

MASTER OF SCIENCE IN MOLECULAR BIOTECHNOLOGY PROGRAM

STUDENT HANDBOOK 2019 – 2020 ACADEMIC YEAR



**INFORMATION FOR GRADUATE STUDENTS
IN THE
MASTER OF SCIENCE IN MOLECULAR BIOTECHNOLOGY PROGRAM**

**DEPARTMENT OF CLINICAL LABORATORY SCIENCES
UNIVERSITY OF KANSAS MEDICAL CENTER**

Welcome graduate students! We have prepared this document to assist you during your graduate studies in the Department of Clinical Laboratory Sciences. The information presented is a combination of Office of Graduate Studies and Departmental requirements. It is important that you become familiar with all of the pertinent Office of Graduate Studies rules and regulations as described in the Graduate catalog which can be found online at:

[Office of Graduate Studies Guide](#)

In addition to the Graduate catalog, the University of Kansas Medical Center (KUMC) maintains a student handbook that details the Policies and Guidelines of the KUMC campus, the campus calendar, and includes each individual school's handbook. The KUMC Student Handbook is available online (and is printable if you prefer a hard copy) at:

[KUMC Student Handbook](#)

The School of Health Professions student handbook can be directly accessed at the following site:

[School of Health Professions Student Handbook](#)

As graduate students, you are responsible for the information obtained in these documents. It is important that you maintain a position in good standing within the Office of Graduate Studies, and that all requirements are fulfilled. The Graduate Director will be pleased to discuss any question or concern involving the graduate program. The attainment of an advanced degree is a difficult task but provides high reward. To reach the required level of knowledge and skill requires substantial effort at the laboratory bench, in formal coursework, and in the study of literature within the discipline. Because of the level of training excellence required and expected, each degree aspirant will be mentored, advised, counseled and encouraged throughout the program. While the responsibility for success lies with each student, the Department faculty wants every student to succeed. Consequently, the Department will make every effort to provide you with the best possible learning environment in order to give you the opportunity to reach your goal.

Department of Clinical Laboratory Sciences

University of Kansas Medical Center
3901 Rainbow Blvd.
MS 4048
Kansas City, Kansas 66160

Chair, Graduate Director Eric Elsinghorst G014C Eaton 8-1089 eelsinghorst@kumc.edu
(advising, degree requirements, rules and reg., anything)

Administrative Assistant Suzanne Russell G004A Eaton 8-5221 srussell3@kumc.edu

School of Health Professions – Dean’s Office

Dean Abiodun Akinwuntan 1024 Murphy 8-5235 aakinwuntan@kumc.edu

Executive Officer Michael Ann Raymer 1024 Murphy 8-5235 mraymer@kumc.edu

School of Health Professions – Business Affairs, Student Affairs & Outreach

Director of Finance Erin Manuel 4040 SON 8-5277 emanuel@kumc.edu
and Administration

Administrative Officer Christine Jones 4040 SON 8-5275 cjones24@kumc.edu

School of Health Professions – Networking & Multimedia/Web Development

Network Specialist Tim Hunt 8-8966 thunt2@kumc.edu

Information Resource Terry Erisman 4044 SON 8-4411 terisman@kumc.edu
Specialist

KUMC Office of Graduate Studies

Graduate Studies processes all paperwork related to graduate students, faculty, degrees, programs and coursework.

Vice Chancellor For Academic Affairs	Robert Klein	5018 Wescoe 8-2739	rklein@kumc.edu
Dean of Graduate Studies	Michael Werle	5008 Wescoe 8-7491	mwerle@kumc.edu
Director of Graduate Studies	Marcia Jones	5004 Wescoe 8-4876	mjones@kumc.edu

Interdisciplinary Graduate Program in Biomedical Sciences (IGPBS)

Director	Michael Werle	5008 Wescoe 8-7491	mwerle@kumc.edu
Program Coordinator	Martin Graham	5010 Wescoe 8-2719	mgraham4@kumc.edu

The Office of the Registrar 913-588-7055

Located in Dykes Library

[Registrar's Office](#)

for:

- Change of Name
- Official verification of grades/or student enrollment (for insurance, work etc.)
- Residency questions
- Online transcript request
- Change of Address

Financial Aid 913-588-5170

Located in Dykes Library

[Student Financial Aid Office](#)

for:

- Questions about financial aid-programs and process
- Scholarships and grant programs

IT Help Desk Customer Support 913-588-7995

[Information Resources](#)

for:

- Email accounts
- Computer Access problems
- Protocol for the help desk to follow when helping you with your email account

ATM Machines can be found:

- Outside the Hospital Cafeteria

Student Health 913-588-1941

Located in the Student Center Building 1st floor

[Student Health Services](#)

for:

- Immunizations, Appointments for health/sickness
- Appointments 588-1941
- KUMC Student Counseling Center 588-6580
- KUMC Emergency 588-6500
- KUMC Switchboard 588-5000

KUMC Credit Union 913-588-5375

Located in 1035 Delp

<http://www.kumccu.org>

(notary public: \$2 fee for non-members)

Dykes Library 913-588-7166

[Dykes Library](#)

Lost and Found is located in Dykes Library

KUMC Bookstore 913-588-2537

Located in Orr-Major Building

[KU Bookstore](#)

KUMC Police

[KUMC Police Department](#)

For immediate access to the campus police, activate any blue phone on campus - any day, any time.

You do not need to dial.

Location:

115 Support Services Facility

2100 West 36 Avenue

Kansas City, Kansas 66160-7145

- Emergency: 911
- **Non-Emergency: 913-588-5030**
- Lost & Found: 913-588-5177
- Escort service starts at 6PM covering the area between Chester St (N), 43rd St (S), Fisher St (W) and State Line Rd (E). Dial 8-5030.

KUMC Environment, Health, and Safety Office

[Environment, Health, and Safety Office](#)

[Links for Health and Safety Programs and Policies](#)

[Chemical Safety \(including Hazardous Materials\)](#)

KUMC No Smoking Policy

The KUMC campus is smoke-free and the use of tobacco products is prohibited inside and outside - anywhere considered to be a part of our campus property.

MASTER OF SCIENCE IN MOLECULAR BIOTECHNOLOGY DEGREE PROGRAM

TECHNICAL STANDARDS FOR ADMISSION AND RETENTION

Graduates must have the knowledge and skills to function in a broad variety of research environments, including academic, industrial, and clinical settings. Therefore, the following abilities and expectations must be met by all students in the program.

1. Essential Observational Requirements

A Master of Science in Molecular Biotechnology student must be able to:

- Observe and perform laboratory procedures in which biological materials (e.g., proteins, nucleic acids, body fluids, cultured cells, and cellular samples) are analyzed by molecular biological methods.
- Characterize the color, odor, clarity, and viscosity of biological materials, reagents, or chemical reaction products.
- Read and comprehend text, numbers, and graphs displayed in print and other visual displays.
- Perform comparative observations of text, movement, shapes, graphs, colors, etc.

2. Essential Movement Requirements

A Master of Science in Molecular Biotechnology student must be able to:

- Move freely and safely about a laboratory.
- Reach laboratory benchtops and shelves, and lift a minimum of 25 pounds.
- Travel to laboratory sites for practical experience – sites may be located anywhere within the Kansas City metropolitan area.
- Perform moderately taxing continuous physical work over several hours.
- Control laboratory equipment and adjust instruments to perform laboratory procedures.
- Use an electronic keyboard generate, calculate, record, evaluate, and transmit information, and to operate laboratory instruments.

