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| **PROFESSOR:**  Jean Newberry, MEd, RRT-ACCS, NPS | **PHONE NUMBER:**  239.432.7356 |
| **OFFICE LOCATION:**  A-117 | **E-MAIL:**  jean.newberry@fsw.edu |
| **OFFICE HOURS:**  see below | **SEMESTER:**  Fall, 2017 |

1. **COURSE NUMBER AND TITLE, CATALOG DESCRIPTION, CREDITS:**

**RET 4715 ADVANCED NEONATAL MEDICINE (3 CREDITS)**

The Principles that underlie fetal developmental and congenital pathology with an emphasis on advanced practice for neonatology and cardiac care are discussed and analyzed. The practice issues for the Neonatal intensive care unit and Pediatric Cath. Lab are also reviewed.

1. **PREREQUISITES FOR THIS COURSE:**

**Admission into the BAS Cardiopulmonary Sciences Program; Prior to enrolling in any upper level course (course number beginning with a 3 or 4), students must complete the following courses with a grade of “C” or better: ENC 1101 English Composition I, ENC 1102 English Composition II, and three semester hours of college level mathematics; or permission from the appropriate academic dean.**

**CO-REQUISITES FOR THIS COURSE:**

None

1. **GENERAL COURSE INFORMATION:** Topic Outline.

* Fetal Development
* Antenatal Assessment
* Neonatal, Pediatric Assessment and Resuscitation
* Hemodynamic Monitoring of Neonatal and Pediatric Patient
* Administration of Gas mixtures / Oxygen therapy
* Bronchial Hygiene therapy
* Non invasive mechanical Ventilation of Newborn and Pediatric Patient
* Invasive mechanical Ventilation of Newborn and Pediatric Patient
* ECMO/ Thoracic organ transplantation
* Common disorders of the Newborn and Pediatric patient
* Congenital Heart disease
* Congenital Airway Anomalies
* Surgical disorders in Newborn and Child
* PALS/ NRP

1. **LEARNING OUTCOMES AND ASSESSMENT:**

**General Education Competencies**:

General education courses must meet at least four out of the five following outcomes. All other courses will meet one or more of these outcomes.

*Communication (COM):* To communicate effectively using standard English (written or oral).

*Critical Thinking (CT):* To demonstrate skills necessary for analysis, synthesis, and evaluation.

*Technology/Information Management (TIM):* To demonstrate the skills and use the technology necessary to collect, verify, document, and organize information from a variety of sources.

*Global Socio-cultural Responsibility (GSR):* To identify, describe, and apply responsibilities, core civic beliefs, and values present in a diverse society.

*Scientific and Quantitative Reasoning (QR):* To identify and apply mathematical and scientific principles and methods.

**Additional Course Competencies:**

At the conclusion of this course, students will be able to demonstrate the following additional competencies:

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| **LEARNING OUTCOMES** | **ASSESSMENTS** | **GENERAL EDUCATION COMPETENCIES** |
| Students will be able to complete the appropriate calculations and measurements required for the assessment of premature neonatal, full-term newborn and children patients. | Students will demonstrate competency by successfully completing multiple choice and calculation quizzes and/or exams and/or by completing different scenarios with the SimNewB Neonatal Simulator and SimBaby Simulator. | QR |
| Students will be able to interpret a complete hemodynamic profile of a pediatric patient and to describe invasive, semi-invasive and noninvasive techniques for monitoring cardiac output and index in a pediatric patient. | Students will demonstrate competency by successfully completing multiple choice and/or quizzes and/or exams and completing different clinical simulations. | CT |
| Students will demonstrate the ability to describe and analyze for efficacy appropriate Neonatal and Pediatric interventions that will include Oxygen administration, Aerosol Therapy, Airway clearance Therapy, Mechanical Ventilation, ECMO, Nitric Oxide Therapy. | Students will demonstrate competency by successfully completing quizzes and/or exams. The student will be evaluated for therapeutic indication and decision making abilities using group discussion and clinical simulation. | CT |
| Students will be able to accurately compare and contrast the relevant cardiovascular and pulmonary congenital anomalies; analyze the pathophysiology underlying common infant pulmonary disorders; recognize, describe the surgical disorders and the neuromuscular diseases in newborn and child | Students will demonstrate competency by successfully completing multiple choice quizzes and/or exams. At least two patient case study presentations may be required |  |
| Students will be able to identify and to assess impending signs and symptoms of respiratory failure, circulatory compromise and cardiac arrest in the patient; to manage both basic and advanced neonatal resuscitation and advanced pediatric care. | Students will demonstrate competency by successfully completing multiple choice quizzes and/or exams. The student will be evaluated by demonstrating appropriate skills and cognitive knowledge during the practical evaluation stations with the SimNewB Neonatal Simulator and SimBaby Simulator | CT |

