

**Graduation Composition and Communication Requirement (GCCR)
GCCR PROPOSAL AND CHANGE UNDERGRADUATE PROGRAM FORM**

I. General Information:

College:	<u>College of Health Sciences</u>	Department (Full name):	<u>Department of Clinical Sciences</u>
Major Name (full name please):	<u>Medical Laboratory Science</u>	Degree Title:	<u>Bachelor of Health Sciences</u>
Formal Option(s), if any: _____		Specialty Field w/in Formal Options, if any: _____	
Requested Effective Date:	<u>FALL 2014, IF RECEIVED BY SENATE COUNCIL BY MONDAY, APRIL 7.</u>		
Contact Person:	<u>Michelle Butina</u>	Phone:	<u>859-218-0852</u> Email: <u>mbu228@uky.edu</u>

II. Parameters of the Graduation Composition and Communication Requirement (GCCR):

The new GCCR replaces the old Graduation Writing Requirement. It is fulfilled by a course or courses specified within a B.A./B.S. degree program. As outlined in draft Senate Rule 5.4.3.1, the GCCR stipulates that students must successfully complete this requirement after achieving sophomore status and prior to graduation. To satisfy the GCCR, students must earn an average grade of C or better on the designated Composition and Communication (C&C) intensive assignments produced in any given course designated as fulfilling some or all of the GCCR. The requirements for GCCR courses include:

- at least 4500 words of English composition (approximately 15 pages total);
- a formal oral assignment or a visual assignment;
- an assignment demonstrating information literacy in the discipline;
- a draft/feedback/revision process on GCCR assignments.

The program requirements for the GCCR include:

- at least one specific Program Student Learning Outcome for C&C outcomes;
- a plan for assessing both the writing and oral or visual components of the GCCR;
- clear goals, rubrics, and revision plans for GCCR implementation.

Upon GCCR approval, each program will have a version of the following specification listed with its Program Description in the University Bulletin:

“Graduation Composition and Communication Requirement. Students must complete the Graduation Composition and Communication Requirement as designated for this program. Please consult a college advisor or program advisor for details. See also ‘Graduation Composition and Communication Requirement’ on p. XX of this Bulletin.”

III. GCCR Information for this Program (by requirement):

A.	List the courses currently used to fulfill the old Graduation Writing Requirement:
	<u>Any UK course approved GWR course</u>
B.	GCCR Program Outcomes and brief description:
1.	Please specify the Major/Program Student Learning Outcomes (SLOs) pertaining to Composition & Communication and the GCCR requirement. These are program outcomes, not course outcomes. Please specify the program-level SLOs for C&C in your program: <u>Students will demonstrate competent written, oral, and visual communication skills both as producers and consumers of information.</u>
2.	Please provide a short GCCR description for your majors (limit 1000 characters): Please explain the GCCR requirement in language appropriate for undergraduate majors to understand the specific parameters and justification of your program’s GCCR implementation plan: <u>Medical laboratory science students are required to demonstrate competence in communication and composition as these forms of communication are essential skills for entry level medical laboratory scientists. Demonstration of communication is achieved by successful completion of a ten minute oral and visual (PowerPoint) presentation relevant to the field of immunohematology. This oral/visual communication assignment is a component of MLS 463 Immunohematology.</u>

Graduation Composition and Communication Requirement (GCCR)
GCCR PROPOSAL AND CHANGE UNDERGRADUATE PROGRAM FORM

Demonstration of composition is achieved by successful completion of a fifteen page written assignment relevant to one of the four major medical laboratory science disciplines. This written assignment is a component of MLS 470 Clinical Correlations, a capstone course.

C. Delivery and Content:

1. Delivery specification: for your major/program, how will the GCCR be delivered? Please put an X next to the appropriate option. (Note: it is strongly recommended that GCCR courses be housed within the degree program.)

- a. Single required course within program
- b. multiple required or optional courses within program
- c. course or courses outside program (i.e., in another program)
- d. combination of courses inside and outside program
- e. other (please specify): _

2. Basic Course Information: Please provide the following information for course(s) used to satisfy the GCCR, either in whole or in part:

Course #1: Dept. prefix, number, and course title: MLS 463 Immunohematology

- new or existing course? Existing (new courses should be accompanied by a New Course Proposal)
 - if a new course, check here that a New Course Proposal has been submitted for review via eCATS
- required or optional? Required
- shared or cross-listed course? Not shared or cross-listed
- projected enrollment per semester: 30

Course #2 (if applicable): Dept. prefix, number, and course title: MLS 470 Clinical Correlations

- new or existing course? Existing (new courses should be accompanied by a New Course Proposal)
 - if a new course, check here that a New Course Proposal has been submitted for review via eCATS
- required or optional? Required
- shared or cross-listed course? Not shared or cross-listed
- projected enrollment per semester: 30

Course #3 (if applicable): Dept. prefix, number, and course title: _____

- new or existing course? _____ (new courses should be accompanied by a New Course Proposal)
 - if a new course, check here that a New Course Proposal has been submitted for review via eCATS
- required or optional? _____
- shared or cross-listed course? _____
- projected enrollment per semester: _____

3. Shared courses: If the GCCR course(s) is/are shared from *outside* the program, please specify the related department or program that will be delivering the course(s). Please provide the following:

- **Contact information of providing program:**

- **Resources:** what are the resource implications for the proposed GCCR course(s), including any projected budget or staffing needs? If multiple units/programs will collaborate in offering the GCCR course(s), please specify the resource contribution of each participating program.

