MINNESOTA WEST COMMUNITY & TECHNICAL COLLEGE
COURSE OUTLINE

DEPT. MDLT  COURSE NO.  2106

COURSE TITLE  IMMUNOHEMATOLOGY

CATALOG DESCRIPTION This course teaches the theory of red cell antigen-antibody interactions as it relates to blood grouping and typing, antibody detection compatibility testing. Blood donor screening component preparation are also discussed. In laboratory the student will perform basic blood banking procedures. Accuracy in procedure interpretation is emphasized.

AUDIENCE  Medical laboratory students

FULFILLS MN TRANSFER CURRICULUM AREA(S)
Area : by meeting the following competencies:
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PREREQUISITES OR NECESSARY ENTRY SKILLS/KNOWLEDGE: MDLT 1100 AND MDLT 1120

LENGTH OF COURSE 3 CREDITS/ 2 LECTURE, 1 LAB, 0 OTHER

THIS COURSE IS USUALLY OFFERED:
Every other year  ☐  fall ☑  spring ☐  summer ☐  undetermined ☐

Four goals are emphasized in course at Minnesota West Community & Technical College:

1) ACADEMIC CONTENT:

2) THINKING SKILLS:

3) COMMUNICATIONS SKILLS:

4) HUMAN DIVERSITY:

TOPICS TO BE CONVERED:
This course focuses on the concepts and techniques used in transfusion medicine

LIST OF EXPECTED COURSE OUTCOMES:
1. Explain, interpret and perform forward and reverse tube typing on unknown samples
2. Wash red blood cells
3. Explain, interpret and perform Rh typing
4. Explain, interpret and perform Antibody Screening Procedures
5. Explain, interpret and perform Cross match Procedures
6. Explain, interpret and perform DAT and IAT Procedures
7. Explain RBC antigens
8. List factors affecting RBC antigens
9. Name other major non ABO non Rh antigen systems
10. Interpret and perform weak D testing
11. Recognize agglutination reactions
12. Describe the sequence of events that leads to development of ABO antigens.
13. List the carbohydrates that give ABO antigens their specificity
14. Explain ABO antibodies
15. Explain blood group antibody production
16. Explain Rh blood group antigens and antibodies
17. Explain Rh inheritance and nomenclature
18. Explain ABO and non ABO antibodies
19. Describe characteristics of blood antibodies such as IgG vs. IgM and cold vs. warm
20. List discrepancies and the resolution of discrepancies in ABO tests
21. Identify preparation, preservation and storage requirements of blood components
22. Describe blood donation procedures
23. Site the indications for transfusing each kind of blood product
24. Select compatible transfusion units
25. Differentiate blood components.
26. Differentiate immunohematology reagents
27. Explain autologous transfusion
28. Recognize crossmatch problems
29. Explain the phenomena of dosage
30. List uses of DAT IAT
31. List acute adverse transfusion reactions
32. Distinguish warm from cold autoimmune hemolytic anemia
33. List delayed acute adverse transfusion reactions
34. State the significance of blood antibodies as associated with transfusion reactions and HDN
35. Discuss cord blood testing and HDN (Hemolytic Disease of the Newborn)
36. Define RhIG and how to use it
37. Perform testing for fetal maternal bleed
38. Explain and perform autoantibody detection tests
39. Interpret antibody panel test results
40. Explain transfusion reactions and the workup
41. Apply QC/QA principles
42. Define immunohematology terms
LEARNING/TEACHING TECHNIQUES used in the course are:

- Collaborative Learning
- Problem Solving
- Student Presentations
- Interactive Lectures
- Creative Projects
- Individual Coaching
- Lecture
- Films/Videos/Slides
- Demonstrations
- Lab

ASSIGNMENTS AND ASSESSMENTS FOR THIS CLASS INCLUDE:

- Reading
- Tests
- Individual Projects
- Oral Presentations
- Worksheets
- Collaborative Projects
- Textbook Problems
- Papers
- Portfolio
- Group Problems
- Term Paper
- Other (describe below)

The information in this course outline is subject to revision

To receive reasonable accommodations for a documented disability, please contact the campus Student Services Advisor or campus Disability Coordinator as arrangements must be made in advance. In addition, students are encouraged to notify their instructor.

Veteran Services: Minnesota West is dedicated to assisting veterans and eligible family members in achieving their educational goals efficiently. Active duty and reserve/guard military members should advise their instructor of all regularly scheduled military appointments and duties that conflict with scheduled course requirements. Instructors will make every effort to work with the student to identify adjusted timelines. If you are a veteran, please contact the Minnesota West Veterans Service Office.

This document is available in alternative formats to individuals with disabilities by contacting the
Student Services Advisor or by calling 800-658-2330 or
Minnesota Relay Service at 800-627-3529 or by using your preferred relay service.

A Member of the Minnesota State Colleges and Universities System
An Affirmative Action Equal Opportunity Educator/Employer
Faculty are requested to submit their syllabus to the Academic Affairs office within two weeks after the course begins.

ACADEMIC YEAR: 2002/2003

INSTRUCTOR NAME: Rita Miller, MS(CLS), MT(ASCP)

OFFICE HOURS:

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SYLLABUS INFORMATION: