

Elective Interventional Radiology Rotation Information and Instructional Objectives

Instructor of Record for Elective Interventional Radiology Rotation:

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Elective Interventional Radiology Clinical Rotation Topics

Cardiovascular System

Heart failure

Vascular disease: Aortic aneurysm/dissection, Arterial embolism/thrombosis, Arteriovenous malformation, Deep vein thrombosis, Giant cell arteritis, Peripheral artery disease, Phlebitis/thrombophlebitis, Varicose veins, Venous insufficiency

Gastrointestinal System/Nutrition

Colorectal disorders: Abscess/fistula, Ischemic bowel disease,

Gastric disorders: Gastrointestinal bleeding

Hepatic disorders: Chronic hepatitis, Cirrhosis, Portal hypertension

Neoplasms: Malignant

Nutritional and vitamin disorders: Malabsorption

Musculoskeletal System

Lower extremity disorders: Soft-tissue injuries

Spinal disorders: Ankylosing spondylitis, Herniated nucleus pulposus, Spinal stenosis

Upper extremity disorders: Soft-tissue injuries

Pulmonary System

Infectious disorders:

Acute bronchiolitis

Acute bronchitis

Empyema

Influenza

Pertussis

Pneumonias: Bacterial, Fungal, HIV-related, Viral

Tuberculosis

Neoplasms: Benign, Malignant, Carcinoid tumors

Obstructive pulmonary diseases: Cystic fibrosis

Pleural diseases

Pulmonary circulation: Cor pulmonale, Pulmonary edema, Pulmonary embolism, Pulmonary hypertension

Elective Interventional Radiology Rotation Learning Outcomes

Upon completion of the elective Interventional Radiology clinical rotation,

1. Students will demonstrate medical knowledge of the pathophysiology, etiology, epidemiology, patient presentation, differential diagnosis, diagnostic work-up, patient management, health promotion, and disease prevention for common conditions (listed in Interventional Radiology Clinical Rotation Topics above) encountered in Interventional Radiology for patients seeking medical care for the following age populations: infants, children, adolescents, adults and/or elderly.
2. Students will elicit a detailed and accurate patient history, perform an appropriate physical examination, appropriately use and interpret diagnostic testing and laboratory studies, and formulate differential diagnoses and assessment plans for symptoms/conditions (listed in Interventional Radiology Clinical Rotation Topics above) commonly encountered in patients seeking emergent Interventional Radiology, acute Interventional Radiology, and/or chronic Interventional Radiology care.
3. Students will demonstrate technical skills common to Interventional Radiology.
4. Students will obtain and document information clearly and appropriately for the following types of patient encounters: (a) emergent problem-focused encounters, (d) acute problem-focused encounters, and/or (e) chronic disease follow-up encounters.
5. Students will listen empathetically and effectively, communicate clearly, and utilize shared decision-making for patients seeking care in Interventional Radiology.
6. Students will facilitate difficult health care conversations in Interventional Radiology.
7. Students will demonstrate compassion, integrity, respect, patient responsiveness, and accountability while providing care to patients in an Interventional Radiology setting.
8. Students will (a) seek, implement, and accept feedback, (b) reflect on performance and develop plans for self-improvement, and (c) locate, appraise, and integrate evidence-based studies related to Interventional Radiology.
9. Students will (a) promote a safe environment for patients seeking care in a Interventional Radiology setting, (b) demonstrate knowledge of quality improvement methodologies and metrics, (c) recognize the unique role of PAs and other health professions in Interventional Radiology, (d) work effectively with other health professionals to provide collaborative, patient centered interventional radiology care, (e) work effectively in an outpatient and/or inpatient health delivery settings, (f) incorporate considerations of cost awareness and funding into patients seeking care in an Interventional Radiology setting, and (g) describe basic health payment systems and practice models for Interventional Radiology.