- **Memorandum of Understanding/Letter of Agreement:** Attach formal documentation of agreement between the providing and receiving programs, specifying the delivery mechanisms and resources allocated for the specified GCCR course(s) in the respective programs (include with attachments).
Date of agreement: _____

4. Syllabi: Please provide a sample syllabus for each course that will be designated to fulfill the GCCR. Make sure the following things are clearly indicated on the syllabi for ease of review and approval (check off each):

- the GCCR assignments are highlighted in the syllabus and course calendar;
- the GCCR assignments meet the minimum workload requirements as specified by the Senate Rules for GCCR courses (see the draft Senate GCCR rule linked [here](#));
- the elements are specified in the syllabus that fulfill the GCCR requirement for a clear draft/feedback/revision process;
- the grade level requirements for the GCCR are specified on the syllabus (i.e., an average of C or better is required on GCCR)

Graduation Composition and Communication Requirement (GCCR)
GCCR PROPOSAL AND CHANGE UNDERGRADUATE PROGRAM FORM

- assignments for credit);
- the course or sequence of courses are specified to be completed after the first year (i.e. to be completed after completing 30 credit hours) for GCCR credit;
- the course syllabus specifies "This course provides full/partial GCCR credit for the XXX major/program"
 - if the course provides partial GCCR credit, the fulfilled portion of the GCCR must be specified and the other components of the GCCR for the program must be specified: e.g. "This course provides partial credit for the written component of the GCCR for the XXX major/program in conjunction with Course 2"

5. Instructional plan: Summarize the instructional plan for teaching the C&C skills specified in the program SLOs and delivered in the course(s). Include the following information in **brief** statements (1000 characters or less). Information can be cut-and-pasted from the relevant sample syllabus with indications **where** on the syllabus it is found:

- **overview of delivery model:** summarize how the GCCR will be delivered for all program majors: explain how the delivery model is appropriate for the major/program and how it is offered at an appropriate level (e.g. required course(s), capstone course, skills practicum sequence of courses, etc.):

In Medical Laboratory Science (MLS) written communications primarily consists of laboratory procedures, technical reports and discipline specific manuscripts/articles. As such, the composition component of the GCCR is being added to the MLS 470 Clinical Correlations course. This capstone course is taught in the last semester of the program. At this time students will have taken all courses in all MLS disciplines and will have completed half of their practicums providing them a wealth of knowledge to incorporate into a professional paper.

In MLS oral and visual communications primarily consist of formal presentation or informal talks on laboratory related topics. As such, the oral/visual communication component of the GCCR will be met via a long-standing assignment in the MLS 463 Immunohematology course. This course is taught in the second semester of the program and a similar assignment is traditionally given in the first semester.

- **assignments:** overview or list of the assignments to be required for the GCCR (e.g. papers, reports, presentations, videos, etc.), with a summary of how these GCCR assignments appropriately meet the disciplinary and professional expectations of the major/program:

MLS 463 Immunohematology - Students will give a 10 minute oral presentation on an immunohematology topic using a PowerPoint delivery method. Appropriately meets expectations as oral presentations (formal or informal) are often necessary in the field. If formal, PowerPoint is the most common delivery method. MLS 470 Clinical Correlations - Students will write a 15 page paper, on a medical laboratory science case study or disease, following a format similar to standard articles in MLS journals. Appropriately meets expectations as publications/report in the field commonly follow this format.

- **revision:** description of the draft/feedback/revision plan for the GCCR assignments (e.g. peer review with instructor grading & feedback; essay drafting with mandatory revision; peer presentations; etc.):

MLS 463 Immunohematology - Oral and PowerPoint presentations will be peer reviewed. Students will be placed in groups for the peer review process. MLS students will complete a similar oral/visual presentation assignment one semester prior and MLS faculty believe this qualifies them to be effective peer reviewers. Students will use a rubric to provide feedback.

MLS 470 Clinical Correlations - Annotated bibliographies will be reviewed by the instructor with feedback (acceptable or not) will be given by the instructor. A review of the written document will be conducted by the instructor and feedback given via rubric.

- other information helpful for reviewing the proposal:

D. Assessment:

In addition to providing the relevant program-level SLOs under III.B, please specify the assessment plan at the program level for the proposed course(s) and content. Provide the following:

- specify the assessment schedule (e.g., every 3 semesters; biennially):
The MLS Program will maintain its current student learning outcomes (SLO) assessment schedule. Thus, the GCCR SLO will be assessed once every 3 years. Due for assessment 14-15 academic year.
- identify the internal assessment authority (e.g. curriculum committee, Undergraduate Studies Committee):
SLO's are assessed by the MLS Program Director. Next level of assessment is presentation at the MLS curriculum retreat held annually followed by review from College Director of Assessment.

Graduation Composition and Communication Requirement (GCCR)
GCCR PROPOSAL AND CHANGE UNDERGRADUATE PROGRAM FORM

- if the GCCR course(s) is/are shared, specify the assessment relationship between the providing and receiving programs:
explain how the assessment standards of the receiving program will be implemented for the provided course(s):
GCCR course is not shared, the two courses meeting the GCCR requirement are both required courses within the MLS Program.

Graduation Composition and Communication Requirement (GCCR)
GCCR PROPOSAL AND CHANGE UNDERGRADUATE PROGRAM FORM

Signature Routing Log

General Information:


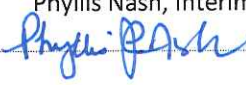
GCCR Proposal Name (course prefix & number, program major & degree):	MLS 463 Immunohematology and MLS 470 Clinical Correlations
Contact Person Name:	GCCR Coordinator for MLS Program is Michelle Butina, MLS Program Director
Phone:	859-218-0852
Email:	mbu228@uky.edu

Instructions:

Identify the groups or individuals reviewing the proposal; record the date of review; provide a contact person for each entry. On the approval process, please note:

- Proposals approved by Programs and Colleges will proceed to the GCCR Advisory Committee for expedited review and approval, and then they will be sent directly to the Senate Council Office. Program Changes will then be posted on a web transmittal for final Senate approval in time for inclusion in the Fall 2014 Course Bulletin.
- New Course Proposals for the GCCR will still require review and approval by the Undergraduate Council. This review will run parallel to GCCR Program Change review.
- In cases where new GCCR courses will be under review for implementation after Fall 2014, related GCCR Program Changes can still be approved for Fall 2014 as noted "pending approval of appropriate GCCR courses."

Internal College Reviews and Course Sharing and Cross-listing Reviews:

Reviewing Group	Date Reviewed	Contact Person (name/phone/email)
Home Program <i>review by Chair or DUS, etc.</i>	3/18/14	 3/18/14 Karen Skaff, Department Chair / 218-0585 / karen.skaff@uky.edu
Providing Program <i>(if different from Home Program)</i>		/ /
Cross-listing Program <i>(if applicable)</i>		/ /
College Dean	3/18/14	 Phyllis Nash, Interim Assoc. Dean Academic Affairs / 218-0570 / phyllis.nash@uky.edu
		/ /

Administrative Reviews:

Reviewing Group	Date Approved	Approval of Revision/ Pending Approval ¹
GCCR Advisory Committee	3/26/2014	

Comments:

¹ Use this space to indicate approval of revisions made subsequent to that group's review, if deemed necessary by the revising group; and/or any Program Change approvals with GCCR course approvals pending.

