Carroll University Nursing Program
NRS 312 Family Centered Obstetric Care
Fall 2017

Course Number, Title, Section, Time and Location:
Family Centered Obstetric Nursing Care - NRS312
Wednesday, 1100-1250pm (9/13/2017 - 12/20/2017)

Location: Shattuck Auditorium Room 122

Number of Credits: 2

Placement/prerequisites/co-requisites: Nursing major, NRS 233, 234, 236, and BIO 212. Pre-requisite or Co-requisite: PSY 221.

Faculty Name: Nicole Mattson MS, RN, CNS-BC
Office: Scholars House Room 203
Phone: # 262-951-3131
Faculty email address: nmattson@carrollu.edu
Office hours: Thursdays from 8:30-11:30am, and by appointment

Course Description:
The course focuses on the specialized health care needs of the childbearing family. The health responses of the family unit are emphasized as essential to the promotion and maintenance of health of mother and child. Students develop the necessary knowledge base and learn the importance of collaboration with others of the health care delivery team to provide care and teaching for pregnancy, delivery and newborn nursing.

Course Objectives:
At the end of this course the student will have demonstrated the ability to:

1. Demonstrate an appreciation of the history and contemporary issues in maternity nursing and their impact on current nursing practice. (Essential IX.5).

2. Conduct a health history including physical, behavioral, psychological, spiritual, socioeconomic, and environmental assessments identifying conditions and characteristics that increase health risks of the childbearing family. (Essential IX. 1).

3. Demonstrate understanding of the anatomy, physiology, and pathophysiology regarding healthcare of the female, unborn, and newborn patient as it relates to this course. (Essential IX. 3).

4. Develop an awareness of patients as well as healthcare professionals’ spiritual beliefs and values and how those beliefs and values impact the childbearing process. (Essential VII.3, VIII.9, IX.18).

5. Utilize evidence-based practices to guide health teaching, health counseling, screening, referrals, and follow-up care specific to the individual needs of a childbearing woman,
1. Demonstrate understanding of the basic nursing care of the childbearing woman, her family, and her newborn. (Essential VII.5).

2. Use written, verbal, non-verbal, and emerging technology methods to communicate effectively. (Essential I.4).

3. Utilize critical thinking skills to identify the needs of childbearing and the childrearing family utilizing the nursing process. (Essential VII.3, IX.13).

4. Demonstrate understanding of complementary and alternative modalities and their role in caring for the childbearing family. (Essential IX.17).

5. Describe normal and abnormal physiological and psychological changes that occur during each period of the childbearing cycle and newborn period. (Essential IX.3).

**Required Textbooks and necessary materials:**


**Suggested Materials and Texts:**

- ATI 10th edition modules

In addition, all previously required nursing texts may be utilized.

Version: 9/2017
The following Nursing Concepts are the focus of NRS 312:

- Family-Centered Nursing Care
- Ethical issues related to childbearing
- Contraception, conception, and infertility
- Fetal development
- Physical and psychological changes during pregnancy
- Prenatal testing
- Labor and delivery
- Postpartum care
- Healthy newborn
- At risk newborn
- Newborn resuscitation
- Pregnancy loss/loss of an infant
- Postpartum care of the newborn
- Breastfeeding

Methods of Evaluation

Any or all such measures of student learning may be administered in the classroom, computer or clinical nursing laboratory or in the clinical setting at faculty discretion. If the student is not successful in meeting the required quiz/exam mean score, there will be no consideration of any successfully completed coursework in determining final course grade and the student may earn a maximum final course grade of "C". Unsuccessful completion of course work will always be considered when determining final course grade. There will be no rounding up of quiz or exam grades. No extra credit assignment points may be used to earn back points for quizzes or exam scores. At no time will extra credit points be used in determining student achievement of required quiz/exam mean score.

Determination of final course grade: If the student meets the required 78% quiz/exam mean score, and assuming the student meets all other course requirements, the final course grade will be determined according to the percent of total points accrued for exams, quizzes, and course assignments according to the grading scale below:

Grades will be determined using the following grading scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>93-100%</td>
</tr>
<tr>
<td>AB</td>
<td>88-92%</td>
</tr>
<tr>
<td>B</td>
<td>83-87%</td>
</tr>
<tr>
<td>C</td>
<td>78-82%</td>
</tr>
<tr>
<td>D</td>
<td>72-77%</td>
</tr>
<tr>
<td>E</td>
<td>68-72%</td>
</tr>
<tr>
<td>F</td>
<td>67% and below</td>
</tr>
</tbody>
</table>

Note: Students must achieve a grade of BC in NRS course 312 to progress in the nursing program.

Learning tools:

Class tutor:
The class will have a tutor that will be available 1-2 times per week in 1-2 hour periods of availability to assist students with review, studying, assignment questions, quiz and exam preparation. The tutor will communicate with students in the class regarding their tutoring

Version: 9/2017
Assignments:
It is the student's responsibility to follow all directions, both verbal and written, in order to successfully complete assignments. Related course documents are posted on Canvas.

ATI Skills Modules – Maternal Newborn Cares:
It is intended that these assignments will be completed as listed in the syllabus calendar to supplement and support in-class and lab learning. This learning tool is available to each student and is strongly recommended to facilitate success in the posttest evaluation associated with these learning modules in the assignment section of the grade book.

Lab simulation:
There will be opportunities in class and during lab with hands-on deep learning activities that will require active participation in order to prepare for simulation skills check off by each student. Lab dates and times will be posted on eLearning. Students will sign up for a lab time slot. Attendance will be taken during lab time.

Certain nursing courses within the Carroll University Nursing Program require additional classroom time outside of the scheduled hours. It is the responsibility of the student to work with the Nursing Faculty if there is a scheduling conflict with other courses. Do not assume you can skip another course for a nursing course.

Cultural Birthing Care Plan Gallery Walk:
The student team will create a birthing care plan for an identified simulated patient based on basic information given and then determine a culturally sensitive course of care for her labor and delivery experience per the rubric guidelines to be posted on Canvas. The presentation will be developed as a group to include the criteria of the assignment rubric. All groups will present on the last day of class.

OB Teaching Handout:
The student will create a patient brochure/teaching handout that explains common postpartum teaching topics that are specific to a mom after childbirth or to a newborn. At the beginning of the semester groups will be assigned and each student in the group will be assigned a topic from the list below. Each topic within the group will be different and other groups will have the same breakdown. At the due date each student will share their topic with their group following the rubric guidelines. Each student will provide the members of their group with copies of their patient brochure/teaching handout for review/study purposes (see Canvas for rubric).