Elective Interventional Radiology Instructional Objectives

Upon completion of the elective Interventional Radiology clinical rotation,

1. **Elective Interventional Radiology Rotation Learning Outcome #1:** Students will demonstrate medical knowledge of the pathophysiology, etiology, epidemiology, patient presentation, differential diagnosis, diagnostic work-up, patient management, health promotion, and disease prevention for common conditions (listed in Interventional Radiology Clinical Rotation Topics above) encountered in Interventional Radiology for patients seeking medical care for the following age populations: infants, children, adolescents, adults and/or elderly.

- **Interventional Radiology instructional objective:** Evaluate the common disease process found in Interventional Radiology using suggested readings and course study guide. (MK-PLO2)
 - **Interventional Radiology instructional objective:** Identify the etiology, pathophysiology, and clinical presentation of conditions listed in the clinical topics for this rotation. (MK-PLO3)
 - **Interventional Radiology Rotation instructional objective:** Select appropriate treatment plans for patients using all pertinent medical data, including history, physical examination, and diagnostic data, under the preceptor's supervision. (MK-PLO3)
 - **Interventional Radiology instructional objective:** Contrast possible risks and benefits of diagnostic studies and treatment plans. (MK-PLO3)
 - **Interventional Radiology instructional objective:** Contrast the risks and benefits of procedures that must be performed on your patient. (MK PLO-3)
 - **Interventional Radiology instructional objective:** Interpret and apply setting appropriate healthcare guidelines. (MK PLO-3)
2. **Elective Interventional Radiology Rotation Learning Outcome #2:** Students will elicit a detailed and accurate patient history, perform an appropriate physical examination, appropriately use and interpret diagnostic testing and laboratory studies, and formulate differential diagnoses and assessment plans for symptoms/conditions (listed in Interventional Radiology Clinical Rotation Topics above) commonly encountered in patients seeking emergent Interventional Radiology, acute Interventional Radiology, and chronic Interventional Radiology care.
- **Interventional Radiology instructional objective:** Demonstrate an age and setting appropriate history and physical exam for a patient 18-64 years of age. (PC-PLO2)
 - **Interventional Radiology instructional objective:** Demonstrate an appropriate history and physical exam on a patient greater than 65 years of age. (PC-PLO2)
 - **Interventional Radiology instructional objective:** Choose appropriate diagnostic tests to identify an abnormality. (PC-PLO3)
 - **Interventional Radiology instructional objective:** Interpret diagnostic studies related to the patient's medical condition. (PC-PLO3)
 - **Interventional Radiology instructional objective:** Formulate an appropriate differential diagnosis based on history, physical examination, and diagnostic study data. (PC-PLO4)
 - **Interventional Radiology instructional objective:** Construct an appropriate treatment plan based on history, physical exam, and diagnostic data. (PC-PLO4)
 - **Interventional Radiology instructional objective:** Actively participate in the management of acute and chronic patient conditions. (PC- PLO4)
3. **Elective Interventional Radiology Rotation Learning Outcome #3:** Students will demonstrate technical skills common to Interventional Radiology.
4. **Elective Interventional Radiology Rotation Learning Outcome #4:** Students will obtain and document information clearly and appropriately for the following types of

patient encounters: (a) emergent problem-focused encounters, (d) acute problem-focused encounters, and/or (e) chronic disease follow-up encounters.

5. **Elective Interventional Radiology Rotation Learning Outcome #5:** Students will listen empathetically and effectively, communicate clearly, and utilize shared decision-making for patients seeking care in Interventional Radiology.
 - **Interventional Radiology instructional objective:** Describe health promotion and disease prevention to your patients. (ICS-PLO3)
 - **Interventional Radiology instructional objective:** Adapt communication style and information context to the individual patient interaction. (ICS-PLO3)
 - **Interventional Radiology instructional objective:** Identify communication barriers with different patient populations. (ICS PLO-3)
 - **Interventional Radiology instructional objective:** Compose an oral case presentation and present it to the preceptor. (ICS-PLO3)
 - **Interventional Radiology instructional objective:** Explain possible risks and benefits of diagnostic studies and treatment plans to your patient as approved by the supervising provider. (ICS-PLO3)
 - **Interventional Radiology instructional objective:** Select written patient education handouts to address a health promotion issue using the most up-to-date, evidence-based medical data. (ICS PLO-3)

6. **Elective Interventional Radiology Rotation Learning Outcome #6:** Students will facilitate difficult health care conversations in Interventional Radiology.