3. Essential Communication Requirements

A Master of Science in Molecular Biotechnology student must be able to:

- Read and comprehend technical and professional materials (e.g., textbooks, journal articles, handbooks, and instruction manuals).
- Follow verbal or written instructions in order to correctly and independently perform laboratory procedures.
- Effectively, confidently, and sensitively converse with scientific staff at practicum sites regarding laboratory tests.
- Communicate verbally and in a recorded format (writing, typing, graphics, or telecommunication) with faculty members, fellow students, staff, and scientific staff.
- Independently prepare papers, prepare laboratory reports, and take paper, computer, and laboratory practical examinations.

4. Essential Intellectual Requirements

A Master of Science in Molecular Biotechnology student must:

- Possess these intellectual skills: comprehension, measurement, mathematical calculation, problem solving, reasoning, integration, analysis, comparison, self-expression, and criticism.
- Be able to exercise sufficient judgment to recognize and correct performance deviations.

5. Essential Behavioral Requirements

A Master of Science in Molecular Biotechnology student must:

- Be able to manage the use of time and be able to systematize actions in order to complete professional and technical tasks within realistic constraints.
- Possess the emotional health necessary to effectively employ intellect and exercise appropriate judgment.
- Demonstrate appropriate affective behaviors and mental attitudes to not jeopardize the emotional, physical, mental and behavioral safety of other individuals with whom there is interaction in academic and practicum settings.
- Possess the mental and emotional rigor to demonstrate respect to all people, including fellow students, faculty, and other individuals at practicum settings, without showing bias or preference on the basis of race, color, age, sex, religion or creed, national origin or ancestry, gender expression, gender identity, disability, veteran status, sexual orientation or genetic testing & screening.
- Be able to perform technical procedures while experiencing the stresses of research environments (e.g., large number of tasks to complete in a limited amount of time), emergent demands (e.g., changes in procedures), and potentially distracting environments (i.e., high noise levels, crowding, complex visual stimuli).
- Be flexible and creative and adapt to professional and technical change.
- Recognize potentially hazardous materials, equipment, and situations and proceed safely in order to minimize risk of injury to self and nearby individuals.
- Be honest, compassionate, ethical, and responsible. The student must be forthright about errors or uncertainty. The student must be able to critically evaluate her or his own performance, accept constructive criticism, and look for ways to improve. The student must be able to evaluate the performance of fellow students and tactfully offer constructive comments.

It is the student's responsibility to notify the Department of Clinical Laboratory Sciences if there is any reason they cannot meet the expectations of students in the MS in Molecular Biotechnology program with or without reasonable accommodation.

Individuals with disabilities are encouraged to apply to the program. Candidates who indicate that they cannot meet one or more of the expectations will be reviewed further by the Admissions Committee, with applicant and faculty input, to determine what reasonable accommodations might be possible to facilitate successful completion of the clinical laboratory science curriculum and preparation for the certification examinations.

MASTER OF SCIENCE IN MOLECULAR BIOTECHNOLOGY DEGREE PROGRAM
TECHNICAL STANDARDS FOR ADMISSION AND RETENTION

The expectations for MS in Molecular Biotechnology students are described above. If you have any questions about program accommodations or university services, please contact the KU Medical Center EO/Disability Specialist at 913-588-7813 (V) or 913-588-7963 (TDD).

I am aware of the technical standards for admission and retention for students of the MS in Molecular Biotechnology program.

Signature

Date

Printed Name

ACCOMMODATION OF INDIVIDUALS WITH DISABILITIES

Accommodation Policy:

It is the policy of the University of Kansas Medical Center to provide reasonable accommodation to qualified individuals with known impairments that meet the statutory definition of a covered disability except where such accommodation would impose an undue hardship or present the threat of harm. Reasonable accommodation applies to all aspects of employment and all educational programs, services and activities. Persons with disabilities who are covered under this policy include students who satisfy eligibility criteria; and, with or without reasonable accommodation, meet the technical standards and matriculation requirements of the program.

Procedure for Requesting Accommodation:

Students who believe they may need academic accommodations are encouraged to contact Cynthia Ukoko, in the Academic Accommodations Services Office as soon as possible to better ensure that such accommodations can be implemented in a timely fashion. Online appointments may also be made at <https://medconsult.kumc.edu>.

For online information about academic accommodations, please go to <http://www.kumc.edu/student-affairs/academic-accommodation-services.html>.

Cynthia Ukoko, Academic Accommodations Services Office
G020 Dykes Library
Mail Stop: 4029
Telephone: (913) 945-7035

Students may also discuss their need(s) for accommodation with faculty or the school's Disability Officer.

PROGRAM INFORMATION

Curriculum. The general mission of the MS in Molecular Biotechnology program is to provide broad-based knowledge and skills to prepare students for advanced careers in molecular biotechnology settings, such as molecular bioscience-oriented clinical, industrial and research laboratories. To realize this mission, the curriculum is structured to provide a firm foundation in the principles underlying modern biotechnology while integrating this theoretical understanding with intensive training in a variety of laboratory skills. The curriculum combines traditional coursework as well as practicum-based experience. Students obtain training in the use and application of state-of-the-art methodologies and instrumentation as well as critical thinking and trouble shooting skills. The application of these skills to research and development is emphasized.

The Master of Science in Molecular Biotechnology is a minimum 40 credit hour program that can be completed in two years if taken on a full-time basis, as outlined below.

YEAR 1: Fall Semester

GSMC 850 Proteins and Metabolism (2 credit hours) <ul style="list-style-type: none">• Basic principles of metabolism, protein structure and an introduction to nucleic acids (9AM-11AM, Mondays and Wednesdays, first half of the fall semester)
GSMC 851 Molecular Genetics (2 credit hours) <ul style="list-style-type: none">• Basic principles of molecular genetics, DNA replication, DNA repair, transcription, and translation (9AM-11AM, Mondays and Wednesdays, second half of the fall semester)
GSMC 852 Introduction to Biomedical Research I (2 credit hours) <ul style="list-style-type: none">• Research problems, methods, and literature discussion that interfaces with the lecture content of GSMC 850 and GSMC 851 (9AM-11AM, Fridays, throughout the fall semester)
GSMC 856 Introduction to Research Ethics (1 credit hour) <ul style="list-style-type: none">• Discussion of research ethics, including scientific fraud, plagiarism and misrepresentation, conflicts of interest, and confidentiality (9AM-11AM, Thursdays, first half of the fall semester)
CLS 710 Molecular Techniques Lecture I (2 credit hours) <ul style="list-style-type: none">• Theory underlying molecular techniques involving recombinant DNA, genetic engineering, and genomics (1PM-2PM, Mondays and Thursdays, throughout the fall semester)
CLS 711 Molecular Techniques Laboratory I (2 credit hours) <ul style="list-style-type: none">• Advanced laboratory with practical application of selected nucleic acid and cell culture techniques for research and clinical settings (2PM-4:30PM, Mondays and Thursdays, throughout the fall semester, many additional independent hours required in the laboratory)
CLS 740 Journal Club (1 credit hour) (or CLS 730) <ul style="list-style-type: none">• Analysis and presentation of articles from the literature• This course meets 2-3:30PM, Fridays, throughout the semester• This course alternates every fall semester with CLS 730 Current Issues in Biotechnology

