

## **RADIOLOGIC TECHNOLOGY**

### **RAD 100 Radiologic Technology Procedures I (3) Fall**

**3 hours lecture per week**

*Prerequisite(s): Acceptance into the Associate in Science degree in Radiologic Technology program.*

*Corequisite(s): RAD 100L and RAD 105 and RAD 140.*

*Comment: RAD 100 is offered in the fall semester only. Letter grade only. RAD 100 may not be taken credit/no credit. RAD 100 may not be audited.*

RAD 100 provides an introduction to radiologic technology procedures, including concepts such as: radiographic positioning, radiation and patient safety, digital imaging equipment and x-ray production, image quality evaluation, professionalism in healthcare, and radiographic exposure principles.

Upon successful completion of RAD 100, the student should be able to:

1. Identify general responsibilities of the radiographer.
2. Describe patient and radiation safety protocols, including the ALARA concept.
3. Identify standard positioning terms.
4. Discuss evaluation criteria for the projections commonly performed as routine for the chest, abdomen, upper and lower extremities, and the pelvis.
5. List anatomy visualized in routine projections of the chest, abdomen, upper and lower extremities, and the pelvis.
6. Explain image quality factors and the equipment, x-ray production, and exposure factors that affect quality.

### **RAD 100L Radiologic Technology Procedures Laboratory I (1) Fall**

**3 hours lab per week**

*Prerequisite(s): Acceptance into the Associate in Science degree in Radiologic Technology program.*

*Corequisite(s): RAD 100 and RAD 105 and RAD 140.*

*Comment: RAD 100L is offered in the Fall semester only. Letter grade only. RAD 100L may not be taken credit/no credit. RAD 100L may not be audited.*

RAD 100L provides an introduction to radiologic technology procedures, applying concepts in: radiographic positioning, radiation and patient safety, digital imaging equipment and x-ray production, image quality evaluation, professionalism in healthcare, and radiographic exposure principles.

Upon successful completion of RAD 100L, the student should be able to:

1. Apply general responsibilities of the radiographer.
2. Employ patient and radiation safety protocols, including the ALARA concept.
3. Demonstrate projections commonly performed as routine for the chest, abdomen, upper and lower extremities, and the pelvis.

4. Identify anatomy visualized in routine projections of the chest, abdomen, upper and lower extremities, and the pelvis.
5. Demonstrate how image quality factors are affected by equipment, x-ray production, and exposure factors.

### **RAD 105 Radiologic Pharmacology (2) Fall**

*2 hours lecture per week*

*Prerequisite(s): Acceptance into the Associate in Science degree in Radiologic Technology program.*

*Corequisite(s): RAD 100, RAD 100L, and RAD 140.*

*Comment: RAD 105 is offered in the fall semester only. Letter grade only. RAD 105 may not be taken credit/no credit. RAD 105 may not be audited.*

RAD 105 focuses on basic concepts of radiographic pharmacology, including the proper administration, use, effects, and side-effects of radiographic contrast media and other drugs. Legal, ethical, and professional liability issues are also discussed.

Upon successful completion of RAD 105, the student should be able to:

1. Identify the chemical, generic, and trade names for selected drugs.
2. Explain the actions, uses, and side effects for selected drugs.
3. Describe the effects of selected drugs on imaging procedures.
4. Identify routes of drug administration and proper administration protocol.
5. Discuss legal and ethical implications of the radiographer's role in drug administration.
6. Explain the radiographer's professional liability concerning drug administration.

### **RAD 110 Radiologic Technology Procedures II (3) Spring**

*3 hours lecture per week*

*Prerequisite(s): A grade of "C" or higher in RAD 100 and a grade of "C" or higher in RAD 100L and a grade of "C" or higher in RAD 105 and a grade of "C" or higher in RAD 140.*

*Corequisite(s): RAD 110L and RAD 120 and RAD 141 and RAD 149.*

*Comment: RAD 110 is offered in the spring semester only. Letter grade only. RAD 110 may not be taken credit/no credit. RAD 110 may not be audited.*

RAD 110 explores more radiologic technology procedures, including concepts such as: radiographic positioning, radiation and patient safety, and working in healthcare.

Upon successful completion of RAD 110, the student should be able to:

1. Discuss evaluation criteria for the projections commonly performed as routine for the bony thorax, vertebral column, skull, and facial bones.
2. List anatomy visualized in routine projections of the bony thorax, vertebral column, skull, and facial bones.

3. Describe patient and radiation safety protocols, including the ALARA concept.
4. Explain the professional responsibilities of the radiographer working in a healthcare setting.

### **RAD 110L Radiologic Technology Procedures Laboratory II (1) Spring**

*3 hours lab per week*

*Prerequisite(s): A grade of "C" or higher in RAD 100 and a grade of "C" or higher in RAD 100L and a grade of "C" or higher in RAD 105 and a grade of "C" or higher in RAD 140.*

*Corequisite(s): RAD 110 and RAD 120 and RAD 141 and RAD 149.*

*Comment: RAD 110L is offered in the Spring semester only. Letter grade only. RAD 110L may not be taken credit/no credit. RAD 110L may not be audited.*

RAD 110L explores more radiologic technology procedures, applying concepts in: radiographic positioning, radiation and patient safety, and working in healthcare.

Upon successful completion of RAD 110L, the student should be able to:

1. Demonstrate projections commonly performed as routine for the bony thorax, vertebral column, skull, and facial bones.
2. Identify anatomy visualized in routine projections of the bony thorax, vertebral column, skull, and facial bones.
3. Employ patient and radiation safety protocols, including the ALARA concept.
4. Practice the professional responsibilities of the radiographer in a simulated healthcare setting.

### **RAD 120 Radiologic Physics (3) Spring**

*3 hours lecture per week*

*Prerequisite(s): A grade of "C" or higher in RAD 100 and a grade of "C" or higher in RAD 100L and a grade of "C" or higher in RAD 105 and a grade of "C" or higher in RAD 140.*

*Corequisite(s): RAD 110 and RAD 110L and RAD 141 and RAD 149.*

*Comment: RAD 120 is offered in the spring semester only. Letter grade only. RAD 120 may not be taken credit/no credit. RAD 120 may not be audited.*

RAD 120 provides a foundation in radiologic physics, including concepts such as: principles of electricity and magnetism, digital imaging equipment components, theories of x-ray production and interactions with matter, digital image production and storage, and basic principles of radiation protection.

Upon successful completion of RAD 120, the student should be able to:

1. Describe the principles governing electricity and magnetism.
2. Identify fundamental components of digital x-ray and fluoroscopy equipment.
3. Explain the theories of x-ray production and x-ray interactions with matter.
4. Discuss digital image production, processing, manipulation, viewing, and storage.

5. Identify principles governing radiation protection.

***NOTICE: RAD 140, 141, 142, 240, 241 and 242 are special courses in Hospital Radiographic Technique.***

***Courses in Hospital Radiographic Technique provide approximately 2200 hours of clinical experience in the radiology department of a cooperating hospital. These experiences include observation of and practice in positioning the sick and injured patient, obtaining the exact radiograph requested by the physician, and assisting in treatment of disease. In these special courses in Hospital Radiographic Technique film exposure time, film manipulation and the finished radiograph are critically studied. Throughout the two academic years and interim summer, certain approved radiographs must be completed. These, by location, include radiographs of extremities, gastrointestinal tract, urinary tract, skull (sinuses, facial bones, mastoids, mandible), spine, pelvis (hip-nailing), shoulder and thoracic cage and cavity (lungs, heart and sternum).***

#### **RAD 140 Clinical Practicum I (6) Fall**

*Approximately 20 clinical hours per week*

*Prerequisite(s): Acceptance into the Associate in Science degree in Radiologic Technology program.*

*Corequisite(s): RAD 100 and RAD 100L and RAD 105.*

*Comment: RAD 140 is offered in the fall semester only. Letter grade only. RAD 140 may not be audited. RAD 140 may not be taken credit/no credit. Students will need to complete health screening and be cleared by the clinical site to which they are assigned. Liability insurance is required, and charges will be assessed at the time of registration. Approximately 270 clinical hours during the 16 week semester.*

RAD 140 provides for observation and supervised practice in positioning the patient and obtaining diagnostic radiographs as requested with emphasis on chest, abdomen, and upper extremity radiography.

Upon successful completion of RAD 140, the student should be able to:

1. Demonstrate competent performance of specified examinations.
2. Demonstrate competency in the principles of radiation protection standards.
3. Critique images for appropriate anatomy, image quality, and patient identification.
4. Determine corrective measures to improve inadequate images.
5. Maintain patient confidentiality standards and meet HIPAA requirements.
6. Integrate the use of appropriate and effective written, oral and nonverbal communication with patients, the public and members of the health care team in the clinical setting.

### **RAD 141 Clinical Practicum II (6) Spring**

*Approximately 20 clinical hours per week*

*Prerequisite(s): A grade of "C" or higher in RAD 100 **and** a grade of "C" or higher in RAD 100L **and** a grade of "C" or higher in RAD 105 **and** a grade of "C" or higher in RAD 140.*

*Corequisite(s): RAD 110 **and** RAD 110L **and** RAD 120 **and** RAD 149.*

*Comment: RAD 141 is offered in the spring semester only. Letter grade only. RAD 141 may not be taken credit/no credit. RAD 141 may not be audited. Students will complete health screening and must be cleared by the clinical site to which they are assigned.*

*Liability insurance must be in effect for clinical courses. Approximately 270 clinical hours during the 16 week semester.*

RAD 141 provides for observation and supervised practice in positioning the patient and obtaining diagnostic radiographs as requested with emphasis on pelvis, hip, and lower extremity radiography.

Upon successful completion of RAD 141, the student should be able to:

1. Demonstrate competent performance of specified examinations.
2. Demonstrate competency in the principles of radiation protection standards.
3. Critique images for appropriate anatomy, image quality, and patient identification.
4. Determine corrective measures to improve inadequate images.
5. Maintain patient confidentiality standards and meet HIPAA requirements.
6. Integrate the use of appropriate and effective written, oral and nonverbal communication with patients, the public and members of the health care team in the clinical setting.

### **RAD 142 Clinical Practicum III (7) Summer**

*A minimum of 315 clinical hours during the 12 week semester.*

*Prerequisite(s): A grade of "C" or higher in RAD 110 **and** a grade of "C" or higher in RAD 110L **and** a grade of "C" or higher in RAD 120 **and** a grade of "C" or higher in RAD 141 **and** a grade of "C" or higher in RAD 149.*

*Corequisite(s): RAD 150.*

*Comment: RAD 142 is offered in the summer only. Letter grade only. RAD 142 may not be taken credit/no credit. RAD 142 may not be audited. Students will complete health screening and must be cleared by the clinical site to which they are assigned. Liability insurance must be in effect for clinical courses. A minimum of 315 clinical hours during the 12 week semester.*

RAD 142 provides for observation and supervised practice in positioning the patient and obtaining approved radiographs as requested with emphasis on skull, facial bones, and vertebral column radiography.

Upon successful completion of RAD 142, the student should be able to:

1. Demonstrate competent performance of specified examinations.
2. Demonstrate competency in the principles of radiation protection standards.

3. Critique images for appropriate anatomy, image quality, and patient identification.
4. Determine corrective measures to improve inadequate images.
5. Maintain patient confidentiality standards and meet HIPAA requirements.
6. Integrate the use of appropriate and effective written, oral and nonverbal communication with patients, the public and members of the health care team in the clinical setting.

### **RAD 149 Radiographic Image Critique I (1) Spring**

*1 hour lecture per week*

*Prerequisite(s): A grade of "C" or higher in RAD 100 and a grade of "C" or higher in RAD 100L and a grade of "C" or higher in RAD 105 and a grade of "C" or higher in RAD 140.*

*Corequisite(s): RAD 110 and RAD 110L and RAD 120 and RAD 141.*

*Comment: RAD 149 is offered in the spring semester only. Letter grade only. RAD 149 may not be taken credit/no credit. RAD 149 may not be audited.*

RAD 149 facilitates the development of image quality evaluation skills through the critique of radiographic images. This course also promotes the practice of effective communication through peer teaching.

Upon successful completion of RAD 149, the student should be able to:

1. Identify criteria for radiographic image evaluation.
2. Evaluate the quality of selected images using radiographic principles and terminology.
3. Discuss methods for improving radiographic image quality.
4. Practice effective communication of health information through peer teaching.

### **RAD 150 Radiographic Image Critique II (1) Summer**

*2.5 hours lecture per week for 6 weeks*

*Prerequisite(s): A grade of "C" or higher in RAD 110 and a grade of "C" or higher in RAD 110L and a grade of "C" or higher in RAD 120 and a grade of "C" or higher in RAD 141 and a grade of "C" or higher in RAD 149.*

*Corequisite(s): RAD 142.*

*Comment: RAD 150 is offered in the summer only. Letter grade only. RAD 150 may not be taken credit/no credit. RAD 150 may not be audited.*

RAD 150 facilitates the development of image quality evaluation skills through the critique of radiographic images. This course also promotes the practice of effective communication through peer teaching.

Upon successful completion of RAD 150, the student should be able to:

1. Identify criteria for radiographic image evaluation.
2. Evaluate the quality of selected images using radiographic principles and terminology.

3. Discuss methods for improving radiographic image quality.
4. Practice effective communication of health information through peer teaching.

### **RAD 200 Radiologic Technology Procedures III (3) Fall**

*3 hours lecture per week*

*Prerequisite(s): A grade of "C" or higher in RAD 142 and a grade of "C" or higher in RAD 150.*

*Corequisite(s): RAD 200L and RAD 210 and RAD 240 and RAD 248.*

*Comment: RAD 200 is offered in the fall semester only. Letter grade only. RAD 200 may not be audited. RAD 200 may not be taken credit/no credit.*

RAD 200 focuses on advanced radiologic technology procedures, including concepts such as: radiation and patient safety, fluoroscopy procedures, imaging special patient populations, adaptations to positioning based on patient condition, and non-routine radiographic positioning.

Upon successful completion of RAD 200, the student should be able to:

1. Identify projections that could be used to supplement routine radiographic examinations to demonstrate specific anatomy.
2. Discuss adaptations to positioning or non-routine projections that may be performed to demonstrate anatomy in a trauma situation.
3. Describe adaptations to positioning or non-routine projections that may be performed to demonstrate anatomy for the geriatric patient.
4. Describe adaptations to positioning or non-routine projections that may be performed to demonstrate anatomy for the pediatric patient.
5. Identify situations in which routine radiographic projections would be contraindicated and adjust positioning accordingly.
6. Explain radiation safety and patient care protocols for advanced radiologic technology procedures.

