Faculty members are required to have the outline submitted to the Academic Affairs Office. The course outline is the form used for approval of new courses by the Academic Affairs and Standards Council.

DEPT. Medical Laboratory Technician COURSE NUMBER: MDLT 2110

NUMBER OF CREDITS: 2 Lecture: 2 Lab: 0

Course Title:
Clinical Chemistry II

Catalog Description:
Clinical Chemistry II is a continuation of MDLT 1125 Clinical Chemistry I. Students continue to develop skills in the performance of the chemical analysis of blood. Lectures continue to correlate laboratory results with clinical findings. Content of the course includes renal, acid/base balance, electrolytes, endocrinology & thyroid, gastric & pancreatic function, toxicology, and hormones.

FULFILLS MN TRANSFER CURRICULUM AREA(S)
Goal 1: Communication: ___ by meeting the following competencies:

Goal 2: Critical Thinking: ___ by meeting the following competencies:

Goal 3: Natural Sciences: ___ by meeting the following competencies:

Goal 4: Mathematics/Logical Reasoning: ___ by meeting the following competencies:

Goal 5: History and the Social and Behavioral Sciences: ___ by meeting the following competencies:

Goal 6: The Humanities and Fine Arts: ___ by meeting the following competencies:

Goal 7: Human Diversity: ___ by meeting the following competencies:

Goal 8: Global Perspective: ___ by meeting the following competencies:

Goal 9: Ethical and Civic Responsibility: ___ by meeting the following competencies:

Goal 10: People and the Environment: ___ by meeting the following competencies:

Prerequisites or Necessary Entry Skills/Knowledge:
MDLT 1100 Intro to Laboratory Science, CHEM1150 Survey of Chemistry, and MDLT 1125 Clinical Chemistry I.
### Topics to be Covered

- Renal
- Acid/base balance
- Electrolytes
- Endocrinology & thyroid
- Gastric & pancreatic function
- Toxicology
- Hormones

### Student Learning Outcomes

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Apply principles of safety, quality assurance and quality control in clinical chemistry</td>
<td>Evaluate specimen acceptability for chemical analysis</td>
</tr>
<tr>
<td>Compare and contrast human body chemistry levels under normal and abnormal conditions</td>
<td>Explain, perform, and evaluate clinical chemistry procedures for renal, acid-base balance, endocrinology, toxicology, hormones, gastric, and pancreatic testing</td>
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<tr>
<td>Discuss basic laboratory instrumentation and automation</td>
<td>Perform laboratory calculations as pertains to clinical chemistry</td>
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<tr>
<td>Discuss methodologies for chemistry determinations</td>
<td>Define terminology associated with clinical chemistry topics</td>
</tr>
<tr>
<td>Correlate test results with patient conditions in regards to renal, acid-base balance, endocrinology, toxicology, hormones, gastric, and pancreatic diseases</td>
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### Is this course part of a transfer pathway: Yes ☐ No ☒

02/2020