**University of Kentucky
College of Health Sciences
Department of Clinical Sciences
Medical Laboratory Sciences**

Course Number/Title/Section: MLS 463 Immunohematology, Section 201/501
Course Credit: 3 credits
Course Place/Time: Lecture: College of Nursing 102A
Time: Mon 9:30-11:00 am; Wed 1:30-3:00 pm
Course Faculty: Steve Schwarze, PhD, MLS(ASCP)
126B CTW Bldg., 900 S. Limestone
Lexington, KY 40536-0200
Method for reaching instructor: email: steve.schwarze@uky.edu
Office Phone: Phone: 859-323-1100 ext. 80846
Office fax: 859-323-8957
Office hours: Immediately after class, by appointment or stop by.

Course Description: A brief overview of fundamental genetics and immunology designed for the immunohematologist introduces lectures covering the essential principles and practices of Blood Banking. The major blood group antigen and antibody characteristics are described and applied to antibody detection and identification relevant to compatibility testing, mother-baby situations, blood transfusion, and transplantation. Donor selection, blood collection and component preparation are highlighted. Advanced topics in transfusion medicine include blood transfusion and component therapy for complex patient populations, adverse transfusion complications, hemolytic diseases including hemolytic disease of the fetus and newborn, autoimmune hemolytic anemias, histocompatibility (HLA) and molecular testing. Also presented are current laboratory practices of quality control of reagents and instrumentation, quality assurance issues, and regulations pertaining to blood banking laboratories.

Student Learning Outcomes:

- Learning Outcome #1: Students will demonstrate entry level knowledge and practical application skills in the area of clinical Blood Banking.
- Learning Outcome #2: Students will possess the ability to interpret complex serological test results and resolve antibody problems as they apply to transfusion of blood components for positive patient outcomes.
- Learning Outcome #3: Students will be eligible to take national certification examinations as Medical Laboratory Scientists and function as an entry-level Medical Laboratory Scientist.
- Learning Outcome #4: Students will demonstrate competent oral and visual communication skills as a consumer of medical laboratory science information.

General Course Objectives: More detailed objectives will be presented with each lecture.

Generally, upon completion of this course, the successful student will be able to:

(Cognitive objectives)

1. Describe basic Mendelian genetics relative to the blood group antigens.
2. Interpret antibody-antigen reactions and the stages of agglutination as they relate to the immune response.
3. Recognize discrepancies in ABO typing and propose appropriate resolutions.
4. Describe the characteristics of ABO, Rh, and other major blood group systems as they relate to various testing performed in the Blood Bank.
5. Interpret expected and unexpected results in compatibility testing.
6. Describe the principles of antibody detection and identification, Indirect Antiglobulin Test (IAT) and Direct Antiglobulin Test (DAT), discuss when the tests are used in Blood Banks, and interpret test results.
7. List the criteria for donor selection and understand the specific selection of blood donors for whole blood, autologous, designated units, and apheresis components.
8. Define the requirements for viral marker testing of blood donors.
9. Describe the procedure for collecting a unit of blood and the preparation of the various blood components.
10. Describe characteristics of the various blood components relative to preparation, storage and selection for patient transfusion.
11. Interpret Quality Control as it relates to Blood Bank reagents and instruments.
12. Discuss quality assurance and regulatory control required in the clinical Blood Bank.
13. Examine the regulatory agencies in the Blood Bank and their purpose.
14. Understand the reasons for a quality assurance department in medical facilities as it relates to blood, blood components, compatibility testing and transfusion.
15. Understand the principles of transfusion therapy and list which blood components are indicated for various patient needs.
16. Discuss the various effects of blood transfusion and transfusion transmitted diseases.
17. List the therapeutic indications for apheresis, differentiation between conditions requiring plasma exchange and those necessitating cytappheresis.
18. Rank, according to severity, the different types of transfusion reactions, and correlate them with appropriate laboratory results.
19. Compare the autoimmune hemolytic anemias and correctly interpret antibody panels of affected individuals.
20. Evaluate the contribution of immunohematology to the diagnosis of hemolytic disease of the newborn and how it contributes to the treatment of the disease.

(Affective Objectives)

1. Appreciate the importance of didactic knowledge as it helps the student successfully function in a clinical Blood Bank.
2. Learn what constitutes professionalism through ethical and professional behavior. Confidentiality and respect for patients' privacy and dignity and respect for healthcare peers are mandatory. The MLS program will prepare each student for those practices in modern clinical laboratories.
3. Appreciate the importance of good communication skills because the graduate will become an important member of the team providing healthcare and will interact with physicians, nurses, patients, and other members in the laboratory.

Required Textbook:

“Basic and Applied Concepts of Blood Banking and Transfusion Practices”, 3rd edition, Kathy D. Blaney and Paula R. Howard; Mosby Elsevier; ISBN 978-0-323-08663-9

Supplemental Textbooks (optional):

“AABB Technical Manual”, 17th edition, American Association of Blood Banks; ISBN 978-1-56395-315-6

“Immunohematology Principles and Practices”, 3rd edition, Eva D. Quinley; Lippencott; ISBN: 978-0-7817-8204-3

“Modern Blood Banking and Transfusion Practices”, 4th edition, Denise M. Harmening, F.A. Davis; ISBN: 0-8036-0419-X

Grading:

Exams (x4)	65%
Final exam	20%
Case Study/Disease Oral Presentation	15%

Exams

All exams are multiple choice of the type used on the professional certification exams. Exams may cover **BOTH** lecture and laboratory material. Exams may have visuals included in the questions. **All exams are comprehensive.** The date, time, and location of exams can be found in the course schedule.

Case Study/Disease Oral Presentation Assignment:

*This assignment is a component of the UK Graduation Composition and Communication Requirement (GCCR). This course provides partial credit for the oral/visual component of the GCCR for the MLS Program in conjunction with MLS 470. (The GCCR requirement will be met via **two** assignments given in MLS courses. This is the first of the two assignments.)