YEAR 1: Spring Semester

GSMC 853 Cellular Structure (2 credit hours) <ul style="list-style-type: none">Basic principles of cellular structure and function, including lipid bilayer, membrane proteins, and cellular organelles (9AM-11AM, Mondays and Wednesdays, first half of the spring semester)
GSMC 854 Cell Communication (2 credit hours) <ul style="list-style-type: none">Basic principles of cellular communication, including G-protein-coupled signaling, cytoskeleton, cell cycle control, cell death, extracellular matrix, and cancer (9AM-11AM, Mondays and Wednesdays, second half of the spring semester)
GSMC 855 Introduction to Biomedical Research II (2 credit hours) <ul style="list-style-type: none">Research problems, methods, and literature discussion that interfaces with the lecture content of GSMC 853 and GSMC 854 (9AM-11AM, Fridays, throughout the spring semester)
CLS 720 Molecular Techniques Lecture II (2 credit hours) <ul style="list-style-type: none">Theory underlying protein purification, characterization, and analysis techniques including proteomics (1PM-2PM, Tuesdays and Thursdays, throughout the fall semester)
CLS 721 Molecular Techniques Laboratory II (2 credit hours) <ul style="list-style-type: none">Advanced laboratory with practical application of selected protein and immunological techniques for research and clinical settings (2PM-4:30PM, Tuesdays and Thursdays, throughout the fall semester, many additional independent hours required in the laboratory)

YEAR 2: Summer Semester

BIOL 702 Laboratory Practice: Radiation Safety Procedures (0.75 credit hours) <ul style="list-style-type: none">Structure of the atom, isotopes, and radioactivity with emphasis on radiation protection and safe handling of isotopesThis course meets 9AM-12PM, Monday-Friday, during the first week of the summer semester on the KU Lawrence campus
BIOL 703 Radioisotopes and Radiation Safety in Research (1.25 credit hours) <ul style="list-style-type: none">Structure of the atom, isotopes, and radioactivity with emphasis on radiation protection and safe handling of isotopesThis course meets 9AM-12PM, Monday-Friday, during the second week of the summer semester on the KU Lawrence campus
CLS 750 Practicum I (4 credit hours) <ul style="list-style-type: none">Research performed in collaboration with laboratories at KUMC and other institutions in the Kansas City area

YEAR 2: Fall Semester

CLS 751 Practicum II (5 credit hours) <ul style="list-style-type: none">Research performed in collaboration with laboratories at KUMC and other institutions in the Kansas City area
CLS 730 Current Issues in Biotechnology (1 credit hour) (or CLS 740) <ul style="list-style-type: none">Seminar series by academic and industry speakers on scientific, business, legal, social, and ethical issues in biotechnologyThis course meets 2PM-3:30PM, Fridays, throughout the fall semesterThis course alternates every fall semester with CLS 740 Journal Club

YEAR 2: Spring Semester

CLS 752 Practicum III (5 credit hours) <ul style="list-style-type: none">• Research performed in collaboration with laboratories at KUMC and other institutions in the Kansas City area
CLS 742 Scientific Writing (1 credit hour) <ul style="list-style-type: none">• Development of scientific writing skills. This course will serve to guide students and monitor progress in completing the written component of the final general examination.

Practicum. As indicated in the above outline, the program includes three practica. These practica are central to meeting the objective of providing experience in various aspects of the molecular biotechnology field. The practica are performed during the second year of the program, with one practicum during each of the Summer, Fall, and Spring semesters of that year. Each practicum is performed at a different site to provide a different molecular biotechnology emphasis. When enrolled in a practicum, your primary academic obligation is the practicum itself. Practicum studies are performed on a full-time basis (i.e., eight hours a day, Monday through Friday [CLS 750] or Monday through Thursday [CLS 751 & CLS 752]). This dedicated effort allows you to understand the theory and application of state-of-the-art molecular techniques and technologies in depth. Additionally, studying at a single practicum site for a full semester will allow you to gain an appreciation of the day-to-day opportunities, obligations, and realities of professionals working in molecular biotechnology settings. During a practicum, you will work with investigators, laboratory staff, and other members of the practicum site in the ongoing activities of the practicum site. In a research-oriented practicum, you will initially participate in an ongoing research project that will lead to independent research activities.

Students must successfully complete the following courses prior to enrolling in practicum courses: CLS 710, CLS 711, CLS 720, CLS 721, GSMC 850, GSMC 851, GSMC 852, GSMC 853, GSMC 854, GSMC 855, and GSMC 856.

Students are not expected to provide “service work” for the practicum sites during their rotations. Occasionally, a student may choose to be hired by a practicum site and the employment is outside the scheduled practicum hours (e.g., evenings or weekends). In such cases, the student is a *bona fide* employee of the site and the work is not considered to satisfy any part of the student’s practicum requirements.

Degree completion. A final general examination is required during your final spring semester in the program. This exam consists of a written and an oral examination. The written component consists of a grant proposal. The topic of the proposal is selected during the final fall semester. The development and writing of the proposal is accomplished as part of CLS 742, Scientific Writing. Once the final draft of the proposal is accepted by the CLS 742 instructor, the final oral defense will be scheduled. Completion of the written component is required preliminary to taking the comprehensive oral examination. The oral examination is a defense of your proposal and can include questions regarding your general knowledge of molecular biotechnology concepts and applications. A committee of three members of the graduate faculty administers the oral defense. Your performance on the oral defense will be rated as “Honors,” “Satisfactory” or “Unsatisfactory” and this rating will be forwarded to the Office of Graduate Studies. If the rating is “Unsatisfactory,” you may be allowed to repeat the examination, with the recommendation of the Department. The repeat examination may not be scheduled sooner than two months after the first attempt. Under no circumstances will the student be allowed to take the final oral defense more than twice. If a rating of at least “Satisfactory” is not achieved after the second attempt, the student will be dismissed from the program. The timeline for degree completion requirements will be reviewed in the Fall and Spring advising meetings held between you and the Graduate Director (please see “Advising”, below).

You must be in good academic standing with the KUMC Office of Graduate Studies (i.e., enrolled in at least one credit hour in regular status with a minimum 3.0 cumulative GPA) to take the final general examination.

Advising. You will be assigned a Graduate Advisor(s) who will be responsible for guiding you as you satisfy all requirements of the program and the Office of Graduate Studies. Individual advising meetings with your advisor will occur at the beginning of each semester, and additionally as required based on your academic performance. Before the start of the fall semester, new students will participate in an orientation that covers policies, requirements, and academic support services for the program and School of Health Professions.

GENERAL INFORMATION

Alertus system and Emergency Contact Information. In order to increase campus safety, yellow Alertus units have been installed on walls around campus. The units are a way for the KUMC police department to communicate in real time during an emergency (e.g., severe weather that causes the need for immediate action, situations that affect public safety, hazardous spill or environmental danger). In an emergency, the Alertus units sound an alarm, flash lights, and display a text message with information and instructions. Additionally, an emergency e-mail goes out to all university accounts, and a text message is sent to those individuals who have provided their mobile phone number. All students who have provided phone numbers in Enroll&Pay will automatically receive emergency text messages. If you would like to opt-out of these emergency notification text messages, log onto Enroll & Pay, click on the “Emergency Contact Info” link in the Main menu, and follow the instructions.

Financial Assistance. If you have any questions regarding Financial Aid, please contact that office at (913) 588-5170. Website: <http://www.kumc.edu/student-services/student-financial-aid.html>. Please be advised that financial aid applications and/or funds are not transferable from the KU Lawrence Campus to KUMC. If you need financial aid while on this campus, you must apply through the KU Medical Center Financial Aid office at the number listed above. Send or submit all materials (i.e. papers, applications) directly to that office. Information about scholarships available to current KUMC SHP students can be found at:
<http://www.kumc.edu/school-of-health-professions/scholarships.html>

Health Insurance. KUMC students are required to have a complete health record on file in the Student Health Center. Please visit [Health Requirements for Enrollment](#) for information regarding requirements of the Student Health Services Office for KUMC students. From that site, you can download forms that must be completed and returned to the Student Health Services Office. All students at KUMC are required to maintain health insurance coverage throughout their enrollment. For information about health insurance available to KUMC students, visit [Student Health Insurance](#). Health insurance coverage is mandatory for all international students enrolled at the University of Kansas, regardless of their course load. Insurance coverage will be automatically included in international student tuition bills, and students will no longer be required to make separate payment arrangements. All questions relating to this information should be directed to Student Health Services, not the Clinical Laboratory Sciences department. The telephone number for Student Health Services is (913) 588-1941.

Housing. KUMC Student Services has contracted with a private company to provide a housing referral website: <https://kumc.gradrent.com>. The website is designed for KUMC and free for anyone looking to buy or rent.

Jayhawk Tech Clinic. The Jayhawk Tech Clinic is available for walk-up support in Taylor 3021 to discuss any IT issue you’re having. Sign up for an appointment or find more info here: [Information Resources](#). Some of the support services include:

- Help with any operating system issue, Mac or Windows
- Virus & malware cleanup and installation of free protection
- Smartphone and tablet assistance including setting up wi-fi, email, and calendars
- Performance tuning, registry cleaning, and disk defragmentation
- Assistance with implementing a backup strategy

Mail. You have been issued an KUMC Outlook e-mail account. All University business and department business is conducted only through your Outlook account, so check it regularly. If you have not already done so, you should access your account and change the password assigned to you. *Your Outlook account will be the only e-mail address used for program communications.*

A mailbox for the receipt of campus and federal mail by Clinical Laboratory Science graduate students is located in Suzanne Russell's office (G004A Eaton). Outgoing campus mail can be left in the same office. Be certain to include Mail Stop (MS) numbers on items sent through campus mail. The MS number for the Clinical Laboratory Sciences department is MS4048.

Name/Address Changes. Students should notify the Office of the Registrar immediately of any name, telephone and/or address changes ([Registrar's Office](#)). Failure to notify the Registrar affects all records and communication with the University. *Always notify the CLS Graduate Director of such changes as well.* It is equally important that both offices have your current phone number(s) in the event of an emergency. The program does not disclose student telephone numbers and/or addresses. We do, however, need a way to contact you – even if your number is an unlisted one.

Parking. A map of the KUMC parking lots and shuttle stops can be found at: [KUMC parking map](#). Students may purchase parking permits on a space-available basis by contacting the [Parking Services Office](#), 2100 West 36th Ave. Kansas City, KS 66160, (913) 588-5175, Monday through Friday, 8 AM–5PM. Online vehicle registration can be completed at: [Online Parking System](#). If you are struggling to find a parking spot, call the Parking department at 913-588-5175. They will direct you to an available space, possibly in another color lot (red, etc.). If you need a jump start, or have a flat tire, call Police Dispatch at 913-588-5030.

[Shuttle service](#) is available from satellite KUMC parking lots Monday-Friday from 4:30AM to 12:15AM and run about every 20 minutes throughout the day (more frequently during morning and evening rush hours). [Map of shuttle stops](#) Off-campus police security escorts are available 8PM-6AM daily. You can request this service by calling police dispatch at 913-588-5030. Additionally, Parking Services has partnered with [TapRide](#) which allows students to request a blue shuttle ride or security escort.

How to get started with TapRide:

- Download the TapRide app from the Apple Store or Google Play.
- Select the University of Kansas Medical Center from the system drop-down menu.
- Sign in with your KU Medical Center user credentials.
- Choose a pickup location.
- Choose a destination.
- When the driver accepts the request, you will be notified if a security vehicle or campus shuttle will be arriving to provide service.
- After the service, please take a moment to rate your experience.
- The boundaries are:
 - Chester Avenue to the North
 - State Line Road to the East
 - 43rd Street to the South
 - Fisher Street to the West

Student Support Services. The KUMC [Office of Student Affairs](#) offers various support services to the student community.

The [Student Counseling and Educational Support Services](#) office provides psychological services and educational assistance to students. Services are provided by qualified professional staff and are confidential and free of charge. These services range from personal counseling to learning resources, services for student with disabilities, and recreational opportunities.

The KUMC [Archie R. Dykes Health Sciences Library](#) is one of the most complete medical libraries in the Midwest. Reference resources, literature search, and interlibrary loan services are available through the library. The library also houses computers that are available for internet access, personal computing, and completing computer-based assignments.

The [Information Resources Office](#) offers a wide range of services for students. The Teaching & Learning Technology division offers orientation for online courses. Other services include classroom, auditorium, and audio/visual equipment reservation, ITV, DVD authoring, and technical assistance.

[Legal assistance](#) is available to students that have been assessed the KUMC Required Campus Fee and is provided by a private attorney licensed in Kansas and Missouri. Legal advice is available by appointment only. To learn how to schedule an appointment, visit the Student Legal Service website (follow the link above).

Writing Center. The [Writing Center](#) in Dykes Library offers students a welcoming place for discussing writing. The Center offers free tutoring on writing assignments, workshops and presentations, resources, writing groups, and more. The goal is to make students more effective, confident writers by providing feedback on their work and advice on their writing process. Appointments can be made by phone (913-945-8477; TTY: 711), or electronically (writing@kumc.edu or <https://medconsult.kumc.edu>).

ACADEMIC AND GRIEVANCE POLICIES

The Graduate Director shall obtain a statement for the student's file that verifies that the student has been informed of these regulations and conditions. The statement shall be signed and dated.

Academic Standing. The School of Health Professions academic and performance standards and policies are published in the [School of Health Professions Student Handbook](#). You must be capable of demonstrating knowledge obtained in the courses of the program. Academic failure precludes fulfillment of this requirement.

To remain in good standing in the program, you must maintain a "B" average (cumulative grade-point average [GPA] of at least 3.0 on a 4.0 scale). Only grades of "A" or "B" are considered satisfactory in graduate courses with a "CLS" designation. If a grade of "C" or below is obtained in a CLS course, the work is considered as unsatisfactory and will not count toward fulfilling degree requirements, and the course must be repeated the next semester in which the course is scheduled (provided that the cumulative GPA in the program is at least 3.0 at the start of that semester). For courses with a designation other than CLS, only grades of "A", "B", or "C" are considered satisfactory. If a grade below "C" is obtained in a non-CLS course, the work is considered as unsatisfactory and will not count toward fulfilling degree requirements, and the course must be repeated the next semester in which the course is scheduled (provided that the cumulative GPA in the program is at least 3.0 at the start of that semester). If a grade of "U" is obtained for any course graded on a U/S basis, the work is considered unsatisfactory and must be repeated the next semester in which the course is scheduled (provided that the cumulative GPA in the program is at least 3.0 at the start of that semester). Students can only repeat a course one (1) time and must achieve an acceptable grade on the second try or they will be dismissed from the program. Students are subject to dismissal if they earn two unsatisfactory grades while enrolled in the program. This condition applies to any combination of courses (e.g., unsatisfactory grades in two different courses, or unsatisfactory grades obtained during the repeat of a particular course).

If at any time your cumulative GPA falls below "B" (3.0 on a 4.0 scale), you will automatically be placed on academic probation by the KUMC Office of Graduate Studies and will be required to raise your cumulative GPA to at least a 3.0 during the next semester (including the summer semester). Failure to meet this requirement will result in a recommendation that you terminate graduate study.

You must be in good academic standing (i.e., enrolled in at least one credit hour in regular status with a minimum 3.0 cumulative GPA) during the semester in which you wish to take the final general examination. You must have a minimum 3.0 cumulative GPA at the end of your final semester to complete the program.

