



## HEALTHCARE SCIENCE

**COURSE:** 25.525 Medical Services General Medicine

**UNIT:** 5.3 Diagnostic Imaging Services

**SUB UNIT:** Reproductive System



## INTRODUCTION

**Annotation:** (Briefly describe the topics, methods, technology integration, etc.)

In this unit students will apply knowledge and patient care skills in assisting physicians and patients/clients with reproductive procedures used to perform diagnostic imaging. Students will review previous vocabulary related to general medical terms and the reproductive system. Students will research diseases of the reproductive system and make an oral presentation describing the disease and type of diagnostic testing used to diagnose the disease. Students will use communication skills to give directions in simulations of preparing client/patients to undergo diagnostic procedures.

**Grade(s):**

<input type="checkbox"/>	9 <sup>th</sup>
<input type="checkbox"/>	10 <sup>th</sup>
<input checked="" type="checkbox"/>	11 <sup>th</sup>
<input checked="" type="checkbox"/>	12 <sup>th</sup>

**Time:** Three 50 minute class periods

**Author:** Pat Rape, BSRT, MEd

**Additional Author(s):** Teresa L. Lass, M.Ed. (Special Education)

**Students with Disabilities:**

For students with disabilities, the instructor should refer to the student's IEP to be sure that the accommodations specified are being provided. Instructors should also familiarize themselves with the provisions of Behavior Intervention Plans that may be part of a student's IEP. Frequent consultation with a student's special education instructor will be beneficial in providing appropriate differentiation.



# FOCUS STANDARDS

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**GPS Focus Standards:** Please list the standard and elements covered.

**HS-TGM-16. Students will demonstrate understanding of the services provided in diagnostic imaging – Diagnostic Imaging Services (Radiology).**

- a. Differentiate between the types of diagnostic imaging techniques, including but not limited to: diagnostic, treatment, and monitoring systems and the types of medical information/records each generates including Computer Assisted Tomography (CAT), Magnetic Resonance Imaging (MRI), Positron Emissions Tomography (PET), Ultrasound Imaging, X-Rays, arrhythmia monitoring, pulmonary monitoring, and Obstetrical/Neonatal monitoring.
- b. Examine the types of medical information/records each generates including but not limited to: Computer Assisted Tomography (CAT), Magnetic Resonance Imaging (MRI), Positron Emissions Tomography (PET), Ultrasound Imaging, X-Rays, arrhythmia monitoring, pulmonary monitoring, and Obstetrical/Neonatal monitoring.
- c. Discuss the impact of technology on diagnostic imaging techniques and treatments such as fiber optics and laser therapy.

**HS-TGM-8 Students will understand and utilize terminology related to the human anatomy.**

- j. Utilize diagnostic, surgical, and procedural terms and abbreviations related to the reproductive system.

**GPS Academic Standards:**

**Scsh9**

c. Building vocabulary knowledge

- Demonstrate an understanding of contextual vocabulary in various subjects.
- Use content vocabulary in writing and speaking.
- Explore understanding of new words found in subject area texts.

**National / Local Standards / Industry / ISTE:**



# UNDERSTANDINGS & GOALS

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## Enduring Understandings:

Diagnosing of disorders of the reproductive system may involve a variety of diagnostic test that may be ordered or performed by a patient's physician. Some tests may involve various imaging procedures. It is important for the healthcare worker to understand how to communicate information related to reproductive system imaging including basic anatomy and physiology, common disorders and the role of the Imaging Technologist and apply knowledge of medical terminology in communicating and understanding the Imaging Technologist's role in preparing clients for reproductive system imaging.

## Essential Questions:

- What are the basic structures of the reproductive system?
- Describe how diagnostic examinations are used to diagnose disorders of the reproductive system?
- How are directions given to a client/patient to prepare for specific imaging procedures?
- What is the role of the Imaging Technologist in assisting the physician, client/patient, and other medical team members in performing imaging procedures?

## Knowledge from this Unit:

### Prior Knowledge

The student will:

- Recall the structure and function of the reproductive system.
- Recall common disorders of the reproductive system

### New Knowledge

The student will:

- Discuss Imaging procedures used to diagnose reproductive system diseases.
- Describe preparatory procedures for imaging the reproductive system for each modality (CT, Ultrasound, MRI, Nuclear Medicine, PET, Radiography (hysterosalpingogram, ultrasound of the pelvis, mammography, fetal monitoring)

## Skills from this Unit:

The student will be able to:

- Give directions to a client/patient to prepare for a diagnostic procedure of the reproductive system.



## ASSESSMENT(S)

**Assessment Method Type:** Select one or more of the following. Please consider the type(s) of differentiated instruction you will be using in the classroom.

- ☐ Pre-test
- ☒ Objective assessment - multiple-choice, true- false, etc.
  - ☒ Quizzes/Tests
  - ☐ Unit test
- ☐ Group project
- ☒ Individual project
- ☒ Self-assessment - May include practice quizzes, games, simulations, checklists, etc.
  - ☒ Self-check rubrics
  - ☒ Self-check during writing/planning process
  - ☐ Journal reflections on concepts, personal experiences and impact on one's life
  - ☐ Reflect on evaluations of work from teachers, business partners, and competition judges
  - ☐ Academic prompts
  - ☐ Practice quizzes/tests
- ☐ Subjective assessment/Informal observations
  - ☐ Essay tests
  - ☐ Observe students working with partners
  - ☐ Observe students role playing
- ☐ Peer-assessment
  - ☐ Peer editing & commentary of products/projects/presentations using rubrics
  - ☐ Peer editing and/or critiquing
- ☐ Dialogue and Discussion
  - ☐ Student/teacher conferences
  - ☐ Partner and small group discussions
  - ☐ Whole group discussions
  - ☐ Interaction with/feedback from community members/speakers and business partners
- ☐ Constructed Responses
  - ☐ Chart good reading/writing/listening/speaking habits
  - ☐ Application of skills to real-life situations/scenarios
- ☒ Post-test

**Assessment(s) Title:**

- Patient Teaching Pamphlet
- Reproductive System Vocabulary Quiz

**Assessment(s) Description/Directions:**

The Disease report will be graded for the oral presentation by the Disease Report Form.