OB Teaching topics include:
Maternal Antenatal (due on 10/4/17):

- Routine labs for pregnancy (UA, CBC, RPR, Rh testing/Coomb’s, CMP)
- Amniocentesis and Biophysical Profile
- Contraction stress testing, non-stress testing, and fetal kick counting
- Alpha fetoprotein testing and TORCH testing

Maternal Postpartum (due on 11/15/17):
• Perineal Care/Promotion of bowel function/Breast Care (for breastfeeding and formula feeding Moms)
• Sexual Intercourse/Contraception/activity and exercise
• Post-Partum Depression/Blues/Psychosis
• Post-Partum Infections

Newborn (due on 11/29/17):
• Crying/Quieting Techniques/Safe Sleep
• Bathing/Cord care/Skin care/Clothing
• Feeding/Elimination/oral and Nasal suctioning
• Diapering/Diaper rash/Circumcision care, procedure

These may be re-divided based on the number of students in the class.

ATI Non-proctored practice assessments:
Each student will prepare for the ATI assessments by completing the weekly ATI homework assignments and reviewing skills modules. The non-proctored assessments will be taken individually, are not timed, are open book (use ATI, not the text, to avoid conflicts in information), and are intended to encourage learning by utilizing your ATI resources. No collaboration amongst students is allowed. Do not take these assessments in groups to avoid concerns regarding academic integrity.

ATI Non-proctored practice assessments are graded as assignments in the course.

• RN Maternal Newborn Online Practice 2013 A
• RN Maternal Newborn Online Practice 2013 B

You can repeat each assessment one time after completing the 3 remediation templates. The higher score will be entered in the grade book. You will submit the remediation templates and all ATI scores on the ATI due date identified in the course calendar. If you choose to repeat the assessment, this is due on the ATI due dates identified in the course syllabus. If you do not complete remediation templates you will not receive credit for the assignment. ATI due dates are identified in the course calendar. Rationales for the assessment will be unlocked after the due date and you may go back in and review the questions at that time.

Quizzes and exams:
Quizzes:
There will be 8 quizzes to be completed on LMS prior to class the week that they are assigned. They will be based on the reading assignments and may also contain info from the assigned ATI assignment. Quizzes will focus on the general knowledge, especially anatomy, physiology, and pharmacology of the content for each week. Students may use the book or notes for the quizzes. Students MAY NOT use other resources for quizzes to include peers, faculty, friends, co-workers, etc. Quizzes will be reviewed for similar times of testing. It is recommended that you do not take the quiz in a group of friends to avoid concern of a collaborative effort. Failure to complete an assigned quiz PRIOR to class that week will result in a zero for that quiz.
Two additional quizzes will be topic-specific quizzes (1- Contraception and Nutrition, and 2- OB Diagnostics) that will be more heavily weighted. These quizzes may be completed at any time during the semester, but must be completed no later than 10pm.

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on the day that they are due. These quizzes are open note/book/resource. They are not to be done as a group.

Exams:
There will be 3 exams for this course to include Exam 1, Exam 2, and a cumulative final exam during finals week. Exam 1 and Exam 2 will reflect the content of their section and will focus on the nursing care of the OB patient as it relates to the specified content. Both of these exams will be administered on paper utilizing scantron and consisting of 50 questions and will be taken in class. Only athletes with Carroll University athletic conflicts will be excused and must notify the instructor at the beginning of the course to schedule these exams at another time. No work conflicts or social conflicts will be acceptable as excuses for rescheduling these exams if scheduled outside of the class time. A brief post-test review will be scheduled on the following course day. Tests will not be available for review during the tutor review session or with the instructor.

All exams will be related to the general nursing care related to the following topics:

Exam 1 content:
- Family-Centered Nursing Care
- Ethical issues related to childbearing
- Women’s reproductive health review
  - menstrual cycle
  - STD’s
  - preventative health care
- Contraception, conception, and infertility
- Fetal development
- Physical and psychological changes during pregnancy
- Prenatal testing

Exam 2 content:
- Labor and delivery
- Early pregnancy complications/termination
- Pregnancy complications/health concerns
- Postpartum care
- Healthy newborn/newborn resuscitation
- Complications of labor and delivery/C-section delivery

Cumulative exam will include all of the above as well as:
- At risk newborn
- Postpartum care of the newborn
- Breastfeeding
- Pregnancy loss/loss of an infant

Final exam:
The final exam will be cumulative, and potentially cover the entire course content from the semester. This exam will cover knowledge from any of the course objectives listed above. This exam will be a paper and scantron exam.

ATI proctored exam:
All students are required to take this ATI test. Points are calculated based on the ATI equivalent to our 100%. A score of a 66.7% is the lowest cutoff for a level 2 score per ATI, therefore all grades will be calculated using a formula where a 66.7% on ATI is equivalent to a 78% per Carroll University grading guidelines. There will be no rounding of results in determining if the student has achieved a level 2 score. The student must have successfully completed the non-proctored practice assessments as required in order to receive points for the proctored assessment. Students achieving a Level 3 on the ATI exam will automatically receive a 93% on the final exam for the course. Students who achieve a Level 3 will still take the final exam, but will not be penalized if their score is below a 93%. For example, if a student receives a Level 3 on ATI scores a 82% on the final, the final score recorded in the gradebook would still be a 93%. If students achieve >93% upon taking the final, then they would receive the higher grade. For example, if a student receives a Level 3 on ATI scores a 98% on the final, the final score recorded would be a 98%.

NOTE: Failure to complete the non-proctored practice assessments as required will result in zero points on this assessment regardless of the score achieved. Failure to take the ATI proctored exam will result in an incomplete in the course.

Medication Math Mania:
To assure an environment of safety in medication calculation and administration, this course will follow the Carroll University Medication Math Mania Policy (see Appendix B). Two quizzes will occur during the semester.

Extra credit:
Extra credit will only be offered at the discretion of the instructor if a particular beneficial opportunity arises during the semester that will facilitate learning but was not previously built in to the syllabus. No other extra credit opportunities will be offered for any other circumstances. Extra credit points are not available for use toward exam/quiz grades and may only be applied toward the total grade score if a 78% or better was earned on exam/quiz grades.

Labor & Delivery management skills check off:
Each student will be required to independently manage a basic labor and delivery that may or may not include one complication or newborn cares. The student must be able to complete necessary assessments, make basic nursing decisions based on their findings, and safely deliver a newborn using the skills that they have learned throughout the semester that promote a hemodynamically stable mom/baby and a successful delivery without additional trauma or complication. Students will be provided with a skills check off list during the practice deliveries. Each student must sign up for his or her check off during assigned testing times with a teaching assistant or BSN.