1. Purpose: Often medical laboratory scientists are asked to informally or formally communicate with other healthcare professionals and as such you need to be able to effectively articulate complex concepts related to medical laboratory science. This assignment will enable you to do practice your communication skills related to a medical laboratory science topic.
2. Goal:
 - a. Is to present an effective PowerPoint on a case/study disease state related to immunohematology and present it orally in a manner that is comprehensible and professional to an audience of medical laboratory science students.
3. Overview:
 - a. Each student will choose a patient case study or a disease relevant to the field of immunohematology. The case study/disease should come from your experience, lecture, from the news, or journal article, etc. The case study should correlate patient laboratory data and any other pertinent laboratory testing with the patient’s diagnosis. Or the laboratory data contributing to the diagnosis of the disease should be highlighted.
4. The case study/disease **must** include the following information:
 - a. Patient history (if applicable)

- b. Overview of the disease
 - c. Symptoms
 - d. Laboratory findings
 - e. Other pertinent patient testing
 - f. Determination of diagnosis
 - g. Prognosis and treatment options
 - h. Technical problems if applicable
5. Presentation:
- a. Student must use Microsoft PowerPoint presentation software. If a student prefers to use different presentation software (e.g., Prezi) please consult instructor first.
 - b. Information should be presented in a logical sequence.
 - c. Reference citations must include sufficient information to allow the instructor to independently locate the reference. The minimal requirements for print references should include: author name (s), title of the journal article or book chapter or book, journal volume, pages and year of publication, book publisher, and city of publication. World Wide Web citations should include the date the material was obtained, the address, and the authors.
 - d. Spelling and grammar: Points will be deducted for spelling and grammar error as determined by the instructor.
 - e. Presentation should be a **minimum of 10 minutes in length** and a maximum of 12 minutes. After the presentation follow up questions may be asked.
 - f. Key terms introduced during the presentation must be defined and explained.
 - g. Eye contact must be maintained with the audience.
 - h. Presenter must interact with the audience (for example, through questions, solicitation of opinions).
 - i. Presentation graphics (eg. powerpoint) must be used to enhance the presentation.
6. Review – Feedback – Revision Process:
- a. This assignment will have 2 review-feedback-revision processes.
 - i. For the review-feedback-revision process you will be placed into groups.
 - ii. Within the group, you will review another students' oral and PowerPoint presentation and provide feedback. You will be given a rubric to use for providing feedback. Since you have presented case studies/diseases the previous semester in MLS 461 Clinical Microbiology you are aware of expectations and can provide useful suggestions to your fellow students.
 - b. Completion and incorporation of feedback is worth 5% of assignment grade
 - c. Final presentation is worth 10% of assignment grade. You will be given feedback on final presentation as well.
7. Grading: This assignment is worth 15% of course grade. To satisfy the GCCR, students must earn an average grade of C or better on the designated Composition and Communication (C&C) intensive assignments produced in any given course designated as fulfilling some or all of the GCCR. (See ORAL PRESENTATION grading rubrics.)

Mid-Term Evaluation

Students will be provided with a mid-term evaluation. Exams taken and assignments due before mid-term (mid-term date can be found on the UK Academic Calendar) will be used to determine mid-term progress.

Grading Scale:

A	90 – 100%
B	80 – 89%
C	70 – 79%
D	60 – 69%
F	59% and below

COURSE POLICIES

Professional Preparation: This program prepares students for entry into the clinical laboratory science profession. As such, instructors have a responsibility to assist students in learning about ethical and professional behavior. Professional behavior in this program includes: attending all classes, being prompt, notifying instructors of any absences, adhering to the highest standards of academic honesty, and conversing respectfully with faculty and fellow students.

Attendance: Tardiness is defined as arriving 10 minutes after class begins or departure before the end of the class session. Three tardies constitute one unexcused absence. Attendance is mandatory. For the third and each subsequent unexcused absence, the final average will be lowered by 1 point (1%). You are expected to contact the instructor PRIOR to class if you are unable to attend.

Make-up opportunity: When there is an excused absence a student will be given an opportunity to make up the missed work and/or exams. It is the student's responsibility to inform the instructor of the absence, preferably in advance. Any missed scheduled assignment(s) will be due at the beginning of the class session on the day the student returns. Time and location of make-up exams will be determined by the instructor.

Excused Absences:

S.R. 5.2.4.2 defines the following as acceptable reasons for excused absences:

- a) serious illness;
- b) illness or death of family member;
- c) university-related trips;
- d) major religious holidays;
- e) other circumstances the instructor finds to be "reasonable cause for nonattendance".

Students anticipating an absence for a major religious holiday are responsible for notifying the instructor in writing of anticipated absences due to their observance of such holidays no later than the last day for adding a class. Information regarding dates of major religious holidays may be obtained through the religious liaison, Mr. Jake Karnes (859-257-2754).

Verification of Absences: The instructor has the right to request appropriate verification of an excused absence. Students missing work due to an excused absence bear the responsibility of informing the instructor about their excused absence (except where prior notification is required) and of making up the missed work (see “Make-up Opportunity” policy above).

Late work: Late work will not be accepted for a grade unless approved by instructor. If approved, points will be deducted for late work at the rate of 5 points per day. After one week, late work will not be accepted.

Submission of assignments: Assignments will be available on Blackboard. All assignments are to be accessed and submitted via Blackboard. All assignments are due on the assigned date (see course schedule) by the beginning of the class session.

Questions Concerning Grades: All assignments and exams will be evaluated. Any assignment graded incorrectly or questions concerning the grading must be brought to the instructors’ attention within one week of the grade being posted/returned. One week after grades have been posted/returned they become final and no corrections will be made.

Electronic Device Policy: Generally cell phone use is not permitted for any reason. All cell phones must be placed in the “off” or “silenced” position during class. If there is a situation where a student might need to be notified during a class period, please alert the instructor to this potential and carefully monitor the phone. Other electronic devices (except for computers and i-Pads) such as smartphones, i-Pods, MP3 Players, and electronic game devices should be turned off.

Exams: Exams are multiple choice and are the type used on the professional certification exam. Exams are completed on Blackboard. The Final Exam is comprehensive. The date, time and location of exams can be found in the course schedule. Students are not allowed to open another window, tab, browser, or application (including copy and paste) and are not allowed to use another computer (including iPhone, iPad, etc.) while taking the exam. Please refer to the Academic Integrity, Cheating, and Plagiarism policy below.