### **RAD 200L Radiologic Technology Procedures Laboratory III (1) Fall**

*3 hours lab per week*

*Prerequisite(s): A grade of "C" or higher in RAD 142 and a grade of "C" or higher in RAD 150.*

*Corequisite(s): RAD 200 and RAD 210 and RAD 240 and RAD 248.*

*Comment: RAD 200L is offered in the fall semester only. Letter grade only. RAD 200L may not be audited. RAD 200L may not be taken credit/no credit.*

RAD 200L focuses on advanced radiologic technology procedures, applying concepts in: radiation and patient safety, fluoroscopy procedures, imaging special patient populations, adaptations to positioning based on patient condition, and non-routine radiographic positioning.

Upon successful completion of RAD 200L, the student should be able to:

1. Demonstrate projections that could be used to supplement routine radiographic examinations to demonstrate specific anatomy.
2. Apply adaptations to positioning or non-routine projections that may be performed to demonstrate anatomy in a trauma situation.
3. Apply adaptations to positioning or non-routine projections that may be performed to demonstrate anatomy for the geriatric patient.
4. Apply adaptations to positioning or non-routine projections that may be performed to demonstrate anatomy for the pediatric patient.
5. Appraise situations in which routine radiographic projections would be contraindicated and adjust positioning accordingly.
6. Employ radiation safety and patient care protocols for advanced radiologic technology procedures.

### **RAD 210 Advanced Diagnostic Imaging (3) Fall**

*3 hours lecture per week*

*Prerequisite(s): A grade of "C" or higher in RAD 142 and a grade of "C" or higher in RAD 150.*

*Corequisite(s): RAD 200 and RAD 200L and RAD 240 and RAD 248.*

*Comment: RAD 210 is offered in the fall semester only. Letter grade only. RAD 210 may not be taken credit/no credit. RAD 210 may not be audited.*

RAD 210 focuses on advanced radiographic imaging principles, including concepts such as: fluoroscopic examination of body systems, considerations for imaging special patient populations, and advanced imaging modalities.

Upon successful completion of RAD 210, the student should be able to:

1. Describe radiographic procedures for selected fluoroscopic examinations of the GI and biliary systems.
2. Discuss at least three procedural considerations for imaging special patient populations.
3. Explain basic principles related to advanced imaging modality equipment, image acquisition, and procedures.
4. Identify major anatomical structures found within selected cross-sectional images of the human body.

### **RAD 230 Radiologic Technology Procedures IV (3) Spring**

*3 hours lecture per week*

*Prerequisite(s): A grade of "C" or higher in RAD 200 and a grade of "C" or higher in RAD 200L and a grade of "C" or higher in RAD 210 and a grade of "C" or higher in RAD 240 and a grade of "C" or higher in RAD 248.*

*Corequisite(s): RAD 230L and RAD 241 and RAD 249 and RAD 260.*

*Comment: RAD 230 is offered in the spring semester only. Letter grade only. RAD 230 may not be audited. RAD 230 may not be taken credit/no credit.*



RAD 230 focuses on special radiologic technology procedures, including concepts such as: quality control of imaging equipment, supplies and equipment for special procedures, venipuncture, and radiation and patient safety protocols in advanced imaging procedures. This course also explores advanced imaging modality procedures.

Upon successful completion of RAD 230, the student should be able to:

1. Describe at least one procedure of an advanced imaging modality in terms of: patient preparation, general procedural methods, contrast media commonly used, contrast media administration, special equipment utilized, and projections required.
2. Discuss at least three major uses for one advanced imaging modality.
3. Identify gross anatomical structures and pathologies on images produced by advanced imaging modalities.
4. Explain quality control measures and tests to digital imaging equipment.
5. Identify the special needles, guide wires and catheters required for special procedures.
6. Describe the procedural steps involved in the Seldinger technique for venipuncture.

### **RAD 230L Radiologic Technology Procedures Laboratory IV (1) Spring**

*3 hours lab per week*

*Prerequisite(s): A grade of "C" or higher in RAD 200 and a grade of "C" or higher in RAD 200L and a grade of "C" or higher in RAD 210 and a grade of "C" or higher in RAD 240 and a grade of "C" or higher in RAD 248.*

*Corequisite(s): RAD 230 and RAD 241 and RAD 249 and RAD 260.*

*Comment: RAD 230L is offered in the spring semester only. Letter grade only. RAD 230L may not be audited. RAD 230L may not be taken credit/no credit.*

RAD 230L focuses on special radiologic technology procedures, applying concepts in: quality control of imaging equipment, supplies and equipment for special procedures, venipuncture, and radiation and patient safety protocols in advanced imaging procedures.

Upon successful completion of RAD 230L, the student should be able to:

1. Apply quality control measures and tests to digital imaging equipment.
2. Identify the special needles, guide wires and catheters required for special procedures discussed in RAD 230.
3. Demonstrate the procedural steps involved in the Seldinger technique for venipuncture.
4. Employ radiation safety and patient care protocols for advanced radiologic technology procedures.

### **RAD 240 Clinical Practicum IV (6) Fall**

*Approximately 20 hours per week*

*Prerequisite(s): A grade of “C” or higher in RAD 142 **and** a grade of “C” or higher in RAD 150.*

*Corequisite(s): RAD 200 **and** RAD 200L **and** RAD 210 **and** RAD 248.*

*Comment: RAD 240 is offered in the fall semester only. Letter grade only. RAD 240 may not be audited. RAD 240 may not be taken credit/no credit. Students will complete health screening and must be cleared by the clinical site to which they are assigned. Liability insurance must be in effect for clinical courses. Approximately 270 clinical hours during the 16 week semester.*

RAD 240 provides for observation and supervised practice in positioning the patient and obtaining diagnostic radiographs as requested with emphasis on fluoroscopic procedures using contrast media and radiography of specified patient populations.

Upon successful completion of RAD 240, the student should be able to:

1. Provide patient-centered, clinically effective care for all patients regardless of age, gender, disability, special needs, ethnicity, or culture.
2. Demonstrate competency in the principles of radiation protection standards.
3. Critique images for appropriate anatomy, image quality, and patient identification.
4. Determine corrective measures to improve inadequate images.
5. Maintain patient confidentiality standards and meet HIPAA requirements.
6. Integrate the use of appropriate and effective written, oral and nonverbal communication with patients, the public and members of the health care team in the clinical setting.

### **RAD 241 Clinical Practicum V (6) Spring**

*Approximately 20 hours per week*

*Prerequisite(s): Prerequisite(s): A grade of “C” or higher in RAD 200 **and** a grade of “C” or higher in RAD 200L **and** a grade of “C” or higher in RAD 210 **and** a grade of “C” or higher in RAD 240 **and** a grade of “C” or higher in RAD 248.*

*Corequisite(s): RAD 230 **and** RAD 230L **and** RAD 249 **and** RAD 260.*

*Comment: RAD 241 is offered in the spring semester only. Letter grade only. RAD 241 may not be audited. RAD 241 may not be taken credit/no credit. Students will complete health screening and must be cleared by the clinical site to which they are assigned. Liability insurance must be in effect for clinical courses.*

RAD 241 provides for observation and supervised practice in positioning the patient and obtaining diagnostic radiographs as requested with emphasis on trauma and mobile radiography. RAD 241 includes a rotation in an advanced imaging modality.

Upon successful completion of RAD 241, the student should be able to:

1. Provide patient-centered, clinically effective care for all patients regardless of age, gender, disability, special needs, ethnicity, or culture.
2. Demonstrate competency in the principles of radiation protection standards.

3. Critique images for appropriate anatomy, image quality, and patient identification.
4. Determine corrective measures to improve inadequate images.
5. Maintain patient confidentiality standards and meet HIPAA requirements.
6. Integrate the use of appropriate and effective written, oral and nonverbal communication with patients, the public and members of the health care team in the clinical setting.

### **RAD 242 Clinical Practicum VI (6) Summer**

*Approximately 34 clinical hours per week for 9 weeks*

*Prerequisite(s): A grade of "C" or higher in RAD 230 **and** a grade of "C" or higher in RAD 230L **and** a grade of "C" or higher in RAD 241 **and** a grade of "C" or higher in RAD 249 **and** a grade of "C" or higher in RAD 260.*

*Corequisite(s): RAD 255.*

*Comment: RAD 242 is offered in the summer only. Letter grade only. RAD 242 may not be audited. RAD 242 may not be taken credit/no credit. Students will complete health screening and must be cleared by the clinical site to which they are assigned. Liability insurance must be in effect for clinical courses.*

RAD 242 provides for observation and supervised practice in positioning the patient and obtaining diagnostic radiographs as requested with emphasis on surgical procedures and non-surgical c-arm procedures. RAD 242 includes a rotation in an advanced imaging modality.

Upon successful completion of RAD 242, the student should be able to:

1. Provide patient-centered, clinically effective care for all patients regardless of age, gender, disability, special needs, ethnicity, or culture.
2. Demonstrate competency in the principles of radiation protection standards.
3. Critique images for appropriate anatomy, image quality, and patient identification.
4. Determine corrective measures to improve inadequate images.
5. Maintain patient confidentiality standards and meet HIPAA requirements.
6. Integrate the use of appropriate and effective written, oral and nonverbal communication with patients, the public and members of the health care team in the clinical setting.

### **RAD 248 Radiographic Image Critique III (1) Fall**

*1 hour lecture per week*

*Prerequisite(s): A grade of "C" or higher in RAD 142 **and** a grade of "C" or higher in RAD 150.*

*Corequisite(s): RAD 200 **and** RAD 200L **and** RAD 210 **and** RAD 240.*

*Comment: RAD 248 is offered in the fall semester only. Letter grade only. RAD 248 may not be taken credit/no credit. RAD 248 may not be audited.*

RAD 248 facilitates the development of image quality evaluation skills through the critique of radiographic images. This course also promotes the practice of effective communication through peer teaching.

Upon successful completion of RAD 248, the student should be able to:

1. Identify criteria for radiographic image evaluation.
2. Evaluate the quality of selected images using radiographic principles and terminology.
3. Discuss methods for improving radiographic image quality.
4. Practice effective communication of health information through peer teaching.

### **RAD 249 Radiographic Image Critique IV (1) Spring**

*1 hour lecture per week*

*Prerequisite(s): A grade of "C" or higher in RAD 200 and a grade of "C" or higher in RAD 200L and a grade of "C" or higher in RAD 210 and a grade of "C" or higher in RAD 240 and a grade of "C" or higher in RAD 248.*

*Corequisite(s): RAD 230 and RAD 230L and RAD 241 and RAD 260.*

*Comment: RAD 249 is offered in the spring semester only. Letter grade only. RAD 249 may not be taken credit/no credit. RAD 249 may not be audited.*

RAD 249 facilitates the development of image quality evaluation skills through the critique of radiographic images, with an additional focus on advanced imaging modality equipment and image production. This course also promotes the practice of effective communication through peer teaching.

Upon successful completion of RAD 249, the student should be able to:

1. Identify major components of the primary equipment for at least one advanced imaging modality.
2. Explain the major image production principles of at least one advanced imaging modality.
3. Evaluate the quality of selected images from at least one advanced imaging modality using radiographic principles and terminology.
4. Practice effective communication of health information through peer teaching.

### **RAD 255 Applied Radiologic Technology Principles (1) Summer**

*2.5 hours lecture for 6 weeks*

*Prerequisite(s): A grade of "C" or higher in RAD 230 and a grade of "C" or higher in RAD 230L and a grade of "C" or higher in RAD 241 and a grade of "C" or higher in RAD 249 and a grade of "C" or higher in RAD 260.*

*Corequisite(s): RAD 242.*

*Comment: RAD 255 is offered in the summer semester only. Letter grade only. RAD 255 may not be audited. RAD 255 may not be taken credit/no credit.*

RAD 255 focuses on the practical application of basic and advanced radiologic imaging principles. This course explores topics such as: principles of routine imaging procedures, basic patient care considerations, radiographic equipment operations and image production, and the biological effects of radiation.

Upon successful completion of RAD 255, the student should be able to:

1. Identify the main principles of routine radiographic imaging procedures.
2. Describe basic patient care considerations.
3. Explain radiographic equipment operation and image production.
4. Describe the effects of ionizing radiation on biologic systems.

### **RAD 260 Radiation Biology and Protection (1) Spring**

*1 hours lecture per week*

*Prerequisite(s): A grade of "C" or higher in RAD 200 and a grade of "C" or higher in RAD 200L and a grade of "C" or higher in RAD 210 and a grade of "C" or higher in RAD 240 and a grade of "C" or higher in RAD 248.*

*Corequisite(s): RAD 230 and RAD 230L and RAD 249.*

*Comment: RAD 260 is offered in the spring only. Letter grade only. RAD 260 may not be audited. RAD 260 may not be taken credit/no credit.*

RAD 260 focuses on effects of ionizing radiation in biologic systems; application to radiography, radiation therapy, and nuclear medicine; importance of minimizing exposure and proper techniques.

Upon successful completion of RAD 260, the student should be able to:

1. Discuss theories and principles relating to the effects of ionizing radiation on biologic systems.
2. Describe radiation protection principles as related to radiography, radiation therapy and nuclear medicine imaging.
3. Explain the importance of minimizing radiation exposure and using proper technique settings.

## **RELIGION**

### **REL 149 Introduction to the World's Goddesses (3) KCC AA/FGA**

*3 hours lecture per week*

*Comment: REL 149 is cross-listed as WS 149*

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REL 149 provides a cross-cultural analysis of the religious narratives, beliefs, practices, iconography, and sacred sites related to the female deities in the Americas, Polynesia, the Middle East, Africa, and Europe from prehistory to 1500 C.E.

Upon successful completion of REL 149, the student should be able to:

1. Identify the relationship between goddesses and culture, economics, politics, and gender constructs.
2. Describe the following elements or dimensions associated with goddesses: religious stories, beliefs, practices, sacred sites, and visual representations.
3. Demonstrate an understanding of the religious complexities associated with aforementioned dimensions.
4. Contextualize the historical and geographical frameworks surrounding goddesses around the world.
5. Explain the similarities and differences of goddesses through cross-cultural analysis.

