biosciences B047A</td>
<td>303-492-1984</td>
</tr>
<tr>
<td>Sonia Leach, Ph.D. Assistant Professor, Center for Genes, Environment, and Health National Jewish Hospital</td>
<td><a href="mailto:Sonia.Leach@gmail.com">Sonia.Leach@gmail.com</a></td>
<td>NJH 1400 Jackson St Denver, CO 80206</td>
<td>303-388-4461</td>
</tr>
<tr>
<td>Dennis Lezotte, Ph.D., Director of Graduate Studies Professor &amp; Chair, Dept. of Biostatistics and Informatics</td>
<td><a href="mailto:Dennis.Lezotte@ucdenver.edu">Dennis.Lezotte@ucdenver.edu</a></td>
<td>AMC Campus Building 500, W3143</td>
<td>303-724-4365</td>
</tr>
<tr>
<td>Tzu Lip Phang, Ph.D. Assistant Professor, Pulmonary Science/Critical Care Medicine</td>
<td><a href="mailto:Tzu.Phang@ucdenver.edu">Tzu.Phang@ucdenver.edu</a></td>
<td>AMC Campus RC2, 9003</td>
<td>303-724-6057</td>
</tr>
<tr>
<td>David Pollock, Ph.D. Associate Professor, Dept. of Biochemistry and Molecular Genetics</td>
<td><a href="mailto:David.Pollock@ucdenver.edu">David.Pollock@ucdenver.edu</a></td>
<td>AMC Campus RC1-S 10111</td>
<td>303-724-3234</td>
</tr>
<tr>
<td>Karin Verspoor, Ph.D. Research Faculty, Computational Bioscience Program</td>
<td><a href="mailto:Karin.Verspoor@ucdenver.edu">Karin.Verspoor@ucdenver.edu</a></td>
<td>AMC Campus RC1-S 6114</td>
<td>303-724-3758</td>
</tr>
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<table>
<thead>
<tr>
<th>Staff</th>
<th>Email</th>
<th>Office Location</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kathy Thomas Administrative Coordinator</td>
<td><a href="mailto:Kathy.R.Thomas@ucdenver.edu">Kathy.R.Thomas@ucdenver.edu</a></td>
<td>AMC Campus RC1-S 6103</td>
<td>303-724-3399</td>
</tr>
<tr>
<td>Liz Pruett Student Coordinator</td>
<td><a href="mailto:Liz.Pruett@ucdenver.edu">Liz.Pruett@ucdenver.edu</a></td>
<td>AMC Campus RC1-S 6103</td>
<td>303-724-3399</td>
</tr>
<tr>
<td>Paige Diller Student Support</td>
<td><a href="mailto:Paige.Diller@ucdenver.edu">Paige.Diller@ucdenver.edu</a></td>
<td>AMC Campus RC1-S 6103</td>
<td>303-724-3399</td>
</tr>
<tr>
<td>Dave Farrell CPBS IT Services</td>
<td><a href="mailto:Dave.Farrell@ucdenver.edu">Dave.Farrell@ucdenver.edu</a></td>
<td>AMC Campus RC1-S 10103</td>
<td>303-724-3320</td>
</tr>
<tr>
<td>Lynne Fox AMLS, MA, AHIP, Education Librarian</td>
<td><a href="mailto:Lynne.Fox@ucdenver.edu">Lynne.Fox@ucdenver.edu</a></td>
<td>AMC Campus Library</td>
<td>303-724-2121</td>
</tr>
</tbody>
</table>
Computational Bioscience Educational Mission Statement

The Computational Bioscience Program of the University Of Colorado School Of Medicine is dedicated to training computational biologists who aspire to achieve excellence in research, education and service, and who will apply the skills they learn toward improving human health and deepening our understanding of the living world.

The Computational Bioscience Program provides graduates with the foundation for a lifetime of continual learning. Our curriculum integrates training in computation and biomedical sciences with student research and teaching activities that grow increasingly independent through the course of the program. Our graduates are able to do independent computational bioscience research, to collaborate effectively with other scientists, and to communicate their knowledge clearly to both students and the broader scientific community.

The Computational Bioscience Program is committed to continually reviewing and improving its curriculum as the science and practice of bioinformatics evolves. The following four goals represent the foundation of the computational bioscience graduate education program at the University of Colorado.

Educational Goals and Objectives

Knowledge Goals
Graduates demonstrate their knowledge of core concepts and principles of computational bioscience, and the ability to apply computation to gain insight into significant biomedical problems. This knowledge includes mastery of the fundamentals of biomedicine, statistics and computer science, as well as proficiency in the integration of these fields. Graduates contribute to the discovery and dissemination of new knowledge.

Knowledge Objectives
1. Demonstrate knowledge of the scientific principles that underlie the current understanding of molecular biology, statistics and computer science.
2. Demonstrate an ability to productively integrate knowledge from disparate fields to solve problems in biomedicine using computational methods.
3. Demonstrate knowledge of the types and sources of data most commonly used in computational bioscience, including knowledge of all major public data repositories.
4. Demonstrate the knowledge of the classes of algorithms most often applied in computational bioscience, and their domains of applicability.
5. Demonstrate an understanding of the principles and practice of the scientific method as applied in computational bioscience, including experimental design, hypothesis testing, and evaluation of computational systems.

Communication Skills Goals
Graduates demonstrate interpersonal, oral and written skills that enable them to interact productively with scientists from both biomedical and computational domains, to clearly communicate the results of their work in appropriate formats, and to teach others computational bioscience skills. Graduates are able to bridge the gap between biomedical and computational cultures.
Communication Skills Objectives

1. Communicate effectively, both orally and in writing, in an appropriate range of scientific formats, including in formal presentations, collaborative interactions, and in the critique of others’ work.
2. Demonstrate familiarity with both biomedical and computational modes of expression, and be able to communicate clearly across disciplinary boundaries.
3. Demonstrate commitment and skill in teaching to and learning from students, colleagues, and other members of the scientific community.

Professional Behavior Goals

Graduates demonstrate the highest standards of professional integrity and exemplary behavior, as reflected by a commitment to the ethical conduct of research, continuous professional development, and thoughtfulness regarding the broader implications of their work.

Professional Behavior Objectives

1. Act in an ethically responsible manner, displaying integrity, honesty, and appropriate conduct at all times.
2. Recognize the limits of one’s knowledge, skills, and behavior through self-reflection and seek to overcome those limits.
3. Always consider the broad significance of one’s professional actions, including their implications for society and the living world.

Self-Directed and Life Long Learning Skills

Graduates demonstrate habits and skills for self-directed and life-long learning, and recognize that computational bioscience is a rapidly evolving discipline. Our focus is on the development of adaptive, flexible and curious scientists able to comfortably assimilate new ideas and technologies during the course of their professional development.

Self-Directed and Life Long Learning Skills Objectives

1. Recognize the need to engage in lifelong learning to stay abreast of new technologies and scientific advances in multiple disciplines.
2. Locate, evaluate and assimilate relevant new knowledge and techniques from a wide variety of sources.
The Graduate School

**Personnel**

John H. Freed, Ph.D., Dean.................................Academic Office One, Room 2615A, 303 724 2911  
John.Freed@ucdenver.edu

Milinda Walker, Assistant to the Dean....................Academic Office One, Room 2615, 303 724 2911  
Milinda.Walker@ucdenver.edu

Fran Osterberg, MA, Assistant Dean.......................Academic Office One, Room 2609A, 303 724 2915  
Fran.Osterberg@ucdenver.edu

Teresa Bauer-Sogi, Administrative Assistant.............Academic Office One, Room 2609, 303 724 2913  
Teresa.Bauersogi@ucdenver.edu

**Rules**

**Ph.D. Comprehensive Examination Packet information:**

After completing or registering for all program-required non-dissertation coursework, and concurrently with applying for admission to candidacy for the Ph.D., students must take a comprehensive examination in their respective discipline. This examination (written or oral or both) will test a student's mastery of a broad field of knowledge, not merely the formal coursework which he/she has completed. This examination must be completed no later than the end of the student's third year. Individual programs may establish an earlier deadline. Instructions and deadlines for completion of the forms are provided on the graduate school website.

**Ph.D. Dissertation Defense Packet information:**

Once a student has completed their dissertation and before the degree is conferred, a final examination on the dissertation and related topics is conducted in two parts, an oral presentation of the dissertation research that is open to the public, and a closed examination conducted by the examining committee. Instructions and deadlines for completion of the forms are provided on the graduate school website.

**Policies**

Academic policies and procedures can be found in the Graduate School handbook, located on their website.

**Website**

http://ucdenver.edu/academics/colleges/graduate-school

**Other Important Numbers**

Admissions and Student Services............................Academic Office One, Room 2609, 303 724 2919

Student Assistance Office .......................................Education II North, Room 3123, 303 724 7686

Student Health Insurance/Services, Laverne Loechel .......Education II North, Room 3208, 303 724 7674  
Laverne.Loechel@ucdenver.edu

Registrar’s Office..................................................Education II North, Room 3123, 303 724 8059  
student.services@ucdenver.edu

Ombudsman’s Office.................................................Building 500, Room C7005, 303 724 2950  
melissa.connell@ucdenver.edu and lisa.neale@ucdenver.edu
**Keeping In Touch**

**Email**
Your university e-mail username and password formats will be mailed to you in a communication from your school or college. If you have paid your deposit and not received username and password information, contact your program administrator. You must Login to webmail to activate your username and change your password. The initial password is a formula; please insert your personal information. The change password page will look like this linked page. The new password and your username provide access to:

- campus e-mail
- the student portal, [http://www.ucdenver.edu/UCDAccess](http://www.ucdenver.edu/UCDAccess)
- computers in the library, labs, etc.
- student printing & other UNIVERSITY domain resources.