7. **Elective Interventional Radiology Rotation Learning Outcome #7:** Students will demonstrate compassion, integrity, respect, patient responsiveness, and accountability while providing care to patients in an Interventional Radiology setting.
 - **Interventional Radiology instructional objective:** Practice professionally in a working situation with other healthcare team members, including appropriate dress, punctual attendance, and professional attitude. (P-PLO1)
 - **Interventional Radiology instructional objective:** Show sensitivity to the emotional, social, developmental, and ethnic background of patients and their families on their service. (P-PLO1)
 - **Interventional Radiology instructional objective:** Apply professional attitude in such areas as attendance, dress code, and performance in the medical setting. (P-PLO1)
 - **Interventional Radiology instructional objective:** Demonstrate sensitivity and responsiveness to patients' culture, gender, age, and disabilities. (P-PLO1)
 - **Interventional Radiology instructional objective:** Demonstrate motivation and desire to learn. (P-PLO3)
 - **Interventional Radiology instructional objective:** Demonstrate knowledge of the legal and regulatory requirements of the role of a physician assistant. (P-PLO4)

8. **Elective Interventional Radiology Rotation Learning Outcome #8:** Students will (a) seek, implement, and accept feedback, (b) reflect on performance and develop

plans for self-improvement, and (c) locate, appraise, and integrate evidence-based studies related to Interventional Radiology.

- **Interventional Radiology instructional objective:** Demonstrate an openness to receive constructive criticism. (PBLPI-PLO1)
- **Interventional Radiology instructional objective:** Recognize limitations and locate assistance from supervising preceptors and appropriate reference material. (PBLPI-PLO1)
- **Interventional Radiology instructional objective:** Develop the ability to learn from practice. (PBLPI-PLO2)
- **Interventional Radiology instructional objective:** Recognize personal limitations and where to access help personally and professionally. (PBLPI-PL2)
- **Interventional Radiology instructional objective:** Interpret independent outside readings concerning medical problems encountered. (PBL PI-PLO3)
- **Interventional Radiology instructional objective:** Show ability to understand and apply decision-making tools. (PBL PI PLO-3)
- **Interventional Radiology instructional objective:** Recognize the importance of lifelong learning in the medical field. (PBLPI-PLO3)
- **Interventional Radiology instructional objective:** Assess medical evidence and communicate it to patients and colleagues. (PBLPI-PL3)
- **Interventional Radiology instructional objective:** Apply information technology to access online medical information and continue personal education. (PBLPI-PL3))
- **Interventional Radiology instructional objective:** Use medical information technology in decision-making, patient care, and patient education. (PBLPI-PL3)

9. **Elective Interventional Radiology Rotation Learning Outcome #9:** Students will (a) promote a safe environment for patients seeking care in a Interventional Radiology setting, (b) demonstrate knowledge of quality improvement methodologies and metrics, (c) recognize the unique role of PAs and other health professions in Interventional Radiology, (d) work effectively with other health professionals to provide collaborative, patient centered interventional radiology care, (e) work effectively in an outpatient and/or inpatient health delivery settings, (f) incorporate considerations of cost awareness and funding into patients seeking care in an Interventional Radiology setting, and (g) describe basic health payment systems and practice models for Interventional Radiology.