Accommodation of Individuals with Disabilities. It is the policy of the University of Kansas Medical Center to provide reasonable accommodation to qualified individuals with known impairments that meet the statutory definition of a covered disability except where such accommodation would impose an undue hardship or present the threat of harm. Reasonable accommodation applies to all aspects of employment and all educational programs, services and activities. Persons with disabilities who are covered under this policy include students who satisfy eligibility criteria; and, with or without reasonable accommodation, meet the technical standards and matriculation requirements of the program. Please visit [Academic Accommodation Services](#) for more information about academic accommodation. *Procedure for Requesting Accommodation.* Students who believe they may need accommodations are encouraged to contact Cynthia Ukoko, cukoko@kumc.edu, in the Academic Accommodations Services Office (G020 Dykes), 913-945-7035, as soon as possible to better ensure that such accommodations can be implemented in a timely fashion. Online appointments may also be made at <https://medconsult.kumc.edu>.

Attendance. Students in the Master of Science in Molecular Biotechnology program should become thoroughly knowledgeable with each course and professional criterion in preparing for a career in the life sciences. Class attendance is required because the complex material presented is essential for the professional development of the student. Lab and practicum assignments require performance of procedures and/or application of principles. All assignments and course objectives must be completed to the satisfaction of the instructor. The following policies apply to all courses with a “CLS” designation:

1. Tardiness:

- a) The student should adhere to the time set by the Instructor for class attendance. More than 15 minutes late shall constitute an absence.
- b) If the student is tardy to a lecture or laboratory course, he/she should explain the reason for the tardiness at the end of the period or at an appropriate time within the period. Tardiness at a practicum site should be explained on arrival at the site.

2. Absence:

- a) **Lectures** - Students are expected to attend all lectures. In the event of serious illness or emergency, the student must call the Instructor (or the Clinical Laboratory Sciences office if the Instructor cannot be reached) early that day to report she/he is ill and will not be in. Five percent (5%) will be deducted from the final grade each time absences are equal to the number of credit hours for that class (i.e., for a 2 credit hour course, if two classes are missed a 5% deduction will occur, if four classes are missed a 10% reduction will occur). As stated above, being 15 minutes late will be considered an absence. At the discretion of the instructor, proper documentation for the absence may be required. Should a quiz or exam be missed, a separate exam may be allowed at the discretion of the instructor. The instructor will determine if the exam can be taken (meaning the cause for absence is acceptable) and what form of proper documentation is required. Excused absences will only be granted when a student follows policy and are given at the discretion of the instructor.

Laboratories - Students are expected to attend all student lab sessions; in the event of serious illness or family emergency, the student must call the Instructor (or the Clinical Laboratory Sciences office if the Instructor cannot be reached) early that day to report she/he is ill and will not be in. Upon returning to classes it is the student's responsibility to contact the faculty member and to make arrangements to make up the time missed. In most courses, material covered in early labs is needed by the student in later labs. Failure to make up missed labs in a timely manner may result in a grade reduction for that course.

Practicum Rotations - Students are expected to attend all practicum sessions. In the event of serious illness or family emergency, the student must call the practicum site AND the Clinical Laboratory Sciences Graduate Director early that day to report she/he is ill and will not be in. During practicum rotations, the maximum number of excused absences (for any reason) permitted is equal to the number of credit hours for that practicum. Any absences (whether due to illness or not) are expected to be made up on weekends, breaks, or by staying at the end of the semester for additional time corresponding to the that lost from absence. Failure to make up lost time will result in a grade reduction of 5% for every day not made up.

- b) If a student must be absent for three days or less because of extenuating circumstances, he/she must notify the office of the Department of Clinical Laboratory Sciences prior to the time the class(es) are scheduled to begin. If a student must be absent for greater than three days, he/she must notify the Graduate Director prior to the date the leave would commence. In addition, prior to starting the leave, the student must have received written approval from the Graduate Director and all faculty affected by the student's absence. After approval of the leave, the faculty and student will arrange a mutually

agreeable schedule for the student to complete the material missed due to the absence. This could include weekends and/or student vacation times.

- c) Provision for make-up is at the discretion of the Instructor. Appeals for special consideration may be addressed to the Instructor involved and, if the appeal is not resolved, to the Graduate Director.
- d) A student having excessive absences may be withdrawn from the course by the Dean and assigned a grade of F. In the Department of Clinical Laboratory Sciences excessive absence is defined as days absent in excess of the number of credit hours in the course. Faculty members will report to the Graduate Director whenever a student has been absent without explanation for a consecutive number of days greater than the number of credit hours in the course. The Graduate Director will bring this continued absence to the attention of the KUMC Registrar. The presumption will be that the student has withdrawn from the course.

3. Leave of Absence:

- a) A student desiring to interrupt the curriculum for any reason (e.g., maternity/medical leave) may submit an application for Leave of Absence to the CLS Graduate Director. A leave of absence shall not exceed 12 months in length. The student may resume the program the next semester in which courses are scheduled, provided that the student meets the course prerequisites.
- b) KUMC Registrar policies and procedures for requesting a Leave of Absence can be found at the KUMC Registrar's [Change in Enrollment](#) website.
- c. Note: Individual course requirements regarding attendance may be more restrictive. Refer to the School of Health Professions Student Handbook for [attendance policies](#) specific to the school. It is the student's responsibility to review the SHP policies on attendance.

Course Evaluation. Course evaluation by students is part of the continuing course improvement process. Therefore, your participation is very important. Evaluations for lecture and laboratory courses will be distributed by email the week prior to final examinations and should be completed by the last day of class. Participation is tracked; however, all student responses are anonymous and will only be presented to faculty as aggregate data. Due to the value that the CLS department places on these evaluations, your course grade may be withheld until the course evaluation is completed.

Electronic Devices Policy. Personal electronic devices include, but are not limited to: mobile phones, pagers, PDAs, recorders, digital cameras, laptop computers, and netbooks. Mobile phones, pagers, and other personal electronic devices must be off and out of sight in classrooms and laboratories. These electronic devices may be turned on and set on silent mode only with the expressed consent of the instructor.

A mobile phone, or a similar device, cannot be used as a calculator without consent of the instructor. Any electronic device that is capable of recording, copying, imaging, playing back, and/or recovering data are to be turned off and out of sight during examinations. Electronic devices may be used to record a lecture, presentation, interview or similar activity with prior permission of the individual being recorded. This permission does not extend to others who may be present. Verbal permission may be sufficient for recording within a class or meeting for personal use. However, written permission must be obtained prior to recording or transmitting someone's image or speech over the airwaves, in public, on the web, as part of a class assignment or any University sponsored activity or program. Accessibility to lectures or other materials by persons with disabilities should be accommodated as required by applicable policies and laws. Absence of permission may constitute a copyright violation.

Electronic devices used for the purposes of cheating or academic dishonesty will cause the student to be penalized under the Academic Misconduct policy of the School of Health Professions. A student may be found to have engaged in academic misconduct if he or she provides or receives inappropriate aid to or from another person in connection with a test, assignment or other material used or intended to be used to evaluate academic performance. This includes the unauthorized use of electronic devices to record, copy, photograph, or otherwise transmit related materials.

English language requirements: Students for whom English is a second language must satisfy at least ONE of the following requirements PRIOR to beginning the program. Official documentation of scores must be provided to the Admissions Committee.

All students MUST satisfy at least ONE of the following requirements:

- Be a citizen of a country where English is the native language, e.g. United States, Great Britain, Australia, New Zealand or English-speaking provinces in Canada.
- Earned a baccalaureate degree or higher from an institution in one of the countries listed above.
- Successfully passed (within the last two years) the academic format of the International English Language Testing System (IELTS).
 - Minimum Requirements: Overall band score of 6.5 and no component band score lower than 6.0.
- Successfully passed (within the last two years) the Internet Based TOEFL
 - Minimum requirements: 23 on the Reading and Listening Sections, 19 on the Writing Section.