1. **DISTRICT-WIDE POLICIES:**

**Programs for Students with Disabilities**

Florida SouthWestern State College, in accordance with the Americans with Disabilities Act and the College’s guiding principles, offers students with documented disabilities programs to equalize access to the educational process. Students needing to request an accommodation in this class due to a disability, or who suspect that their academic performance is affected by a disability should contact the Office of Adaptive Services at the nearest campus. The office locations and telephone numbers for the Office of Adaptive Services at each campus can be found at <http://www.fsw.edu/adaptiveservices>.

**REPORTING TITLE IX VIOLATIONS**

Florida SouthWestern State College, in accordance with Title IX and the Violence Against Women Act, has established a set of procedures for reporting and investigating Title IX violations including sexual misconduct.  Students who need to report an incident or need to receive support regarding an incident should contact the Equity Officer at [equity@fsw.edu](mailto:equity@fsw.edu).  Incoming students are encouraged to participate in the Sexual Violence Prevention training offered online.  Additional information and resources can be found on the College’s website at <http://www.fsw.edu/sexualassault>.

1. **REQUIREMENTS FOR THE STUDENTS:**

This course is to be presented totally online. It is the student’s responsibility to manage their time and finish assignments in a timely manner.

At the satisfactory completion of this course, the student will be able to:

1) Describe, in detail\*, Fetal Cardiopulmonary Developmental Problems

2) Describe, in detail, the Practice of Evidenced-based Medicine as regards Neonatal and Pediatric Patients either in the literature or in your Facility

3) Discuss, in detail, the procedure for Maternal and Neonatal Patient Assessment

4) Describe, in detail, Selected Therapeutic Procedures for Treatment of Neonatal and Pediatric

Disorders. Special attention shall be paid to Asthma and upper airway obstruction and

Pediatric Cardiology Interventions

5) Master an efficient Technique for Accessing Neonatal / Pediatric Literature Resources

6) Illustrate through an oral Power Point Presentation, a selected Neonatal or Pediatric Disorder through the Case Study or Pathophysiology approach

7) Describe, in detail, the significant invasive procedures for management of critical Neonatal Congenital Anomalies

8) As an alternative to #7 complete a self-study for NPS or PALS examinations

9) Compare Cardiovascular Interventions for Congenital or Traumatic Injuries to the Cardiopulmonary Systems of the Neonate

10) List and discuss the emerging trends in Neonatal Medicine

\* in detail means - to be able to describe or discuss the following:

a) Indications

b) Risks

c) Complications

d) Contraindications

e) Benefits

f) Equipment used

g) Procedure protocols

h) Analysis of the data

i) Treatment strategies based on the analysis

**VI.** **ATTENDANCE POLICY:**

— Attendance Verification: The student must complete all of the listed activities by 4:30 on the last day of the drop/add period, in order to have your attendance verified. If your attendance is NOT verified, this will affect your financial aid. Specifically, the three activities you MUST complete are as follows:

1. Pass the discussion board quiz.

2. Participate in the Introductory Discussion Board

Students will be responsible for completing all assignments listed in each module and submitting them by the stated deadline. Discussion will take place through the use of discussion forum postings, e-mail, and telephone (if necessary). Technology is not an excuse for late submission of assignments or postings to the discussion forum.

Vacations: Students choosing to go on vacation during the semester are responsible for submitting all assignments, discussion forum postings, projects, and examinations by the stated due dates. Lack of Internet access is not an excuse for late submission

1. **GRADING POLICY:**

At Florida SouthWestern State College, plagiarism is a serious academic offense that constitutes an act of academic dishonesty. According to Article IV, Academic Integrity, of Florida SouthWestern State College’s Student Code of Conduct, “Violations of student academic integrity include any actions which attempt to promote or enhance the academic standing of any student by dishonest means.” Plagiarism is one such violation. The FSW Code of Conducts state that:

Plagiarizing the words, ideas, or data of others by not properly acknowledging the source [violates academic integrity]. Plagiarism includes failing to identify verbatim statements as quotations and failing to give appropriate credit and citations of sources used. The principles of academic integrity require that all work submitted or presented without citation of sources will be the student’s own work, not only on tests, but in themes, papers, assignments, discussions and class presentations, unless it has been clearly specified that the work is a team effort.

All Florida SouthWestern State College students have an obligation to know and understand academic standards and expectations. The College expects all students to be honest in their academic endeavors.

The consequence for plagiarism in this course is a grade of 0 (zero) for the assignment or paper for the first offense. If a student is found to plagiarize more than once the student will receive a grade of “F” for the entire course.

Essay assignments will be graded as they are submitted. The student‘s paper will be graded within 48 hours after submission. If there is going to be a delay, the instructor will notify student of the delay within the 48 hour window. Unless a student has prior permission from the professor, each assignment is to be submitted to the professor by stated due date. Any assignment submitted after the deadline will lose the amount of points stated in each assignment's directions. No assignment will be accepted that is more than four (4) days late. After that time, a zero (0) will be given for that assignment.

Include below is the numerical ranges for each letter grade and the weights for each category.

90 - 100 = A

80 - 89 = B

70 - 79 = C

60 - 69 = D

Below 60 = F

Discussion boards 30%

Quizzes 25%

Essays 25%

Final Project 20%

(Note: The “incomplete” grade [“I”] should be given only when unusual circumstances warrant. An “incomplete” is not a substitute for a “D,” “F,” or “W.” Refer to the policy on “incomplete grades.)

1. **REQUIRED COURSE MATERIALS:**

Walsh, et. Al. (2015) Perinatal and Pediatric Respiratory Care, 4th

Edition, W.B. Saunders ISBN10: 9781455753215

1. **RESERVED MATERIALS FOR THE COURSE:**

Other special learning resources.

1. **CLASS SCHEDULE:**

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| **Date** | **Module** | **Topic** | **Assignments Due Date** |
| Aug 21 – Aug 27 | 1 | Embryology and fetal growth | Introduction Discussion: 8/24 4 pm Case Discussion: initial post: 8/24  Responses:8/27  Plagiarism Quiz: 8/27 4 pm Discussion Quiz: 8/27 4 pm Module Quiz: 8/28 |
| Aug27 - Sep 3 | 2 | Neonatal and Pediatric Assessment | Case Discussion: initial post: 8/30  Responses: 9/3  Module Quiz: 9/3 |
| Sep 3 - Sep 10 | 3 | Invasive and non-invasive monitoring | Case Discussion: initial post: 9/6  Responses: 9/10  Essay: 9/10 |
| Sep 10 – Sep 17 | 4-A  4-B | ECMO/mechanical ventilation  ***\*\*\*This module is split between RT and CVT\*\*\**** | Module Quiz: 9/17 |
| Sep 17 – Sep 24 | 5 | Surfactant and inhaled medical gases | Module Quiz: 9/24 Essay: 9/24 |
| Sep 24 – Oct 1 | 6 | Organ Donation | Case Discussion: initial post: 9/27  Responses: 10/1 |
| Oct 1 - Oct 8 | 7 | Pulmonary disorders at birth | Case Discussion: initial post: 10/4  Responses: 10/8 Module Quiz: 10/8 |
| Oct 8 - Oct 15 | 8 | Disorders requiring surgery | Case Discussion: initial post: 10/11  Responses: 10/15 |
| Oct 15 - Oct 22 | 9 | Congenital Heart Disease |  |
| Oct 22 – Oct 29 | 9 | Congenital Heart Disease | Case Discussion: initial post: 10/25  Responses: 10/29  Module Quiz:10/29 |
| Oct 29 - Nov 5 | 10 | Sleep disorders | Case Discussion: initial post: 11/1  Responses: 11/5 Module Quiz: 11/5 |
| Nov 5 - Nov 12 | 11 | Airway disorders and parenchymal lung diseases | Case Discussion: initial post: 11/8  Responses: 11/12 Module Quiz: 11/12 |
| Nov 12 - Nov 19 | 12 | Asthma and Cystic Fibrosis | Module Quiz: 11/19 |
| Nov 19 – Nov 26 | 13 | RDS and Shock | Module Quiz: 11/26  Shock Case Study: 11/26 |
| Nov 26 – Dec 4 | 14 | Caring for the parents | Case Discussion: initial post: 11/28  Responses: 12/1  Final Project: 12/6 |

1. **Professor Newberry Office Hours:**

Monday 12:30-4:00 pm

Tuesday 9:00-11:00 am,

Wednesday 9-11:00 am, 12:30-4:00 pm

Thursday, Friday by appointment