- **Interventional Radiology instructional objective:** Operate under the rules of HIPAA to preserve patient confidentiality. (SBP-PLO1)
- **Interventional Radiology instructional objective:** Practice according to policy and procedures set forth by the health care facility. (SBP-PLO1)
- **Interventional Radiology instructional objective:** Employ a professional relationship with the supervising providers and other health care team members. (SBP-PLO4)
- **Interventional Radiology instructional objective:** Identify the obstacles to obtaining medical care for those with financial difficulties. (SBP-PLO6)

- **Interventional Radiology instructional objective:** Evaluate cost-effective health care and resources that do not compromise the quality of patient care. (SBP-PLO6)
- **Interventional Radiology instructional objective:** Identify the funding sources and payment systems that provide coverage for the patient. (SBP-PLO7)
- **Interventional Radiology instructional objective:** Choose the appropriate code for billing the responsible payment service under the direct supervision of the preceptor. (SBP-PLO7)

Elective Interventional Radiology Rotation Curriculum Integration Table

| Elective Interventional Radiology Rotation Learning Outcome | Assessment Method (Benchmark Requirements) | PAS Program Goal | PAS Program Learning Outcome (ARC-PA)/Student Learning Outcomes (GVSU) |
|--|---|---|---|
| <p>Students will demonstrate medical knowledge of the pathophysiology, etiology, epidemiology, patient presentation, differential diagnosis, diagnostic work-up, patient management, health promotion, and disease prevention for common conditions (listed in Interventional Radiology Clinical Rotation Topics above) encountered in Interventional Radiology for patients seeking medical care for the following age populations: infants, children, adolescents, adults and/or elderly.</p> | <p>Preceptor Evaluation (80% average score on Medical Knowledge competency section)</p> | <p>Medical Knowledge and Competence in Patient Care</p> | <p>MK #2 MK #3</p> |
| <p>Students will elicit a detailed and accurate patient history, perform an appropriate physical examination, appropriately use and interpret diagnostic testing and laboratory studies, and formulate differential diagnoses and assessment plans for symptoms/conditions (listed in Interventional Radiology Clinical Rotation Topics above) commonly encountered in patients seeking emergent Interventional Radiology, acute Interventional Radiology, and/or chronic Interventional Radiology care.</p> | <p>Preceptor Evaluation (80% average score on Patient competency section)</p> | <p>Medical Knowledge and Competence in Patient Care</p> | <p>PC #1 PC #2 PC #3 PC #4</p> |

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| Students will demonstrate technical skills common to Interventional Radiology. | Preceptor Evaluation (80% average score on Patient competency section) | Medical Knowledge and Competence in Patient Care | PC #5 |
| | Clinical Skills Checklist (Pass/Fail) | | |
| Students will obtain and document information clearly and appropriately for the following types of patient encounters: (a) emergent problem-focused encounters, (b) acute problem-focused encounters, and/or (c) chronic disease follow-up encounters. | Preceptor Evaluation (80% average score on Interpersonal and Communication Skills competency section) | Medical Knowledge and Patient Care | ICS#2 |
| Students will listen empathetically and effectively, communicate clearly, and utilize shared decision-making for patients seeking care in Interventional Radiology. | Preceptor Evaluation (80% average score on Interpersonal and Communication Skills competency section) | Medical Knowledge and Patient Care | ICS #1 |
| | | Collaborative Practice | ICS #3 ICS #5 |
| Students will facilitate difficult health care conversations in Interventional Radiology. | Preceptor Evaluation (80% average score on Interpersonal and Communication Skills competency section) | Collaborative Practice | ICS #4 |
| Students will demonstrate compassion, integrity, respect, patient responsiveness, and accountability while providing care to patients in an Interventional Radiology setting. | Preceptor Evaluation (80% average score on Professionalism competency section) | Professionalism | P #1 P #2 P #3 |
| Students will (a) seek, implement, and accept feedback, (b) reflect on performance and develop plans for self-improvement, and (c) locate, appraise, and integrate evidence- | Preceptor Evaluation (80% average score on Practice-Based Learning and | Lifelong Learning | PBLPI #1 PBLP #2 PBLP #3 |