Academic Integrity, Cheating, and Plagiarism: Each student in the class and program is expected to adhere to the highest standards of academic honesty. Cheating, plagiarism, and destruction of course materials violate the rules of the University. For more information on the University’s policy on academic integrity please see Students Rights and Responsibilities, Part II, Section 6.3 (<http://www.uky.edu/StudentAffairs/Code/part2.html>). Violations of the university’s rules regarding academic honesty can lead to a failing grade in the course and suspension, dismissal or expulsion from the University. Instances of academic dishonesty will be reported to appropriate University officials as required by University rules and procedures.

Classroom Behavior: Classroom behavior should be in compliance with the student code of conduct. Full details can be viewed at: <http://www.uky.edu/StudentAffairs/Code/part1.html>.

Consistent with this policy, student behavior that detracts from the educational environment will not be tolerated. Examples of inappropriate behaviors include engaging in disrespectful or uncivil discussions, holding disruptive discussions, or sleeping. Disruptive students will be asked to leave the classroom and re-admittance is at the discretion of the instructor.

Academic Accommodations: If you have a documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (Room 2, Alumni Gym, 859-257-2754, email address jkarnes@email.uky.edu) for coordination of campus disability services available to students with disabilities. We can then collaborate on the best solution.

Severe Weather (Lexington): It is the policy of the University of Kentucky to keep all offices open and classes meeting as scheduled except under extraordinary conditions.

If severe weather should result in changes to the university schedule, the university will follow specific procedures about when those decisions are made and how they will be announced. Details of those procedures are available at <http://www.uky.edu/PR/News/severeweather.html>.

All faculty, staff and students should note that announcements regarding the cancellation of classes and closure of offices, or a delayed opening will normally be made by 6 a.m. through the local news media. The most up-to-date and complete information will be available from the UK Infoline at 859-257-5684, UK TV Cable Channel 16, or the UK Web site at <http://www.uky.edu/>

Severe Weather (Hazard): It is the policy of the University of Kentucky and the Center for Excellence in Rural Health (CERH) to keep all offices open and classes meeting as scheduled except under extraordinary weather conditions. **The MLS Program will follow the cancellation or delayed announcements of the CERH.** The announcements regarding the cancellation of classes (closure of facility) or a delayed opening are typically made by 6 a.m. The most up-to-date and complete information will be available from the Center phone line at (606)-439-3557, WYMT TV, Radio Stations 97.9 & 101.1, or the Center web site at <http://www.kyruralhealth.org/>.

If classes are cancelled in Hazard, but not in Lexington, ITV lectures will be recorded and made available to CERH students. This might possibly require having class on a Friday.

If classes are not cancelled or delayed and road conditions in your area make it dangerous for you to travel, the prudent thing to do would be to remain home and then get the information that you missed from a classmate. To check road conditions you may use the "511" system of the Kentucky State Police. Just dial those three numbers and the machine will prompt you through road conditions for your area.

MLS 463 Class Content and Schedule

Room 102A, College of Nursing

Date	Lecture Topic	Reading <i>Basic & Applied Concepts of Blood Banking and Transfusion Practices</i>	Comments/Assignment Information
Jan 9, 2015 1:30-3:00 pm	Immunology Principles and Application	Chapter 1	
Jan 14, 2015 9:30-11:00 am	Blood Bank Reagents	Chapter 2	
Jan 16, 2015 1:30-3:00 pm	Genetics and Inheritance	Chapter 3	Selection of case/study disease due
Jan 21, 2015 9:30-11:00 am	ACADEMIC HOLIDAY-- NO CLASSES		
Jan 23, 2015 1:30-3:00 pm	Exam 1	Chapters 1, 2, 3	
Jan 28, 2015 9:30-11:00 am	ABO and H Blood Group System	Chapter 4	
Jan 30 2015 1:30-3:00 pm	ABO and H Blood Group System	Chapter 4	
Feb 4, 2015 9:30-11:00 am	ABO Discrepancies/ Lab Workflow	Chapter 4	
Feb 6, 2015 1:30-3:00 pm	Rh System	Chapter 5	
Feb 11, 2015 9:30-11:00 am	Other Blood Group Systems	Chapter 6	
Feb 13, 2015 1:30-3:00 pm	Other Blood Group Systems	Chapter 6	
Feb 18, 2015 9:30-11:00 am	Exam 2	Exam 1 + Chapters 4, 5, 6	
Feb 20, 2015 1:30-3:00 pm	Antibody Detection and Identification	Chapter 7	
Feb 25, 2015 9:30-11:00 am	Antibody Detection and Identification	Chapter 7	
Feb 27, 2015 1:30-3:00 pm	Compatibility Testing	Chapter 8	
Mar 4, 2015 9:30-11:00 am	Donor Selection, Blood Collection	Chapter 12	

Mar 6, 2015 1:30-3:00 pm	Testing of Donor Blood	Chapter 13	
Week of March 11, 2015	SPRING VACATION: NO CLASS		
Mar 18, 2015 9:30-11:00 am	Exam 3	Exams 1, 2 + Chapters 7, 8, 12, 13	
Mar 20, 2015 1:30-3:00 pm	Component Preparation	Chapter 14	Draft due for review- feedback
Mar 25, 2015 9:30-11:00 am	Blood Administration, Transfusion Therapy	Chapter 14	
Mar 27, 2015 1:30-3:00 pm	Transfusion Therapy	Chapter 15	
Apr 1, 2015 9:30-11:00 am	Adverse Complications of Transfusions	Chapter 10	
Apr 3, 2015 1:30-3:00 pm	Hemolytic Disease of the Newborn	Chapter 11	Draft returned with feedback
Apr 8, 2015 9:30-11:00 am	Exam 4	Exams 1, 2, 3 + Chapters 14, 15, 10, 11	
Apr 10, 2015 1:30-3:00 pm	KCLS Meeting—No Class		
Apr 15, 2015 9:30-11:00 am	Hemolytic Anemias	McKenzie text Chapter 17 + Handout	
Apr 17, 2015 1:30-3:00 pm	HLA System and Testing	Chapter 1/3	
Apr 22, 2015 9:30-11:00 am	Class Presentations		Final presentation due
Apr 24, 2015 1:30-3:00 pm	Class Presentations		Final presentation due
April 29, 2015 9:00-11:00 am	Final Exam	Comprehensive, HLA, Hemolytic anemias	