**Mailboxes**
Students share a mailbox in the Department of Pharmacology Mail Area. This mailbox is labeled Hunter Lab. Check this mailbox daily to avoid missing important announcements and other information.

**Email Listserves**
After receiving your firstname.lastname@ucdenver.edu email account, you will be added to the CPBS mailing list. This list will keep you informed about seminars, meetings and let you send out messages to the entire CPBS group.

**Department Website**
[http://compbio.ucdenver.edu](http://compbio.ucdenver.edu)

**Other Things You Should Know..........**

**Weekly Events**
Students are required to attend Monday Seminars and weekly Journal Club meetings. Seminars are scheduled on Monday’s from 2-3:30pm. Journal Club schedule is TBA. A list of events can be found on our website, [http://compbio.ucdenver.edu](http://compbio.ucdenver.edu). Just click on the events calendar link.

**Mailing Address**
Your Name  
University of Colorado Denver  
Computational Bioscience Program  
12801 E. 17th Ave.  
MS 8303, PO Box 6511  
Aurora, CO 80045

**Printers**
Student printers are located in the Hunter Lab, RC1-S 6400A.

**Student Study Lounge**
The student study lounge is located in RC1-S 6115. Please request a key from Kathy Thomas or Liz Pruett.
Travel instructions

1. First you must obtain approval from your advisor or Dr. Hunter (first year students) for any travel.

2. After your travel is approved by Dr. Hunter, notify Liz Pruett of your detailed travel plans. Please specify name of conference or school you are visiting, purpose, dates of travel, destination, preferred departure times and frequent flyer accounts (if applicable).

   • A travel authorization (TA#) will then be obtained for you and a preliminary flight itinerary will be emailed to you. You MUST respond to this email within 24hrs to book the flight.

   • Making hotel reservations is your responsibility. You will book and pay for your hotel, then be reimbursed after the travel is complete. You must present a detailed receipt to be reimbursed.

   • Upon completion of your trip you may be reimbursed for additional costs such as ground transportation and baggage. It is very important that you obtain an ITEMIZED receipt for any expenses you wish to claim. Please turn in all itemized receipts to Liz Pruett promptly. More information on travel is available at https://www.cu.edu/psc/payables/travel.htm

Tutoring

Tutoring is available on an individual basis. Dr. Dennis Lezotte (Dennis.Lezotte@ucdenver.edu) should be contacted immediately if you need assistance with any course work, English, or writing. Depending on your needs, some tutoring may be paid by the department or program to help ensure your success.

Advising

General academic advising is done by the student coordinator, Liz Pruett. Be sure to meet with her prior to registration and before completion of program milestone (prelims, comps, etc.) to ensure you are adhering to the graduate school rules.

Priorites in the first few weeks

Orientation

All new students must attend the in-person and on-line orientation, as per the Graduate School.

Payroll

It is important to establish a checking account as soon as possible. The University issues all paychecks, including student stipends, as direct deposits. Students should be sure to have a voided check available when filling out payroll forms. Each student is required to produce a driver’s license (or state ID) and a social security card for payroll purposes.

Establishing Residency

(The following pertains only to out-of-state/international students)

New non-resident students must immediately obtain documentation to support the Petition for State Residency. First-year students must make collecting this documentation a priority. Funding will be available, assuming satisfactory academic progress, only if the student qualifies as an in-state resident after the first year of study. To be awarded in-state tuition status at the beginning of your second year you must establish that you have resided in the state for a year and established several kinds of connections to the state. It is important that these “connections” be established as soon as you arrive in the state to show the one-year history required by the University. Some things that can support these connections are a signed lease or rent receipts, utility bills in your name, a Colorado driver’s license and license plates, and voter registration.
Prior to the start of your second academic year you must fill out and have notarized the Petition for In-State tuition classification and submit this along with your supporting documentation to the office of Admissions. Petition forms are available in the Admissions office. Notaries can be found in the Financial Aid Office, the Chancellor’s office, and the Graduate Nursing office. Failure to complete the In-State tuition classification process could jeopardize your continued financial support in the Computational Bioscience Program.

For driver’s license offices, license plate offices and voter registration please consult the local city phone book. For complete directions on establishing Colorado in-state residency for tuition purposes please consult the Registrar’s website at:


Get Connected

Get your student ID card

UC Denver access control cards are issued to all students by the ID Badging Office located in Building 500, 1st floor, north of the Bookstore, in room N1207. During orientation, photos are taken and ID cards and RTD College Passes are issued. Student ID/access cards are NOT made available until you have paid your matriculation fee AND attend orientation – all students are scheduled to have pictures taken and IDs distributed by your school/program. Access Control cards serve the dual purpose of identification on campus and after normal business hours access control at a number of exterior and interior locations. Your card can be programmed to allow after hours parking in all gated lots (6 p.m. – 6 a.m. MF, and all day Saturday/Sunday) on the Anschutz Medical Campus. If you choose to request parking after hours (6 a.m. – 6 p.m.), your ID will be programmed for that access as well – you must check in at the Parking Office in Building 500, ground floor to have your card programmed for after hours parking. There is a $10 fee to activate your card for any parking service. Students who withdraw or graduate are required to return the access control card – access and therefore, access to buildings/labs/parking is removed from your card upon graduation. Lost cards are replaced at no charge the first time. Fees are charged for subsequent losses.

Activate your students email account

Your university e-mail username and password formats will be mailed to you in a communication from your school or college. If you have paid your deposit and not received username and password information, contact your Program Admissions office or Academic Advisor. You must Login to webmail to activate your username and change your password. The initial password is a formula; please insert your personal information. The change password page will look like this linked page. The new password and your username provide access to:

- campus e-mail
- the student portal, http://www.ucdenver.edu/UCDAccess
- computers in the library, labs, etc.
- student printing & other UNIVERSITY domain resources.

Register for classes

The UCDAccess online Student Self-Service Portal allows you to apply for financial aid, search for your classes on various criteria, view real-time numbers of seats available, enroll and pay for your classes, order transcripts, and more. To log into the UCDAccess portal you will need your official University username and password (detailed above). http://www.ucdenver.edu/UCDAccess
Enroll in Student Health Insurance

All degree and specific approved, certificate-seeking students enrolled in five or more credit hours must take the School of Medicine's Student Health Insurance Plan unless they can prove enrollment in other comparable insurance. Students taking under five credit hours in a degree program are also eligible to purchase the SHI Plan by submitting a selection/waiver form by the September 1, 2010. Forms are located online at http://www.ucdenver.edu/life/services/student-health/Documents/AMC_StudentEnrollWaiver.pdf and in Appendix C. See page 25 for more information.

Log into the Employee Portal

As an employee of the University you have access to a portal that will allow you to view your pay advice/check, update your address and emergency contact information, request travel reimbursement, view the holiday schedule and host of other vital announcements and resources. Go to http://my.cu.edu choose the Denver campus and enter your email login credentials.

Student Financial Support

As a Ph.D. student in the Computational Bioscience Program you are provided full tuition, health and dental insurance, and a stipend of $25,000 per year for living expenses (for the academic year 2010-2011). Following the University Comprehensive Examination (generally at the end of the student’s second year), the annual stipend and benefits are usually provided by the student’s chosen advisor, as long as all necessary qualifications are met. The stipend is paid monthly via direct deposited on the last working day of each month.

Each student is responsible for books, housing, and any other expenses not specifically mentioned above. The Student Coordinator will obtain a copy of the students’ bills following registration for the current semester. The Student Coordinator will ensure that all appropriate charges on the student bills are paid. It is only necessary to deliver a copy of your bill to the Student Coordinator if there is a problem or question. Each student is personally responsible for late fees and fines, so it is critical that all necessary paperwork arrive at the CPBS office in a timely fashion and that all necessary registrations are completed timely. Moreover, students registering past the semester registration deadline set by the office of Admissions & Records are assessed a $60 late registration fee, which is also the student’s responsibility by explicit policy of the Assistant Dean of the Graduate School.