Grading is as follows:
Exams and Quizzes:

<table>
<thead>
<tr>
<th>Evaluation Method</th>
<th>Points Available</th>
<th>% Total Grade</th>
<th>Points Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quizzes (8 worth 10 points each)</td>
<td>80</td>
<td>12.6%</td>
<td></td>
</tr>
<tr>
<td>Additional topic-specific exams</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nutrition and Contraception Quiz (15 points)</td>
<td>30</td>
<td>4.7%</td>
<td></td>
</tr>
<tr>
<td>OB Diagnostics Quiz (15 points)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exam 1</td>
<td>75</td>
<td>11.8%</td>
<td></td>
</tr>
<tr>
<td>Exam 2</td>
<td>75</td>
<td>11.8%</td>
<td></td>
</tr>
<tr>
<td>Med Math Mania Quiz 1</td>
<td>5</td>
<td>0.78%</td>
<td></td>
</tr>
<tr>
<td>Med Math Mania Quiz 2</td>
<td>10</td>
<td>1.6%</td>
<td></td>
</tr>
<tr>
<td>Skills check off</td>
<td>40</td>
<td>6.3%</td>
<td></td>
</tr>
<tr>
<td>ATI Proctored Test</td>
<td>40</td>
<td>6.3%</td>
<td></td>
</tr>
<tr>
<td>Final Cumulative Exam</td>
<td>100</td>
<td>15.7%</td>
<td></td>
</tr>
<tr>
<td>Total Points</td>
<td>455</td>
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</tr>
</tbody>
</table>

All students must achieve a mean score of 78% on all exams and quizzes in order to pass the course.

Written Assignments:

<table>
<thead>
<tr>
<th>Evaluation Method</th>
<th>Points Available</th>
<th>% Total Grade</th>
<th>Points Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Group Cultural Birthing Care Plan</td>
<td>70</td>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>OB Discharge Teaching Handout</td>
<td>50</td>
<td>7.8%</td>
<td></td>
</tr>
<tr>
<td>Non proctored assessment A</td>
<td>30</td>
<td>4.7%</td>
<td></td>
</tr>
<tr>
<td>Non proctored assessment B</td>
<td>30</td>
<td>4.7%</td>
<td></td>
</tr>
<tr>
<td>Total Points</td>
<td>180</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Evaluation Methods Combined

<table>
<thead>
<tr>
<th>Points Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exams and Quizzes Points (~70%)</td>
</tr>
<tr>
<td>Written Assignments, ATI, etc. (~30%)</td>
</tr>
<tr>
<td>Total Points Combined (100%)</td>
</tr>
</tbody>
</table>

Faculty Policies:

Attendance: Students are expected to attend and participate in all classes. Any more than an absence of 2 class periods will result in the lowering of the student’s assignment course grade by 1/2 of a grade (example B to a B/C). Turning point responseware will be used to log attendance. Any anticipated absences should be communicated to the faculty via email.
prior to the expected absence. Any missed material is the responsibility of the student and will be considered incomplete (a zero) unless other arrangements are made with the instructor prior to the assignment due date. (See the “late assignment section”). Students are expected to read the assigned content in the textbook, prepare for class, and participate actively in discussions and group work in order to receive participation credit. Students are expected to participate, positively contribute to learning, and refrain from disrupting the class or other students in the class.

Cell Phones: Phones are not permitted at clinical or in laboratory. Cell phones are not to be used during class time. Texting/emailing is not permitted during class time. All students in this course are expected to adhere to Nursing Department and University professional standards. In addition, there will be no use of cell phones, texting, or emailing during class time. Failure to comply will result in the student(s) being asked to leave the class. This will result in the loss of opportunity to participate in that day’s learning exercise and may result in a learning contract. If a student is confronted on more than one occasion, a learning contract will be initiated. Failure to change unprofessional behavior after two warnings will result in an unsuccessful completion in this course.

Missed quizzes and exams:
*Failure to take a quiz or exam during the assigned period or unexcused absences from a scheduled exam will result in a grade of zero on that quiz/exam. No exceptions.* If a student quiz/test is interrupted by a connectivity issue during an on-line assessment and the student is unable to resume their quiz, the student must contact the instructor immediately to have their quiz reset. Failure to do so will result in a zero.

Late assignments:

1. Students will be held accountable for meeting all designated deadlines.
2. Students are responsible for ALL reading assignments.
3. Late assignments will have 10% point (on total possible points for the assignment) deduction per day.
4. If the student requires an extension for an assignment, communication with the instructor MUST occur before the assignment is due. Each student may only receive one extension during the course and will be granted at the discretion of the instructor.
5. Exceptions for extreme circumstances will be made at the discretion of the instructor.

Unsuccessful Student Progress and Completion of Student Learning Contracts:
Students who are unsuccessful at mid-term (or any other point in semester per faculty determination) will be required to collaborate with faculty to develop a student learning contract as a means to plan learning strategies that can promote and support student success. Learning activities, objectives, explicit measures and due dates will be identified and documented on the student learning contract. Students must successfully complete their learning contract by the listed date assigned in that learning contract in order to successfully complete the course. Failure to do so will result in an unsuccessful completion of this course.

Professional Conduct of the Student:
The student:

Version: 9/2017
1. Attendance – Attends all required classroom, clinical, nursing program, and university activities.
2. Attentiveness – Demonstrates alertness, attentiveness, and active participation in all required classroom, clinical, nursing program and university activities.
3. Authority – Demonstrates respect for all those placed in authority.
4. Communication – Demonstrates effective communication in all written, verbal, and nonverbal communication with patients, families, professional colleagues, faculty, administrators, and peers.
5. Cooperation – Demonstrates the ability to effectively collaborate with others, giving and accepting freely the exchange of information and constructive criticism.
6. Demeanor – Demonstrates a positive, open attitude towards peers, teachers, and others during the course of study; maintains a professional and respectful manner in interpersonal relations; functions in a supportive, constructive, and responsive manner, in all situations.
7. Ethics – Conducts self in compliance with the ANA Code of Ethics.
8. Inquisitiveness – Demonstrates the spirit of inquiry.
9. Judgment – Engages in decision-making that reflects the integration of personal, professional and academic conduct.
10. Maturity – Functions as a responsible, ethical, law-abiding adult.
11. Personal Appearance – Demonstrates personal hygiene and dress that reflects the standards expected of a professional nurse.
12. Professional Role – Conducts self as a professional role model in compliance with ANA Standards of Practice and the Wisconsin State Board of Nursing Rules and Regulations.
13. Responsibility – Demonstrates accountability for knowing, following, and meeting expectations in classroom, laboratory, and clinical settings; nursing school performance is the primary commitment.
15. Timeliness – Demonstrates accountability in meeting professional and academic deadlines; arrives and is prepared to participate at the start of scheduled course, laboratory, and clinical times.

As the Carroll University environment is considered a profession setting, any email correspondence between you and the professor must be written in a professional manner. More specifically, your emails should be: composed clearly and articulately; use formal, professional language; include relevant subject heading and what class you are in (e.g., Question about Project for NRS 312); and use proper spelling, grammar, and punctuation. *Emails that do not meet these standards may not receive a response.*

In general, email will be answered during standard business hours: 9am-5pm on Monday through Friday. Do not assume that emails sent outside of those hours, or on weekends, will be returned until the resumption of standard business hours.

Campus Information:
The Carroll University Writing Center, located in the library Learning Commons, is open Sunday through Friday. Writing Assistants are available either by appointment or on a drop in basis. To schedule an appointment, use LC Online, which is accessible through the student portal or by visiting our webpage: [http://www.carrollu.edu/learningcommons/writingcenter.asp?nav=5790](http://www.carrollu.edu/learningcommons/writingcenter.asp?nav=5790)

From brainstorming to citation, Writing Assistants can help you with any stage of the writing process. Appointments are thirty minutes long, and are free to all students.

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Statement on Academic Integrity:
The Carroll University Academic Integrity Policy is located in your student handbook. I encourage you to familiarize yourself with it. If a student violates this policy in any way, I reserve the right to impose a sanction of failure on the assignment/assessment or failure in the course. If you have questions about appropriate citations, please ask. On-line quizzes and exams are not to be taken as a collaborative student effort. Additional resources are permitted during quizzes or exams only as indicated in this syllabus. If any changes are made, the students will be notified via written announcement/email. Violation of this policy may result in the above-mentioned sanctions.

Accommodation for Disabilities:
Students with documented disabilities who may need accommodations, or any student considering obtaining documentation, should make an appointment with Ms. Martha Bledsoe, the Carroll University disabilities coordinator, no later than the first week of class. Mrs. Bledsoe may be reached by calling 524-7335 or contacting her via e-mail – mbledsoe@carrollu.edu.

Modifications to the syllabus:
The instructor and the University reserve the right to modify, amend, or change the syllabus (schedule, course requirements, grading policy, etc.) as the curriculum and/or program require(s). In the event of a change, all students enrolled in the course will receive an email notification and the change will be posted to the LMS course calendar within 24 hours.
<table>
<thead>
<tr>
<th>Date/week</th>
<th>Content</th>
<th>Student Learning Outcomes</th>
<th>Teaching/ Learning Strategies</th>
<th>Preparation for Class</th>
<th>Assignments/ Assessments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1&lt;br&gt;9/13/2017&lt;br&gt;Introduction</td>
<td>Orientation to course – Review syllabus and identify work groups&lt;br&gt;Trends and M&amp;M’s</td>
<td>1. Discuss course content and requirements to be successful in NRS 312.&lt;br&gt;2. Identify the nursing roles available to maternal newborn nurses (1,9).&lt;br&gt;3. Define the principle of family centered care (1,9).&lt;br&gt;4. Distinguish between the levels of care available to childbearing families (1,9).&lt;br&gt;5. Describe the need for health promotion across the woman's life span.&lt;br&gt;6. Analyze conditions and factors that increase health risks for women across the life span (2,5).</td>
<td>Interactive Lecture</td>
<td>Print out syllabus&lt;br&gt;Read Perry chapters: 1-2</td>
<td>Read syllabus</td>
</tr>
<tr>
<td>Week 2&lt;br&gt;9/20/2017&lt;br&gt;Reproductive Years</td>
<td>Contraception&lt;br&gt;Family Planning&lt;br&gt;Infertility&lt;br&gt;STI’s</td>
<td>1. Describe the nurse's role for the couple's selected family planning methods (4,9).&lt;br&gt;2. Examine the process of conception and complications that can prevent successful intrauterine pregnancy (3,10).&lt;br&gt;3. Describe the phases of the menstrual cycle, the hormones and changes that occur in each phase (3).&lt;br&gt;4. Compare and contrast the various methods of contraception available today (1,3,5).&lt;br&gt;5. Discuss common causes and treatments for infertility (3).</td>
<td>Interactive Lecture</td>
<td>Read Perry pg. 44-72&lt;br&gt;Ch. 4 skip pg. 98-108&lt;br&gt;All chapter 5&lt;br&gt;Review male and female structures&lt;br&gt;Read ATI chapters: 1-2, 8</td>
<td>Week 2 quiz due before class by 10:50am on 9/27/17&lt;br&gt;Med Math Mania Week 1 Homework due at start of class on 9/20/2017</td>
</tr>
</tbody>
</table>
| Week 3 | 9/27/2017 | Pre-conception Care and the Antenatal Period | Fetal development | Signs of pregnancy | 1. Describe the nurse’s role in prenatal education (1,2,5,7).  
2. Summarize the significant changes in growth and development of the fetus throughout gestation (3,10).  
3. Summarize the effects of alcohol and illicit drugs on the childbearing woman and her fetus/newborn (7,10).  
4. Compare subjective (presumptive), objective (probable), and diagnostic (positive) signs of pregnancy (10).  
5. Utilize the methods most commonly used to determine the estimated date of birth (8).  
6. Relate the anatomic and physiologic changes that occur during pregnancy (3,10).  
7. Delineate recommended levels of weight gain during pregnancy (8).  
8. Discuss the emotional and psychological changes that commonly occur in a woman, her partner, and her family during pregnancy (2,7).  
9. Explain the causes of the common discomforts of pregnancy (7). | Interactive Lecture | Read Perry chapters: 6, 7, 9  
Read ATI chapters: 3-5  
ATI Skills Maternal Newborn Care Pre Test | Week 3 quiz due by 10:50am on 10/4/17 | Med Math Mania Week 2 Homework due at start of class on 9/27/2017 |
| Week 4 | 10/4/2017 | Normal visit schedule | Testing during | 1. Identify the differing processes by which fraternal (dizygotic) and identical (monozygotic) twins are formed (3,10).  
2. Describe typical prenatal labs | Interactive Lecture | Read Perry chapters: 8, 10 | Week 4 quiz due by 10:50am on 10/11/17 |
<table>
<thead>
<tr>
<th>Assessment of fetal well-being</th>
<th>pregnancy Twins</th>
<th>Video</th>
<th>Read ATI chapters: 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Trimester Assessment</td>
<td>(3,10).</td>
<td></td>
<td>Watch course video on Fetal Heart Rate assessment prior to class. Found on Canvas website.</td>
</tr>
<tr>
<td>2nd Trimester Assessment</td>
<td>3.Identify the advantages and disadvantages of chorionic villus sampling (3,10).</td>
<td>ATI Skills module:</td>
<td></td>
</tr>
<tr>
<td>3rd Trimester Assessment</td>
<td>4.Discuss the use of amniocentesis as a diagnostic tool (3,10).</td>
<td>• Danger Signs During Pregnancy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5.Identify indications and interpret findings for ultrasound examination during pregnancy (2,3,10).</td>
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<tr>
<td></td>
<td>6.Describe characteristics of fetal heart rate monitoring and describe the appearance and significance of each (8).</td>
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<tr>
<td></td>
<td>7.Outline steps to be performed in the systematic evaluation of fetal heart rate (8).</td>
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<tr>
<td></td>
<td>8.Interpret common methods of fetal monitoring during pregnancy (8).</td>
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<tr>
<td></td>
<td>9.Compare and contrast the procedure and information obtained from Doppler, nonstress test, contraction stress test, and biophysical profile (3,8,10).</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Week 5</th>
<th>Labor and delivery Pain management</th>
<th>Interactive Lecture Video: Stages of Labor</th>
<th>Read Perry chapters: 13-16</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/11/2017</td>
<td>1.Describe the physiology of labor (3).</td>
<td></td>
<td>Read ATI chapters: 11-15</td>
</tr>
<tr>
<td>Intrapartum Care</td>
<td>2.Describe the signs of pending labor (3).</td>
<td></td>
<td>ATI Skills modules:</td>
</tr>
<tr>
<td>LAB DAY (outside of class time)</td>
<td>3.Examine the five critical factors that influence labor (3).</td>
<td></td>
<td>• Stages of labor</td>
</tr>
<tr>
<td></td>
<td>4.Summarize methods used to evaluate the progress of labor (3,5).</td>
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<td>• Epidural catheter placement</td>
</tr>
<tr>
<td></td>
<td>5.Describe the physiologic and psychological changes occurring in the three phases of labor (2,3,7).</td>
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<tr>
<td></td>
<td>6.Compare and contrast the nursing actions during each phase of labor (7).</td>
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<tr>
<td></td>
<td>7.Discuss premonitory signs of labor</td>
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</tr>
</tbody>
</table>