Review of Draft _____

Final Presentation _____

	1	1.5	2	3	Total points
Organization	Audience cannot understand presentation because there is no sequence of information	Audience has difficulty following presentation because student jumps around	Student presents information in logical, interesting sequence which audience can follow.	Student presents information in logical, interesting sequence which audience can follow	
Subject Knowledge	Student does not have grasp of information; student cannot answer questions about subject.	Student is uncomfortable with information and is able to answer only rudimentary questions.	Student is at ease with expected answers to all questions, but fails to elaborate.	Student demonstrates full knowledge (more than required) by answering all class questions with explanations and elaboration.	
Graphics and Slides	Student uses superfluous graphics or no graphics.	Student uses graphics that rarely support text and presentation.	Student's graphics relate to and support text and presentation.	Student's graphics explain and reinforce screen text and presentation.	
Text and slides	Student's presentation has four or more spelling errors and/or grammatical errors. Text size/word count inappropriate.	Presentation has three misspellings and/or grammatical errors. Text size/word count from appropriate to inappropriate.	Presentation has no more than two misspellings and/or grammatical errors. Text size/word count allow for visibility.	Presentation has no misspellings or grammatical errors. Text size/word count allow for excellent visibility.	
Eye Contact	Student reads all of report with no eye contact.	Student occasionally uses eye contact, but still reads most of report.	Student maintains eye contact most of the time, but frequently returns to notes.	Student maintains eye contact with audience, seldom returning to notes.	
Elocution	Student mumbles, regularly mispronounces terms, and speaks too quietly for students in the back of class to hear.	Student's voice is low. Student mispronounces some terms. Audience occasionally has difficulty hearing.	Student's voice is clear. Student pronounces most words correctly. Most audience members can hear presentation.	Student uses a clear voice and correct, precise pronunciation of terms so that all audience members can hear presentation.	
Total Points	Total possible point = 18 points <ul style="list-style-type: none"> • Maximum of 3 points for each category: Organization, Subject Knowledge, Graphics and Slides, Text and Slides, Eye Contact, Elocution • Grade will be % of total earned points compared to total possible points. 				

Comments:

**University of Kentucky
College of Health Sciences
Department of Clinical Sciences
Clinical Laboratory Sciences**

Course Number/Title/Section: MLS 470 Clinical Correlations, Section 201

Course Credit: 3 credit

Course Time /Place: Online and Friday meetings (see schedule)

Course Faculty:

Coordinator: Michelle Butina, PhD, MLS(ASCP)
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Office Hours: Contact by email for an appointment

COURSE DESCRIPTION

Bulletin Description:

A comprehensive review of the medical laboratory science profession using clinical and multi-disciplinary case studies. In addition, students will take mock certification exams twice, once at the beginning and another at the end of the review.

Prereq: Admission into the Medical Laboratory Science Program or consent of instructor.

Student Learning Outcomes:

By the end of the semester, given readings, activities, examinations, and class discussion, the students will be able to demonstrate the following learning outcomes:

The student will:

Learning Outcome #1: Demonstrate entry level knowledge and practical application skills toward the field of Medical Laboratory Science

Learning Outcome #2: Possess the ability to interpret clinical results and apply troubleshooting skills while practicing self-validation of their findings.

Learning Outcome #3: Students will demonstrate competent oral and visual communication skills as a consumer of medical laboratory science information.

General Course Objectives:

Upon completion of this course, the successful student will:

1. Correlate hematology, clinical chemistry, clinical microbiology, and immunohematology findings for a given patient given the patients results.
2. Given a set of QC results, evaluate the results for validity and problem-solve any discrepancies seen.
3. Complete successfully the mock exams that cover entry level knowledge for the Medical Laboratory Sciences field.
4. Complete the case studies and review exams for each area in Medical Laboratory Science with a 75% grade or better.
5. Evaluate and summarize literature regarding medical laboratory science concepts and diseases using written communication

Affective behavior Objectives:

1. Students will appreciate how correlation of practical rotations enables them to successfully pass certification exams.
2. Students will comprehend the significance of accurate results needed by other healthcare professionals to successfully treat our patients.
3. Appreciate the importance of good communication skills because the graduate will become an important member of the team providing healthcare and will interact with physicians, nurses, patients, and other members in the laboratory.

Grading:

Mock Exam #1	4%
Mock Exam #2	15%
Review exams (Each area exam worth 12.5%)	50%
Case Studies (Each area cases worth 4%)	16%
Writing Assignment	15%
Total	100%

Mock Exams: Students will take two mock exams, similar to the BOC exam (online, multiple choice questions), in order to prepare you for the BOC examination. Exams will be proctored on-campus. See schedule for dates of mock exams.

Review Exams: Students will complete a review exam at the end of each review section (sections include hematology, microbiology, immunohematology and clinical chemistry). Exams are multiple choice. See schedule for dates of review exams.

Case Studies: Students will complete section case studies (four sets of case studies corresponding to the four sections mentioned above.) These cases will enable you to review section content and help prepare you for BOC exam questions presented as case study based questions.

Writing Assignment:

*This assignment is a component of the UK Graduation Composition and Communication Requirement (GCCR). This course provides partial credit for the written component of the GCCR for the MLS Program in conjunction with MLS 463. (The GCCR requirement will be met via two assignments given in MLS courses. This is the second of the two assignments.)

1. Purpose: Often medical laboratory scientists are asked to communicate in writing. Often this is either in the form of developing standard operating procedures (SOPs), technical reports, or to present unique case studies/disease states encountered in practice. This written assignment will enable you to do practice your written communication skills related to a medical laboratory science topic.
2. Goal: Is to produce an effective written document on a medical laboratory related topic that conveys the content in a comprehensible and professional level for an audience of medical laboratory scientists.
3. Overview: You will select a case study/disease from any of the four major MLS disciplines (clinical chemistry, hematology, microbiology and immunohematology) to research and write up in a manner similar to that as those submitted to laboratory science journals.