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| based studies related to Interventional Radiology. | Proficiency Improvement competency section) | | |
| Students will (a) promote a safe environment for patients seeking care in a Interventional Radiology setting, (b) demonstrate knowledge of quality improvement methodologies and metrics, (c) recognize the unique role of PAs and other health professions in Interventional Radiology, (d) work effectively with other health professionals to provide collaborative, patient centered interventional radiology care, (e) work effectively in an outpatient and/or inpatient health delivery settings, (f) incorporate considerations of cost awareness and funding into patients seeking care in an Interventional Radiology setting, and (g) describe basic health payment systems and practice models for Interventional Radiology. | Preceptor Evaluation (80% average score on Systems-Based Practice competency section) | Medical Knowledge and Patient Care | SBP #1 SBP #6 |
| | | Lifelong Learning | SBP #2 |
| | | Collaborative Practice | SBP #3 SBP #4 SBP #5 SBP #7 |

Interventional Radiology Preceptor Evaluation of the Student

1. What is your group and/or site name (i.e., Corewell Health Family Medicine-Kentwood)
2. Medical Knowledge: This section evaluates the student's ability to demonstrate medical knowledge, clinical reasoning, and problem-solving ability of sufficient breadth and depth to practice medicine as an entry-level physician assistant

| | 60% (Failing) | 70% (D+/ C-) | 80% (C+/ B) | 90% (B+/ A-) | 100% (A) | N/A |
|---|------------------|--------------------|-------------------|--------------------|-------------|-----|
| Student demonstrates medical knowledge in pathophysiology, etiology, and epidemiology for patients seeking medical care for common conditions encountered in interventional radiology in the following age populations (MK#2, 3): | | | | | | |
| Infants | | | | | | |
| Children | | | | | | |
| Adolescents | | | | | | |
| Adults | | | | | | |
| Elderly | | | | | | |
| Student demonstrates medical knowledge of patient presentations for common conditions encountered in interventional radiology for the following age populations (MK#2,3): | | | | | | |
| Infants | | | | | | |
| Children | | | | | | |
| Adolescents | | | | | | |
| Adults | | | | | | |
| Elderly | | | | | | |
| Student demonstrates medical knowledge of differential diagnosis and diagnostic work-up for patients seeking medical care for common conditions encountered in interventional radiology in the following age populations (MK#2,3) | | | | | | |
| Infants | | | | | | |
| Children | | | | | | |
| Adolescents | | | | | | |
| Adults | | | | | | |
| Elderly | | | | | | |
| Student demonstrates medical knowledge of patient management strategies for patients seeking medical care for common conditions encountered in interventional radiology in the following age populations (MK#2,3): | | | | | | |
| Infants | | | | | | |
| Children | | | | | | |
| Adolescents | | | | | | |
| Adults | | | | | | |
| Elderly | | | | | | |
| Student demonstrates medical knowledge of health promotion and disease prevention for patients seeking medical care for common conditions encountered in interventional radiology in the following age populations (MK#2, 3) | | | | | | |
| Infants | | | | | | |

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|----------------------|--|--|--|--|--|--|
| Children | | | | | | |
| Adolescents | | | | | | |
| Adults | | | | | | |
| Elderly | | | | | | |
| Additional Comments: | | | | | | |

3. Patient Care: This section evaluates the student's ability to provide person-centered care that includes patient- and setting-specific assessment, evaluation, management, and health promotion.

| | 60% (Failing) | 70% (D+/ C-) | 80% (C+/ B) | 90% (B+/ A-) | 100% (A) | N/A |
|---|------------------|--------------------|-------------------|--------------------|-------------|-----|
| Elicit a detailed and accurate history and perform an appropriate physical examination for the following populations encountered in interventional radiology (PC#1): | | | | | | |
| Infant | | | | | | |
| Children | | | | | | |
| Adolescents | | | | | | |
| Adult | | | | | | |
| Elderly | | | | | | |
| Elicit a detailed and accurate history and perform an appropriate physical examination for patients encountered in interventional radiology seeking (PC#2): | | | | | | |
| Emergent care | | | | | | |
| Acute care | | | | | | |
| Chronic care | | | | | | |
| Student demonstrates knowledge of the appropriate use and interpretation of diagnostic testing and laboratory studies commonly used for patients seeking (PC#3): | | | | | | |
| Emergent care | | | | | | |
| Acute care | | | | | | |
| Chronic care | | | | | | |
| Student organizes information from the interview, diagnostic testing, and physical examination to formulate differential diagnoses for patients seeking (PC#4): | | | | | | |
| Emergent care | | | | | | |
| Acute care | | | | | | |
| Chronic care | | | | | | |
| Student organizes information from the interview, diagnostic testing, and physical examination to formulate assessment plans for symptoms/conditions commonly encountered in patients seeking (PC#4): | | | | | | |
| Emergent care | | | | | | |
| Acute care | | | | | | |
| Chronic care | | | | | | |
| Demonstrate basic technical skills common to interventional radiology. (PC#5): | | | | | | |
| Additional Comments: | | | | | | |