Student expenses, including the stipend, will be paid until graduation as long as the following conditions are met:

1. Maintaining satisfactory academic progress
2. Achieving eligibility for in-state tuition after the first year.
   a. Students who fail to qualify for in-state residency will be responsible for the difference between in-state and out-of-state/international tuition.
3. Passing the Preliminary Examination at the end of the first year.
4. Completing the University Comprehensive Examination by the end of the second academic year.
5. Ability of the student’s chosen dissertation advisor to provide support during the research phase of the Program.
6. Scheduling the Dissertation Defense within approximately five years of entering the Program.
### 2010-2011 Academic Calendar

Please refer to the [UC Denver Graduate School Academic Calendar](http://ucdenver.edu/academics/colleges/Graduate-School/Documents/AMC/BS10-11.pdf) for detailed information. The table below provides a summary of key dates for the 2010-2011 academic year:

#### SUMMER SEMESTER 2010
- Registration for Summer 2010 Basic Sciences begins for continuing students: Monday, May 17
- Last day to submit Application for Graduation for August 2010 MS grad: Tuesday, June 1
- Summer Semester begins: Monday, June 7
- Diplomas cards due for December graduates: Friday, August 6
- Last day to drop/add: Friday, June 11
- Independence Day Holiday (July 4th falls on Sunday): Monday, July 5
- Last day to take final exams/thesis defense for August MS & PhD graduates: Friday, July 30
- Last day to submit thesis: Friday, August 6
- Final Examination Week: August 16-20
- Summer Semester ends: Friday, August 20
- Final grades due (noon): Wednesday, August 25
- August degree award data: Friday, August 26

#### FALL SEMESTER 2010
- Registration for Fall 2010 begins for Basic Sciences continuing students: Monday, August 9
- Fall Semester begins: Monday, August 30
- Recess 1: August 30 - November 19
- Labor Day Holiday: Monday, September 6
- Last day to drop/add: Friday, September 10
- Last day to submit Application for Graduation for December 2010 MS grad: Friday, October 1
- Last day to take final exams/thesis defense for December MS & PhD graduates: November 17
- Last day to submit thesis: Wednesday, November 24
- Thanksgiving Break: November 25-26
- Thanksgiving Break: Friday, December 3
- Final Exam Week: December 12-17
- Fall Semester ends: Friday, December 17
- Degree award Date: Wednesday, December 22
- Final grades due (noon):
2010-2011 Holiday Calendar

http://www.ucdenver.edu/about/departments/HR/FormsTemplatesProcesses/Documents/Word/HolidayScheduleFY11.pdf

University of Colorado Denver

Holiday Schedule
Fiscal Year 2010-11

Common Holidays
The following holidays will be observed at all UC Denver campuses and locations. Offices not designated as essential services will be closed.

- Independence Day: Monday, July 5, 2010
- Labor Day: Monday, September 6, 2010
- Thanksgiving: Thursday, November 25, 2010
- Christmas: Friday, December 24, 2010
- Alternate Holiday: Monday, December 27, 2010
- New Year’s Day: Friday, December 31, 2010

Alternate/Floating Holidays

Denver Campus
Units specifically serving the Denver Campus and its colleges and schools will observe the following alternate/floating holidays:

- Tuesday, December 28, 2010
- Wednesday, December 29, 2010
- Thursday, December 30, 2010

Anschutz Medical Campus
Units specifically serving the Anschutz Medical Campus and its colleges and schools will observe the following alternate/floating holidays:

- Friday, November 26, 2010
- Monday, January 17, 2011
- Monday, February 21, 2011

Consolidated Units
Consolidated units serving UC Denver at-large will remain open on the alternate/floating holidays and each employee will request either the Denver Campus or Anschutz Medical Campus schedule for the fiscal year.

Holiday Policy

For more information and guidance on administering holiday leave, please see the UC Denver Holiday Policy: http://administration.ucdenver.edu/admin/policies/hr/HolidayPolicy.pdf
Degree Requirements and Coursework

Required Courses

The "required" credit hours in the Computational Bioscience Program, which must be completed at UCD-AMC, include a minimum of 30 semester credit hours of bioinformatics courses and 30 semester hours of doctoral dissertation research. Students may transfer up to 20 semester hours from prior work. The required Bioinformatics courses in the program are described below. Consequently, 20 credit hours of relevant graduate-level course work can be taken at AMC, other CU campuses or other universities within the United States and transferred into the program. Relevant course work must be distributed equally among Human Biology, Math/Statistics and Computer Science. In order to meet the requisite credit hour requirements, the program will transfer in applicable graduate level course credits or have the student successfully pass selected courses that fulfill the above conditions during the first four semesters of the program.

Noncredit Library Tutorials:

Students must complete the BITS and NCIB library tutorials described on page 22 in addition to credit coursework described below.

Interdepartmental Courses:

IDPT 7811, 7812, 7813, 7814 & 7815 Biomedical Sciences Core Course I, II, III, IV & V

Credit Hrs: 2.0, 2.5, 2.5, 1.5, and 1.5 respectively

<table>
<thead>
<tr>
<th>Course</th>
<th>Dates</th>
<th>Director</th>
<th>Title</th>
<th>Department</th>
<th>Ph:</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDPT 7811</td>
<td>8/30 – 9/17</td>
<td>Jeffrey Kieft, Ph.D.</td>
<td>Assoc Prof</td>
<td>Biochemistry and Molecular Genetics RC1-South, Room 9110</td>
<td>303-724-3257</td>
<td><a href="mailto:jeffrey.kieft@ucdenver.edu">jeffrey.kieft@ucdenver.edu</a></td>
</tr>
<tr>
<td>IDPT 7812</td>
<td>9/20 - 10/15</td>
<td>Richard Davis, Ph.D.</td>
<td>Assoc Prof</td>
<td>Biochemistry and Molecular Genetics RC1-South, Room 10109</td>
<td>303-724-3226</td>
<td><a href="mailto:richard.davis@ucdenver.edu">richard.davis@ucdenver.edu</a></td>
</tr>
<tr>
<td>IDPT 7813</td>
<td>10/18 - 11/9</td>
<td>Robert Evans, Ph.D.</td>
<td>Assoc Prof</td>
<td>Pathology RC-1 North, Room 5118</td>
<td>303-724-4306</td>
<td><a href="mailto:robert.evans@ucdenver.edu">robert.evans@ucdenver.edu</a></td>
</tr>
<tr>
<td>IDPT 7814</td>
<td>11/10 - 11/23</td>
<td>Andrew Bradford, Ph.D.</td>
<td>Assoc Prof</td>
<td>Obstetrics and Gynecology RC-1 North, Room 5100</td>
<td>303-724-3507</td>
<td><a href="mailto:andy.bradford@ucdenver.edu">andy.bradford@ucdenver.edu</a></td>
</tr>
<tr>
<td>IDPT 7815</td>
<td>11/24 - 12/10</td>
<td>Kristin Artinger, Ph.D.</td>
<td>Asst Prof</td>
<td>Craniofacial Biology RC-1 South, Room 11112</td>
<td>303-724-4562</td>
<td><a href="mailto:krisitin.artinger@ucdenver.edu">krisitin.artinger@ucdenver.edu</a></td>
</tr>
</tbody>
</table>

This is a set of interdisciplinary courses required for first year graduate students enrolled in basic science Ph.D. programs at UCD-AMC. The objective of the courses is to provide the basic science information and introduction to the skills required for a successful research career in all disciplines of modern biomedical sciences. Topics cover the fundamentals of biochemistry, molecular biology, cell biology, developmental biology, molecular genetics and biomolecular structure. Specialty topics required by individual programs are taken usually during the spring semester of the first year, and in some cases in the second year to round out the curriculum.
Required Courses Continued

CPBS 7711 Bioinformatics I
Credits: 4 semester hours
Prerequisite: permission of instructor
Status: Required
What is bioinformatics, and why study it? How is large scale molecular biology data generated, where and how can researchers gain access to it, and what is the quality of the data?

- Nucleotide sequence data: Genomic sequencing, expressed sequence tags, gene expression, transcription factor binding sites and single nucleotide polymorphisms.
- Metadata: Summary and reference systems, finding new types of data online, likely growth areas. Private and future data sources Computational representations of molecular biological data, data storage techniques: databases (flat, relational and object oriented), and controlled vocabularies.
- General data retrieval techniques: indices, Boolean search, fuzzy search and neighboring. Biological data types and their special requirements: sequences, macromolecular structures, chemical compounds, genetic variability, and connections to clinical data. Representations of patterns and relationships: alignments, regular expressions, hierarchies, and graphical models (including Markov chains and Bayes nets).
- Visualization: methods for presenting large quantities of biological data, particularly sequence viewers, 3D structure viewers, anatomical visualization, and database-driven web sites.
- Interoperability - the challenges of data exchange and integration: Ontologies, interchange languages and standardization efforts. XML, UMLS, CORBA and OMG/Life Sciences.
- Inference problems and techniques for molecular biology with an overview of key inference problems in biology, including: homology identification, genomic sequence annotation, protein structure prediction, protein function prediction, gene expression characterization, network identification, and drug discovery.

CPBS 7712 Bioinformatics II
Credits: 4 semester hours
Prerequisite: BIOI 7711
Status: Required

Additionally, this course addresses recent developments in bioinformatics and focus on advanced issues in specific areas including (but not limited to), information extraction from biomedical literature, inference of biochemical networks form high throughput data, and prediction of protein function.

Please note: during the 2nd year of the program it's required that students serve as the Teaching Assistant for one of the above courses. This is a great resume builder and further solidifies your Bioinformatics knowledge.
**Required Courses Continued**

**CPBS 7605 Ethics in Research**  
Credits: 1 semester hour  
Prerequisite: permission of instructor  
Status: Required  
Discussion of professional conduct, social implications of research and questions raised by biomedical research with an emphasis on topics relevant to computational biologists. Active student participation in required.

**CPBS 7606 Statistics for the Basic Sciences**  
Credits: 3 semester hours  
Prerequisite: permission of instructor  
Status: Required  
Cross listed: BIOS 6606  
This course provides an overview of fundamental concepts in statistics such as hypothesis testing and estimation and it provides an overview of statistical methods (for example, regression and analysis of variance) that apply to many areas of science.