4. Paper Requirements

a. Format

- Minimum 15 pages in length – follow template posted on Blackboard
- Double spaced (Includes title, abstract, body and reference page)
- 1 inch margins (top, bottom, right and left side)
- 12 point font
- Use section headings and sub section headings where appropriate
- Include page numbers (bottom left)

b. References

- You must have a minimum of **10** references.
- References should be from textbooks, journals, and reputable websites
- Example of reputable is Mayo Clinic and Cleveland Clinic
- Not reputable is WebMD or Wikipedia (when in doubt, ask if it is an acceptable reference or not)
- Journal Suggestions - Remember you can access journals at UK library e-journals at <http://libraries.uky.edu/>
 1. Clinical Laboratory Science
 2. Laboratory Medicine
 3. Blood
- References must be current - within the last 10 years (exception is made for historical references such as when disease discovered or old test methodologies)
- Approved bibliographic style is APA style (for text citations and reference page). For examples of APA style see:
 1. <http://owl.english.purdue.edu/owl/resource/560/01/>
 2. <http://www.library.cornell.edu/resrch/citmanage/apa>
 3. http://www.umuc.edu/library/libhow/apa_examples.cfm

c. Images, charts, tables

- Images can only take up ¼ of page (maximum of 4 images). Can be included anywhere in paper...images noted in template are examples of sections where images are commonly used.
- Tables need to be single spaced.
- Tables, charts, images need to be numbered and referred to in text (e.g., see Table 2.). Must include title, or brief explanation. Must include citation of where obtained.

d. Review-Feedback-Revision:

- Students will submit annotated bibliographies that will be reviewed and feedback provided (more information below)
- Students will submit a draft of the written assignment that will be reviewed and feedback provided (more information below)

5. Paper Template: A template to use for section headings and an example of an outstanding written assignment, from previous class, will be posted on Blackboard.
6. Deadlines and Submission Information:
 - a. August 16th – Topic selection
 - Submit topic selection to Dr. Butina via email. If topic was already selected by another student then you will have to pick another one. (One topic per student.)
 - b. August 30th – Annotated bibliography due
 - An annotated bibliography includes a summary and/or evaluation of each of the sources.
 - Must have at 8 of the 10 references. See annotated bibliography instructions on Blackboard.
 - No grade will be given on the annotated bibliography but they will be reviewed and feedback provided on acceptability.
 - c. October 11th
 - Submit draft of paper
 - Draft must include body of paper, pages 3-13, see paper template. Submission of title, page, abstract and reference page is not required but will be reviewed if submitted.
 - Submit as an email attachment (attach as Word document) to Dr. Butina. Please save the file as LAST NAME 470 Draft (for example, BUTINA 470 Draft).
 - Completion and incorporation of feedback is worth 5% of assignment grade. (See writing assignment rubric)
 - d. December 5th
 - Submit final paper
 - Includes all pages
 - Submit as an email attachment (attach as Word document) to Dr. Butina. Please save the file as LAST NAME 470 Final (for example, BUTINA 470 Final).
 - Final written assignment is worth 10% of assignment grade. (See writing assignment rubric.)
7. Grading: This assignment is worth 15% of course grade. To satisfy the GCCR, students must earn an average grade of C or better on the designated Composition and Communication (C&C) intensive assignments produced in any given course designated as fulfilling some or all of the GCCR. (See writing assignment rubric.)

Mid-Term Evaluation:

Students will be provided with a mid-term evaluation. Exams taken and assignments due before mid-term (mid-term date can be found on the UK Academic Calendar) will be used to determine mid-term progress.

Grading Scale:

A	90-100%
B	80-89%
C	70-79%
D	60- 69%
F	below 60%

Books for this Class are Optional

The following are a list of suggested MLS Review books that have exam questions and review material with each answer. You might find them useful in studying for the MLS Certification exam (BOC) and for this course. There is no one book recommended for this course and so a book is optional.

1. ***Clinical Laboratory Science Review: A Bottom Line Approach*** , ed. Jarreau, Patsy, publisher LSU Health Sciences Center Foundation, New Orleans, 4th edition, c. 2011, ISBN 10: 0967043425 or ISBN 13: 978-0967043425
2. ***Success! In Clinical Laboratory Science***, ed. Ciulla, A. P., Lehman, D. C., publisher Pearson, Boston, 4th edition, c. 2009, ISBN 10: 0-13-512648-7 or ISBN 13: 978-0-13-512648-6
3. ***Medical Laboratory Science Review***, ed. Harr, Robert R. , publisher F. A. Davis Company, Philadelphia, 4th edition, c. 2012, ISBN 10: 0803628285 or ISBN 13: 978-0803628281
4. ***BOC Study Guide***, ed. Tanabe, P. A., and Holladay, E. B. , Publisher American Society for Clinical Pathology, Chicago, 5th edition, c. 2009, ISBN 10: 0891895876

ATTENDANCE

Attendance and punctuality will be considered part of your grade and have a bearing on borderline grades for the course.

All exams are multiple choice of the type used on the professional certification exams. The Review Exams for each area review are comprehensive. The exams are to be given on-line and are scheduled by the Instructor. Exams will have an open window on Bb for you to take them. The instructor for that section will determine when the window is open and closed. Students will be expected to take the Exams without assistance or notes (see section on Academic Integrity).

Assignments are determined by the Instructor in-charge of each review section. These may take various forms but culminate in a Review Exam for each section.

COURSE POLICIES

Professional Preparation: This program prepares students for entry into the clinical laboratory science profession. As such, instructors have a responsibility to assist students in learning about ethical and professional behavior. Professional behavior in this program includes: attending all

classes, being prompt, notifying instructors of any absences, adhering to the highest standards of academic honesty, and conversing respectfully with faculty and fellow students.

Attendance: Tardiness is defined as arriving 10 minutes after class begins or departure before the end of the class session. Attendance is mandatory. You are expected to contact the instructor PRIOR to class if you are unable to attend.

Make-up opportunity: When there is an excused absence a student will be given an opportunity to make up the missed work and/or exams. It is the student's responsibility to inform the instructor of the absence, preferably in advance. Time and location of make-up exams will be determined by the instructor.

Excused Absences:

S.R. 5.2.4.2 defines the following as acceptable reasons for excused absences:

- a) serious illness;
- b) illness or death of family member;
- c) University-related trips;
- d) major religious holidays;
- e) other circumstances you find to be "reasonable cause for nonattendance".

Students anticipating an absence for a major religious holiday are responsible for notifying the instructor in writing of anticipated absences due to their observance of such holidays no later than the last day for adding a class. Information regarding dates of major religious holidays may be obtained through the religious liaison, Mr. Jake Karnes (859-257-2754).

Verification of Absences:

The instructor has the right to request appropriate verification of an excused absence. Students missing work due to an excused absence bear the responsibility of informing the instructor about their excused absence (except where prior notification is required) and of making up the missed work (see "Make-up Opportunity" policy above).