### **REL 150 Introduction to the World's Major Religions (3) KCC AA/FGC and AS/AH**

*3 hours lecture per week*

REL 150 is a historical survey of the world's major religious traditions. The course provides a basic introduction to the world's religious traditions while enabling students to think both sensitively and critically about the religious world.

Upon successful completion of REL 150, the student should be able to:

1. Identify the myths, rituals, ethics, and art of each major religious tradition.
2. Describe significant historical developments within each major religious tradition, from the time of its origins until today.
3. Demonstrate an understanding of their own religious background and those of the surrounding communities.

### **REL 151 Religion and the Meaning of Existence (3) KCC AA/DH**

*3 hours lecture per week*

REL 151 explores various religious responses to the question, "what is the meaning of existence?," while also considering significant challenges to those responses.

Upon successful completion of REL 151, the student should be able to:

1. Describe various traditional religious responses to the question, "what is the meaning of existence?"
2. Identify key historical and contemporary challenges to religious explanations of the meaning of existence.
3. Examine one's own views on the meaning of existence in light of and in

comparison to the values of the world's religions.

**REL 215 Contemporary Religions (3) KCC AA/DH**

*3 hours lecture per week*

*Recommended preparation: REL 150.*

REL 215 explores the development of new religions and contemporary transformations of traditional religions.

Upon successful completion of REL 215, the student should be able to:

1. Identify social pressures and influences that have transformed the contemporary religious landscape.
2. Describe the distinguishing characteristics of traditional religions and new religious movements and provide contemporary examples of each.
3. Analyze contemporary religious phenomena in light of modern technology, science, globalization, human population shifts and/or environmental concerns.

**REL 222 Religion and Conflict in the Modern Era (3) KCC AA/DH**

*3 hours lecture per week*

*Recommended preparation: Credit in or placement in REL 150 or HIST 151 or HIST 152.*

REL 222 analyzes the historical relationship between religion and conflict in the modern era. The course explores the ways in which religions have served to create, exacerbate, and/or legitimate violent conflicts since 1800.

Upon successful completion of REL 222, the student should be able to:

1. Identify common characteristics of religious conflicts throughout history and around the world.
2. Describe the historical origins and evolutions of various religious conflicts in the modern era.
3. Analyze the ways in which religious rhetoric, myths, rituals and ethics have helped shape violent conflicts in the modern era.

**RESPIRATORY CARE**

**RESP 100 Respiratory Care Profession (1) Summer**

*1 hour lecture per week*

*Comment: RESP 100 may not be taken credit/no credit. RESP 100 may be audited only upon approval of both Respiratory Therapy Program Director and instructor. RESP 100 is only offered in the Summer semester.*

RESP 100 introduces students to Respiratory Care as an allied health field and defines the role of the Respiratory Care Practitioner in patient care and as a member of the health care team; provides basic knowledge of health care systems and settings, national and state organizational structure, credentialing and licensing, and ethical considerations; and introduces fundamental patient care concepts, procedures, aids, and terminology.

Upon successful completion of RESP 100, the student should be able to:

1. Describe the history and development of Respiratory Care as a profession.
2. Identify current local and national issues affecting the Respiratory Care profession.
3. Describe the role of the Respiratory Care Practitioners (RCP) as a member of the health care team.
4. Discuss ethical concerns facing respiratory Care and other health care practitioners.
5. Discuss issues of health literacy and patient safety affecting Respiratory Care practice.
6. Describe the role of a Respiratory Care or Cardiopulmonary Department within the organizational structure of a hospital or health care facility.
7. Describe the role of Respiratory Care in the out-patient setting.
8. Demonstrate an understanding of community-based health care by examining a community-based health agency.
9. Explain the difference between licensure and credentialing in Respiratory Care.
10. Identify geriatric core competencies, describe role of Respiratory Therapist in interdisciplinary team geriatric care.
11. Identify appropriate responses in non-violent crisis intervention.

### **RESP 101 Sciences for Respiratory Care (3) Summer**

*3 hours lecture per week*

*Prerequisite(s): Acceptance into the Associate in Science degree in Respiratory Care program.*

*Recommended Preparation: ENG 100 and MATH 100 and CHEM 100 and PHYS 100.*

*Comment: RESP 101 is offered in the summer semester only. RESP 101 may not be taken credit/no credit. RESP 101 may be audited only upon approval of both Respiratory Therapy Program Director and instructor. RESP 101 offers letter grade A, B, C, and F only. 0-74% = F. There is no D grade possible for this course.*

RESP 101 focuses on basic sciences for the beginning student in respiratory care. This course will include principles of physics, infection control, computer skills, and evidence-based medicine that apply to healthcare.

Upon successful completion of RESP 101, the student should be able to:

1. Describe gas laws and perform calculations using gas laws.
2. Define scientific terms related to physics and chemistry.
3. Describe infection control techniques used in healthcare.



4. Develop an electronic presentation (i.e. PowerPoint).
5. Develop a simple spreadsheet.
6. Perform internet searches.
7. Define evidence-based medicine.
8. Utilize principles of evidence-based medicine to research selected topics in respiratory care.

### **RESP 200 Cardiopulmonary Pathophysiology (3) Fall**

*3 hours lecture per week*

*Prerequisite(s): Acceptance into the Associate in Science degree in Respiratory Care program.*

*Comment: RESP 200 may not be taken credit / no credit. Letter grade only. RESP 200 is offered only in the Fall semester.*

RESP 200 examines common cardiopulmonary disease processes while exploring the relationship between pathophysiology and therapeutic interventions.

Upon successful completion of RESP 200, the student should be able to:

1. Define and describe fundamental characteristics of cardiopulmonary diseases and conditions.
2. Discuss etiology, pathology, diagnosis, management, and prognosis of common cardiopulmonary diseases.
3. Identify the corresponding chronic cardiopulmonary diseases with the appropriate rehabilitative techniques.
4. Define abnormal lab values as they relate to specific diseases.
5. Discuss traumatic injuries to the chest wall.
6. Describe common pathology seen on chest x-ray exam.

### **RESP 201 Cardiopulmonary Anatomy and Physiology (3)**

*3 hours lecture per week*

*Prerequisite(s): Acceptance into the Associate in Science degree in Respiratory Care program.*

*Comment: RESP 201 may not be taken credit/no credit. RESP 201 may be audited only upon approval of both Respiratory Therapy Program Director and Instructor. RESP 201 offers letter grade A, B, C, and F only (0-74% = F). There is no D grade possible for the course. RESP 201 is only offered in the fall semester.*

RESP 201 provides an in-depth study of the anatomy and physiology of the heart, lungs, and associated structures including an introduction to cardiac electrophysiology and lung volumes and capacities.

Upon successful completion of RESP 201, the student should be able to:

1. Describe the structure and function of the heart, lungs, and related body systems.
2. Discuss the process of respiration.

3. Demonstrate knowledge of electrophysiology through rhythm recognition.
4. State the function of blood, vessels, and the heart.
5. Name the structures in the heart and lung and describe their location in the body.
6. Describe the gross and microscopic anatomy of the lung.
7. Describe lung volumes and capacities.
8. Interpret normal pulmonary function test values.
9. Perform physiologic calculations.

### **RESP 202 Clinical Practice I (5) Fall**

*16 hours lab or clinical per week*

*Prerequisite(s): Acceptance into the Associate in Science degree in Respiratory Care program.*

*Comment: Letter grade only. RESP 202 may not be taken credit/no credit. RESP 202 may not be audited. A minimum of 225 clinical practice hours required. RESP 202 is offered only in the Fall semester.*

RESP 202 is a clinical practice course in basic respiratory care skills, knowledge, and behavior. Introduces students to basic respiratory care skills and procedures including charting, medications, oxygen and aerosol therapy, lung inflation therapy, and secretion management. The course includes clinical rotations at local hospital clinical sites to include: Queen's Medical Center, Straub Hospital, and Castle Medical Center. Rotations will involve a minimum of 225 clinical hours of direct clinical practice. Students are required to have medical clearance, liability insurance, uniforms, CPR certification, and supplies and tools.

Upon successful completion of RESP 202, the student should be able to:

1. Perform routine physical assessment on the cardiopulmonary patient.
2. Document results of the patient's assessment and response to therapy in the patient's record.
3. Monitor and evaluate the patient's response to respiratory therapy.
4. Communicate the patient's respiratory care plan, response to therapy, and progress to other members of the health care team.
5. Collect the necessary supplies, test for equipment function, and administer oxygen, humidification, and aerosol devices.
6. Measure respiratory care medications as ordered and administer using the appropriate devices.
7. Perform secretion management techniques such as chest percussion and postural drainage and positive pressure adjuncts.
8. Perform hyperinflation techniques such as intermittent positive pressure breathing and incentive spirometry.
9. Instruct patient on proper breathing and coughing techniques.
10. Discuss the role of the respiratory care practitioner as part of the health care team.
11. Apply universal precaution in the patient care setting.

### **RESP 203 Respiratory Care Techniques I (3) Fall**

*3 hours lecture per week*

*Prerequisite(s): Acceptance into the Associate in Science degree in Respiratory Care program.*

*Comment: RESP 203 may not be taken credit / no credit. RESP 203 may be audited only upon approval of Respiratory Program Director and Instructor. RESP 203 is offered in the Fall semester only.*

RESP 203 introduces students to respiratory care knowledge and techniques including charting, medications, oxygen therapy, lung inflation therapy, and secretion management.

Upon successful completion of RESP 203, the student should be able to:

1. Review a patient's record for respiratory care orders and pertinent data.
2. Collect and evaluate additional pertinent clinical data to evaluate the patient's clinical status.
3. Select, assemble, and check equipment for proper function that are used in oxygen administration, humidification, and aerosol delivery.
4. Define or describe the following prescribed therapies: medical gas therapy, humidity and aerosol therapy, PAP therapy (positive airway pressure therapy), chest percussion and postural drainage therapy, lung inflation therapy.
5. State the goals of each of the prescribed therapies.
6. State the indications/contraindications of each of the prescribed therapies.
7. State the hazards/complications of each of the prescribed therapies.
8. Explain the proper method of providing the prescribed therapies.
9. State the method(s) of evaluation and monitoring of the patient's response to each of the prescribed therapies.
10. Evaluate and modify prescribed therapy for non-critically ill patients.
11. Explain the process of cardiopulmonary resuscitation. Maintain records and communication using conventional terminology as required by hospital policy and regulatory agencies.
12. Demonstrate a concept or principle related to RESP 203 in a project.
13. Present the project to a non-medical audience.

### **RESP 211 Introduction to Mechanical Ventilation (2)**

*4 hours lecture/lab per week*

*Prerequisite(s): Acceptance into the Associate in Science degree in Respiratory Care program.*

*Comment: RESP 211 may not be taken credit /no credit. RESP 211 may be audited only upon approval of the Respiratory Program Director and the instructor.*

RESP 211 introduces students to the concepts and principles of mechanical ventilation.

Upon successful completion of RESP 211, the student should be able to:

1. List the physiological indications for mechanical ventilation.

2. List the criteria for instituting mechanical ventilation.
3. List the hazards/complications of mechanical ventilation.
4. Describe the physiological effects of positive pressure.
5. Explain the concepts of compliance and resistance
6. Perform math calculations used in mechanical ventilation
7. Discuss the appropriate settings when initiating mechanical ventilation
8. Describe the different modes of conventional mechanical ventilation: Control, Asist-Control (A/C), Synchronized Intermittent Mechanical Ventilation (SIMV), Pressure Support Ventilation (PSV), Pressure Control Ventilation (PCV), Pressure Control Inverse Ratio Ventilation (PCIRV).
9. Explain the different methods of triggering and cycling the ventilator.
10. Explain the different phases of inspiration and exhalation of Continuous Mechanical Ventilation (CMV).
11. Diagram the different graphic waveforms of ventilation.
12. Explain how graphic waveforms are used in mechanical ventilation.
13. Explain the differences between Intermittent Positive Pressure Breathing (IPPB), Pressure Support (PS), and Pressure Control (PC).
14. Explain the effect of flow wave patterns on the inspiratory flowrate of flow variable ventilators.
15. Explain the maintenance of patient-ventilator interface.
16. Describe various methods of weaning and extubation procedures.
17. Discuss the role of the Respiratory Care Practitioner in the ICU environment.
18. Explain the concept of open-lung inflation Rx.
19. Explain the effects of Continuous Positive Airway Pressure (CPAP) and Positive End Expiratory Pressure (PEEP) therapy on improving oxygenation.
20. Describe the procedure for using and titrating Continuous Positive Airway Pressure (CPAP) and Positive End Expiratory Pressure (PEEP).
21. Describe the procedure of using Bilevel Positive Airway Pressure (BiPAP).
22. Explain the concepts of Inspiratory Positive Airway Pressure (IPAP) and Expiratory Positive Airway Pressure (EPAP).
23. Apply concepts of mechanical ventilation into a clinical simulation.

## **RESP 212 Clinical Practice II (5) Spring**

*15 hours clinical per week*

*Prerequisite(s): Acceptance into the Associate in Science degree in Respiratory Care program.*

*Comment: Letter grade only. RESP 212 may not be taken credit/no credit. RESP 212 may not be audited. RESP 212 is offered in the Spring semester only.*

RESP 212 introduces students to advanced respiratory care skills and procedures including airway management, mechanical ventilation, arterial puncture, and patient transport. Clinical hours will include direct patient contact in acute care, medical/surgical, and emergency room. This course involves a minimum of 225 clinical hours.

Upon successful completion of RESP 212, the student should be able to:

1. Perform routine physical assessment on the critically ill patient in the intensive care unit.
2. Interpret and evaluate diagnostic tests such as Arterial Blood Gases, electrolytes, and chest x-rays.
3. Document results of the patient's assessment and diagnostic tests in the patient's record.
4. Communicate the patient's respiratory care plan, response to therapy, and progress to other members of the health care team.
5. Perform suctioning through tracheostomy and endotracheal tubes (ETT).
6. Perform tracheostomy care.
7. Perform manual ventilation with self-inflating bag.
8. Select and insert oral and nasal airways to maintain airway patency.
9. Inflate and measure endotracheal and tracheostomy tube cuff pressures.
10. Secure the ETT with cloth tape or other appropriate devices.
11. Perform bedside ventilatory assessment such as Negative Inspiratory Force (NIF), Tidal Volume (TV), Vital Capacity (VC), and minute volume.
12. Set up the mechanical ventilator and test for function prior to patient use.
13. Adjust ventilator settings per order or protocol.
14. Check and document ventilator-patient interface.
15. Administer respiratory care medications to mechanically ventilated patients.
16. Monitor and evaluate the patient's response to respiratory therapy.
17. Discuss the role of the respiratory care practitioner as part of the health care team in the intensive care unit (ICU).

### **RESP 213 Respiratory Care Techniques II (3) Spring**

*3 hours lecture per week*

*Prerequisite(s): Acceptance into the Associate in Science degree in Respiratory Care program.*

*Comment: Letter grade only. RESP 213 may not be taken credit / no credit. RESP 213 may be audited only upon approval of Respiratory Program Director and Instructor. RESP 213 will only be offered in Spring semesters.*

RESP 213 introduces students to advanced respiratory care knowledge and techniques including assessment, hemodynamics, gas exchange, and other diagnostic studies.

Upon successful completion of RESP 213, the student should be able to:

1. Evaluate information from physical assessment of the critically ill patient on mechanical ventilation.
2. Describe the procedure for and importance of ventilation assessment.
3. Interpret and evaluate relevant diagnostic information as it relates to the patient's condition: ventilation, oxygenation, acid-base balance, chest radiograph, clinical laboratory studies, electrocardiogram, mixed venous saturation, and cardiac output.
4. Evaluate the hemodynamic measurements as they relate to the patient's condition.
5. Explain the clinical implications of using invasive and noninvasive pulmonary

- and cardiac monitoring to assess the critically ill patient.
6. Discuss the importance of nutrition of the critically ill patient on mechanical ventilation.
  7. Discuss clinical case studies of common cardiopulmonary diseases.
  8. Describe the inductive thinking process when evaluating clinical cases and organizing clinical information.

### **RESP 218 Cardiopulmonary Pharmacology (3)**

*3 hours lecture per week*

*Prerequisite(s): Acceptance into the Associate in Science degree in Respiratory Care program*

*Comment: Letter grade only. RESP 218 may not be taken credit/no credit. RESP 218 may be audited only upon approval of the Respiratory Care Program Director and Instructor. RESP 218 is only offered in the Spring semester.*

RESP 218 focuses on pharmacologic principles of drugs used in the Emergency Room (ER) and Intensive Care Unit (ICU) settings as well as an overview of general principles of pharmacology. RESP 218 supports other courses where students learn how to deliver medications and assess response to those medications.

Upon successful completion of RESP 218, the student should be able to:

1. Describe drugs administered by the RCP in terms of indications, actions, routes, doses, delivery systems, and adverse reactions.
2. Discuss specialized equipment and techniques used to administer cardiorespiratory medications.
3. State basic principles of pharmacodynamics.
4. Recommend changes in medication, dose, or delivery systems.
5. Select appropriate medications and delivery systems based on pathophysiology and case interpretation.
6. Recommend appropriate cardiac and emergency drugs.
7. Calculate drug dosages.

### **RESP 222 Clinical Practice III (5) Summer**

*15 clinical hours per week*

*Prerequisite(s): Acceptance into the Associate in Science degree in Respiratory Care program.*

*Comment: Letter grade only. RESP 222 may no be taken credit/no credit. RESP 222 may not be audited. RESP 222 is offered only in the Summer semester only.*

RESP 222 During the summer internship students will perform patient care skills under the direction of clinical faculty (preceptors). The demonstration of skill competencies will enable students to implement advanced respiratory care skills and procedures in the acute care, intensive care hospital, and long-term acute care settings. This course involves a minimum of 225 hours.

Upon successful completion of RESP 222, the student should be able to:

1. Perform routine physical assessment on the critically ill patient in the intensive care unit.
2. Interpret and evaluate diagnostic tests such as arterial blood gases, electrolytes, and chest x-rays.
3. Document results of the patient's assessment and diagnostic tests in the patient's record.
4. Communicate the patient's respiratory care plan, response to therapy, and progress to other members of the health care team.
5. Perform suctioning through tracheostomy and endotracheal tubes (ETT).
6. Perform tracheostomy care.
7. Perform manual ventilation with self-inflating bag.
8. Select and insert oral and nasal airways to maintain airway patency.
9. Inflate and measure endotracheal and tracheostomy tube cuff pressures. Secure the ETT with cloth tape or other appropriate devices.
10. Perform bedside ventilatory assessment such as Negative Inspiratory Force, Tidal Volume, Vital Capacity, and minute volume.
11. Set-up and test for function the mechanical ventilator prior to patient use.
12. Adjust ventilator settings per order or protocol.
13. Check and document ventilator-patient interface.
14. Administer respiratory care medications to mechanically ventilated patients.
15. Monitor and evaluate the patient's response to respiratory therapy.
16. Communicate with mechanically ventilated patient and relay his or her needs to other members of the health care team.

### **RESP 229 Advanced Cardiac Life Support (2) Summer**

*2 hours lecture per week*

*Prerequisite(s): Acceptance into the Associate in Science degree in Respiratory Care program.*

*Comment: Letter grade only. RESP 229 may not be audited. RESP 229 may not be taken credit/no credit. RESP 229 is only offered in the summer semester. Fees are required for RESP 229 for ACLS certification and for the advanced ECG portion of the course. Fees are approximately \$200 in addition to texts.*

RESP 229 is a course that certifies students in advanced cardiac life support (ACLS) technique and theory utilizing the program developed by the American Heart Association. Students will also learn to perform and interpret 12-lead ECGs.

Upon successful completion of RESP 229, the student should be able to:

1. Describe drugs administered by the RCP in terms of indications, actions, routes, doses, delivery systems, and adverse reactions.
2. Apply ACLS algorithms in the 10 required cases.
3. Recommend changes in medication, dose, or delivery systems.
4. Select appropriate medications and delivery systems based on pathophysiology

- and case interpretation.
5. Recommend appropriate cardiac and emergency drugs.
  6. Calculate drug dosages.
  7. Complete the ACLS final exam with a passing score.
  8. Perform 12 lead ECG and interpret rhythms.
  9. Perform advanced airway management techniques.
  10. Utilize the AED/Defibrillator to deliver electric therapy to the heart.
  11. Successfully complete ACLS certification.
  12. Discuss ethical implications of advanced life support.

### **RESP 300 Case and Disease Management in Cardiopulmonary Care (3) Fall**

*3 hours lecture per week*

*Prerequisite(s): A grade of "C" or higher in MATH 100 **and** a grade of "C" or higher in ENG 100 **and** a grade of "C" or higher in RESP 100 **and** a grade of "C" or higher in RESP 101 **and** a grade of "C" or higher in RESP 200 **and** a grade of "C" or higher in RESP 201 **and** a grade of "C" or higher in RESP 202 **and** a grade of "C" or higher in RESP 203 **and** a grade of "C" or higher in RESP 210 **and** a grade of "C" or higher in RESP 211 **and** a grade of "C" or higher in RESP 212 **and** a grade of "C" or higher in RESP 213 **and** a grade of "C" or higher in RESP 218 **and** a grade of "C" or higher in RESP 222 **and** a grade of "C" or higher in RESP 229.*

*Comment: Letter grade only. RESP 300 may not be audited. RESP 300 may not be taken credit/no credit. RESP 300 is offered in the Fall semester only.*

RESP 300 provides an overview of managed care and significant trends in healthcare policy. The course material covers theoretical concepts of case and disease management, the history and process of case and disease management and how it links to the practice of Cardiopulmonary Care. Various case management models and roles and their application in specialty roles and team models will be examined. The course studies local and national trends in various healthcare settings (acute care, community health, sub-acute, managed care organizations) and the implementation of case management models for the care of patients with cardiopulmonary disorders.

Upon successful completion of RESP 300, the student should be able to:

1. Define case management according to the CMSA and other defining sources
2. Describe the process and activities of case management
3. Identify and describe the legal issues in case management.
4. Identify and describe the ethical issues in case management.
5. Write a job description for a typical respiratory care case manager.
6. Describe the role of respiratory therapists as service providers in the process of case management and as case managers.
7. Discuss the role of case management in healthcare institutions including the hospital, long term care facilities, home care, health insurance providers.
8. Develop a cardiopulmonary patient care planning from initial assessment and treatment to discharge and home care.



### **RESP 301 Neonatal/Pediatric Respiratory Care (3) Fall**

*3 hours lecture per week*

*Prerequisite(s): Acceptance into the Associate in Science degree in Respiratory Care program.*

*Comment: Letter grade only. RESP 301 may not be audited. RESP 301 may not be taken credit/no credit.*

RESP 301 is an introduction to the concepts and principles of neonatal and pediatric respiratory care as they relate to clinical practice.

Upon successful completion of RESP 301, the student should be able to:

1. Use neopuff (t-piece resuscitator).
2. Identify and explain the anatomy and physiology of maternal-fetal circulation.
3. List maternal factors that may affect the health of the fetus.
4. Complete the Heart Association course on Pediatric Advanced Life Support (PALS) and earn the course completion card.
5. Identify and explain current clinical use of advanced airway management and mechanical ventilation in Neonatal-Pediatric care settings.
6. Understand and explain Diagnostic tools used in Neonatal-Pediatric care.
7. Identify the components of the APGAR score and assessments of gestational age.
8. Explain the physiological changes that immediately occur after a normal birth.
9. Identify and explain therapeutic modalities used in Neonatal-Pediatric care.

### **RESP 302 Clinical Practice IV (4) Fall**

*12 hours hospital practice per week*

*Prerequisite(s): Acceptance into the Associate in Science degree in Respiratory Care program.*

*Comment: Letter grade only. RESP 302 may not be taken credit/no credit. RESP 302 may not be audited. RESP 302 is offered in the Fall semester only.*

RESP 302 is an introductory course in application of neonatal/pediatric respiratory care skills and procedures in the clinical setting. Total clinical practice hours is 180.

Upon successful completion of RESP 302, the student should be able to:

1. Perform routine physical assessment on premature, full-term newborn, and pediatric patients.
2. Interpret and evaluate diagnostic tests, including ABGs, capillary blood stick, and chest x-rays.
3. Monitor neonatal/pediatric patient's vital signs, including EKG monitoring, TCM, ETCO2 monitor.
4. Communicate the patient's respiratory care plan, response to therapy, and progress to other members of the health care team.
5. Maintain the airway of neonatal and pediatric patients via bag-mask ventilation.
6. Set up and monitor non-invasive and invasive ventilators, adjust settings in

relation to diagnostic tests.

7. Present a case study of a neonatal or pediatric patient.

### **RESP 312 Clinical Practice V (4) Spring**

*12 hours clinical per week*

*Prerequisite(s): Acceptance into the Associate in Science degree in Respiratory Care program.*

*Comment: Letter grade only. RESP 312 may not be taken credit/no credit. RESP 312 may not be audited. RESP 312 is offered in the Spring semester only.*

RESP 312 provides diagnostic laboratory observation, supervised experiences, with emphasis on performing diagnostic tests safely and correctly, and supervised continuing advanced critical care of respiratory patients. Clinical practice hours is 180.

Upon successful completion of RESP 312, the student should be able to:

1. Perform routine and advanced pulmonary function tests under supervision.
2. Observe diagnostic bronchoscopy, cardiopulmonary exercise testing, polysomnographic exams, neurodiagnostic exams, and, under supervision, assist with procedures.
3. Perform preventive maintenance and calibrations of cardiopulmonary diagnostic equipment.
4. Correlate anatomy and physiology of the cardiopulmonary system with procedures and techniques. Recognize, describe, and change factors which affect the quality of a diagnostic test.
5. Perform routine physical assessment on the critically ill patient in the intensive care unit, and interpret and evaluate diagnostic tests such as ABGs, electrolytes, and chest x-rays.
6. Document results of assessment and diagnostic tests in the patient's record, and communicate the patient's respiratory care plan, response to therapy, and progress to other members of the health care team. Perform suctioning through tracheostomy and endotracheal tubes (ETT), and perform tracheostomy care.
7. Perform manual ventilation with self-inflating bag.
8. Manage the airway, including selecting and inserting oral and nasal airways to maintain airway patency, inflating and measuring endotracheal and tracheostomy tube cuff pressures, and securing the ETT with cloth tape or other appropriate devices.
9. Perform bedside ventilatory assessment such as NIF, TV, VC, and minute volume.
10. Manage a mechanical ventilator, including set-up and test for function the mechanical ventilator prior to patient use, adjusting ventilator settings per order or protocol, checking and documenting ventilator-patient interface, administering respiratory care medications to mechanically ventilated patients.
11. Monitor and evaluate the patient's response to respiratory therapy.

12. Communicate with mechanically ventilated patient and relay his or her needs to other members of the health care team.
13. Participate in discussions about the role of the respiratory care practitioner as part of the health care team in the intensive care unit (ICU).
14. Apply universal precaution in the patient care setting.
15. Attend ICU rounds, Geriatric grand rounds, and physician and respiratory care departmental in-services.

### **RESP 313 Current Concepts in Cardiopulmonary Care (3) Spring**

*3 hours lecture per week*

*Prerequisite(s): A grade of "C" or higher in ENG 100 and a grade of "C" or higher in RESP 100 and a grade of "C" or higher in RESP 101 and a grade of "C" or higher in RESP 200 and a grade of "C" or higher in RESP 201 and a grade of "C" or higher in RESP 202 and a grade of "C" or higher in RESP 203 and a grade of "C" or higher in RESP 211 and a grade of "C" or higher in RESP 212 and a grade of "C" or higher in RESP 213 and a grade of "C" or higher in RESP 218 and a grade of "C" or higher in RESP 222 and a grade of "C" or higher in RESP 229.*

*Comment: RESP 313 is only offered in the Spring semester.*

RESP 313 provides a review and analysis of current trends and concepts in the management of patients with cardiovascular, pulmonary and sleep associated disorders. The course material covers evidence and protocol based approaches to management of significant complex diseases and conditions such as ARDS/ALI, pulmonary tuberculosis, pulmonary hypertension, cardiac diseases, COPD, biological epidemics, and asthma management. Students will examine model practice guidelines and pathways, identify and evaluate research findings, and discuss methods for implementing best practice models in the modern healthcare system.