Med Math Mania Week 4 Homework due at start of class on 10/11/2017
Nutrition and Contraception Quiz due by 10pm on 10/14/17
1. Differentiate between false labor and true labor (3).
2. Describe the cardinal movements during delivery (3).
3. Differentiate the types of diabetes mellitus and their respective risk factors in pregnancy (3,10).
4. Develop a plan of care for the pregnant woman with pregestational or gestational diabetes (5,7).
5. Establish a plan of care for gestational diabetes (5,7).
6. Differentiate between true labor and non-labor (3).
7. Differentiate between true labor and false labor (3).
8. Differentiate between false labor and true labor (3).
9. Describe the cardinal movements during delivery (3).
10. Describe systemic response to labor (3).
11. Describe intrapartum nursing interventions (8).
12. Describe auscultation of fetal heart rate (8).

<table>
<thead>
<tr>
<th>Week 6</th>
<th>Exam 1</th>
<th>Exam 1 and Med Math Mania Quiz 1</th>
<th>Bring your calculator and pencil.</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/18/2017</td>
<td>Labor and delivery (continued)</td>
<td>Pain management</td>
<td></td>
</tr>
<tr>
<td>Week 7</td>
<td>Intrapartum Care cont.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/25/2017</td>
<td>Labor and delivery (continued)</td>
<td>Pain management</td>
<td></td>
</tr>
<tr>
<td>Week 8</td>
<td>Antepartum at Risk LAB DAY (outside of)</td>
<td>Complications of pregnancy (Preexisting and Gestational)</td>
<td></td>
</tr>
<tr>
<td>11/1/2017</td>
<td></td>
<td>1. Describe the early complications of pregnancy to include ectopic pregnancy, hemorrhage, and infection (3,10).</td>
<td>Interactive Lecture Small group case study: Gestational</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Differentiate the types of diabetes mellitus and their respective risk factors in pregnancy (3,10).</td>
<td>Read Perry chapters: 11, 12 Read ATI chapters: 7,9,10</td>
</tr>
</tbody>
</table>
| | | 3. Develop a plan of care for the pregnant woman with pregestational or gestational diabetes (5,7). | ATI skills modules:
| | | | • Measuring fundal height
| | | | • Leopold maneuvers
| | | | Week 8 quiz due by 10:50am on 11/8/17
| | | | Med Math Mania Week 6 Homework due at start of class on 11/1/2017 OB Diagnostics Quiz due by 10pm

Week 6 & 7 quiz due by 10:50am on 11/1/17
Med Math Mania Week 5 Homework due at start of class on 10/25/2017
<table>
<thead>
<tr>
<th>Week 9</th>
<th>Complications of labor and delivery</th>
<th>4. Differentiate the management of various cardiovascular disorders in pregnant women (3,5). 5. Discuss the care of pregnant women who use, abuse, or are dependent on alcohol or illicit or prescription drugs (1,5). 6. Compare the assessment, implications, and nursing care of women with hypertensive disorders (3,8,10). 7. Compare and contrast abruption placentae and placenta previa, including implications for the mother and fetus (3,5).</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/8/2017</td>
<td>Care of the c/section patient</td>
<td>Diabetes</td>
</tr>
<tr>
<td>Intrapartum at Risk</td>
<td>Interactive Lecture</td>
<td>on 11/4/17</td>
</tr>
<tr>
<td>LAB DAY (outside of class time)</td>
<td>Small group case study: Preeclampsia</td>
<td>Read Perry chapters: 17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Read ATI chapters: 16</td>
</tr>
<tr>
<td></td>
<td>ATI Skills Modules:</td>
<td>ATI Practice A due by 10 pm on 11/11/17</td>
</tr>
<tr>
<td></td>
<td>• Cesarean birth</td>
<td>Med Math Mania Week 7 Homework due at start of class on 11/8/2017</td>
</tr>
<tr>
<td>Week 10</td>
<td>11/15/2017</td>
<td>Postpartum care and complications</td>
</tr>
<tr>
<td>Week 10 quiz due by 10:50am on 11/22/17</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>LAB DAY (outside of class time)</td>
<td></td>
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<tr>
<td>Maternal Teaching Handout due in class on 11/15/17 (only for those with maternal topics)</td>
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<tr>
<td>Week 11</td>
<td>11/22/2017</td>
<td>Exam 2</td>
</tr>
<tr>
<td>Week 12 quiz due by 10:50am on 12/6/17</td>
<td></td>
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<tr>
<td>Newborn Teaching Handout due in class on 11/29/17 (only for those with newborn topics)</td>
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<tr>
<td>Handout</td>
<td>considerations and activities to be carried out during the first four hours after birth and subsequent daily care (5,8).</td>
<td>Care Skills Post Test</td>
</tr>
<tr>
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<td>-------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>6. Summarize the components of a complete newborn assessment and the significance of normal variations and abnormal findings (2,8).</td>
<td>7. Discuss the neurologic and neuromuscular characteristics of the newborn and the reflexes that may be present at birth (3).</td>
<td></td>
</tr>
<tr>
<td>8. Discuss appropriate teaching necessary for cord care (5).</td>
<td>9. Define circumcision including appropriate teaching and nursing interventions (5).</td>
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</tr>
<tr>
<td>10. Discuss the reasons a newborn may develop jaundice and treatment options (3).</td>
<td>11. Discuss nursing care related to phototherapy (8).</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Week 13 12/6/2017</th>
<th>High risk newborn</th>
<th>Interactive Lecture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Care of high risk newborn</td>
<td>1. Describe methods used to identify infection in the newborn.</td>
<td>Read Perry chapters: 24, 25</td>
</tr>
<tr>
<td>Class presentations on Birthing Care Plan Experience Papers</td>
<td>2. Identify the effects of maternal use of alcohol, heroin, methadone, marijuana, methamphetamine, cocaine, and tobacco on the fetus and newborn.</td>
<td>Read ATI chapters: 25, 27</td>
</tr>
<tr>
<td>Breast feeding</td>
<td>3. Compare and contrast the physical characteristics of preterm, late preterm, term, and post term neonates.</td>
<td>ATI Skills Module:</td>
</tr>
<tr>
<td>Formula feeding</td>
<td>4. Plan developmentally appropriate care for the high-risk infant.</td>
<td>- Breastfeeding guidelines</td>
</tr>
<tr>
<td>5. Discuss newborn nutrition and differentiate between options (5).</td>
<td>6. Discuss types of prenatal loss, including etiology, diagnosis, and the nurses role in facilitating the family's grief process (1,3,4,8).</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Infant Nutrition &amp; Maternal and newborn loss</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Read Perry chapters: 24, 25</td>
<td>Read ATI chapters: 25, 27</td>
<td>Skills check off TBD</td>
</tr>
<tr>
<td>Week 14</td>
<td>12/13/2017</td>
<td>ATI Proctored Exam</td>
</tr>
<tr>
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<tr>
<td>Cultural Birthing Care Plan Gallery Walk</td>
<td>(everyone needs to bring a laptop to class)</td>
<td></td>
</tr>
<tr>
<td>Cultural Birthing Care Plan Gallery Walk in class</td>
<td>Skills check off TBD</td>
<td></td>
</tr>
</tbody>
</table>