Late work: Late work will not be accepted for a grade unless approved by instructor. If approved, points will be deducted for late work at the rate of 5 points per day. After one week, late work will not be accepted.

Submission of assignments: Assignments will come from each instructor and will be available on Blackboard or medium they chose. All assignments are to be accessed and submitted via Blackboard or as directed by the Instructor. All assignments are due on the assigned date given by the instructor.

Questions Concerning Grades: All assignments and exams will be evaluated. Any assignment graded incorrectly or questions concerning the grading must be brought to the instructors' attention within one week of the grade being posted/returned. One week after grades have been posted/returned they become final and no corrections will be made.

Electronic Device Policy: Generally cell phone use is not permitted for any reason. All cell phones must be placed in the "off" or "silenced" position during class. If there is a situation

where a student might need to be notified during a class period, please alert the instructor to this potential and carefully monitor your phone. Other electronic devices (except for computers and iPads) such as smartphones, i-Pods, MP3 Players, and electronic game devices **should be turned off**.

Academic Integrity, Cheating, and Plagiarism: Each student in the class and program are expected to adhere to the highest standards of academic honesty. Cheating, plagiarism, and destruction of course materials violate the rules of the University. For more information on the University's policy on academic integrity please see Students Rights and Responsibilities, Part II, Section 6.3 (<http://www.uky.edu/StudentAffairs/Code/part2.html>). Violations of the university's rules regarding academic honesty can lead to a failing grade in the course and suspension, dismissal or expulsion from the University. Instances of academic dishonesty will be reported to appropriate University officials as required by University rules and procedures.

Classroom Behavior: Classroom behavior should be in compliance with the student code of conduct. Full details can be viewed at: <http://www.uky.edu/StudentAffairs/Code/part1.html>. Consistent with this policy, student behavior that detracts from the educational environment will not be tolerated. Examples of inappropriate behaviors include engaging in disrespectful or uncivil discussions, holding disruptive discussions, or sleeping. Disruptive students will be asked to leave the classroom and re-admittance is at the discretion of the instructor.

Academic Accommodations: If you have a documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (Room 2, Alumni Gym, 859-257-2754, email address jkarnes@email.uky.edu) for coordination of campus disability services available to students with disabilities. We can then collaborate on the best solution.

Severe Weather: It is the policy of the University of Kentucky to keep all offices open and classes meeting as scheduled except under extraordinary conditions.

If severe weather should result in changes to the university schedule, the university will follow specific procedures about when those decisions are made and how they will be announced. Details of those procedures are available at <http://www.uky.edu/PR/News/severeweather.htm>.

All faculty, staff and students should note that announcements regarding the cancellation of classes and closure of offices, or a delayed opening will normally be made by 6 a.m. through the local news media. The most up-to-date and complete information will be available from the UK Infoline at 859-257-5684, UK TV Cable Channel 16, or the UK Web site at <http://www.uky.edu/>

COURSE SCHEDULE

Friday 8/9	Orientation to MLS 470	(11 am-1:30pm) NURS 102a
	Lunch during Orientation - MLS provide food	
	Mock Exam 1	(1:30-3:30pm) NURS 102a

8/10-8/23	Designated Time for Writing Assignment	
8/16	Submit topic selection to Dr. Butina (due midnight)	
8/30	Submit annotated bibliographies to Dr. Butina (due midnight)	
8/26-9/13	Microbiology Review On-line	
9/6	Microbiology Case Studies assignment due (5pm)	
9/14-9/15	Microbiology Review Exam window (opens 5pm for 24 hours)	
9/16-10/7	Hematology Review On-line	
9/27	Hematology Case Studies assignment due (5pm)	
10/4-10/5	Hematology Review Exam window (opens 5pm for 24 hours)	
10/7-10/11	Designated Time for Writing Assignment	
10/11	Submit draft of paper to Dr. Butina (due midnight)	
Friday 10/11	Micro biology Review meeting	(10am-11:30am) NURS 102a
	Lunch on your own	
	BOC Information Session	(Noon- 1pm) NURS 102a
	Hematology Review meeting	(1 pm-2:30pm) NURS 102a
10/14-11/1	Immunoematology Review On-line	
10/25	Immunoematology Case Studies assignment due (5pm)	
11/1-11/2	Immunoematology Review Exam window (opens 5pm for 24 hours)	
11/4-11/22	Clinical Chemistry Review On-line	
11/15	Clinical Chemistry Case Studies assignment due (5pm)	
11/22-11/23	Clinical Chemistry Review Exam window (opens 5pm for 24 hours)	
11/25-12/5	Designated Time for Writing Assignment	
12/5	Submit final paper to Dr. Butina (due midnight)	
Friday 12/6	Hazard and Lexington students together at UK-Lexington	
	Immunoematology Review	(10am-11am) NURS 102a
	Chemistry Review	(11am-Noon) NURS 102a
	Graduation Updates/Potluck Luncheon	(Noon-1pm) NURS 102a
	Mock Exam #2	(1pm-3pm) NURS 102a

MLS 470 Case Study/Disease Written Assignment Rubric

Student Name: _____

___ **Draft** ___

Criteria	Exceeds Standard (3 points) - Above the required requirements either in quantity or depth.	Meets Standard (2 points) - Adequately provided all required elements.
1. Paper format instructions were followed. Includes required page length, font size, margins, spacing and page numbers.		
2. Instructions for images, charts, tables were followed.		
3. Title page has all required elements.		
4. Abstract accurately presents summary of entire paper.		
5. Introduction conveys overview of the disease.		
6. Prevalence section included.		
7. Comprehensive pathophysiology section clearly describes the etiology and pathogenesis.		
8. Comprehensive discussion of symptoms and presentation of patient.		
9. Comprehensive section of diagnosis. Includes detailed laboratory testing.		
10. Comprehensive section on treatment options.		
11. Prognosis section included.		
12. Conclusion adequately reflects summary of paper.		
13. At least 10 current references were included. Reference are from appropriate sources.		
14. Citations in body were appropriate and correctly cited following APA guidelines.		
15. Reference page followed APA guidelines.		
16. Paper is logically organized and includes section headings.		
17. Quality of writing (grammar, spelling, punctuation, transitions, etc.)		

TOTAL POINTS: _____

SCORE: _____