Upon successful completion of RESP 313, the student should be able to:

1. Identify and describe evidence-based medicine (EBM).
2. Identify different levels of evidence and associated research models.
3. Define and describe critical thinking in respiratory care.
4. Explain current trends in specific cardiopulmonary disease management, i.e., ARDS, Alpha1 antitrypsin deficiency, asthma, and ventilator discontinuation.
5. Evaluate methods of implementation and maintenance of protocols and EBM in the clinical environment.
6. Develop patient assessment and respiratory care plan.
7. Define and describe clinical problem solving.
8. Identify patient safety issues in cardiopulmonary care.
9. Discuss emerging or developing newer technologies or processes in cardiopulmonary care.

### **RESP 316 Cardiopulmonary Diagnostics (3) Spring**

*3 hours lecture per week*

*Prerequisite(s): Acceptance into the Associate in Science degree in Respiratory Care program.*

*Recommended Preparation: ENG 100 and MATH 100.*

*Comment: RESP 316 may not be taken credit/no credit. RESP 316 may be audited only upon approval of both Respiratory Therapy Program Director and instructor. RESP 316 is offered in the Spring semester only.*

RESP 316 introduces students to pulmonary laboratory procedures and techniques including the Blood Gas Laboratory, Bronchoscopic Lung examination, Pulmonary Function Laboratory, Sleep Laboratory, and Neurodiagnostic examinations. The course emphasizes testing methods and protocols, interpretation of test results and correlation to disease states and appropriate therapeutic intervention.

Upon successful completion of RESP 316, the student should be able to:

1. Define the role of cardiopulmonary diagnostics in patient care.
2. Describe, evaluate, and interpret pulmonary function tests, and polysomnographic tests.
3. Describe and discuss the fundamentals of a lung bronchospic exam.
4. Describe and discuss the fundamentals of obtaining a 12-lead ECG tracing.
5. Describe and discuss arterial blood gas sampling procedures, including the care and maintenance of analyzers, co-oximeters, and blood gas electrodes.
6. Discuss stepwise approach to interpreting arterial blood gases, acid-base balance; correlate gases with interventions and disease states (CHF, COPD, mechanical ventilation).
7. Explain methods to diagnose lung volumes, capacities, and diffusion.
8. Explain methods and protocols to diagnose sleep-related disorders.
9. Explain methods and protocols to diagnose neurodiagnostic disorders.
10. Explain methods and protocols for cardiopulmonary exercise testing.

### **RESP 320 Respiratory Care Seminary (3)**

*3 hours lecture per week*

*Prerequisite(s): Acceptance into the Respiratory Care program and successful completion of the first year of the AS-RC program.*

*Comment: Letter grade only. RESP 320 may not be audited. RESP 320 may not be taken credit/no credit.*

RESP 320 is a course designed to help students pass their national board exams and to help them put together an overall understanding of respiratory care in regards to overall respiratory care knowledge. The focus of the content is to review what has already been learned, and to cover specific areas of knowledge that are more challenging to retain in long term memory. The course also allows students the opportunity to demonstrate their applied learning and critical thinking skills for information gathering, decision making, and recommendations for patient care related to case analyses.

Upon successful completion of RESP 320, the student should be able to:

1. Select one adult, pediatric, or neonatal patient to perform a case analysis. Provide relevant background clinical information to include: a. History and Physical Exam; b. Pathophysiology; c. Diagnostics; d. Treatment/Plan of care; e. In/Out patient course summary; and f. Recommendations.
2. Participate in a comprehensive review of respiratory care theories, concepts, applications, and practice.
3. Complete self-assessments for all respiratory care content areas.
4. Participate in physician-facilitated case analyses, lectures, and discussion sessions.

### **RESP 322 Clinical Practice VI (4) Summer**

*A total of 180 clinical hours per semester*

*Prerequisite(s): Acceptance into the Associate in Science degree in Respiratory Care program.*

*Comment: Letter grade only. RESP 322 may not be audited. RESP 322 may not be taken credit/no credit. RESP 322 only offered in the summer semester only.*

RESP 322 is a hospital-based course applying advanced respiratory care skills and procedures. Students are expected to consistently perform at an advanced level in all skills learned in previous Respiratory Care courses. Critical care diagnostics and therapeutics are the focus. In addition, clinical-based workshops are provided for national credential examinations and advanced methodologies of mechanical ventilation. This course involves a minimum of 180 clinical hours.

Upon successful completion of RESP 322, the student should be able to:

1. Perform routine physical assessment on the critically ill patient in the intensive care unit, including the interpretation and evaluation of diagnostic tests, the calculation of shunt, dead space, static compliance and airway resistance.
2. Evaluate hemodynamic parameters such as CVP, SVR, PVR, MAP, PCWP, CO, and CI.
3. Identify basic abnormal and life-threatening ECG patterns.
4. Document results of assessment and diagnostic tests in the patient's record and communicate the results and the patient's respiratory care plan, response to therapy, and progress to other members of the health care team.
5. Manage the airway, including suctioning through tracheostomy and endotracheal tubes (ETT), performing tracheostomy care, selecting and inserting oral and nasal airways to maintain airway patency, inflating and measuring endotracheal and tracheostomy tube cuff pressures.
6. Perform bedside ventilatory assessment such as NIF, TV, VC, and minute volume.
7. Manage the mechanical ventilator (including NPPV), including set-up and test for function of the mechanical ventilator prior to patient use, and make clinical recommendations based on various patient data.
8. Manage, with minimal supervision, a minimum of three ventilator patients in the ICU.

9. Identify the actions of common medications used in the ICU: antimicrobial agents, paralyzing agents, respiratory stimulants/depressants, and analgesics/anesthetics.
10. Participate in ICU rounds and physician and respiratory care departmental in-services.
11. Participate in self-assessment and clinical simulation exam practice.

## SCIENCE

### **SCI 295 (Alpha) STEM Research Experience (1-3) KCC AA/DY**

*3 hours cooperative education/work experience per week per credit*

*Prerequisite(s): Consent of instructor.*

*Recommended Preparation: Completion of a lab science course as stipulated by the instructor.*

*Comment: Letter grade only. SCI 295 (alpha) may not be audited. SCI 295 (alpha) may not be taken credit/no credit. SCI 295 (alpha) topics may be repeated up to a maximum of 6 total credits from any combination of SCI 295 research topics.*

SCI 295 (alpha) offers a research experience in science, technology, engineering and/or mathematics, emphasizing the application of the scientific method to a specific project.

Upon successful completion of SCI 295, the student should be able to:

1. Formulate a hypothesis.
2. Design methods to test a hypothesis.
3. Collect and analyze data as appropriate.
4. Document and formally present results of hypothesis testing to an audience.
5. Enhance understanding of scientific concepts.
6. Collaborate as a member of a research team.
7. Work responsibly in a lab setting.

### **SCI 295BL STEM Research Experience in Biology and/or Marine Biology (1-3) KCC AA/DY**

*3 hours cooperative education/work experience per week per credit*

*Prerequisite(s): Consent of instructor.*

*Recommended Preparation: Completion of or concurrent enrollment in BIOL 171 and 171L course as stipulated by the instructor.*

*Comment: Letter grade only. SCI 295BL may not be audited. SCI 295BL may not be taken credit/no credit. SCI 295BL may be repeated up to a maximum of 6 credits.*

SCI 295BL offers a research experience in science, technology, engineering and/or mathematics, emphasizing the application of the scientific method to a specific project in biology and/or marine biology.

Upon successful completion of SCI 295BL, the student should be able to:

1. Formulate a hypothesis.
2. Design methods to test a hypothesis.
3. Collect and analyze data as appropriate.
4. Document and formally present results of hypothesis testing to an audience.
5. Enhance understanding of scientific concepts.
6. Collaborate as a member of a research team.
7. Work responsibly in a lab setting.

**SCI 295BT STEM Research Experience in Botany (1-3) KCC AA/DY**

*3 hours cooperative education/work experience per week per credit*

*Prerequisite(s): Consent of instructor.*

*Recommended Preparation: Completion of a lab science course as stipulated by the instructor.*

*Comment: Letter grade only. SCI 295BT may not be audited. SCI 295BT may not be taken credit/no credit. SCI 295BT may be repeated up to a maximum of 6 credits.*

SCI 295BT offers a research experience in science (botany), technology, engineering and/or mathematics, emphasizing the application of the scientific method to a specific project in biology and/or marine biology.

Upon successful completion of SCI 295BT, the student should be able to:

1. Formulate a hypothesis.
2. Design methods to test a hypothesis.
3. Collect and analyze data as appropriate.
4. Document and formally present results of hypothesis testing to an audience.
5. Enhance understanding of scientific concepts.
6. Collaborate as a member of a research team.
7. Work responsibly in a lab setting.

**SCI 295CS STEM Research Experience in Computer Sciences (1-3) KCC AA/DY**

*3 hours cooperative education/work experience per week per credit*

*Prerequisite(s): Consent of instructor.*

*Recommended Preparation: Credit or concurrent enrollment in ICS 111.*

*Comment: Letter grade only. SCI 295CS may not be audited. SCI 295CS may not be taken credit/no credit. SCI 295CS may be repeated up to a maximum of 6 credits.*

SCI 295CS offers a research experience in science, technology, engineering and/or mathematics, emphasizing the application of the scientific method to a specific project in computer sciences.

Upon successful completion of SCI 295CS, the student should be able to:

1. Formulate a hypothesis.
2. Design methods to test a hypothesis.
3. Collect and analyze data as appropriate.
4. Document and formally present results of hypothesis testing to an audience.
5. Enhance understanding of scientific concepts.
6. Collaborate as a member of a research team.
7. Work responsibly in a lab setting.

**SCI 295EC STEM Research Experience in Ecology (1-3) KCC AA/DY**

*3 hours cooperative education/work experience per week per credit*

*Prerequisite(s): Instructor Consent.*

*Recommended Preparation: Completion of introductory **or** majors biology/ecology course **or** demonstrated interest in research **or** ecological management, as stipulated by the instructor.*

*Comment: Letter grade only. SCI 295EC may not be audited. SCI 295EC may not be taken credit/no credit. SCI 295EC may be repeated up to a maximum of 6 credits.*

SCI 295EC offers a research experience in science, technology, engineering and/or mathematics, emphasizing the application of the scientific method to an ecology project.

Upon successful completion of SCI 295EC, the student should be able to:

1. Formulate a hypothesis.
2. Design methods to test a hypothesis.
3. Collect and analyze data as appropriate.
4. Document and formally present results of hypothesis testing to an audience.
5. Enhance understanding of scientific concepts.
6. Collaborate as a member of a research team.
7. Work responsibly in a lab setting.

**SCI 295EN STEM Research Experience in Engineering (1-3) KCC AA/DY**

*3 hours cooperative education/work experience per week per credit*

*Prerequisite(s): Instructor Consent.*

*Recommended Preparation: Completion of a calculus-based physics course as stipulated by the instructor.*

*Comment: Letter grade only. SCI 295EN may not be audited. SCI 295EN may not be taken credit/no credit. SCI 295EN may be repeated up to a maximum of 6 credits.*

SCI 295EN offers research experience in science, technology, engineering and/or mathematics, emphasizing the application of the engineering design process to a specific project.

Upon successful completion of SCI 295EN, the student should be able to:

1. Formulate a hypothesis.
2. Design methods to test a hypothesis.



3. Collect and analyze data as appropriate.
4. Document and formally present results of hypothesis testing to an audience.
5. Enhance understanding of scientific concepts.
6. Collaborate as a member of a research team.
7. Work responsibly in a lab setting.

**SCI 295ES STEM Research Experience in Environmental Science (1-3) KCC AA/DY**

*3 hours cooperative education/work experience per week per credit*

*Prerequisite(s): Consent of instructor.*

*Recommended Preparation: Completion of introductory or majors ecology or environmental science course **or** demonstrated interest in environmental science, as stipulated by the instructor.*

*Comment: Letter grade only. SCI 295ES may not be audited. SCI 295ES may not be taken credit/no credit. SCI 295ES may be repeated up to a maximum of 6 credits.*

SCI 295ES offers a research experience in Environmental Science emphasizing the application of the scientific method to research or projects.

Upon successful completion of SCI 295ES, the student should be able to:

1. Formulate a hypothesis or research question.
2. Design methods to test a hypothesis or research question.
3. Collect and analyze data as appropriate.
4. Document and formally present results of research project to an audience.
5. Enhance understanding of scientific concepts.
6. Collaborate as a member of a research team.
7. Work responsibly in a lab or field setting.

**SCI 295GS STEM Research Experience in Geosciences (1-3) KCC AA/DY**

*3 hours cooperative education/work experience per week per credit*

*Prerequisite(s): Consent of instructor.*

*Recommended Preparation: Completion of introductory or majors ecology or environmental science course **or** demonstrated interest in environmental science, as stipulated by the instructor.*

*Comment: Letter grade only. SCI 295GS may not be audited. SCI 295GS may not be taken credit/no credit. SCI 295GS may be repeated up to a maximum of 6 credits.*

SCI 295GS offers a research experience in science, technology, engineering, and/or mathematics, emphasizing the application of the scientific method to a specific project in geosciences.

Upon successful completion of SCI 295GS, the student should be able to:

1. Formulate a hypothesis or research question.
2. Design methods to test a hypothesis or research question.
3. Collect and analyze data as appropriate.

4. Document and formally present results of research project to an audience.
5. Enhance understanding of scientific concepts.
6. Collaborate as a member of a research team.
7. Work responsibly in a lab or field setting.

**SCI 295MA STEM Research Experience in Mathematics (1-3) KCC AA/DY**

*3 hours cooperative education/work experience per week per credit*

*Prerequisite(s): Consent of instructor.*

*Recommended Preparation: Completion of a calculus course, eg., MATH 241 or higher.*

*Comment: Letter grade only. SCI 295MA may not be audited. SCI 295MA may not be taken credit/no credit. SCI 295MA may be repeated up to a maximum of 6 credits.*

SCI 295MA offers research experience in science, technology, engineering and/or mathematics, emphasizing the application of mathematical techniques to analyze or model a specific project.

Upon successful completion of SCI 295MA, the student should be able to:

1. Formulate a hypothesis
2. Design methods to test a hypothesis
3. Collect and analyze data as appropriate
4. Document and formally present results of hypothesis testing to an audience
5. Enhance understanding of scientific concepts
6. Collaborate as a member of a research team
7. Work responsibly in a lab setting

**SCI 295MI STEM Research Experience in Microbiology and/or Molecular Biology (1-3) KCC AA/DY**

*3 hours cooperative education/work experience per week per credit*

*Prerequisite(s): Instructor Consent.*

*Recommended Preparation: Completion of a microbiology **and/or** molecular biology lab science course as stipulated by the instructor.*

*Comment: Letter grade only. SCI 295MI may not be audited. SCI 295MI may not be taken credit/no credit. SCI 295MI may be repeated up to a maximum of 6 credits.*

SCI 295MI offers a research experience in science, technology, engineering and/or mathematics, emphasizing the application of the scientific method to a specific project in microbiology and/or molecular biology.