GRE score expectations: For admission, the MS in Molecular Biotechnology program does not set minimal cut-off scores for the Verbal Reasoning and Quantitative Reasoning sections of the GRE general exam. Successful applicants typically score at least in the 70th percentile. Such scores indicate a good potential for successful completion of the program. An applicant must score at least a 2.5 in the Analytical Writing section to be considered for admission.

Grievance procedure – Department of Clinical Laboratory Sciences:

1. If the student has or anticipates a problem relating to status in the program, the student should consult the Graduate Director.
 - a. If the problem is of a general nature and is serious, the student and the Graduate Director should meet with the SHP Dean.
2. If the problem is with an individual faculty member, the student should communicate with the faculty member involved and together they should try to solve the problem.
 - a. If the problem is not resolved within a week, the student, the Graduate Director, the involved faculty member and the SHP Dean shall meet within the next week and work to resolution. At the discretion of the department, an extension may be granted. Documentation of this arrangement must be attached to the original notification.
 - b. It is within the discretion of the SHP Dean to talk to the student, the Graduate Director, and the faculty member (alone or in a group) to reach a resolution before the scheduled meeting.
 - c. At the time of the scheduled meeting within the second week, the student and the involved faculty member shall provide written documentation setting out problems and providing factual information in support of statements.
 - d. If more time is needed, all parties may meet again at specified date within a week.
 - e. If all parties agree to a resolution the decision will be binding and settlement will be without prejudice.
 - f. If the problem cannot be resolved among the parties, the SHP Dean will decide the issue.

Note: It is SHP policy that grievance procedures for grade disputes do not proceed beyond the departmental level.

Grievance procedure – School of Health Professions and Office of Graduate Studies:

The grievance procedure may not be used as an appeal for a grade. Grades should be appealed at the department or program level. Appeals from the decision of a department or program regarding matters of academic or non-academic misconduct can be appealed to the School of Health Professions and the Dean of Graduate Studies. Appeals procedures apply to situations in which the student wishes to appeal a proposed suspension or dismissal due to alleged misconduct. Procedures may only be pursued after all departmental procedures have been exhausted.

Proposals to suspend or dismiss a student for misconduct shall be sent from the department chair or program director, in writing, to the dean of the School of Health Professions, the vice chancellor for academic affairs, and to the student. The letter shall specifically recite those facts and circumstances relied upon by the program for recommending the proposed discipline. To access the SHP appeals procedure, the student must file, in writing, a Notice of Appeal to the dean of the School of Health Professions within two (2) weeks of the date of the chair's or program director's recommendation of discipline.

See the School of Health Professions Student Handbook and Graduate Studies Handbooks for further information about the grievance procedure: [School of Health Professions Student Handbook](#) and [Graduate Studies Handbook](#).

Grooming and dress standards. The University of Kansas Medical Center projects an image of professionalism in our community. The grooming and dress of our students and employees conveys a message of respect and credibility. Appearance and cleanliness are extremely important in meeting the standards set for the medical center. Students and employees have the opportunity to create a positive impression by consistently presenting themselves as models of cleanliness, modesty and conservative good taste.

The following standards should be practiced consistently:

Grooming Standards

- Practice daily oral hygiene.
- Bathe daily and use effective deodorant.
- Heavily-scented toiletries should be avoided.
- Fingernails should be clean, well-groomed and of a reasonable length.
 - ***Student should not wear artificial fingernails or extenders and should keep fingernails trimmed to ¼ inch above each finger in keeping with APIC standards.***
- Make-up should be conservative and in good taste.
- Hairstyles and facial hair should be clean and neatly groomed. Long hair must be tied back.
- Use of jewelry should be minimal and conservative.

Clothing Standards

- All garments must be fresh and clean.
- Proper undergarments shall be worn and not visible.
- Uniforms: as designated by respective instructors or practicum sites.
- Shoe soles should be non-marking and without metal caps. Laced or loafer-type shoes are preferred. Shoes with open-toes are prohibited for the student's personal safety. Cloth uppers are allowed on shoes.
- Legs must be covered while working in laboratories.

- Laboratory coats are worn over clothing during student labs and during other designated activities. Lab coats are provided for student use.

Unacceptable Clothing

- Revealing garments.
- Items of clothing imprinted with advertising or objectionable language.
- Torn or soiled clothing/uniforms or shoes.

Tattoo and Piercing Standards

- Tattoos should not be offensive in nature and are to be covered if possible.
- Non-traditional body piercings/jewelry typically worn on the tongue, lips, eyebrow and nose may not be worn in the clinical setting.

The preceding standards are not all inclusive. The Clinical Laboratory Sciences Director of Graduate Studies has the option to implement specific additional guidelines within the framework of this policy. If there is a question as to the appropriateness of a particular item, it should not be worn without consulting your instructor. A student may be asked to return home to change clothing on his/her own time. Failure to follow standards may result in disciplinary action.

When students are performing practicum rotations, they are expected to conform to the grooming and dress requirements of the supervisory setting. In the absence of site-specific policy, the above guidelines for grooming and dress should be observed.

Misconduct - Academic and Non-Academic. Students should be absolutely certain that they are familiar with the rules, regulations, and procedures that define academic and non-academic misconduct. Failure to abide by regulations, or acts of academic or non-academic misconduct, may result in admonition, warning or censure and, in addition, may subject the student to reduction of grade, disciplinary probation, suspension, or expulsion in accordance with *University Senate Rules and Regulations*, Article II, Section 6, [Academic Misconduct](#).

Academic misconduct includes, but is not limited to:

- Giving, receiving, or utilizing unauthorized aid on examinations, assignments, projects, and/or other undertakings.
- Plagiarism.
- Misrepresenting the source of academic work.
- During clinical education, placing a patient in needless jeopardy by acting or performing inappropriately.
- During clinical education, any breach or violation of the confidence of a person being served.
- Unethical practices in conducting and/or reporting research.
- Inappropriate use of electronic devices (see electronic devices policy).

Acts of non-academic misconduct include but are not limited to:

- Felony conviction involving moral turpitude (i.e., conduct that is considered contrary to community standards of justice, honesty, or good morals)
- Material misrepresentation concerning past achievements or present endeavors
- Habitual drug/alcohol/substance abuse
- Sexual or other forms of harassment
- Any other acts or omissions that, if the student were a credentialed practitioner could result in discipline by a credentialing agency

Detailed examples and policies regarding academic and non-academic misconduct are outlined in the [SHP Student Handbook](#).

Plagiarism. Students must be aware that plagiarism is a very serious form of academic misconduct that can result in immediate dismissal from the program. Students should familiarize themselves with the various forms of plagiarism by visiting sites such as:

- <http://www.lib.usm.edu/legacy/plag/whatisplag.php>
- <http://plagiarism.org>
- <https://guides.library.kumc.edu/plagiarism>

Guidelines for Circumstances of Academic and Non-Academic Misconduct. Each department defines through the components of its written policies and the written statements of academic and non-academic misconduct, the expectations of that department's students. The department monitors each student's performance relative to these expectations. Should a student jeopardize his/her status in the department by not performing at the level expected and defined by the department, the student will be notified in writing that his/her student status is in jeopardy. This notification will take place within five (5) working days from the time the department first becomes aware of the circumstances. Should this notification be necessary, the department will appoint an appropriate faculty advisor to be available to assist a student who is notified of their jeopardized status. This official written notification shall include the following information:

- a) the reason the student is being so notified
- b) the potential consequences of the circumstances
- c) the timeframe in which the student may attempt to rectify the situation
- d) the steps necessary to rectify the situation
- e) the name of the faculty advisor appointed to assist the student
- f) the consequences of the successful or unsuccessful attempt to resolve the matter in the specified timeframe*

**At the discretion of the department, an extension may be granted. Documentation of this arrangement must be attached to the original notification.*

Training Requirements. All new and continuing KUMC students are required annually to take (and complete at the level of competency indicated on each) specific training modules. Students will receive an email message from the KUMC administration regarding their online training requirements, including links to access the necessary training modules.

