



# Wayne County Community College District

## COURSE SYLLABUS

### ANE 205 Anesthesia Technology Pharmacology

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**CREDIT HOURS:** 3.00

**CONTACT HOURS:** 45.00

**COURSE DESCRIPTION:**

This course focuses on the pharmacokinetics and pharmacodynamics of drugs used in the administration of anesthesia and analgesia. Topics covered will include routes of administration, drug interactions, drug metabolism and elimination, and the various classes of anesthetic agents. Intravenous therapy and emergency mediations will also be covered.

**PREREQUISITES:** ANE 110, BIO 240, BIO 250

**COREQUISITE:** ANE 200

**LEARNING OUTCOMES:**

Upon successful completion of this course, the student will:

- Develop an anesthesia plan and predict the benefits associated with a thorough preoperative assessment.
- Discuss the role and responsibility of the Anesthesia Technologist in pharmacology.
- Identify differences in physiology and pathophysiology to consider when monitoring patients using invasive and non-invasive monitoring.
- Explain the action, therapeutic use, preparation, dosage, mode of administration, and the pharmacokinetics and pharmacodynamics of selected drugs.
- Explain induction and discontinuation of general anesthesia, and the importance of positioning for specific situations/conditions.
- Identify blood and fluid therapy alternatives for specific situations/conditions, and consider modifications when complications arise.
- Discuss indications and contraindications for procedural sedation, including: airway access, airway assessment, appropriate dosing, and comorbidities.
- Identify the risks and complications of airway management, predict problems associated with each device, and recommend corrective actions.
- Compare spinal, epidural and peripheral nerve blocks (PNB) and describe regional methods in terms of mechanism of action, pharmacological effects, indications/ contraindications, dosage and volume.
- Describe the recovery phases, appropriate assessment, and discharge criteria for postoperative care.
- Suggest management for common postoperative problems.
- Discuss the goals of pain management appropriate to patient needs.

**ASSESSMENT METHODS:**

Student performance may be assessed by examination, quizzes, case studies, oral conversation, group discussion, oral presentations. The instructor reserves the option to employ one or more of these assessment methods during the course.

**GRADING SCALE:**

90%-100% = A  
80%-89.9% = B  
70%-79.9% = C  
60%-69.9% = D  
<60% = E