**CPBS 7785 Independent Study: Lab Rotations (2-3 Required)**  
Credits: 1 semester hour  
Prerequisite: permission of instructor  
Status: Required  
This requirement is designed to give the student a better understanding of other sciences, promote collaboration between departments, and communicate effectively with biologists and scientists. The student must pick from Associated Faculty and ask permission to join their lab plus decide on a project, complete and submit the pre-rotation laboratory agreement, and deliver a short seminar at the time of completion. It is considered a tool for selecting a dissertation subject.

**CPBS 8990 Doctoral Dissertation**  
Credits: 30 semester hours  
Prerequisite: Successful completion of required Computational Bioscience courses.  
Status: Required  
Doctoral study for the Ph.D. degree by students in the Computational Bioscience program only.

**Elective Courses**

The following courses are optional courses in the program that can be taken for credit and used to fulfill the necessary credit hour limits. It will be possible—and sometimes strongly encouraged—for students to take other graduate level courses (in biology, mathematics and computer science) at UC Denver or from any other UC campus to achieve the appropriate distribution of expertise that the program is seeking in its students. Students must obtain prior approval from their graduate adviser or program director before taking such courses. The following list summarizes some of the available courses in biology, mathematics and computer science that have been identified to fill in deficient content areas of study.

**Computational Bioscience Courses**

**CPBS 7655 Statistical Methods in Genetic Association Studies**  
Credits: 3 semester hours  
Cross listed: BIOS 6655  
Prerequisites: BIOS 6612 or permission from instructor
Elective Courses Continued

**CPBS 7659 Statistical Methods in Bioinformatics (taught by Dr. Katerina Kechris)**
Credits: 3 semester hours  
Cross listed: BIOS 6659  
Prerequisites: BIOS 6611 or equivalent graduate level statistics course, instructor consent

**CPBS 7660 Analysis of High-throughput Data (taught by Dr. Tzu Phang)**
Credits: 2 semester hours  
Cross listed: BIOS 6660  
Prerequisites: BIOS 6611 or equivalent

**CPBS 7785 Independent Study**
Credits: 1 to 3 semester hours  
Prerequisite: permission of instructor

**CPBS 7791 Readings in Bioinformatics**
Credits: 1 semester hour  
Prerequisite: permission of instructor

**CPBS 7792 Special Topics in Bioinformatics**
Credits: 1 to 3 semester hours  
Prerequisite: permission of instructor

Biostatistics Courses

**BIOS 6611 Biostatistical Methods I**
Credits: 3 semester hours  
Prerequisites: Differential Calculus

**BIOS 6612 Biostatistical Methods II**
Credits: 3 semester hours  
Prerequisites: BIOS 6611

**BIOS 7711 Longitudinal Data Analysis**
Credits: 3 semester hours  
Prerequisites: BIOS 6612

**BIOS 7712 Special Topics in Statistics**
Credits: 1 semester hour  
Prerequisites: BIOS 7711

Computer Science Courses
CSCI courses are available on the Boulder Campus. See [http://www.cs.colorado.edu/courses/catalog/](http://www.cs.colorado.edu/courses/catalog/) for complete course descriptions.

**CSCI 5314 Algorithms for Molecular Biology (taught by Dr. Debra Goldberg)**
Credits: 3 semester hours  
Same as MCDB 5314.  
Prerequisites: CSCI 2270 and one of CSCI 3104, CHEM 4711, IPHY 4200 or MCDB 3500.

**CSCI 5582 Artificial Intelligence**
Credits: 3 semester hours  
Prerequisites: CSCI 3155 or equivalent
Elective Courses Continued
CSCI 5622 Machine Learning
Credits: 3 semester hours
Prerequisites: Graduate standing or consent of instructor

CSCI 5817 Database Systems
Credits: 3 semester hours
Prerequisites: CSCI 2270. Recommended: CSCI 3287 and CSCI 3753

CSCI 5832 Natural Language Processing
Credits: 3 semester hours
Same as LING 5832
Prerequisites: Graduate standing or consent of instructor

CSCI 7000 Bioinformatics and Genomics (taught by Dr. Robin Dowell)
Credits: 3 semester hours
Same as MCDB 5520

Other Anschutz Medical Campus Courses
Complete course descriptions are found in the Graduate School Coursebook [http://ucdenver.edu/student-services/resources/registrar/students/Courses/Documents/GraduateSchool2010-11.pdf](http://ucdenver.edu/student-services/resources/registrar/students/Courses/Documents/GraduateSchool2010-11.pdf)

BMGN 7620 Genomics (taught by Dr. David Pollock)
Credits: 2 semester hours

HMGP 7600 Survey of Human Genetics
Credits: 3 semester hours

IDPT 7200 Scientific Writing for Doctoral Students
Credits: 2 semester hours
Prerequisites: Must have passed preliminary examination; permission of instructor

PHCL 7560 Drug Metabolism and Pharmacognetics I
Credits: 1 semester hour

PHCL 7561 Drug Metabolism and Pharmacognetics II
Credits: 2 semester hours

PHSC 7651 Pharmaceutical Biotechnology
Credits: 3 semester hours
First Year Students 2010-2011 Academic Schedule

New Student Orientation ..................................................................................................... Wednesday, August 25, 2010

Fall Semester ................................................................................................................... begins Monday, August 30, 2010
- IDPT 7811 (8/30-9/17) ...................................................................................... MTWRF, 8:00am – 10:00am
- IDPT 7812 (9/20-10/15) ...................................................................................... MTWRF, 8:00am – 10:00am
- IDPT 7813 (10/18-11/9) ...................................................................................... MTWRF, 8:00am – 10:00am
- IDPT 7814. (11/10-11/23) ...................................................................................... MTWRF, 8:00am – 10:00am
- IDPT 7815 (11/24-12/10) ...................................................................................... MTWRF, 8:00am – 10:00am
  All IDPT courses will be held in the Hensel Phelps East Auditorium (in RC-1 North)
- CPBS 7711 Bioinformatics I ...................................................................................... TR, 1:00pm – 2:30pm
  RC-1 North, P18 Room 6123

Thanksgiving Break ........................................................................................................... November 25-26, 2010
Registration for Spring 2011 ......................................................................................... begins Monday, December 6, 2010
Final Exam Week ........................................................................................................... December 13-17, 2010
Fall Semester Ends ....................................................................................................... Friday, December 17, 2010

Spring Semester ........................................................................................................... begins Tuesday, January 24, 2011
- Bioinformatics II CPBS 7712 .................................................................................. TR, 1:00pm – 2:30pm
- Statistics for the Basic Sciences CPBS 7606 ............................................................. TBD
- Independent Study: Lab Rotation 1-2 CPBS 7785 .................................................. Determined by student and faculty
- Elective (3-6 credits recommended) ........................................................................ varies
Spring Break ..................................................................................................................... March 14-18, 2011
Final Exam Week ......................................................................................................... May 16-20, 2011
Springs Semester Ends ................................................................................................. Friday, May 20, 2011

Summer Semester ...................................................................................................... begins Monday, May 30, 2011
- Preliminary Examination .......................................................................................... TBD
- NLM Informatics Training Conference, Bethesda, MD ......................................... ~ 3rd week of June 2011
- Petition for Colorado Residency if not a resident ................................................... by mid-August 2011
### Academic Planning

#### 1st Year Curriculum & Milestones

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<tr>
<th>Fall Course</th>
<th>Title</th>
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<td>IDPT 7812</td>
<td>Biomedical Core Course II</td>
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<td>Biomedical Core Course IV</td>
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<td>CPBS 7711</td>
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#### Spring Course

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<tr>
<td>Dept Varies</td>
<td>Elective Course**</td>
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Preliminary Examination

#### 2nd Year Curriculum & Milestones

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<td>CPBS 7605</td>
<td>Ethics in Research (every other year)</td>
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<tr>
<td>CPBS 7785</td>
<td>Ind Study: Lab Rotation #1 (required)</td>
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<tr>
<td>CPBS 7785</td>
<td>Ind Study: Lab Rotation #2 (required)</td>
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<td>CPBS 8990</td>
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#### Spring Course

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<tr>
<td>Dept Varies</td>
<td>Elective Course**</td>
<td>3-6</td>
<td></td>
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<tr>
<td>CPBS 8990</td>
<td>Dissertation*</td>
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Comprehensive Exam/Dissertation Proposal

#### Years 3-5 Curriculum & Milestones

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<tbody>
<tr>
<td>CPBS 8990</td>
<td>Dissertation*</td>
<td>10-20</td>
<td>10-20</td>
</tr>
</tbody>
</table>

Dissertation Defense (You must complete 30 credits of CPBS 8990 before or in the semester you defend)

**Total Credits = 60 (30 from coursework and 30 Dissertation)**

*Do not take more than 10 credits of CPBS 8990 before taking the Comprehensive Exam.

**Number of elective credits needed depends upon educational background (Comp Sci, Bio, Math, etc) and number of credits transferred into the CPBS program from other graduate programs.

***Lab rotations may also be completed in the summer semester.
Preliminary Examination

There are two milestone examinations for each graduate student in the CPBS Program. The first examination, given at the end of the first year, is the departmentally administered preliminary examination. The second examination, given at the end of the second year, is the University administered comprehensive examination.