- Environment, Health, and Safety Training
 - Practicum sites will require students to adhere to their safety policies which may involve additional safety training.
- HIPAA Training
 - Practicum sites will require the student to adhere to their specific HIPAA policies, which may involve additional HIPAA training.
- Student Confidentiality Agreement
 - Practicum sites will require the student to adhere to their specific confidentiality policies, which may involve additional training as well as signing confidentiality agreements.

Students who do not comply with training requirements will lose access to the electronic network and will not be able to enroll in the following semester.

PRACTICUM PROCEDURES AND POLICIES

After completing the core curriculum, students enroll in three semester-long practica. To enroll in a practicum, students must have successfully completed the following CLS courses with a grade of A or B: CLS710, CLS711, CLS720, and CLS721. Students must also have completed all required GSMC courses with a grade of A, B, or C. Each practicum is performed at a different site to provide experience in various research environments as well as provide experience with different molecular biotechnology approaches. A central focus of the practicum is to understand how research questions are formulated and answered by the scientific method. The general objective of the Practicum is to apply the knowledge and skills acquired through the required lecture, laboratory, and other practicum courses by addressing a substantial practical problem in a realistic setting. Additionally, the student gains and applies additional knowledge and skills that are pertinent to the practicum research project.

During a practicum, students work with investigators, laboratory staff, and other members of the practicum site in the ongoing activities of the practicum site. Students participate in an ongoing research project that leads to independent research activities. While enrolled in a practicum, the primary academic obligation is at the practicum site, and students engage in their practicum-associated activities on a full-time basis. This dedicated effort allows students to understand the theory and application of state-of-the-art molecular techniques and technologies in depth. Additionally, studying at a single practicum site for a full semester allows students to gain an appreciation of the day-to-day opportunities, obligations, and realities of professionals working in molecular biotechnology settings.

While the student is guided by the practicum site scientific mentor, as well as other practicum site staff members and your program Advisor, learning at a practicum site is the student's responsibility (you get out of it what you put into it).

Practicum Courses.

CLS 750 Practicum I. This practicum occurs during the 3rd through 8th weeks of the summer semester. During these weeks, the student is expected to be present at the practicum site full-time, Monday through Friday.

CLS 751 Practicum II. This practicum occurs during the Fall semester, for the entire semester. During this rotation, student is expected to be present at the practicum site full-time, Monday through Thursday.

CLS 752 Practicum III. This practicum occurs during the Spring semester, for the entire semester. During this rotation, student is expected to be present at the practicum site full-time, Monday through Thursday.

The official dates of each practicum course will vary according to the academic calendar, and generally will correspond to the first day of the semester through the final day of classes (i.e., the day before Stop Day). Depending on the needs of the student and/or practicum mentor, alternate start and stop days can be arranged. As stated in the Graduate Student Guide, students are expected to attend all practicum sessions. In the event of serious illness or family emergency, the student must call the practicum site AND the Clinical Laboratory Sciences Graduate Director early that day to report that she/he will not be in. The maximum number of excused absences (e.g., illness or family emergency) permitted is equal to the number of credit hours for the practicum. Any absences (whether due to illness or not) are expected to be made up on weekends, breaks, or by staying at the end of the semester for additional time corresponding to the that lost from absence. Failure to make up lost time will result in a grade reduction of 5% for every day not made up.

While practicum study is full-time, the daily start time at the practicum site is established by the site. For example, some laboratories work on an 8AM-5PM schedule while others may start later in the day or have variable hours depending on the experiments being performed.

Practicum Grading. There are three components to a grade for a practicum course: a performance evaluation, research presentations, and a paper.

Performance evaluation. Student performance is evaluated by the practicum site scientific mentor and other person(s) working most closely with the student at the site. The evaluator(s) use a standard evaluation form. A copy of the evaluation form is included in this Guide so that the evaluation criteria are known. The practicum evaluation is worth 40% of the grade.

Research Presentations. Two 20-30 minute PowerPoint oral research presentations are to be delivered summarizing the objectives, methods, and results of the performed experiments. The presentations will be delivered to the practicum site scientific mentor, other site staff, and your program Advisor. The first presentation is delivered midway through the practicum period, and the second is delivered during the final week of the practicum. Each presentation is worth 20% of the practicum grade. You will be provided with a rubric for presentation grading.

Paper. The written report paper is a summary of the experiments performed and the results obtained during the practicum. The report is written in the format of a scientific paper (i.e., Abstract, Introduction, Materials and Methods, Results, Discussion, References, Data [figures with legends, tables, etc.]). Data included within the paper must be approved for release by the practicum site scientific mentor. The paper should be single-spaced, 11pt Arial font, with 1-inch margins. The text of the paper should be a minimum of 11 pages, plus extra pages for figures and figure legends, tables, references, etc.). A general guideline for length of each section is: Abstract, 0.5 pages; Introduction, 1.5-2 pages; Materials and Methods, 1.5-2 pages; Results, 5 pages; Discussion, 2 pages. The practicum paper is to be completed, including any revisions, and submitted in final form to the practicum site scientific mentor and your program Advisor within one week after the final day of the practicum. The paper is worth 20% of the practicum grade.

Site Identification/Selection. In the semester prior to a practicum, a potential site(s) for the upcoming practicum will be identified through discussions with your program Advisor and are based on your interests and career objectives. When a potential site is identified, your Advisor will contact the scientific mentor for that site regarding your interest. At this time and with your permission, your résumé and academic transcript will be made available to the scientific mentor. If she/he is potentially interested in serving as your mentor, an interview will be scheduled. This interview serves the purpose of allowing both you and the mentor to determine if the site is a good match. During the interview, the mentor will describe the project(s) you would pursue during the practicum. If all parties agree (including your Advisor), the site is selected. This matching process will continue as necessary. Prior to the start of the practicum, the scientific mentor will provide readings/citations which are to be read in preparation for the practicum.

Statement of Objectives. Once the site identification process is completed, a “Statement of Practicum Objectives” is written. This Statement includes “Background”, “Scope of Work”, and “Deliverables” sections. The Background section provides information leading to the scientific question(s) being addressed during the practicum. The “Scope of Work” section describes the scientific question itself, and discusses the objectives and methods of the project. The Deliverables section identifies the requirements for successful completion of the practicum (i.e., evaluation, presentations, paper, notebooks, etc). The Background and Scope of Work sections may be authored by the mentor or by the student with the mentor’s guidance. The Deliverables section is authored by the Graduate Director and the scientific mentor.

Progress Review. You will meet formally on a regular basis with your site scientific mentor to review your performance and progress. Additionally, you will meet regularly with your program Advisor (e.g., either on site, or when you are on the KUMC campus for other program courses) to discuss how your

practicum is proceeding, to identify any problems arising during the practicum, and to discuss other issues pertaining to the practicum. Your program Advisor also will meet and communicate with your practicum site scientific mentor regarding the same issues.

Notebooks. All experimental data will be kept in provided laboratory notebooks specific to the practicum and returned to the practicum site mentor at the end of the practicum.

General Practicum Objectives.

- A. Relate coursework, research, and experience to actual situations and problems in molecular biotechnology under an experienced on-site supervisor.
- B. Become acquainted with the duties, responsibilities, and roles of professional personnel in the biotechnology sector.
- C. Gain a basic understanding of the policies, guidelines and procedures associated with the biotechnology sector.
- D. Learn how to work with and through others to achieve common objectives.
- E. Gain information about the sponsoring practicum site as well as corporations, institutions, and organizations, both complementary and competing, with which the practicum site interacts.