| Final Exam Week Good luck! | Wednesday 12/20/2017 11am-1pm |  |  |
Appendix A
“SOME” Important Terms and Abbreviations to Know
Abortion (spontaneous and elective)
AFI (Amniotic Fluid Index)
AGA/SGA/LGA (Appropriate, Small, and Large for Gestational Age)
Ante- Intra- and Post-partum
APGAR score
Atony
Biophysical profile (BPP)
Bag of Waters (BOW) (Intact or Ruptured)
Assisted or Spontaneous Rupture of Membranes (AROM/ SROM) BBUBBLE-HE
C/S (cesarean section)
Cervical ripening
EBL (estimated blood loss)
EDD/EDC/EDB (estimated date of delivery/confinement/birth)
EFM (electronic fetal monitoring)
EGA (estimated gestational age)
Episiotomy and lacerations
Forceps and FAVD (forceps assisted vaginal delivery)
FSE (fetal scalp electrode; AKA IFE internal fetal electrode)
Gestation
Gravida, Para, TPAL (Term, Preterm, Abortion, Living)
Hydramnios (AKA Polyhydramnios)/Oligohydramnios
Involution
IOL (Induction of labor)
IUGR (intrauterine growth restriction)
IUPC (Intrauterine pressure catheter)
LMP (last menstrual period)
Leopold’s Maneuvers
Lochia
Multigravida/Multipara (AKA Multip)
Nagele’s rule
NST (Non-stress test)
NSVD (Normal Spontaneous Vaginal Delivery)
Nulligravida (AKA nullip)
PPH (Postpartum Hemorrhage)
PTL/PTD (Preterm labor, preterm delivery)
Post-term labor
Premature Rupture of Membranes (PROM)/Prolonged Premature ROM (PPROM) Primigravida/Primipara (AKA Primip)
SVE (Sterile vaginal exam)
Term Pregnancy
Tocodynamometer
TOLAC (Trial of labor after cesarean AKA VBAC Vaginal birth after cesarean)
Vacuum and VAVD (Vacuum Assisted Vaginal Delivery)
US (Ultrasound)
Ultrasound transducer (for external fetal monitoring)
“SOME” Important Medications to Know

Maternal Medications:
- Acetaminophen and hydrocodone (Norco)
- Ampicillin
- Benzocaine topical (Dermoplast)
- Betamethasone (Celestone)
- Carboprost (Hemabate)
- Ceftriaxone
- Dinoprostone (Cervidil)
- Docusate (Colace)
- Folic Acid, Vitamin B-12
- Gentamicin
- Glycerine and witch hazel topical (Tucks pads)
- Hepatitis B vaccine
- Hydromorphone Hydrochloride (Dilaudid)
- Ibuprofen (Motrin)
- Indomethacin (Indocin)
- Influenza Vaccine
- Iron supplements: feosol, ferrous sulfate, Slow FE
- Ketorolac (Toradol)
- Local Anesthetics- Lidocaine (Xylocaine), Bupivacaine (Marcaine)
- Magnesium Sulfate
- Methyl ergonovine maleate (Methergine)
- Metronidazole
- Miconazole and Clotrimazole
- Misoprostol (Cytotec)
- Nifedipine (Procardia)
- Oxytocin (Pitocin)
- Penicillin
- Prenatal Vitamin or Multivitamin
- Rho(D) immune globulin (RhoGAM)
- Rubella vaccine
- Simethicone (Mylicon)
- Terbutaline (Brethine)
- TDAP vaccine
- Zidovudine (AZT)

Infant Medications:
- Ampicillin
- Erythromycin ophthalmic ointment (Ilotycin)
- Gentamicin
- Hepatitis B vaccine
- Local Anesthetics- Lidocaine
- Phytomenadione (Vitamin K)
- Naloxone (Narcan)
- Sucrose water (Sweet-ease)
- Zidovudine (AZT)
Appendix B
Medication Math Mania Policy and Procedures

**Purpose**

To assure an environment of safety in medication calculation and administration

**Procedures for Theory Courses:**

Med Math Mania (MMM) will occur in selected nursing didactic course(s) each semester of the nursing program.

<table>
<thead>
<tr>
<th>Cohort A</th>
<th>Fall</th>
<th>Spring</th>
<th>Cohort B</th>
<th>Fall</th>
<th>Spring</th>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NRS 100</td>
<td>NRS 230</td>
<td></td>
<td>NRS 100</td>
<td>NRS 230</td>
<td>NRS 233</td>
<td>NRS 312</td>
</tr>
</tbody>
</table>

1. **Quizzes:**
   a. Two quizzes will occur during the semester. Course Faculty will schedule Quiz #1 between weeks 4-7; Quiz #2 will be scheduled between weeks 9-14 in the semester.
      i. The Midterm Quiz is 1% of total test/quiz points.
      ii. Final Quiz is worth 1% of total Test/Quiz point
      iii. Each quiz will have 10 questions. Students must achieve a 90% on the MMM quiz to earn full test/quiz "points" in the course. (Less than 90% = 0 points)
      iv. Each Quiz will consist of 2 questions from each of the 5 identified categories: (1) weight based medication, (2) injectable medication, (3) oral medications, (4) parenteral (IV) medication, (5) powdered medication to equal the 10 quiz questions.
      v. Grading will follow the MMM policy outlined below. (i.e errors in rounding)
      vi. MAT 101 will be strongly recommended for students who score below a 90% on the final Math Quiz.

   b. If a student does not achieve the 90% on the "midterm" math quiz he/she will remediate with the MMM tutor for at least 1 hour in order to be eligible to take the final quiz.
      i. Nursing: Math Mania tutor hours are posted in the learning commons under subject tutoring – [http://www.carrollu.edu/learningcommons/subjecttutor.asp?nav=5788](http://www.carrollu.edu/learningcommons/subjecttutor.asp?nav=5788)
      ii. Math tutors will be required to sign the student's MMM remediation log.
      iii. Submit Remediation log to course faculty

         1. Failure to complete remediation as outlined above will result in a zero of mid-term quiz and the inability to take the final MMM quiz, which will result in an additional zero.