Pamphlet: Patient teaching plays an important part in patient care. Patients need to know what is going to happen in order to be comfortable and cooperate in their own care. Communicating information requires the healthcare professional to be knowledgeable of procedures and able to provide that

information in a format the patient understands taking into account physical, mental and cultural differences.

Suggested topics for Pamphlet:

How to perform a self exam (breast or testicular)

Operative procedures: vasectomy, tubal ligation, hysterectomy

Procedures: Mammogram, et al monitoring, ultrasound of fetus, gynecological exam, prostate exam, hysterosappingogram, pelvic ultrasound,

### **Attachments for Assessment(s):**

- Reproductive System Pamphlet Rubric
- HS-TGM-8 Disease Report Form
- Vocabulary Test: Reproductive System
- Cross word puzzle: Reproductive System



## **LEARNING EXPERIENCES**

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**Instructional planning:** Include lessons, activities and other learning experiences in this section with a brief description of the activities to ensure student acquisition of the knowledge and skills addressed in the standards. Complete the sequence of instruction for each lesson/task in the unit.

### **Sequence of Instruction**

#### **1. Identify the Standards. Standards should be posted in the classroom for each lesson.**

TGM-16. Students will demonstrate understanding of the services provided in diagnostic imaging –  
Diagnostic Imaging Services (Radiology).

HS-TGM-8 Students will understand and utilize terminology related to the human anatomy.

#### **2. Review Essential Questions.**

- What are the basic structures of the reproductive system?
- Describe how diagnostic examinations are used to diagnose disorders of the reproductive system?
- How are directions given to a client/patient to prepare for specific imaging procedures?
- What is the role of the Imaging Technologist in assisting the physician, client/patient, and other medical team members in performing imaging procedures?

## Lesson One

**3. Identify and review the unit vocabulary.** See Vocabulary list and definitions attachments.

**4. Assessment Activity.** Review parts of the reproductive system by asking students to recall the names of structures of the male and female reproductive systems, using textbook or overhead projector.

5. (Optional) Review the Reproductive system structure and function as a group (videos of system are available or use reproductive system information from the Applications of Therapeutic Services course).

6. Assign the vocabulary for the Reproductive system (have students look up terms and do).

## Lesson 2-3

1. Review Focus standards, essential questions, and unit vocabulary.

Allow students time to complete disease report. It may be good to take students to the computer lab to complete the assignment

2. Assign disease report using Disease Report Form. Allow time for each student to research and prepare presentation. Students will present during lesson three.

3. Assign the Patient Teaching Pamphlet for each student to complete and assign due date.

Refer to Organ Imaging subunit for final portion of Imaging Unit Assignment

**Attachments for Learning Experiences:** Please list.

- Reproductive System Pamphlet Rubric
- HS-TGM-8 Disease Report Form

## Notes & Reflections:

Make copies all handouts for the unit. To enhance differentiated instruction, the optional group review with videos should be a "must" for students with disabilities; this would give them a visual representation to allow for better content retention. Provide a word bank for the crossword puzzle to assist students with disabilities. Have students engage in peer tutoring by having them complete the pamphlet rubric for each other before submitting the pamphlet for assessment and presenting the disease report to a peer before presenting it to the class.



## CULMINATING PERFORMANCE TASK (Optional)

### Culminating Unit Performance Task Title:

Patient Teaching Pamphlet on the Reproductive System

### Culminating Unit Performance Task Description/Directions/Differentiated Instruction:

After completing the patient teaching pamphlet, the student will use it to teach (either with partners or to the class) about the procedure to be performed.

### Attachments for Culminating Performance Task: Please list.

Reproductive System Pamphlet Rubric



## UNIT RESOURCES

### Web Resources:

[http://en.wikipedia.org/wiki/Medical\\_Imaging](http://en.wikipedia.org/wiki/Medical_Imaging) (used for some definitions)

**Attachment(s):** Supplemental files not listed in assessment, learning experiences, and performance task.

### Materials & Equipment:

- Internet access for research
- X-ray view box and radiographs. Radiographs can be made from overheads
- Presentation of power points on white board or digital projector
- Anatomy videos (check with media center)

### What 21st Century Technology was used in this unit:

<input checked="" type="checkbox"/>	Slide Show Software	<input type="checkbox"/>	Graphing Software	<input type="checkbox"/>	Audio File(s)
<input type="checkbox"/>	Interactive Whiteboard	<input type="checkbox"/>	Calculator	<input checked="" type="checkbox"/>	Graphic Organizer
<input type="checkbox"/>	Student Response System	<input type="checkbox"/>	Desktop Publishing	<input checked="" type="checkbox"/>	Image File(s)
<input type="checkbox"/>	Web Design Software	<input type="checkbox"/>	Blog	<input checked="" type="checkbox"/>	Video
<input type="checkbox"/>	Animation Software	<input type="checkbox"/>	Wiki	<input type="checkbox"/>	Electronic Game or Puzzle Maker
<input type="checkbox"/>	Email	<input checked="" type="checkbox"/>	Website		