The preliminary examination is a broad-based written examination covering the didactic material presented during the first year’s course work. The exact format of the examination, time and number of questions, may change on an annual basis. A major focus of the examination will be on material presented in the Biomedical Sciences Core Courses I-V (IDPT 7811-7815). The second major focus of the examination will be a subset of questions based on the CPBS required courses (CPBS 7711 & CPBS 7712 Bioinformatics I & II) which must be answered. A passing grade is required for continuation in the program. In the case of a failing grade, it is entirely at the discretion of the preliminary exam committee whether to permit re-examination on all or part of the requirement, or to terminate the student's matriculation. Assuming successful completion of the preliminary examination requirement, a student may immediately begin work in a dissertation laboratory and become eligible to take the University comprehensive examination.

The statement below clarifies the Graduate School policy on students who do not pass the preliminary exam. Passing the exam requires that a student earn a passing grade on all parts of the exam if the exam is separated into multiple days; failure on either part results in failure of the entire exam. From the Graduate School Rules:

“Each program is responsible for ensuring that students are qualified for doctoral study through a preliminary examination. The results (Pass/Fail) must be reported to the Graduate School. A student who fails the examination is subject to immediate dismissal from the Graduate School upon the recommendation of the program and concurrence of the Dean. At the program’s discretion, a student who fails the examination may retake it once.”

In addition to the program having the discretion to allow a student to retake the preliminary examination, the program has full responsibility for designing the compensatory examination and for determining what constitutes a passing grade. The Assistant Dean of the Graduate School first must be notified that the student did not pass the preliminary exam, and then must be notified whether the student passed the exam on the second attempt.

Comprehensive Exam

The University-based Comprehensive Examination is an orally defended grant proposal taken at or near the end of the second year. It is based on the student's dissertation proposal, but can include other areas of study as well. This exam typically takes the format of presenting the problem, defending its innovation and demonstrating a workable knowledge of the field of study to assure that independent work is eminent.

The student's dissertation committee judges the quality of the examination and makes recommendations for further academic advancement.

It is necessary that students complete all course work or finish all course work in the same semester as the exam, pass their preliminary examination and have a dissertation topic before they can schedule their oral Comprehensive Examination. After successfully completing this examination and meeting all other Graduate School requirements, students are recognized as formal Ph.D. candidates who can proceed with their independent research work that will ultimately culminate in their Ph.D. dissertation.

The student is reminded that he or she must be registered for at least one dissertation hour (CPBS 8990) during the summer semester in which the examination is taken.
The Comprehensive Exam contains two major components:

1. The written dissertation proposal
2. The oral defense of the dissertation proposal

After completing or registering for all program-required non-dissertation coursework, and concurrently with applying for admission to candidacy for the Ph.D., you must take a comprehensive examination in your field of concentration and related fields. This examination (written or oral or both) will test your mastery of a broad field of knowledge, not merely the formal coursework which you have completed. The oral part of the comprehensive examination is open to members of the Graduate Faculty. This examination must be completed no later than the end of your third year. Under extenuating circumstances, and with the recommendation of the Program Director and concurrence of the Dean, the examination may be taken during the fourth year. A student cannot take the comprehensive examination with less than a 3.00 G.P.A. or before the Graduate School application is submitted and approved. The complete policy and procedure for taking the comprehensive exam is listed on the Graduate School website at www.ucdenver.edu/academics/colleges/Graduate-School under the Students Services—Ph.D. Resources page.

The necessary steps to schedule and take the comprehensive exam are as follows:

1. Form a Comprehensive Exam Committee & Dissertation Advisory Committee
   Shortly after selecting a dissertation advisor, you, in collaboration with your mentor, shall recommend a Dissertation Advisory Committee subject to approval of your Program Director. Although it is recommended that the Dissertation Advisory Committee be the same as the Comprehensive Examination Committee, the two committees need not be identical. The Dissertation Advisory Committee will serve an advisory function to you and your mentor, and shall also monitor your progress in generating and/or collecting data to be used in the writing of the dissertation. The Dissertation Advisory Committee will give you formal permission to write the dissertation once sufficient data have been collected and analyzed. The Dissertation Advisory Committee shall meet at least once each year. Individual Programs may require – and the Graduate School encourages – a greater frequency of meetings. Records of the meetings and of your progress will be kept in your file in the Graduate Program office. If you fail to have a Dissertation Advisory Committee meeting in the preceding 12 months, you will not be permitted to register for Spring Semester, or for subsequent academic terms. Once you are in compliance with this rule, you will be permitted to register.

2. Submit a Dissertation Proposal
   Before taking the Comprehensive Examination, you must submit a dissertation proposal to the Program Director and to the dissertation committee at least two weeks prior to the schedule examination date, and schedule the examination with the Graduate School by filing all the required Graduate School forms. The dissertation proposal should be in a format comparable to a National Institutes of Health (NIH) R03 grant submission.

3. Apply for admission to candidacy
   Students must submit an application for admission to candidacy for the Ph.D. degree to the Graduate School at least two weeks before scheduling the comprehensive examination. To be admitted for candidacy, students must have:
   
   • completed all course work,
   • passed their Preliminary Examination, and
   • met the Graduate School requirements for residency.
Comprehensive Exam Format
In seminar format, students will present material from the Dissertation Proposal to their committee members and the general public. The presentation should last 45-60 minutes and allow time for general questions. Shortly after the presentation is complete, the public audience members will be dismissed and the oral comprehensive exam will begin. This oral examination will test your mastery of a broad field of knowledge, not merely information from your dissertation proposal or the formal coursework which you have completed.

Dissertation
A dissertation (written presentation of novel research) based upon original investigations and showing innovation in computational bioscience methodology. This document must be written, approved by an examining committee authorized by the program, and in a final format approved by the Graduate School. A near final draft of the work is submitted to the examination committee at least 14 days prior to the final oral examination (Defense of Dissertation). The examination committee must formally approve the dissertation before the candidate submits a final and appropriately formatted version of the dissertation to the Graduate School. All Graduate School guidelines and specifications must be followed. Students must register for and complete 30 semester hours of doctoral dissertation credit (CPBS 8990) to be eligible for the Ph.D. degree.

The Oral Defense
The student's dissertation committee conducts the "Defense of Dissertation" after completion of the independent research. Arrangements for the final examination must be made through the Graduate School at least two weeks in advance. Upon successfully defending the innovation of the problem and student's independent research efforts, the Ph.D. candidate must complete all the contingencies and formal recommendations of the dissertation committee and the program director. A final grade for the 30 semester hours of dissertation research is assigned only after the student submits the final, approved manuscript, documenting the completed, innovative and independent research work to the Dean of the Graduate School. If approved by the Graduate School, the Dean of the Graduate School makes a recommendation to the Chancellor, on behalf of the entire graduate school faculty, who then awards the Ph.D. degree to the candidate.

Clarification of Graduate School Rules for Examination Results
(subject to change)

Pass
You must receive the affirmative votes of a majority of the members of the committee in order to pass.

• You will need to pay attention to the rules regarding registration for the correct number of dissertation hours in the semester during which you will take the comprehensive exam in order to be eligible for it.

Pass with Conditions
The committee may feel that, although you have passed the examination, you should complete additional work. This may be in the form of rewriting submitted work, additional coursework, etc. These conditions must be satisfied within six months. You will be considered to have "passed" when these conditions are met. Failure to meet the conditions will result in failure of the examination.

• You should register for dissertation hours as if you had passed without conditions (see the notes under PASS above).

Fail
In the event that you fail the examination, you are subject to immediate dismissal from the Graduate School. At the discretion of your program, you may be allowed to retake the examination once. The remedial exam will be in a form designated by the committee and must be completed within six months.

• You will be required to meet registration requirements for the new examination.
Campus Resources

**AMC Bookstore**

[http://www.ucdenver.edu/student-services/resources/AMCbookstore](http://www.ucdenver.edu/student-services/resources/AMCbookstore)

The Anschutz Medical Center Bookstore provides the most complete inventory of Medical and Scientific books in the Rocky Mountain area. Over 3,000 titles are available for immediate shipment including an extensive selection of Medical titles in CD-ROM and PDA formats. Software is available at discounted education prices for faculty and students. Special orders for books and software are available for titles not in stock. We carry all books and products necessary for course work at the University of Colorado Denver Anschutz Medical Center.

**Location:**

Anschutz Medical Campus  
Building 500; 1st Floor  
13001 East 17th Place  
Aurora, CO. 80045  
303-724-2665 (4-BOOK)

The AMC Bookstore is located on the 1st floor of Building 500. When you enter building 500, go up one floor by elevator or stairs from the lobby entrance, from the stairs/elevator go north, until you see a set of double doors to enter the food court (old hospital cafeteria space) and turn east (right) to enter the bookstore.

**Hours:**

Monday - Friday  
8:00 am - 5:00 pm

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**Health Sciences Library**

[http://hsclibrary.uchsc.edu/](http://hsclibrary.uchsc.edu/)

The UC Denver Health Sciences Library links people, reliable health sciences knowledge, and technology in support of effective learning, quality health care, vital research, and community service. The staff of the library strives for the highest quality services as they enhance access to the knowledge base of the health sciences, instruct users in information retrieval and management techniques, and acquire and organize a specialized collection of electronic, print and other resources in a cost-effective manner.