Specific Practicum Objectives.

- A. Explain the background, underlying theory, and objectives associated with the assigned project.
- B. Explain the theory and application of any molecular technologies/techniques required for the assigned project.
- C. Design experiments to address specific research questions.
- D. Perform molecular techniques as required for the assigned project.
- E. Evaluate experimental outcomes.
- F. Adjust conditions to problem-solve experimental approaches and procedures.
- G. Apply knowledge to address questions associated with the assigned project.
- H. Efficiently organize and coordinate workload.
- I. Assemble, manipulate, calibrate and maintain molecular equipment and instrumentation.
- J. Develop or modify protocols as appropriate to the assigned project.
- K. Implement safety and quality control procedures for the assigned project or other tasks.
- L. Implement directions and constructive suggestions.
- M. Perform tasks as deemed appropriate by the scientific mentor and laboratory staff.

Personal Appearance.

1. Attire
 - a. Students should be aware that practicum sites may choose to enforce a stricter code of dress and conduct than those outlined in this Guide. Students not conforming to these codes may not be accepted or maintained at the practicum site and, consequently, may jeopardize their continued enrollment and progress in the program.
 - b. Neat clean, closed toe shoes will be worn. Any required uniforms, laboratory coats, and shoes will be clean, neat, and in good condition at all times.
 - c. Identification badges may be provided by a practicum site. If an identification badge is not provided, the student shall wear their KUMC identification badge. Badges are to be worn in plain view at all times while on the premises of the practicum site.
2. Personal Hygiene
 - a. All students will bathe regularly and wear an effective deodorant. Strong aromatic scents should not be used. Conservative hair-style and reasonable fingernail length is required. All long hair will be pulled back and fastened. Students are expected to abide by regulations set by practicum sites regarding personal appearance criteria.

Professional Conduct. Students will conduct themselves in a professional manner at all times. Specific conduct codes as defined in each institution's policy manual will be adhered to while at the site. The student is expected to follow the Clinical Laboratory Science Department's Code of Ethics for Graduate Students.

Clinical Laboratory Science Department - Code of Ethics and Conduct for Graduate Students

We, as graduate students in the Department of Clinical Laboratory Science, will apply the following code of ethics and conduct to our actions towards program faculty and scientific mentors, fellow students, practicum site staff and members, patients, physicians, and other personnel in our program. This code will apply to our personal as well as professional attitudes and conduct.

As PROFESSIONALS we will:

1. Assume a professional manner in conduct and attire.
2. Establish a rapport with practicum site mentors, laboratory staff, and other members of the practicum site.
3. Hold in confidence any confidential information.
4. Strive for increased efficiency and quality through organization.
5. Be willing to accept responsibility for our own work and results.

In PERSONAL conduct we will:

1. Achieve the highest degree of honesty and integrity.
2. Maintain adaptability in action and attitude.
3. Establish a sense of fraternity among fellow students.
4. Strive to have a pleasant manner in the laboratory.
5. Remember that we are University of Kansas as well as Clinical Laboratory Science graduate students, and therefore, we should strive to be educated individuals outside our scientific field.

Medical Records and Patient Data. Students will receive KUMC HIPPA training, but each practicum site may administer HIPPA training at their discretion. The discussion of any patient information outside of the laboratory/practicum site setting is not permissible.

Malpractice Liability/Health and Accident Liability. All students in the Department of Clinical Laboratory Sciences are covered by professional liability insurance.

Confidentiality. All scientific data, and institutional and patient information will be held in the strictest confidence at all times. Release of scientific data is at the discretion of the practicum site scientific mentor. Confidential information is not to be discussed with any unauthorized individuals. Students may be required to sign a confidentiality statement at practicum sites. Violation of confidentiality policies and/or of other practicum site policies may result in the dismissal of the student from the practicum site and the practicum course.

- Attentive to and compliant with verbal or written instructions (Rating:)
- Works independently (Rating:)
- Maintains accurate and thorough records (Rating:)
- Follows safety policies and procedures of the laboratory (Rating:)

3. Personal Performance

- Exhibits dedication (Rating:)
- Exhibits maturity (Rating:)
- Exhibits responsibility (Rating:)
- Exhibits reliability (Rating:)
- Treats others with courtesy and respect (Rating:)
- Is prompt (Rating:)
- Accepts constructive criticism (Rating:)
- Exhibits initiative (Rating:)

4. Overall Performance

Comments:



**MASTER OF SCIENCE IN MOLECULAR BIOTECHNOLOGY
DEPARTMENT OF CLINICAL LABORATORY SCIENCES
UNIVERSITY OF KANSAS MEDICAL CENTER**

CERTIFICATION OF RECEIPT

I do hereby acknowledge that I have received a copy of the current *Master of Science in Molecular Biotechnology Graduate Student Guide*, and that I have read and understood the policies and procedures and, will abide by the regulations listed therein.

I have also been provided an opportunity to question the Clinical Laboratory Science Graduate Director about content that I do not understand, and I realize that failure to return this form prevents me from entering a practicum site.

Date of Orientation: August 20, 2019

Printed Name

Signature

Date

**MASTER OF SCIENCE IN MOLECULAR BIOTECHNOLOGY
DEPARTMENT OF CLINICAL LABORATORY SCIENCES
UNIVERSITY OF KANSAS MEDICAL CENTER**

PRACTICUM ROTATION AGREEMENT

In consideration for participating in practicum learning experiences (hereinafter referred to as PRACTICUM) at any facility (hereinafter referred to as the FACILITY) where I may be assigned, I hereby agree to the following:

1. To follow the administrative policies, standards and practices of the FACILITY when in the FACILITY.
2. To report to the FACILITY on time and to follow all established regulations of the FACILITY.
3. To keep in confidence all medical, health, financial and social information (including mental health) pertaining to particular clients or patients.
4. To not publish any material related to my PRACTICUM that identifies or uses the name of the FACILITY unless I have received written permission from the FACILITY.
5. To comply with all federal, state and local laws regarding the use, possession, manufacture or distribution of alcohol and controlled substances.
6. To arrange for and be solely responsible for my living accommodations while at the FACILITY.
7. To provide the necessary and appropriate uniforms and supplies required where not provided by the FACILITY.
8. To wear a name tag that clearly identifies me as a student. Further, I understand and agree, otherwise in writing, that I will not receive any monetary compensation from the FACILITY for any services that I provide to the FACILITY or its clients, students, faculty or staff as a part of my PRACTICUM.

(continued on next page)

Unless otherwise agreed upon in writing, I also understand and agree that I shall not be deemed to be employed by or an agent of the FACILITY; that the FACILITY assumes no responsibilities as to me as may be imposed upon an employer under any law, regulation or ordinance; that I am not entitled to any benefits available to employees; and therefore, I agree not to in any way to hold myself out as an employee of the FACILITY. I understand and agree that I may be immediately withdrawn from the PRACTICUM based upon a lack of competency on my part, my failure to comply with the rules and policies of the FACILITY, if I pose a direct threat to the health or safety of others or, for any other misconduct as outlined in the Graduate Student Guide.

I understand that all medical or health care (emergency or otherwise) that I receive at the FACILITY will be my sole responsibility and expense.

I have read, or have had read to me, the above statements, and understand them as they apply to me. I hereby certify that I am eighteen (18) years of age or older; that I am legally competent to execute this Practicum Rotation Agreement; that I have read carefully and understand the above Practicum Rotation Agreement; and the I have freely and voluntarily signed this "Practicum Rotation Agreement".

STUDENT:

WITNESS:

Signature

Signature

Printed Name

Eric A. Elsinghorst

Printed Name

Date: August 20, 2019

Date: August 20, 2019