Upon successful completion of SCI 295MI, the student should be able to:

1. Formulate a hypothesis.
2. Design methods to test a hypothesis.
3. Collect and analyze data as appropriate.
4. Document and formally present results of hypothesis testing to an audience.
5. Enhance understanding of scientific concepts.

6. Collaborate as a member of a research team.
7. Work responsibly in a lab setting.

**SCI 295PL STEM Research Experience in Physiology (1 - 3) KCC AA/DY**

*3 hours cooperative education/work experience per week per credit*

*Prerequisite(s): Consent of instructor.*

*Recommended Preparation: Completion of a lab science course as stipulated by the instructor.*

*Comment: Letter grade only. SCI 295PL may not be audited. SCI 295PL may not be taken credit/no credit. SCI 295PL may be repeated up to a maximum of 6 credits.*

SCI 295PL offers a research experience in physiology, emphasizing the application of the scientific method to a specific project.

Upon successful completion of SCI 295PL, the student should be able to:

1. Formulate a hypothesis.
2. Design methods to test a hypothesis.
3. Collect and analyze data as appropriate.
4. Document and formally present results of hypothesis testing to an audience.
5. Enhance understanding of scientific concepts.
6. Collaborate as a member of a research team.
7. Work responsibly in a lab setting.

**SCI 295PS STEM Research Experience in Physics (1 - 3) KCC AA/DY**

*3 hours cooperative education/work experience per week per credit*

*Prerequisite(s): Consent of instructor.*

*Recommended Preparation: Credit or concurrent enrollment in PHYS 170 **and** credit or concurrent enrollment in PHYS 170L.*

*Comment: Letter grade only. SCI 295PS may not be audited. SCI 295PS may not be taken credit/no credit. SCI 295PS may be repeated up to a maximum of 6 credits.*

SCI 295PS offers a research experience in science, technology, engineering and/or mathematics, emphasizing the application of the scientific method to a specific project in physics.

Upon successful completion of SCI 295PS, the student should be able to:

1. Formulate a hypothesis.
2. Design methods to test a hypothesis.
3. Collect and analyze data as appropriate.
4. Document and formally present results of hypothesis testing to an audience.
5. Enhance understanding of scientific concepts.
6. Collaborate as a member of a research team.
7. Work responsibly in a lab setting.

**SCI 295VI STEM Research Experience - Vertically Integrated (1-3)**

*3 hours cooperative education/work experience per week per credit*

*Prerequisite(s): Instructor Consent.*

*Comment: Letter grade only. SCI 295VI may not be audited. SCI 295VI may not be taken credit/no credit. SCI 295VI may be repeated up to a maximum of 6 credits.*

SCI 295VI offers a research experience in science, technology, engineering and/or mathematics, emphasizing the application of the scientific method and/or the engineering design process to a vertically integrated project.

Upon successful completion of SCI 295VI, the student should be able to:

1. Define a problem and conduct literature research on methods and topics.
2. Solicit ideas and select a plausible solution to a given problem.
3. Design a prototype system (preliminary design review).
4. Testing phase (critical design review).
5. Final implementation of a working prototype.
6. Document and formally present the results of hypothesis testing to an audience.

**SECOND LANGUAGE TEACHING**

**SLT 102 Language Learning (3) KCC AA/DS**

*3 hours lecture per week*

*Prerequisite(s): A grade of "C" or higher or concurrent enrollment in ENG 100 or a grade of "C" or higher or concurrent enrollment in ESL 100.*

*Comment: Students must do Service Learning in the Education pathway as a requirement of this course.*

SLT 102 introduces the post-method viewpoint of learning in the classroom. The course will begin with identifying the students' intuitions and insights about language learning. Students will then examine different language learning goals and needs as well as explore some basic needs in order for language to be acquired and factors that can accelerate or hinder language learning. In the second portion of the course, students will be introduced to ethnographic case studies of language learners and learn how to do their own ethnographic study on an individual or on one group of student language learners.

Upon successful completion of SLT 102, the student should be able to:

1. Describe the language development cycle, including each stage.
2. Describe the various language learning frameworks commonly found in educational settings.
3. Describe the various motivational and socio-cultural characteristics of language learners.

4. Create scenarios of various language learning situations.
5. Complete an ethnographic study of a language learner including: Observation, Interview, Artifact collection, Secondary research, Data analysis, and Data reporting.

### **SLT 103 Language Teaching (3) KCC AA/DS**

*3 hours lecture per week*

*Prerequisite(s): A grade of "C" or higher or concurrent enrollment in ENG 100 or a grade of "C" or higher or concurrent enrollment in ESL 100.*

*Comment: Students must do Service Learning in the Education pathway as a requirement of this course.*

SLT 103 introduces the post-method viewpoint of teaching in the classroom. The course will begin by identifying the students' intuitions and insights about language teaching. The students will examine ways that instruction can facilitate and accelerate language learning. The students will explore how heritage language, motivation, learning styles, variation in input, etc. can influence their teaching. As the students address the issues of language teaching, they will develop their own definitions of second language pedagogy. In the second portion of the course, students will be introduced to ethnographic case studies of language teachers and learn how to do their own ethnographic study on one teacher's classroom practices.

Upon successful completion of SLT 103, the student should be able to:

1. Describe language teaching in the context of the language development cycle, including each stage.
2. Describe the various language teaching frameworks commonly found in educational settings.
3. Describe how the various motivational and socio-cultural characteristics of language learners can influence their teaching.
4. Describe their own definitions of second language pedagogy.
5. Complete an ethnographic study of a language teacher including Observation, Interview, Artifact collection, Secondary research, Data analysis, and Data reporting.

### **SLT 202 (Alpha) Concepts and Issues in Second Language Teaching (SLT) (3) KCC AA/DH**

*3 hours lecture per week*

*Prerequisite(s): A grade of "C" or higher or concurrent enrollment in ENG 100 or a grade of "C" or higher or concurrent enrollment in ESL 100; and a grade of "C" or higher or concurrent enrollment in SLT 102 or consent of instructor.*

*Comment: Students must do Service Learning in the Education pathway as a requirement of this course.*

SLT 202 (Alpha) continues the exploration of classroom-based language development. SLT 202 (Alpha) students begin each course by exploring various language development issues from different perspectives. With a focus on pedagogy, SLT 202 (Alpha) students also explore language development in different classroom settings with different types of learners. In each section of SLT 202 (Alpha), students compile a portfolio of strategies for helping facilitate language development.

Upon successful completion of SLT 202, the student should be able to:

1. Describe language development from various perspectives.
2. Discuss concepts and issues associated with language development in various class settings.
3. Create and implement lesson plans, activities, and materials that are appropriate for developing language in various classroom settings.
4. Compile a teaching strategies portfolio for developing languages in various classroom settings.

### **SLT 202B Concepts and Issues in Second Language Teaching – Language Skills (3) KCC AA/DH**

*3 hours lecture per week*

*Prerequisite(s): A grade of “C” or higher or concurrent enrollment in ENG 100 or a grade of “C” or higher or concurrent enrollment in ESL 100; and a grade of “C” or higher or concurrent enrollment in SLT 102 or consent of instructor.*

*Comment: Students must do Service Learning in the Education pathway as a requirement of this course.*

SLT 202B continues the exploration of classroom-based language development. SLT 202B students begin the course by exploring language skills from various perspectives, including those of the learner, the teacher, and the researcher. Next, students investigate the different ways that teachers and researchers view instruction of language skills in various classroom settings. As SLT 202B students explore the relationship between pedagogy and language skills development, they compile a portfolio of strategies for helping learners develop language skills.

Upon successful completion of SLT 202B, the student should be able to:

1. Describe language skills from various perspectives, including those of the learner, the pre-service teacher, the in-service teacher, and the researcher.
2. Discuss concepts and issues associated with the instruction of language skills in various classroom settings, including EFL and ESL settings, and K-12 and post-secondary educational settings.
3. Create and implement lesson plans, activities, and materials that are appropriate for developing language skills in various classroom settings.
4. Compile a teaching strategies portfolio that contains lesson plans, activities, and materials for developing language skills in various classroom settings.

### **SLT 202C Concepts and Issues in Second Language Teaching (SLT) – English Language Development (3)**

*3 hours lecture per week*

*Prerequisite(s): A grade of “C” or higher in ENG 100 or a grade of “C” or higher in ESL 100; and a grade of “C” or higher in SLT 102 or consent of instructor; and a grade of “C” or higher in SLT 103 or consent of instructor.*

SLT 202C continues the exploration of classroom-based language development. SLT 202C students begin the course by exploring grammar and vocabulary language skills from various perspectives and investigating the different ways that research and experts view instruction of grammar and vocabulary language skills in K-12 classroom settings. SLT 202C students also explore the relationship between pedagogy and grammar and vocabulary language skills development and compile a portfolio of strategies for helping learners develop grammar and vocabulary language skills.

Upon successful completion of SLT 202C, the student should be able to:

1. Describe grammar and vocabulary language skills from various perspectives.
2. Discuss concepts and issues associated with the instruction of grammar and vocabulary language skills in K-12 classroom settings.
3. Create and implement lesson plans, activities, and materials that are appropriate for developing grammar and vocabulary language skills in K-12 classroom settings.
4. Compile a teaching strategies portfolio that contains lesson plans, activities, and materials for developing grammar and vocabulary language skills in K-12 classroom settings.

### **SLT 203 (Alpha) Integrating Content and Second Language Teaching (3)**

*3 hours lecture per week*

*Prerequisite(s): A grade of “C” or higher or concurrent enrollment in ENG 100 or a grade of “C” or higher or concurrent enrollment in ESL 100; and a grade of “C” or higher or concurrent enrollment in SLT 103 or consent of instructor.*

*Comment: Students must do Service Learning in the Education pathway as a requirement of this course.*

SLT 203 (Alpha) introduces students to strategies for using content to facilitate second language development. SLT 203 (Alpha) students begin by exploring strategies necessary for developing language in various content classrooms. Then the students examine activities and materials appropriate for developing language skills in specific content areas. The students also conduct case studies of various content classroom and develop activities, materials and lesson plans appropriate for facilitating language development in those settings.

Upon successful completion of SLT 203, the student should be able to:

1. Describe the strategies necessary for developing language through content.

2. Describe critical issues for creating lesson plans to facilitate language development.
3. Conduct case-study research on language learners in language classrooms including: 1. Observation, 2. Analysis, 3. Reporting.
4. Create and implement content-based activities, materials, and lesson plans that are appropriate for particular language learners and contexts.
5. Compile a teaching portfolio that contains activities, materials, and lesson plans for facilitating language development using content.

### **SLT 203B Content-based Instruction (3)**

*3 hours lecture per week*

*Prerequisite(s): A grade of "C" or higher or concurrent enrollment in ENG 100 or a grade of "C" or higher or concurrent enrollment in ESL 100; and a grade of "C" or higher or concurrent enrollment in SLT 103 or consent of instructor.*

*Comment: Students must do Service Learning in the Education pathway as a requirement of this course.*

SLT 203B introduces students to strategies for using content to facilitate second language development. SLT 203B students begin by exploring different strategies necessary for developing language using the content of general education classrooms. Then the students examine activities and materials appropriate for developing language skills in specific general education content areas, such as language arts, mathematics, science and social studies. The students also conduct a case study of a general education classroom and develop activities, materials and lesson plans appropriate for facilitating language development in that setting.

Upon successful completion of SLT 203B, the student should be able to:

1. Describe the strategies necessary for developing language using general education content.
2. Describe critical issues for creating lesson plans and materials to facilitate language development using general education content.
3. Conduct case-study research on language learners in various general education including: 1. Observation, 2. Analysis, 3. Reporting.
4. Create and implement content-based activities, materials and lesson plans that are appropriate for particular language learners in various general education classrooms.
5. Compile a teaching portfolio that contains activities, materials and lesson plans for facilitating language development using general education content.

### **SLT 203C Integrating Content and SLT – Universal Design for Diverse Multilingual Learners (3)**

*3 hours lecture per week*



*Prerequisite(s): A grade of “C” or higher in ENG 100 or a grade of “C” or higher in ESL 100; and a grade of “C” or higher in SLT 102 or consent of instructor; and a grade of “C” or higher in SLT 103 or consent of instructor.*

SLT 203C introduces students to the Universal Design for Learning (UDL) framework to facilitate second language development for diverse learners, including multilingual learners with and without disabilities. SLT 203C students begin by exploring strategies necessary for developing language in K-12 content classroom settings. Then the students examine how to use the UDL framework to design activities and materials appropriate for developing language skills in specific content areas. The students also conduct case studies of various content classrooms and diverse language learners, including multilingual learners with disabilities and develop activities, materials, and lesson plans appropriate for facilitating language development in those settings.

Upon successful completion of SLT 203C, the student should be able to:

1. Describe the strategies necessary for developing language through content, using the Universal Design for Learning framework.
2. Describe critical issues for creating lesson plans to facilitate language development for diverse learners using content.
3. Conduct case-study research on diverse language learners in language classrooms including: 1. Observation, 2. Analysis, 3. Reporting.
4. Create and implement content-based activities, materials, and lesson plans that are appropriate for particular diverse language learners and contexts.
5. Compile a teaching portfolio that contains activities, materials, and lesson plans for facilitating language development using content.

### **SLT 203D Integrating Content and SLT – Reading Development (3)**

*3 hours lecture per week*

*Prerequisite(s): A grade of “C” or higher in ENG 100 or a grade of “C” or higher in ESL 100; and a grade of “C” or higher in SLT 102 or consent of instructor; and a grade of “C” or higher in SLT 103 or consent of instructor.*

SLT 203D introduces students to theories and strategies for helping multilingual learners develop reading skills. SLT 203D students begin by exploring strategies necessary for developing language and reading in K-12 content classroom settings. Then the students examine how to design activities and materials appropriate for developing language skills and reading ability in specific content areas. The students also conduct case studies of various content classrooms and develop activities, materials, and lesson plans appropriate for developing language and reading in those settings.