**Location:**

Health Sciences Library | University of Colorado Denver  
Mail Stop A003  
12950 E. Montview Blvd.  
Aurora, CO 80045 | USA  
Phone: 303-724-2152

**Hours:**

Monday - Thursday  
7:00 am – 12:00 Midnight  
Friday  
7:00 am – 6:00 pm  
Saturday  
10:00 am – 6:00 pm  
Sunday  
10:00 am – 12:00 Midnight

Exceptions will posted in early August 2010

Lynne Fox is the Health Sciences Library Liaison to the Computational Bioscience Program and the Center for Computational Pharmacology. Lynne is assigned 10% of her time to assist with copyright issues in building text collections, annotation projects, and working with publishers/vendors to obtain text collections. Keep her in your network and let her know how she can help you. DON'T HESITATE TO
CONTACT HER! Lynne does individual and small group training sessions related to the resources mentioned below -- just let her know when you can meet. Possibilities include Mondays before the lab presentation or Wednesdays before lab meeting times. Lynne.Fox@ucdenver.edu or 303-724-2121.

You can book Library meeting or computer training rooms through the ESS scheduling system (http://schedule.ucdenver.edu/virtualems/) -- come by if you need to find out which rooms, what sizes, etc. The Library has a 40 laptop lab (can be divided into two rooms), televideo conference and av capabilities in most rooms, flat screens or projectors for presentations, and a small portable mic for use in some of the larger rooms without built in av.

IMPORTANT LIBRARY URLs:

Library Home Page - http://hslibrary.ucdenver.edu/

Health Sciences Library Orientation 101 - http://hslibrary.ucdenver.edu/education/library-orientation-tutorials.php Tips on using the library's resources and services in demonstration Flash videos. Other Tutorials of interest:

- Keeping Up: Organizing access to search alerts from the medical literature, blogs, and websites - http://hsl2.ucdenver.edu/education/KeepingUp.php
- NCBI "Introduction to Molecular Biology Resources" - http://www.nlm.nih.gov/bsd/disted/courses/molbio.html These recordings are from a 3 day course offered for librarians on the NCBI resources. Provides in-depth training on various NCBI resources.

Find Journals - http://hslibrary.ucdenver.edu/journals (to find journals with full text online)
Ask a Librarian - http://hslibrary.ucdenver.edu/aal/ Use our email and chat services to get answers to your questions.
Databases Page - http://hslibrary.ucdenver.edu/databases/
Databases for Computers/Information Technology - http://hslibrary.ucdenver.edu/databases/subject/119
Research Consultation - http://hslibrary.ucdenver.edu/research-support/consult.php
Classes - http://hslibrary.ucdenver.edu/classes/
Handouts - http://hslibrary.ucdenver.edu/handouts/
Tutorials - http://hslibrary.ucdenver.edu/online-tutorials

Subscribe to the Appendix: Official Organ of the Health Sciences Library (6/year email newsletter) - http://hslibrary.ucdenver.edu/newsletter/subscribe.php

PDA Resources - http://hslibrary.ucdenver.edu/pda-guide consult with lilian.hoffecker@ucdenver.edu if you have questions.

CiteULike - http://www.citeulike.org/ Store pdfs of articles at this website for access from anywhere. See http://hslibrary.ucdenver.edu/handouts/class-handouts/endnote-web.pdf for more instructions.

EndNote Web - http://www.myendnoteweb.com/ Go to http://hslibrary.ucdenver.edu/databases/by-title/W , click on the Web of Science link, and click on "Please Register for More Features" in the upper right. Your WoS account will also be your EndNoteWeb account. See http://hslibrary.ucdenver.edu/handouts/class-handouts/endnote-web.pdf for more instructions.

iGoogle - http://www.google.com/ig Register and create a customized "dashboard" that you can log into from anywhere, use gadgets to see RSS feeds and other useful tools, see http://hslibrary.ucdenver.edu/handouts/class-handouts/igoogle.pdf

Personalize PubMed with My NCBI: Save searches, create collections, and view filtered subtopics when you are logged into My NCBI. Create your own account: click [Register] in upper right of the screen, then you can:

**CREATE FILTERS TO SORT AND REFINE NCBI SEARCHES INTO MANAGEABLE SUBSETS:**

View this tutorial for instructions for setting up these filters: [http://www.openhelix.com/downloads/jing/2009-03-31_MyNCBI_Filters.swf]

**SAVE PUBMED SEARCHES AND RECEIVE PUBMED AUTOALERTS:**

- While viewing the results from a search, click on "Save Search" (to the right of the search box)
- You will be asked "Would you like e-mail updates of new search results?" If you answer Yes, fill in the form provided with your email and delivery preferences. If you answer No, your search will be stored in a list in your My NCBI account.
- To find and run a search that has been saved, sign into My NCBI and click on the "My NCBI" link in the upper right corner.
- Find the search you want to run in the list and click on the search link to run the search. Click in the checkbox, then on the "What's new for selected" button at the bottom of the page.
- Delete old searches by clicking on the checkbox, then on the "Delete Selected" button at the bottom of the page.

If you use the PubMed link from the library's webpage, you will see our green Article Linker button.

If you use the URL pubmed.gov or any other link to PubMed, you will need to set up the "Outside Tool" to use the green Article Linker button.

- Login to My NCBI
- Click on My NCBI in the upper right
- Click on Preferences on the left, then “Outside Tool” in the list under PubMed (not SNP)
- Click on the letter "U"
- Find "University of Colorado at Denver Health Sciences Library" in the list, click on the button to the left of this listing. SAVE

My NCBI Collections: Save collections of citations for later reference. (Make sure the Internet Explorer popup blocker is off - Tools/PopUp Blocker/ Turn off)

- Sign in to My NCBI if you have not already done so.
- Run a PubMed search,
- Select Collections in the Send to menu.
- On the Save Collection pop-up window you may create a new collection or append to an existing collection, enter a collection name, and delete the saved items from the clipboard.
Recreation

Lounge 500, in Building 500 is a lounge for all Anschutz Medical Campus students – it is accessible 24/7 with your student ID (which you will receive during your school/program orientation). The lounge includes billiards, ping pong, foosball, seating, and privacy rooms which can be used for breastfeeding, prayer, naps (!), etc. Check out the space – it’s right next to the Bookstore/ Food Court area on the first floor of Building 500. There are a few quadrangle areas which are good gathering places for volleyball, frisbee, football and other outdoor activities. You may checkout volleyball net sets, frisbees, etc., from the Student Assistance Office. 303-724-7686.

The Fitzsimons Golf Course is available for everyone to use. Call (303) 397-1818 for a tee time. Visit their web site at www.golfaurora.com/fitz.htm

Intramural Sports

- Flag Football - Fall – Commissioned by AMC Campus
- Volleyball - Fall and Winter – AHEC
- Basketball - Fall and Winter - AHEC
- Flag Football is commissioned by AMC students.
- Basketball and volleyball utilize the services of the Auraria Campus.

Fees for team sports at Auraria are typically $30/student player on a team. $50/guest (spouse, friend, roommate, etc.). Watch the www.ucdenver.edu/studentassistance website, as well as your @ucdenver.edu email for upcoming sports announcements.

Anschutz Medical Campus students are able to use the Recreation Facilities at the Downtown Campus of UC Denver. The Recreation Center is actually the property of Metropolitan State College of Denver, but all of Auraria and Anschutz Medical Campus students are able to use the facilities. You need to have your Anschutz Medical Campus ID (that means you can participate AFTER orientation). Go to http://www.mscd.edu/~cra/# for more information.

Other facilities and parks close to the Anschutz Medical campus include:

- Moorhead Recreation Center  
  2390 Havana Street, Aurora, CO 80010 (303) 366 1718

- Parklane Pool  
  3200 Tucson Street, Aurora, CO 80011 (303) 341-2650

- Aurora Parks and Recreation:  
  General’s Park (at the corner of Colfax and Peoria) Cottonwood Park, Sand Creek Park, Moorhead Park, Spencer Garrett Park, and Havana Park.
AMC Health Insurance Office
http://www.ucdenver.edu/life/services/student-health

The Anschutz Medical Campus at the University of Colorado provides varied student needs in the area of health. The Student Health Insurance (SHI) Plan is designed to provide students with health care coverage offering a PPO accident and sickness health plan.

All degree and specific approved, certificate-seeking students enrolled in five or more credit hours must take the School of Medicine’s Student Health Insurance Plan unless they can prove enrollment in other comparable insurance. Students taking under five credit hours in a degree program are also eligible to purchase the SHI Plan by submitting a selection/waiver form by the September 1, 2010. Forms are located online at http://www.ucdenver.edu/life/services/student-health/Documents/AMC_StudentEnrollWaiver.pdf and in Appendix C.

The Student Insurance Office is available to all students at the School of Medicine to assist with selecting or waiving the Student Insurance Plan. The Student Health Insurance Coordinator can help you evaluate your insurance needs so you choose the best plan available. If you are having problems understanding a bill, or you think an error has been made, don’t hesitate to contact the Student Insurance Office. One of the functions of the Student Insurance Office is to help you resolve billing issues.