2. **Practice Problems**
   a. Select theory course(s) will include a minimum of 6 weeks of MMM practice problems, as directed by course faculty.
   b. **MMM practice will consist of 5 problems** from one each of the 5 identified categories: (1) weight based medication, (2) injectable medication, (3) oral medications, (4) parenteral (IV) medication, (5) powdered medication
   c. **MMM weekly practice problems are not awarded course points.**
d. **MMM problems will include corresponding textbook chapter as a reference for student learning.**

e. **Students will keep a weekly log of their math problems and the percent correct (sample log below).**

f. **Corrected problems and logs will be returned to students on a weekly basis.**

g. Math problems will include weight medication, injectable medications, oral medications, parenteral (IV) medication problems, and powdered medications math problems.

h. **Students need to achieve a 78%. (4 or 5 correct)**

i. **Students that achieve less than 78% (2 or more incorrect) must follow the math support procedure below:**

   i. **Remediation in the math commons for a minimum of 1 hour**

   ii. **Nursing: Math Mania tutor hours are posted in the learning commons under subject tutoring –** [http://www.carrollu.edu/learningcommons/subjecttutor.asp?nav=5788](http://www.carrollu.edu/learningcommons/subjecttutor.asp?nav=5788)

   iii. **Math tutors will be required to sign the student's MMM Remediation.**

   iv. **MMM Remediation problems submitted in theory course the following week.**

j. **Sophomore Cohort A students:**

   i. **To ensure continued practice with medication problems, Spring semester of year two of the program, students will be required to do independent (not associated with a specific class) MMM practice problems.**

   ii. **Students will complete MMM practice problems that are uploaded to the eLearning site for NRS 236. Students will receive 2 weeks of homework assignments at a time via the elearning site. Due dates will be listed on the homework assignments.**

   iii. **Students will review answers with a Math Mania tutor over three separate sessions throughout the semester. Students that achieve less than 78% on homework assignments must follow the math support procedure outlined above.**

   iv. **Math tutors will be required to collect homework problems and sign the student's MMM practice log and verify that they stopped at the tutor 3 times during the course of the semester.**

   v. **MMM practice log will be submitted to NRS 320 instructor on first day of class in Fall Semester year 3 of program.**

   vi. **Failure to submit completed problems and remediation as outlined above will result in a zero of mid-term quiz in NRS 320.**

**Procedure for Clinical Courses –**

All students will be tested on math medication calculations for safe medication administration at the beginning of each clinical nursing course.

a. **NRS 234 will test during the first week of the off campus clinical experience.**

b. **Junior and senior level clinical courses will test during the first two weeks.**

2. Each clinical math competency will have 20 questions.

3. Students must score a 90% to pass the math competency.

   a. If a student fails to achieve a 90% he/she must remediate in the learning commons for a minimum of 1 hour

   b. **Nursing: Math Mania tutor hours are posted in the learning commons under subject tutoring –** [http://www.carrollu.edu/learningcommons/subjecttutor.asp?nav=5788](http://www.carrollu.edu/learningcommons/subjecttutor.asp?nav=5788)

   c. **Math tutors will be required to sign the student's MMM Remediation.**

   d. A math retest is scheduled within 7 days of the first math competency.
e. Students cannot administer medications in the clinical setting until they achieve a 90% on the math competency.

f. Students that are unsuccessful on the initial and second math competency are not allowed to participate in clinical at healthcare facilities.
   i. Students who are unable to participate in clinical will be graded unsuccessful in the course.

Medication Math Calculation Rules and Accepted Abbreviations

1. Rounding with parenteral and Intravenous (IV) medications – See Pharmacology ATI book for more information and examples about rounding.
   - When the problem requires the nurse to draw medication up in a syringe:
     1. The student must round their answer to the nearest tenth:
        if the total volume to be administered is ≥ 1 ml (i.e. 3.2ml’s)
        This is appropriate because syringes are graduated in 10ths.
     or
     2. The student must round their answer to the nearest hundredth:
        if the total volume to be administered is < 1 ml.
        This is appropriate because 1ml syringes are demarcated in 100ths and this is the size syringe you would choose to draw up a volume of < 1ml (i.e. 0.25ml)
   - When the final answer has a decimal number (i.e. 3.68) ≥ 5, round up to the next nearest number. Example: 3.68 = 3.7
   - When the final answer is a decimal number (i.e. 3.24) ≤ 4, keep the original number. Example: 3.24 = 3.2
   - When the problem requires the nurse to calculate the rate of infusion of an IV medication or Intravenous fluid (IVF) that will be delivered via an electronic pump, the student must round their answer to the nearest tenth (33.34ml/hr = 33.3ml/hr).
   - When the problem requires the nurse to calculate the rate of infusion of an IV medication or IVF that will be delivered via gravity flow, the student must round their answer to a whole number (33.34ml/hr = 33ml/hr)

2. Rounding with Oral and Enteral Medication Administration (nasogastric(NG), gastrostomy tube (G-Tube, etc.)
   - Administration of ½ tablets or ¼ tablets is appropriate. Therefore, answers for problems requiring administration of oral tablets must be rounded to the nearest ¼ tablet.
   - When administering oral medications via a dropper or oral syringe, round to the nearest tenth. Example: Lasix is available at 40mg/5ml, you are to administer 100mg per g-tube. Total administrated dose is 12.5ml.

Calculator use -
   - Student may use a basic (non-graphing) calculator for math competency testing.
   - Students are expected to bring their own calculator and not share during examination.
   - Cell phones or other hand help devices (ipad) will not be allowed in lieu of a calculator.
   - Students must show their work on the written test form in order to earn credit for the problem.
**Answers-**

- All answers **must** include the appropriate unit of measurement and all answers must be circled in order to earn credit for their answer.
- Rounding will be implemented at the final answer if the problem has multiple steps. (i.e. the problem requires you to first convert pounds to kilograms, then calculate the concentrations, and finally use the kg and concentration results to calculate the final dose. Rounding would be done when you calculate the final dose and not in the previous steps.