Upon successful completion of SLT 203D, the student should be able to:

1. Describe the strategies necessary for developing language and reading through content.
2. Describe critical issues for creating lesson plans to facilitate language and reading development using content.

3. Conduct case-study research on language-learner reading in language classrooms including: 1. Observation, 2. Analysis, 3. Reporting.
4. Create and implement content-based activities, materials, and lesson plans that are appropriate for particular language learners and contexts.
5. Compile a teaching portfolio that contains activities, materials, and lesson plans for facilitating language and reading development using content.

### **SLT 203E Integrating Content and SLT – Writing Development (3)**

*3 hours lecture per week*

*Prerequisite(s): A grade of “C” or higher in ENG 100 or a grade of “C” or higher in ESL 100; and a grade of “C” or higher in SLT 102 or consent of instructor; and a grade of “C” or higher in SLT 103 or consent of instructor.*

SLT 203E introduces students to theories and strategies for helping multilingual learners develop writing skills. SLT 203E students begin by exploring strategies necessary for developing language and writing in K-12 content classroom settings. Then, the students examine how to design activities and materials appropriate for developing language skills and writing ability in specific content areas. The students also conduct case studies of various content classrooms and develop activities, materials, and lesson plans appropriate for developing language and writing in those settings.

Upon successful completion of SLT 203E, the student should be able to:

1. Describe the strategies necessary for developing language and writing through content.
2. Describe critical issues for creating lesson plans to facilitate language and writing development using content.
3. Conduct case-study research on language-learner writing in language classrooms including: 1. Observation, 2. Analysis, 3. Reporting.
4. Create and implement content-based activities, materials, and lesson plans that are appropriate for particular language learners and contexts.
5. Compile a teaching portfolio that contains activities, materials, and lesson plans for facilitating language and writing development using content.

### **SLT 290 Second Language Assessment (3)**

*3 hours lecture per week*

*Prerequisite(s): A grade of “C” or higher or concurrent enrollment in ENG 100 or a grade of “C” or higher or concurrent enrollment in ESL 100; and a grade of “C” or higher or concurrent enrollment in SLT 202 or consent of instructor; and a grade of “C” or higher or concurrent enrollment in SLT 203 or consent of instructor.*

*Comment: Students must do Service Learning in the Education pathway as a requirement of this course.*

SLT 290 introduces students to strategies for using assessment to facilitate second language development. SLT 290 students begin by examining issues associated with

assessing content-area language needs of students. Then the students examine issues associated with assessing materials appropriate for facilitating language development of students in content-area classrooms. The students also do a study of language needs and activities in a content-area classroom.

Upon successful completion of SLT 290, the student should be able to:

1. Describe language standards at the national, state and local levels.
2. Describe the various types of language assessment conducted in the content-area classroom.
3. Conduct assessments of materials that are appropriate for facilitating language development in content-area classrooms.
4. Conduct various types of survey research on language in content-area classrooms including: 1. Standards, 2. Needs, 3. Skills, 4. Peer and Self-Assessment, 5. Development.
5. Compile a portfolio that contains materials assessments and survey research on language.

### **SLT 302 English Language Development (3)**

*3 hours lecture per week*

*Prerequisite(s): Licensed Hawai'i Department of Education teacher and admitted to the APC-SLT.*

*Comment: Letter grade only. SLT 302 may not be taken credit/no credit. SLT 302 may not be audited. SLT 302 is reserved for licensed Hawai'i Department of Education teachers admitted to the APC-SLT.*

SLT 302 explores classroom-based English language development. SLT 302 students begin the course by exploring grammar and vocabulary language skills from various perspectives and investigating the different ways that research and experts view instruction of grammar and vocabulary language skills in K-12 classroom settings. SLT 302 students also explore the relationship between pedagogy and grammar and vocabulary language skills development and compile a portfolio of strategies for helping learners develop grammar and vocabulary language skills.

Upon successful completion of SLT 302, the student should be able to:

1. Examine research on grammar and vocabulary development.
2. Examine concepts and issues associated with the instruction of grammar and vocabulary skills.
3. Create lesson plans that are appropriate for developing grammar and vocabulary skills.
4. Evaluate implementation of lesson plans that are appropriate for developing grammar and vocabulary skills.

### **SLT 303 Universal Design for Learning for Diverse Multilingual Learners (3)**

*3 hours lecture per week*

*Prerequisite(s): Licensed Hawai'i Department of Education teacher and admitted to the APC-SLT.*

*Comment: Letter grade only. SLT 303 may not be taken for credit/no credit. SLT 303 may not be audited. SLT 303 is reserved for licensed Hawai'i Department of Education teachers admitted to the APC-SLT.*

SLT 303 introduces students to the Universal Design for Learning (UDL) framework to facilitate second language development for diverse learners, including multilingual learners with and without dis/abilities. SLT 303 students begin by exploring the intersection between language and dis/ability. This continues with a deep examination on how to use the UDL framework to design lesson plans, activities, and materials with integrated digital tools to support inclusive and culturally sustaining content-based language development. The students also conduct case studies of their various classrooms and diverse multilingual learners with and without dis/abilities to explore how to best reduce barriers and increase engagement in instruction.

Upon successful completion of SLT 303, the student should be able to:

1. Apply an asset-focus to describe characteristics of and support for diverse multilingual learners with and without dis/abilities.
2. Demonstrate understanding of the Universal Design for Learning framework and its application to teaching diverse multilingual learners.
3. Create inclusive and culturally sustaining content-based lesson plans using the UDL Design Cycle to support multilingual learners with and without dis/abilities.
4. Evaluate implementation of UDL lesson plans.

### **SLT 312 Second Language Reading Development (3)**

*3 hours lecture per week*

*Prerequisite(s): Licensed Hawai'i Department of Education teacher and admitted to the APC-SLT.*

*Comment: Letter grade only. SLT 312 may not be taken for credit/no credit. SLT 312 may not be audited. SLT 312 is reserved for licensed Hawai'i Department of Education teachers admitted to the APC-SLT.*

SLT 312 introduces students to theories and strategies for teaching writing to multilingual learners. SLT 312 students begin by exploring strategies necessary for developing language and reading in K-12 content classroom settings. Then the students examine how to design activities and materials appropriate for developing language skills and reading ability in specific content areas. The students also conduct case studies of various content classrooms and develop activities, materials, and lesson plans appropriate for developing language and reading in those settings.

Upon successful completion of SLT 312, the student should be able to:

1. Determine strategies necessary for content-based language and reading development for multilingual learners.
2. Examine critical issues and pedagogy for reading instruction for multilingual learners.
3. Create inclusive and culturally sustaining content-based lesson plans that support diverse multilingual learners to develop reading across contexts.
4. Evaluate implementation of reading lesson plans.

### **SLT 313 Second Language Writing Development (3)**

*3 hours lecture per week*

*Prerequisite(s): Licensed Hawai'i Department of Education teacher and admitted to the APC-SLT.*

*Comment: Letter grade only. SLT 313 may not be taken for credit/no credit. SLT 313 may not be audited. SLT 313 is reserved for licensed Hawai'i Department of Education teachers admitted to the APC-SLT.*

SLT 313 introduces students to theories and strategies for teaching writing to multilingual learners. SLT 313 students begin by exploring strategies necessary for developing language and writing in K-12 content classroom settings. Then, the students examine how to design activities and materials appropriate for developing language skills and writing ability in specific content areas. The students also conduct case studies of various content classrooms and develop activities, materials, and lesson plans appropriate for developing language and writing in those settings.

Upon successful completion of SLT 313, the student should be able to:

1. Determine strategies necessary for content-based language and reading development for multilingual learners.
2. Examine critical issues and pedagogy, including culturally sustaining and 'āina-based approaches, for writing instruction for multilingual learners.
3. Create inclusive and culturally sustaining content-based lesson plans that support diverse multilingual learners to develop writing across contexts.
4. Evaluate implementation of writing lesson plans.

### **SLT 390 Second Language Evaluation (3)**

*3 hours lecture per week*

*Prerequisite(s): Licensed Hawai'i Department of Education teacher and admitted to the APC-SLT.*

*Comment: Letter grade only. SLT 390 may not be taken for credit/no credit. SLT 390 may not be audited. SLT 390 is reserved for licensed Hawai'i Department of Education teachers admitted to the APC-SLT.*

SLT 390 introduces students to methods and strategies for evaluating second language development. SLT 390 students begin by examining issues associated with evaluating second language teaching and learning. Then the students examine issues associated with applying various supports that are appropriate for facilitating language development in English-learner programs. The students also complete a study of language development, focusing on evaluation.

Upon successful completion of SLT 390, the student should be able to:

1. Analyze required standards for language development in English-learner programs.
2. Examine critical issues associated with evaluating second language teaching and learning in English-learner programs
3. Examine critical issues associated with applying various supports that are appropriate for facilitating language development in English-learner programs.
4. Apply culturally-relevant methods and strategies for evaluating second language development.
5. Conduct a critical study of language development, focusing on evaluation.

## **SOCIAL SCIENCE**

### **SSCI 102 Society and Food (3) KCC AA/FGB and KCC AS/SS**

*3 hours lecture per week*

*Prerequisite(s): Qualification for ENG 100 or qualification for ESL 100.*

SSCI 102 is a cross-cultural and multidisciplinary social science introduction exploring socio-cultural, political, economic, and psychological dimensions of food in relation to cultural traditions and patterns in its production and consumption. The course has a strong integrated global and historical approach exploring central social science themes such as ethnicity, social status, religion, gender, as well as social and environmental sustainability.

Upon successful completion of SSCI 102, the student should be able to:

1. Demonstrate knowledge of cultural meanings of food representing the perspectives of different societies and how food habits are influenced by socio-cultural traditions such as religion beliefs, social status, perceptions of health, and gender relations.
2. Identify food production and consumption patterns as the core element of the evolution of different socio-cultural structures through time in different regions, including Africa, the Americas, Asia, Europe, and Oceania.
3. Demonstrate knowledge of indigenous food traditions and methods of

- sustainability and how globalization, colonization, trade, and migrations have shaped these indigenous food practices (with particular emphasis on the Pacific/Oceania).
4. Explain how globalization, colonization, trade, and migrations have shaped indigenous food traditions as well as methods and practices of sustainability with particular emphasis on Pacific/Oceania.
  5. Describe historical and contemporary challenges to social and environmental sustainability in relation to food systems and identify some alternative strategies to the conventional food system.

### **SSCI 200 Social Science Research Methods (3) KCC AA/DS**

*3 hours lecture per week*

*Prerequisite(s): Qualification for ENG 100 or ESL100; **and** qualification for MATH 100.*

*Comment: Letter grade only. SSCI 200 may not be audited. SSCI 200 may not be taken credit/no credit.*

SSCI 200 introduces research design methods, selection of data collection approaches, use of specialized statistical software to analyze the data, data interpretation, and dissemination of findings.

Upon successful completion of SSCI 200, the student should be able to:

1. Apply critical thinking skills to solve research problems.
2. Demonstrate the basic skills required to perform social science research in an applied field.
3. Demonstrate the techniques to perform elementary statistical analysis of data with computer assistance.

## **SOCIAL SCIENCES**

### **SOCS 225 Statistical Analysis for Social Sciences (3)**

*Comment: SOCS 225 has been replaced by PSY 225. Beginning in the Fall semester of 2024 the SOCS 225 course will no longer be offered at Kapi'olani Community College. SOCS 225 will be replaced by PSY 225, Statistical Techniques.*

## **SOCIAL WORK**

### **SW 200 The Field of Social Work (3) KCC AA/DS and AS/SS**

*3 hours lecture per week*

*Prerequisite(s): Qualification for ENG 100 or qualification for ESL 100.*

SW 200 provides an orientation to the profession of social work; historical development, values and philosophy, scope and aims.

Upon successful completion of SW 200, the student should be able to:

1. Identify and discuss the historical development of social work as a profession.
2. Identify and discuss social work values and their implications to social work practice in the context of a multicultural society.
3. Identify oppression and social injustices inflicted upon the individuals, families, and communities that social workers serve and be able to discuss issues related to diversity and oppression in society, particularly as they apply to special populations distinguished by such things as race, ethnicity, culture, class, gender, sexual orientation, religion, physical or mental ability, age, and national origin.
4. Identify and discuss the theoretical foundations upon which the profession rests, including the manner in which the individual affects and is affected by their social environment (i.e., families, groups, organizations, and communities).
5. Identify and discuss social work skills and generalist social work practice.
6. Identify and describe at least two fields of practice and the social work services developed to rectify/reduce problems in those areas.

## **SOCIOLOGY**

### **SOC 100 Survey of General Sociology (3) KCC AA/DS and KCC AS/SS**

*3 hours lecture per week*

*Prerequisite(s): Qualification for ENG 100 or qualification for ESL 100.*

SOC 100 is an introduction to basic sociological concepts, main theoretical perspectives, and research methods used by sociologists to explain the social world and social interaction. Examines fundamental social institutions, social processes, and social relationships as essential components of the social structure.



Upon successful completion of SOC 100, the student should be able to:

1. Identify core sociological theories, concepts, and key features of social institutions and their role within the social structure.
2. Define and apply main sociological theoretical perspectives to the study of the social world.
3. Identify and describe fundamental sociological research concepts and methods in the study of social issues.
4. Explain relationship between self and society by identifying one's own values and behavior in relation to larger social influences.
5. Demonstrate a global perspective of social processes and events.

### **SOC 214 Introduction to Race and Ethnic Relations (3) KCC AA/DS and KCC AS/SS**

*3 hours lecture per week*

*Prerequisite(s): Qualification for ENG 100 and qualification for MATH 82.*

*Recommended Preparation: SOC 100.*

SOC 214 focuses on race and ethnic relations in world perspective; social, economic and political problems associated with perception, existence, and accommodation of varying racial and ethnic groups within the wider society.

Upon successful completion of SOC 214, the student should be able to:

1. Identify the major ways in which "race" has been defined throughout human history.
2. Identify "races" and "ethnic groups".
3. Compare and contrast varying racial and ethnic groups that make up the population of the American society and discuss the diversity in backgrounds.
4. Describe the basic social processes that affect societies and individual behavior.
5. Give examples of the relationship of individuals and the social and cultural environment.
6. Evaluate predictions concerning the size and composition of the minority populations being studied for the future.
7. Describe how prejudice and discrimination may be related, or unrelated, to each other.
8. Identify the components of assimilation, including the less tangible aspects such as values, sentiments, and attitudes.
9. State ideas and opinions clearly in writing.
10. Define and give examples of each of the major patterns of intergroup relations, assimilation, pluralism, subjugation, segregation, expulsion, and annihilation.
11. Describe the theoretical perspectives that relate to the study of race and ethnic relations.
12. Apply a global perspective when examining race and ethnic relations.