The Student Health Insurance Office welcomes each of you to the University of Colorado Denver - Anschutz Medical Campus. We are looking forward to assisting you in maintaining good health while you achieve your educational goals.

Location:
Student Health Insurance Office | University of Colorado Denver  
Mail Stop A035, Education II, North Room #3208  
Aurora, CO 80045  
Phone: 303-724-7674  
E-mail: Laverne Loechel

Hours
Monday through Friday  
7:30 a.m. - 3:30 p.m.

Parking and Transportation

Commuting to Campus
http://www.ucdenver.edu/life/getting-to-campus/Pages/driving-directions.aspx

Head to Parking and Maps for information on where to park, bike rack/bike locker locations, maps to get there, etc. The parking office is located on the GROUND FLOOR of Building 500, just east of the Credit Union.

Public Transportation

The RTD College Pass is available to all active (enrolled) Anschutz Medical Campus degree seeking students (including the Dental ISP Program). The pass is supported by a mandatory, student use fee of $42.90 per semester.

The AMC RTD College Pass INCLUDES all regular fixed route service, including bus (local, express, regional), light rail, call-n-Ride, and skyRide service (free to AMC students with RTD College Pass).

Services NOT included in the RTD College Pass program are: access-a-Ride, BroncosRide, RockiesRide and other special event services.

For any term in which the degree-seeking student enrolls for academic credit at Anschutz Campus, the fee will be assessed. Waivers out of the College Pass Program will be allowed only for individual students.
who meet specific criteria which is outlined in the Fee Waiver Application form. Detailed information about the Waiver process may be found on the Student Assistance website.

For degree seeking students new to campus, the College Pass will not be available until the student completes orientation and receives their AMC ID Badge. For new students, the College Pass will be distributed by the Badging / Security Office during matriculation. Students will be scheduled for Anschutz Campus ID Pictures, and the RTD College Pass ID will be prepared and distributed at the same time.

Carpooling
http://zimride.ucdenver.edu/

UC Denver Zimride is a new, fun and easy way to find rides where you need to go or coordinate your daily commute. Zimride uses Facebook integration and Google Maps technology to make it easy for you to find a friend or fellow UC Denver classmate to share the ride with. It's simple!

Many people have flexible schedules. With Zimride you can even find someone for occasional carpools. Add your ride today and start saving!

Thanks for making a more sustainable, social and fun form of transportation for our community.

If you have questions, contact our UC Denver Zimride Team, Jarrett.Smith@ucdenver.edu or Kerrie.Bathje@ucdenver.edu
Building Maps
Some of your classes will be held in the Education 2 Towers (North and South). Below are maps of the 1st and 2nd floor rooms in both towers.
Building Maps Continued

North Tower
P28

South Tower
L28

Education 2 (North & South Towers)
P28 & L28
Student Assistance Office

http://www.ucdenver.edu/life/services/student-assistance

The Student Assistance Office’s mission is to enhance student life at the Anschutz Medical Campus of the University of Colorado Denver by providing excellence in specific non-academic and academic student services.

Students who have been admitted into their respective school/program or who are currently enrolled utilize the Student Assistance Office's many services during their tenure at the Anschutz Medical Campus. All students may utilize the services of this office - we are here for you!

Location:

Anschutz Medical Campus
Education II North
3rd Floor #3123
Aurora, CO 80045
303-724-7686

Hours:
Monday through Friday
8:00 a.m. - 5:00 p.m.

The Student Service Suite includes several offices -

- Bursar/Cashier
- Diversity and Inclusion
- Financial Aid
- Registrar
- Student Assistance
- Student Health Services/Student Health Insurance

These offices are centrally located on the 3rd floor of Ed II North. The Student Assistance Office is responsible for maintaining smooth access to the variety of services utilized by students. In addition, the Student Assistance Office offers a variety of programming and services to all students at the Anschutz Medical Campus.

The Student Life Handbook contains a wealth of information about the services within the suite, as well as general information about other campus departments and services. Hard copies are available in the Student Assistance Office, or you can download a copy from their website.


University Policies

Honor Code


The Computational Bioscience Ph.D. Program, while housed in the School of Medicine is governed by the Graduate School, and follows guidelines, policies and calendars for the Basic Science departments. For clarification on specific policy questions you can contact the Graduate School by phone 303-724-2915, email Graduate.School@ucdenver.edu or in the office (Academic Office 1 building, Room 2609).

The student academic honor and conduct code and forms are located in Appendix A of this handbook or online at http://ucdenver.edu/academics/colleges/Graduate-School/student-services/Documents/HonorCode.pdf.
Leave Policy
(From the NIH)

1. Vacation and Holidays.
   Trainees may receive the same vacations and holidays available to individuals in comparable training positions at the grantee or sponsoring institution (refer to the general UCD Graduate Student Handbook). Trainees shall continue to receive stipends during vacations and holidays. At academic institutions, the time between semesters or academic quarters is considered an active part of the training period.

2. Sick Leave and Other Leave.
   Trainees may continue to receive stipends for up to fifteen calendar days of sick leave per year. Under exceptional circumstances, this period may be extended by the awarding component in response to a written request from the training program director or the sponsor. Sick leave may be used for the medical conditions related to pregnancy and childbirth pursuant to the Pregnancy Discrimination Act (42 USC 2000 e(k)).

3. Parental Leave
   Trainees may also continue to receive stipends for up to thirty calendar days of parental leave per year for the adoption or the birth of a child when those in comparable training positions at the grantee or sponsoring institution have access to paid leave for this purpose. Either parent is eligible for parental leave. For trainees, the use of parental leave must be approved by the training program director. A period of terminal leave is not permitted and payment may not be made from grant funds for leave not taken.

4. Unpaid Leave
   Individuals requiring extended periods of time away from their research training experience, which could include more than fifteen calendar days of sick leave or more than thirty calendar days of parental leave must seek approval from the awarding component for an unpaid leave of absence. Approval for a leave of absence must be requested in advance by the training grant program director and be countersigned by an authorized institutional official.

5. Leaves of Absence
   During a leave of absence, documentation to suspend the period of appointment must be completed by submitting an amended Statement of Appointment Form and a Termination Notice. These forms should be submitted to the awarding component at the beginning of the leave. At the resumption of NRSA support, the reappointment must be documented on another Statement of Appointment Form.
Disclaimer
This handbook, which includes parts of the Graduate School Rules, does not constitute a contract with the University of Colorado Denver Graduate School nor with the Computational Bioscience Program, either expressed or implied. Both the Graduate School and the Computational Bioscience Ph.D. Training Program reserve the right at any time to change, delete, or add to any of the provisions or contents at their sole discretion. Furthermore, the provisions of this document are designed to serve as firm guidelines rather than absolute rules and exceptions may be made on the basis of extenuating circumstances.
Notes
Appendix A Honor Code and Forms
Honor Code and Forms

STUDENT ACADEMIC HONOR AND CONDUCT CODE

UNIVERSITY OF COLORADO DENVER
ANSCUTZ MEDICAL CAMPUS

A. ACADEMIC HONOR AND CONDUCT CODE

Education at the Anschutz Medical Campus is conducted under the honor system. All students who have entered graduate and health professional programs should have developed the qualities of honesty and integrity, and each student should apply these principles to his or her academic and subsequent professional career. All students are expected also to have achieved a level of maturity reflected by appropriate conduct at all times.

Although it is not possible to list every situation that violates the UCDAMC academic honor and conduct code, the following examples will provide a reference point:

1. Academic Honesty
   Students should adhere to the highest standards of academic honesty and integrity. Examples of behavior that violates these standards include: plagiarism (including the undocumented use of internet and web-based information), cheating, illegitimate possession and/or use of examinations, violation of the ethical standards for conducting research, and falsification of official records.

2. Professional Conduct
   As future health professionals, students should also adhere to the highest standards of professionalism. Examples of unprofessional conduct include misrepresentation of effort, credentials, or achievement in either the academic or professional setting; any action which compromises the quality or safety of patient care; violation of patient confidentiality; and any other conduct unbefitting a professional health practitioner or biomedical researcher.

3. Alcohol and Drug Use
   Alcohol and/or drug abuse compromises the student's ability to learn and to practice as a health provider or researcher and thus is considered unprofessional conduct. Students who have a problem with alcohol and/or drugs should seek assistance from services available on campus. The sale of drugs or the possession of narcotics is against the law. In order to minimize the potential for alcohol abuse at campus functions, students (as guests and/or hosts) must adhere to current University policy governing the consumption of alcohol on campus.

4. Respect for the Rights and Property of Others
   Students should conduct themselves in a manner that recognizes the rights and property of others. Examples of inappropriate behavior include: theft, damages to University or personal property of others, disruption of educational or other activities on campus, illegal use of University facilities, sexual harassment,
physical assault, and any conduct that threatens the health or safety of others. The primary responsibility for reporting violations of the student honor and conduct code rests with the individual student who has violated them. However, fellow students and members of the faculty also share in this responsibility.

B. RELATIONSHIP OF HONOR AND CONDUCT CODE TO LOCAL, STATE AND FEDERAL LAWS
The University adheres to all appropriate local, state and federal laws, and cooperates with law officials in all matters. Any alleged violation of local, state or federal laws will be referred to the appropriate law enforcement agency and such laws have precedence over the provisions of this policy.

