MLSCI 370 – Clinical Transfusion Science

Overview / General Information

As part of a clinical laboratory education for Medical Laboratory Science students, this course will provide experience in a modern hospital transfusion service laboratory along with weekly tutorials, and followed by comprehensive theoretical and practical examinations.

Policy about course outlines can be found in Course Requirements, Evaluation Procedures and Grading of the University Calendar. [Link to University Calendar]

The University of Alberta is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Code of Student Behaviour (online at [Link to Student Behaviour Code]) and avoid any behaviour which could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.

Audio or video recording, digital or otherwise, of lectures, labs, seminars or any other teaching environment by students is allowed only with the prior written consent of the instructor or as a part of an approved accommodation plan. Student or instructor content, digital or otherwise, created and/or used within the context of the course is to be used solely for personal study, and is not to be used or distributed for any other purpose without prior written consent from the content author(s).

Course Coordinator / Instructor(s)

Chris Ward, BSc (MLS), Med, MLT
5-411 ECHA & 2C30 Edmonton General Hospital
(780) 492-6507
cw9@ualberta.ca

Tracy Pyra, MLT
2C30 Edmonton General Hospital
(780) 342-8643
Tracy.Pyra@albertahealthservices.ca

Course Competencies

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<tr>
<th>Competency</th>
<th>Description</th>
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<td>A.</td>
<td>The student shall be able to demonstrate knowledge of the theory and apply concepts to solve problems in the transfusion science field. (7.01)</td>
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<td>B.</td>
<td>The student shall be able to perform efficiently, with precision and accuracy, basic manual techniques used in the Blood Bank under routine and stressful conditions. (4.13, 4.14, 4.15, 4.16)</td>
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<td>C.</td>
<td>The student shall develop the ability to realistically assess and be confident of personal and professional strengths and limitations. (11.07)</td>
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<td>D.</td>
<td>The student shall develop the ability to set and organize work priorities at the personal level. (9.03)</td>
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<td>E.</td>
<td>The student shall be able to effectively verbally communicate, defending judgments or conclusions, citing supportive evidence. (9.04.01, 10.02.02)</td>
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<td>F.</td>
<td>The student shall be able to maintain safety regulations in the Student Laboratory and Blood Bank and perform accepted protocol in case of incident or accident. (1.14)</td>
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<td>G.</td>
<td>The student shall be able to use, care for and maintain equipment. (6.07)</td>
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<td>H.</td>
<td>The student shall be able to select, handle, store and dispose of reagents and biological specimens. (2.09)</td>
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<td>I.</td>
<td>The student shall be able to analyze test results and solve routine blood banking problems. (5.01, 8.01.01)</td>
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<td>J.</td>
<td>The student shall develop effective strategies for accessing information from a variety of resources, demonstrating comprehension, and communicating ideas. (8.03.02)</td>
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<td>K.</td>
<td>The student shall develop a positive attitude toward Transfusion Science and the need to be a competent technologist with a sense of responsibility in relation to patient care. (11.01, 11.06)</td>
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<td>L.</td>
<td>The student shall be able to assess their level of knowledge, create objectives and develop strategies for achieving objectives. (11.07)</td>
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<td>M.</td>
<td>The student shall develop an understanding of the principles of ethical behaviour for medical laboratory practice. (1.02)</td>
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technologists and will practice such behaviour to include: respect for patients and their rights; protection of confidential material; co-operation with other members of the health care team; performance of duties to the best of one’s ability; and conduct, dress, and deportment that is exemplary to the profession. (11.02, 11.11)

Methods of Instruction

Students will be given a daily schedule of the theoretical and practical skills to be covered. The teaching/learning process will consist of short review sessions on the theory, and laboratories to practice technical skills.

Tutorials: Using multiple resources (last year’s notes, text, etc.) it is expected that students come prepared to discuss the learning objectives. Tutorials will be conducted in which the instructor will give a brief review lecture and ask questions on the assigned topics. Supplemental notes should be taken during these tutorials. Students are encouraged to ask for clarification of any topic not well understood. The main emphasis will be to expand upon material covered last year. Students are expected to review the content provided last year with a view to enhancing understanding and retention.

Laboratories: The clinical instructor will demonstrate procedures and laboratory technique. Students will have standard operating procedures to follow, but are expected to discuss the rationales for individual test procedures, analyze test results and draw relevant conclusions. During the lab, students will do the tests with minimal reference to the procedure. Following the demonstration, the instructor will observe performance and offer feedback. Students are expected to perform the lab in an organized and efficient manner; do each test according to accepted procedures; to obtain reliable test results; and to demonstrate careful attention to clerical details. At the end of the lab, the instructor will review outcomes obtained by posing questions which require students to analyze results and draw meaningful conclusions.

Students will be introduced to Mysis 6.1, which is the program used in the region for Transfusion Medicine. The expectation is that they will become familiar with the program and be able to follow entries the teaching technologist makes while in the clinical lab. Some of the CBOs require mastery of basic computer functions while others do not. Students should focus on procedure and technique more so than detailed computer steps and be aware that laboratories outside the region may use different LIS programs.

Department: While in the department, students will carry out procedures as assigned by staff. Students are expected to demonstrate initiative by performing additional procedures as indicated by test results, after consultation with a staff member. Active participation in the work routine is encouraged, but constant exchange between staff and students, regarding test procedures are essential as is the reading and co-signing of all student work by the supervising staff member.

Distribution of Marks

- Competency-based Objectives (CBOs) Pass/Fail
- Instructor Evaluation 10%
- Written Tests 20%
- Quizzes 5%
- Assignments 20%
- Journal Reflection 5%
- Final Examination 40%

Attendance

Students are expected to present for their entire rotation. This means arriving on time ready to begin at the designated start times, and remaining until the end of the shift. If absences occur for any reason, this may require repeating all or part of the training period in order to successfully achieve the technical requirements. The decision to repeat any part or the entire training program will be based on the judgment of the instructor and the senior staff
members of the blood bank and will vary accordingly to the length of time missed, the nature of the particular training missed, and performance in other areas of the training program.

Students must follow the following AHS protocol below if absent or late. This information is also located in the orientation manual.

Student Call-In Procedure
Students must adhere to the following procedure to report any spontaneous absence OR lateness.

1. Locate the site where you are required to be.
2. Follow the Student Directions to report your absence or lateness.
3. Follow the same procedure to notify the instructor.