**SOC 218 Introduction to Social Problems (3) KCC AA/DS and KCC AS/SS**

*3 hours lecture per week*

*Prerequisite(s): Qualification for ENG 100 or qualification for ESL 100.*

*Recommended Preparation: SOC 100.*

SOC 218 offers a theoretical and substantive introduction to the nature and causes of selected social problems.

Upon successful completion of SOC 218, the student should be able to:

1. Demonstrate knowledge of sociological concepts and approaches as they relate to the nature of social problems.
2. Apply sociological theoretical perspectives in the analysis of causes and consequences of social problems.
3. Demonstrate a global awareness of social problems.

**SOC 231 Introduction to Juvenile Delinquency (3) KCC AA/DS**

*3 hours lecture per week*

*Prerequisite(s): Qualification for ENG 100 or qualification for ESL 100; and qualification for MATH 82.*

*Recommended Preparation: SOC 100.*

SOC 231 covers the sociological analysis of the social realities of juvenile delinquency in contemporary societies, its nature, prevalence, etiology, treatment and future.

Upon successful completion of SOC 218, the student should be able to:

1. Define juvenile delinquency, in particular, socio-legal and statistical characterizations of that form of youthful deviance.
2. Give examples of official and unofficial reactions to youthful offenders, especially in light of victim and offender characteristics, Juvenile Justice System policies and operations, and community sensitivity to and reporting of the problem (victimization surveys) of delinquency.
3. Explain the Juvenile Justice System: its background, functions, interrelations, structure, and its evaluation in the prevention of juvenile delinquency.
4. Give examples of the family as a malfunctioning institution and as a preventive institution.
5. Give examples of the school as a dysfunctional institution and as another preventive institution.
6. Identify the age/career stages in the development of a juvenile delinquent.
7. Give examples of the nature of delinquent gangs; their structure, functions, dynamics, and etiology..
8. Explain the class and sex variations of juvenile delinquents, especially in light of racism and sexism in the Juvenile Justice System.
9. Evaluate the varied sociological research methodologies and panel presentations.

**SOC 251 Introduction to Sociology of the Family (3) KCC AA/DS and KCC AS/SS**

*3 hours lecture per week*

*Prerequisite(s): Qualification for ENG 100 or qualification for ESL 100 or higher level English courses.*

*Recommended Preparation: Qualification for SOC 100.*

SOC 251 explores sociological concepts and theories as they relate to the key social institution of family. This course examines the diversity and change in family patterns and trends.

Upon successful completion of SOC 251, the student should be able to:

1. Identify sociological theories and concepts in the study of family.
2. Identify diverse patterns of family and the major changes affecting the institution.
3. Demonstrate awareness of family dysfunction and its impact from a sociological perspective.
4. Describe and analyze sociological theories as they apply to the nature and causes of issues and trends within the family structure.

**SOC 257 Sociology of Aging (3) KCC AA/DS and KCC AS/SS**

*3 hours lecture per week*

*Prerequisite(s): Qualification for ENG 100 or qualification for ESL 100.*

*Recommended Preparation: SOC 100.*

SOC 257 examines aging as social phenomenon, including issues surrounding aging in contemporary society such as ageism, demographic patterns, family relationships, politics and economics of aging, health care and long-term caregiving. The course provides an overview of key theoretical perspectives and the aging experience in global context.

Upon successful completion of SOC 257, the student should be able to:

1. Identify major issues and concepts pertaining to sociocultural dimensions of aging such as ageism, demographic, political, economic, gender, ethnic, family, health care, and long-term care aspects of the aging experience.
2. Distinguish and apply key social gerontology theories to the explanation of aging as a social phenomenon.
3. Explain and apply social science research findings (qualitative and/or quantitative) used in the study of issues concerning the elderly and the aging society.
4. Demonstrate global and diverse perspectives regarding the societal influences on the aging experience.

## **SPANISH**

### **101 Elementary Spanish I (4) KCC AA/HSL**

*4 hours lecture per week*

SPAN 101 is an introduction to the sounds and basic structures of the Spanish language emphasizing the acquisition of speaking, writing, reading, and listening comprehension skills for communicative proficiency, and an appreciation of the essential elements of Hispanic culture in the context of Spanish-speaking countries.

Upon successful completion of SPAN 101, the student should be able to:

1. Produce the sounds of Spanish and read words with acceptable pronunciation.
2. Reproduce simple patterns of speech based on classroom models with acceptable pronunciation.
3. Respond orally to familiar simple conversational models to demonstrate communicative competency at a basic level.
4. Read aloud familiar materials with pronunciation comprehensible to a native-speaker.
5. Write phrases in Spanish that demonstrate appropriate use of present tense grammatical forms in familiar contexts.
6. Demonstrate knowledge of essential geography and basic concepts of Hispanic culture, and contrastive cultural practices in the context of six countries where Spanish is spoken.

### **SPAN 102 Elementary Spanish II (4) KCC AA/HSL**

*4 hours lecture per week*

*Prerequisite(s): A grade of "C" or higher in SPAN 101 or satisfactory score on language placement test or consent of instructor.*

SPAN 102 is a continuation of SPAN 101 with further development of basic Spanish sentence structures, vocabulary, reading, oral and written communication skills and an enhanced appreciation of Hispanic culture.

Upon successful completion of SPAN 102, the student should be able to:

1. Reproduce patterns of speech based on classroom models with acceptable pronunciation.
2. Respond orally in natural conversation to demonstrate communicative competency.
3. Read aloud familiar materials with pronunciation comprehensible to a native-speaker.
4. Write simple sentences in Spanish that demonstrate appropriate use of grammatical forms in familiar contexts.

### **SPAN 201 Intermediate Spanish I (3) KCC AA/HSL**

*3 hours lecture per week*

*Prerequisite(s): A grade of "C" or higher in SPAN 102 **or** satisfactory score on language placement test **or** consent of instructor.*

SPAN 201 reviews and expands upon the basic language skills acquired in Beginning Spanish through reading, writing, grammar review, introduction of more detailed and advanced functional grammar concepts, vocabulary development, listening comprehension, conversation and oral presentations. Communicative practice with peers, native-speakers, and the instructor will enhance fluency and develop confidence in written and oral expression. Thematic discussion topics, and regional area studies of Spanish-speaking countries will develop critical thinking skills, expressed in Spanish, and enhance knowledge, appreciation and awareness of the countries and cultures where Spanish is spoken.

Upon successful completion of SPAN 201, the student should be able to:

1. Demonstrate through class discussion, conversation, and writing, the ability to read and understand short, nontechnical articles related to daily life, society, and Hispanic and American cultures.
2. Demonstrate through class discussion, conversation, and writing, the integration of the elements of Spanish vocabulary, pronunciation, and grammatical structures to communicate orally on topics related to Hispanic countries and cultures.
3. Demonstrate through class discussion, presentations, conversation, and writing an understanding of some essential aspects of the culture, geography, and important figures of at least five Hispanic countries or geographical regions.
4. Demonstrate through class discussion, conversation, and writing, the integration of the elements of Spanish vocabulary, pronunciation, and grammatical structure the ability to communicate to a native-speaker and be understood on topics related to daily life, society, and Hispanic cultures.

### **SPAN 202 Intermediate Spanish II (3) KCC AA/HSL**

*3 hours lecture per week*

*Prerequisite(s): A grade of "C" or higher in SPAN 201 **or** a satisfactory score on the language placement test **or** consent of the instructor.*

*Comment: Students with prior experience in the Spanish language may be able to earn back credits. They should take the placement test at the Lama Testing Center before registering or contact the instructor.*

SPAN 202 reviews and expands upon the early intermediate language skills acquired in Intermediate Spanish I through increasingly advanced reading, writing, grammar review,

introduction of more detailed functional grammar concepts, vocabulary development, listening comprehension, conversation, and oral and written presentations. Communicative practice with peers, native-speakers, and the instructor will enhance fluency and develop confidence in written and oral expression. Thematic discussion topics, and regional area studies of Spanish-speaking countries will develop critical thinking skills, expressed in Spanish, and enhance knowledge, appreciation and awareness of the countries and cultures where Spanish is spoken.

Upon successful completion of SPAN 202, the student should be able to:

1. Read and comprehend short, nontechnical articles on daily life in Hispanic and American cultures.
2. Write a short essay in Spanish with accuracy and in some detail about topics related to Hispanic and American cultures.
3. Communicate orally with pronunciation comprehensible to a native speaker about Hispanic and American cultures.
4. Demonstrate through class discussion, conversation, and writing the integration of Spanish vocabulary and grammar.
5. Demonstrate through class discussion, conversation, and writing the essential topics related to Spain and Latin American countries history, culture, and society.

### **SPAN 250 Latin American Literature and Culture (3) KCC AA/DL**

*3 hours lecture per week*

*Prerequisite(s): A grade of "C" or higher in SPAN 202 or a grade of "C" or higher in an equivalent course or consent of instructor.*

SPAN 250 is a study of selected excerpts from works of Latin American literature from the pre-Columbian era to the present, focusing on how the literature represents the history, culture and society of Spanish-speaking Latin American countries and peoples. Taught in Spanish at the high intermediate level, this course is especially recommended for students considering a Spanish certificate or major at UH Mānoa, heritage speakers, and qualified students who seek back credits in Spanish.

Upon successful completion of SPAN 250, the student should be able to:

1. Consider a work of literature as a reflection of its cultural milieu and compare that milieu with his/her own.
2. Analyze and evaluate the theme and style of representative literary excerpts and how they represent an expression of the cultural, historical, social, and geographical contexts of a particular Latin American region or people; especially with respect to Identity, Gender, Social Justice/Human Rights, Globalization, and Environment.
3. Describe in writing and discussion the uniqueness and diversity among cultural and national groups of Latin America.
4. Describe in writing and discussion the similarities of theme, style, and purpose that characterize Latin American literature.

5. Participate in discussions about Latin American literature and culture using appropriate vocabulary, grammar, reading, speaking, and writing skills.
6. Communicate thoughts, background knowledge, ideas, and opinions using Intermediate level Spanish, orally and in writing, with sufficient skill to be understood as a native speaker.
7. Explain in writing the need for literary evidence to support opinions and ideas regarding a literary work.
8. Recognize the universality in human experience, as well as the qualities that make a particular ethnic or cultural group distinct.
9. Explain the importance of selected major Latin American authors, from the Pre-Columbian era to the present, as literary figures and representatives of their culture and society.

## **SPEECH**

### **SP 151 Personal and Public Speech (3) KCC AA/OC and KCC AA/DA**

*3 hours lecture per week*

*Recommended preparation: Qualification for ENG 100 or qualification for ESL 100.*

SP 151 emphasizes the development of oral communication skills vital in career and personal life. Focus is on principles and skills of effective interpersonal communication, small group discussions, and public speeches.

Upon successful completion of SP 151, the student should be able to:

1. Apply principles of effective verbal and nonverbal communication in interpersonal, small group, and public speaking situations.
2. Identify strengths and weaknesses in your own and others' interpersonal, group, and public communication.
3. Define and demonstrate the basic principles of verbal and nonverbal communication in an interview, small group discussion/presentation, and public speeches.
4. Analyze an audience and adapt a message to listeners in various communication situations.
5. Organize and formally outline ideas with appropriate and adequate supporting materials in an interview, small group, and informative and persuasive speeches.
6. Develop critical listening skills and demonstrate appropriate audience behaviors in various communication situations.
7. Develop self-confidence and competence as a personal and public communicator.

**SP 181 Interpersonal Communication (3) KCC AA/DS and KCC AA/OC and KCC AS/SS**

*3 hours lecture per week*

*Recommended Preparation: Qualification for ENG 100 or qualification for ESL 100.*

SP 181 explores the theories and practical skills to be a competent communicator in person-to-person situations. Topics include perception, verbal and nonverbal communication, emotion, listening, and conflict management. Students work individually, in pairs, and in small groups to expand their knowledge and understanding of the role communication plays in the development and maintenance of interpersonal relationships in personal, social, and professional contexts.

Upon successful completion of SP 181, the student should be able to:

1. Describe how the communication process and perception shape our communication.
2. Explain the role self-concept plays in your communication.
3. Differentiate between verbal and nonverbal communication.
4. Describe the complex nature of the listening process.
5. Identify the stages of relational development.
6. Describe effective conflict management strategies.

**SP 233 Oral Traditions of Storytelling (3) KCC AA/DA and KCC AA/OC**

*3 hours lecture per week*

*Recommended Preparation: ENG 100 or ESL 100.*

SP 233 is an introduction to the oral traditions of storytelling with emphasis on the historical, cultural, and performance perspectives. Students present stories and learn how to analyze their forms.

Upon successful completion of SP 233, the student should be able to:

1. Select and share stories from cultures that follow oral traditions.
2. Analyze stories in terms of character, plot development, setting, cultural context and theme.
3. Complete an oral history study.
4. Complete a critical self-assessment.
5. Present stories with appropriate use of body and voice.
6. Incorporate memory techniques in presentations.
7. Evaluate the performance of others.

**SP 251 Principles of Effective Public Speaking (3) KCC AA/OC and KCC AA/DA and KCC AS/AH**



*3 hours lecture per week*

*Recommended Preparation: SP 151 or ENG 100 or ESL 100.*

SP 251 focuses on speech composition and delivery. Emphasis is on critical thinking, clear organization, research skill, appropriate verbal and visual support, and lively delivery. Students present speeches, complete self-analysis papers of their speeches, critique presentations, and evaluate reasoning on important topics.

Upon successful completion of SP 251, the student should be able to:

1. Analyze an audience and apply principles to topic selection.
2. Develop, present, and defend positions on important issues.
3. Organize and formally outline a variety of speeches.
4. Support ideas using a variety of evidence and research.
5. Present ideas with appropriate use of body and voice.
6. Provide oral and written feedback to other speakers.
7. Describe a speaker's ethical responsibilities.
8. Identify speech strengths and areas to improve through written self-analysis of presentations.