**Conversions-**

- All nursing students must memorize the following conversion equivalents. The conversion equivalents listed below are the units of measure used in math calculations related to medication preparation on math competency tests. For example, a problem requiring an answer in tsp must be calculated using the 5ml equivalent. No reference notes or conversion charts will be allowed during math quiz.
<table>
<thead>
<tr>
<th>Liquids:</th>
<th>Weight:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 tsp = 5 ml</td>
<td>1 kg = 2.2 lb</td>
</tr>
<tr>
<td>3 tsp = 1 tbs or 1T</td>
<td>milli = one thousandth (0.001)</td>
</tr>
<tr>
<td>8 oz = 1 cup</td>
<td>micro = one millionth (0.000001)</td>
</tr>
<tr>
<td>16 oz = 1 lb</td>
<td>1 mg = 1000 mcg</td>
</tr>
<tr>
<td>16 oz = 1 pt</td>
<td>1000 mg = 1 gram</td>
</tr>
<tr>
<td>2 pints = 1 quart</td>
<td>1000 grams = 1 kilogram</td>
</tr>
<tr>
<td>4 quarts = 1 gallon</td>
<td>1 grain = 60 mg</td>
</tr>
<tr>
<td>1 oz. = 30 ml</td>
<td>1 gram = 15 grains</td>
</tr>
<tr>
<td>1 ml = 1 cc</td>
<td>1 oz = 30 gram</td>
</tr>
<tr>
<td>1000 ml = 1 liter</td>
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</tbody>
</table>
Abbreviations –

- The following abbreviations must be **memorized** by all Carroll University nursing students. Students are responsible for all the abbreviations below including the "do not use" list as mandated by the Joint Commission (JC) and those abbreviations that have been adopted by some institutions as part of a more extensive "do not use" list. No Carroll University nursing student will be allowed to use a reference list for math quiz.

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
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</thead>
<tbody>
<tr>
<td>q</td>
<td>IVP</td>
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<tr>
<td>b.i.d</td>
<td>IVPB</td>
</tr>
<tr>
<td>t.i.d.</td>
<td>L</td>
</tr>
<tr>
<td>q.i.d.</td>
<td>mg</td>
</tr>
<tr>
<td>ac</td>
<td>mcg</td>
</tr>
<tr>
<td>pc</td>
<td>mEq</td>
</tr>
<tr>
<td>po</td>
<td>tsp</td>
</tr>
<tr>
<td>IM</td>
<td>Tbs</td>
</tr>
<tr>
<td>IV</td>
<td>Tab</td>
</tr>
</tbody>
</table>
DO NOT USE abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Unit</th>
<th>Description</th>
<th>Corrected Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>U</td>
<td>Unit</td>
<td>write &quot;unit&quot;</td>
<td></td>
</tr>
<tr>
<td>IU</td>
<td>international units</td>
<td>write &quot;international units&quot;</td>
<td></td>
</tr>
<tr>
<td>Q.D., QD, q.d., or qd</td>
<td>daily</td>
<td>write &quot;daily&quot;</td>
<td></td>
</tr>
<tr>
<td>Q.O.D., QOD, q.o.d., or qod</td>
<td>every other day</td>
<td>write &quot;every other day&quot;</td>
<td></td>
</tr>
<tr>
<td>MS, or MSO₄</td>
<td>morphine sulfate</td>
<td>write &quot;morphine sulfate&quot;</td>
<td></td>
</tr>
<tr>
<td>MgSO₄</td>
<td>magnesium sulfate</td>
<td>write &quot;magnesium sulfate&quot;</td>
<td></td>
</tr>
<tr>
<td>Trailing zeroes (X.0 mg)</td>
<td></td>
<td>write &quot;X mg&quot;</td>
<td></td>
</tr>
<tr>
<td>Lack of leading zeroes (.X mg)</td>
<td></td>
<td>write &quot;0.X mg&quot;</td>
<td></td>
</tr>
</tbody>
</table>

Many institutions also have adopted a more extensive DO NOT USE list, some examples are listed below.

The nurse should write out the terms fully.

- AS (left ear)
- AD (right ear)
- AU (both ears)
- HS (bedtime or half strength)
- SC and SQ (subcutaneous)
- D/C (discharge or discontinue)
- µ (means micrograms but can be mistaken for mg: write "mcg" or "micrograms")
- @ can be mistaken for the number "2": write "at"
- cc can be mistaken for a "u" if poorly written: write "ml" or "milliliter"
- KVO (Keep vein open)
- TKO (To keep open (vein))
- q1h, q2h, q3h, q4h etc. (every hour, every 2 hours, every three hours, every 4 hours)
- ad lib (as desired)
- fl (fluid)
- gtt/min (drops per minute)
- gr (grain)
Syllabi Appendix
Carroll University Nursing Program
MEDICATION MATH MANIA Log

Name:
Circle Course:

<table>
<thead>
<tr>
<th>Cohort A</th>
<th>Fall</th>
<th>Spring</th>
<th>Fall</th>
<th>Spring</th>
<th>Fall</th>
<th>Spring</th>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohort B</td>
<td>-</td>
<td>NRS 100</td>
<td>NRS 230</td>
<td>NRS 233</td>
<td>NRS 320</td>
<td>NRS 316</td>
<td>NRS 417</td>
<td>-</td>
</tr>
</tbody>
</table>

Semester: FALL SPRING Year: _______________

Directions:
1. Each week submit Medication Math Mania problems and Log.
   a. Check calendar for course specific due dates.

<table>
<thead>
<tr>
<th>Week</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problems Correct out of 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Student will check where math error(s) occurred:

<table>
<thead>
<tr>
<th>Incorrect Problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
</tr>
<tr>
<td>Weight based Ch. 25</td>
</tr>
<tr>
<td>Injectable Ch. 18</td>
</tr>
<tr>
<td>Oral Ch. 17</td>
</tr>
</tbody>
</table>
- The Math quizzes will be given around midterm and towards the end of the semester.
- To be eligible to sit for the Math quiz, students must submit the completed Medication Math Mania work problems and log, including documentation of any Math Commons hours needed 1 week prior to the assigned quiz date.
- Chapters coincide with Calculate with Confidence math book required for all Nursing courses
Name:

Circle Course:

<table>
<thead>
<tr>
<th></th>
<th>Fall</th>
<th>Spring</th>
<th>Fall</th>
<th>Spring</th>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohort A</td>
<td>NRS 100</td>
<td>NRS 230</td>
<td>NRS 233</td>
<td>Independent</td>
<td>NRS 320</td>
<td>NRS 316</td>
</tr>
<tr>
<td>Cohort B</td>
<td>-</td>
<td>NRS 100</td>
<td>NRS 230</td>
<td>NRS 233</td>
<td>NRS 312</td>
<td>NRS 316</td>
</tr>
</tbody>
</table>

Semester: FALL SPRING Year: _______________

Directions: **Students that achieve less than 78% must follow the math support procedure below:**

1. **Remediation in the math commons for a minimum of 1 hours each week.**
2. **Math tutors will be required to sign the student's Math Mania Remediation.**
3. **Medication Math Mania Remediation problems submitted in theory course the following week.**

<table>
<thead>
<tr>
<th>WEEK</th>
<th>Remediation date</th>
<th>Hours Remediated</th>
<th>Problems Remediated</th>
<th>Math Tutor Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>