C. GRADUATE SCHOOL HONOR AND CONDUCT COMMITTEE
The committee generally consists of four faculty members and two student representatives. The primary focus of this advisory committee is to examine alleged violations of the honor and conduct code, to hear testimony, and to make recommendations to the Dean as appropriate.

D. PROCEDURES
1. Alleged violations by faculty or students of the student honor and conduct code are first reported to the Dean or Assistant Dean. Normally, disciplinary action should not be taken against the alleged violator until the Honor and Conduct Committee and Dean have reviewed the case and arrived at a decision. However, if the alleged violation threatens the welfare or safety of others or is against the law (see B above), appropriate action should be taken immediately.

2. The Dean or Assistant Dean will review the information submitted concerning the alleged violation. If the alleged violator has been confronted with the violation and admits having violated the honor code, the case may be referred immediately to the Dean for review and action. If there is no admission of wrongdoing, the case will be referred to the Honor and Conduct Committee for a hearing. The Assistant Dean will coordinate the hearing process. Legal counsel will not be present for either the student or the University parties. The hearing will adhere to the following minimum guidelines:
   a. Adequate notice to all concerned parties.
   b. An opportunity provided for the student accused of the violation to be heard and to question the person alleging the violation.
   c. A detailed confidential record of the proceedings.

3. Following its deliberations, the Honor and Conduct Committee will submit its findings and recommendations to the Dean. The Dean will make a decision on the case in a timely manner and will communicate the decision to the student and to the appropriate faculty members.
ACADEMIC HONOR AND CONDUCT CODE

Education at the Health Science Center is conducted under the honor system. All students who have entered graduate and health professional programs should have developed the qualities of honesty and integrity, and each student should apply these principles to his or her academic and subsequent professional career. All students are expected also to have achieved a level of maturity reflected by appropriate conduct at all times.

I, ________________________________, have received and reviewed a copy of the UCD-AMC Honor Code found in the Graduate School Handbook and pledge to abide by these rules, signed this date__________________________.

(Today’s date)

Signed: ________________________________

Please return to the Student Coordinator, by September 1, 2010.
Contact Information

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<thead>
<tr>
<th>Name:</th>
<th>Home phone:</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
<td>Email:</td>
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<tr>
<td></td>
<td>CU Employee</td>
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</tbody>
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<table>
<thead>
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<th>Social Security Number</th>
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<th>Student ID#</th>
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</table>

Emergency Contact Information

<table>
<thead>
<tr>
<th>Name:</th>
<th>Phone:</th>
</tr>
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<tbody>
<tr>
<td>Address:</td>
<td>Relationship to employee:</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Address same as Employee ______</td>
<td></td>
</tr>
</tbody>
</table>

Please return to the Student Coordinator, by September 1, 2010.
Appendix B New Student Checklist
New Student Checklist

✔ Submit required admissions paperwork to the Graduate School Office
✔ Submit payroll paperwork to CPBS Office
✔ Attend new student orientation
✔ Obtain your campus ID card
✔ Activate your UC Denver email address
✔ Register for classes
✔ Submit health insurance paperwork to Student Health Office
✔ (For non-residence) Establish Colorado Residency by obtaining:
  • Local checking account
  • Local driver’s license or State ID
  • Proof of Colorado domicile

✔ Return academic honor/code of conduct form and lab contact form to CPBS Office
✔ Become familiar with campus (parking, library, printing, etc.)
✔ Become familiar with the resources available from student services
Appendix C Health Insurance Enrollment/Waiver Form
University of Colorado - Anschutz Medical Campus (AMC) requires that all students taking 5 or more credit hours have health insurance and will automatically bill these students for Annual enrollment on Plan A of the University of Colorado - Anschutz Medical Campus Student Sickness and Accident Insurance Plan. Students with comparable health insurance coverage may waive out of enrollment on the school-sponsored health insurance plan by completing, signing and submitting this form to the Student Insurance Office in person or by mail by the deadline dates listed below (see the top of the first page of this form for the Student Insurance Office location and mailing address). A NEW Waiver Form must be submitted ANNUALLY, after a break in academic studies, or when you have a change in your Policy.

It is unlawful to knowingly provide false, incomplete or misleading facts or information to an insurance company for the purpose of defrauding or attempting to defraud the insurance company. Penalties may include imprisonment, fines, denial of insurance and civil damages. Any insurance company or agent of an insurance company who knowingly provides false, incomplete, or misleading facts or information to a policyholder or claimant for the purpose of defrauding or attempting to defraud the policyholder or claimant with regard to a settlement or award payable from insurance proceeds shall be reported to the Colorado Division of Insurance within the Department of Regulatory Agencies.
Comparable health insurance coverage means that your health plan meets ALL of the following waiver criteria:

- The annual deductible must be no more than $1,000 per Plan Year (HSA’s are not allowable): and
- There is no less than a $100,000 per Sickness or Accident Maximum: and
- Co-insurance is no more than 30%, if applicable; and
- Coverage must include comprehensive services (inpatient and outpatient benefits ($10K or more per Sickness or Accident for outpatient services) in the State of Colorado and benefits cannot be for Emergency Services only (Hospital Only (CICP), Accident Only, Short Term Medical & Student Select plans do not qualify); and
- Coverage must include outpatient mental health benefits of at least 10 visits per year, at a payment of 50% or higher co-insurance level, and
- Coverage must include inpatient mental health benefits at a payment of 50% up to $10,000 per year; and
- Coverage must include retail pharmacy benefits.

The school performs an audit of every waiver form that is received over the course of the Plan Year. If it is found that the information provided to waive enrollment on the school-sponsored insurance plan is no longer valid, or that your insurance plan does not have comparable coverage, you will be automatically enrolled on Plan A of the University of Colorado - Anschutz Medical Campus Student Sickness and Accident Insurance Plan. Automatic enrollment will be on an Annual basis for waivers received in the Fall semester, for Spring/Summer enrollment for waivers received in the Spring semester, and for Summer enrollment for waivers received in the Summer semester.

Check One:

- I waive enrollment on the Plan Year 2010-11 University of Colorado - Anschutz Medical Campus Student Accident and Sickness Health Plan as my Policy meets the above criteria. You must attach a copy of your current insurance card (both the front and back of the card) and a copy of the Summary of Benefits of your current insurance plan which defines the comparable coverage as outlined above. Your insurance plan must have been effective 08/09/10 for new students or 09/01/10 for returning students in the Fall.
- I choose to enroll on the Plan Year 2010-11 University of Colorado - Anschutz Medical Campus Student Sickness and Accident Insurance Plan by designating enrollment in Plan A or Plan B below. If you do not make any selection you will be automatically enrolled in Plan A. You will not be allowed to switch plans after coverage begins. Please note: Students graduating in December 2010 can choose to elect either Annual or Fall Semester coverage – please contact the Student Insurance Office at 303-724-7674 for more details.

<table>
<thead>
<tr>
<th>Effective and Termination Dates</th>
<th>Plan A Premium</th>
<th>Plan B Premium</th>
<th>Enrollment/Waiver Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual</td>
<td>$3,097</td>
<td>$2,352</td>
<td>09/01/10 (both new and returning students)</td>
</tr>
<tr>
<td>Fall*</td>
<td>$1,052</td>
<td>$ 803</td>
<td>09/01/10</td>
</tr>
<tr>
<td>Spring/Summer**</td>
<td>$ 2,078</td>
<td>$ 1,580</td>
<td>02/01/11</td>
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<tr>
<td>Summer**</td>
<td>$  796</td>
<td>$  609</td>
<td>06/15/11</td>
</tr>
</tbody>
</table>

*Fall coverage is only available to students Graduating in December 2010 (graduation date will be verified by school).
**Open enrollment for Spring and Summer only applies to new students. All continuing students must provide documentation of being involuntarily dropped from other group coverage for enrollment in Spring or Summer semesters.

I must actively attend classes the first thirty-one (31) days of each semester for which I am purchasing insurance coverage. If I drop out within the first thirty-one (31) days, I will not be eligible for the plan, the plan will be void and never effective, and I will not be entitled to receive any benefits for illness or injuries occurring in the days I may have attended classes nor will any claims be processed or paid. I understand that, once enrolled, I will not receive a refund of any amount paid unless I drop out of all classes to enter the armed forces of any country.

I specifically consent to the release of any information which may be protected under the Family Educational and Privacy Rights Act, including without limitation, records of enrollments, attendance or payment of tuition related to my attendance at any educational institution to the blanket policyholder, Ameriben/IEC Group, Connecticut General Life Insurance Company or their legal representatives or attorneys-in-fact.

By my signature I agree that the above statements are true and agree to immediately notify the Student Insurance Office of any changes in my contact information or my health insurance policy information. Any approved waiver is good for the 2010-2011 Plan Year only and I understand that I must submit a new Waiver Form annually or after a break in academic studies. I understand that falsification of information used to waive insurance is a violation of the University of Colorado - Anschutz Medical Campus Student Honor Code. The school does an audit on every waiver form received. If it is found that the information provided to waive the school’s plan is no longer valid, or that your insurance plan does not have comparable coverage you will be automatically enrolled and charged the full premium.

Student’s Signature ______________________ Date ______________________

Underwritten by Connecticut General Life Insurance Company
For More Information Contact the Student Insurance Office • (303) 724-7674