4. Interpersonal and Communication Skills: This section evaluates the student's ability to demonstrate verbal and non-verbal communication skills needed to have respectful, compassionate, and effective conversations with patients, patients' families, and health professionals to exchange information and make medical decisions.

| | 60% (Failing) | 70% (D+/ C-) | 80% (C+/ B) | 90% (B+/ A-) | 100% (A) | N/A |
|--|------------------|--------------------|-------------------|--------------------|-------------|-----|
| Listen empathetically and effectively to patients seeking care in interventional radiology (ICS#1) | | | | | | |
| Obtain and document information clearly and accurately at an appropriate level the following types of patient encounters (ICS#2): | | | | | | |
| Emergent problem-focused encounters | | | | | | |
| Acute problem-focused encounters | | | | | | |
| Chronic disease follow-up encounters | | | | | | |
| Communicate information clearly to patients, families, colleagues, and teams as appropriate across a broad range of socioeconomic and cultural backgrounds (ICS#3) | | | | | | |
| Facilitate difficult health care conversations in interventional radiology (ICS#4): | | | | | | |
| Utilize shared-decision making to promote patient-centered communication by eliciting and incorporating patient preferences (ICS#5) | | | | | | |
| Additional Comments: | | | | | | |

5. Professionalism: This section evaluates the student's ability to demonstrate commitment to carrying out professional responsibilities and adhering to ethical principles and practices.

| | 60% (Failing) | 70% (D+/ C-) | 80% (C+/ B) | 90% (B+/ A-) | 100% (A) |
|---|------------------|--------------------|-------------------|--------------------|-------------|
| Demonstrate compassion, integrity, and respect for patients seeking care in an interventional radiology setting (P#1) | | | | | |
| Demonstrate responsiveness to patient needs that supersede self-interest while | | | | | |

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| providing care in an interventional radiology setting (P#2) | | | | | |
| Show accountability to patients, society, and the profession while providing care in an interventional radiology setting (P#3) | | | | | |
| Demonstrate leadership and advocacy for the PA profession (P#4) | | | | | |
| Additional Comments: | | | | | |

6. Practice-Based Learning and Proficiency Improvement: This section evaluates the student's ability to acquire, appraise, and apply evidence-based medicine to patient care, and accurately assess and improve clinical performance based on constant self-evaluation and lifelong learning.

| | 60% (Failing) | 70% (D+/ C-) | 80% (C+/ B) | 90% (B+/ A-) | 100% (A) |
|--|------------------|--------------------|-------------------|--------------------|-------------|
| Seek, implement, and accept feedback (PBLPI#1) | | | | | |
| Reflect on performance to identify strengths and deficiencies in one's knowledge and expertise and develop a plan for self-improvement (PBLPI#2) | | | | | |
| Locate, appraise, and integrate evidence-based studies related to interventional radiology (PBLPI#3) | | | | | |
| Additional Comments: | | | | | |

7. Systems-Based Practice: This section evaluates the student's ability to engage with other healthcare professionals in a manner that optimizes patient care within the context of the larger healthcare system.

| | 60% (Failing) | 70% (D+/ C-) | 80% (C+/ B) | 90% (B+/ A-) | 100% (A) |
|---|------------------|--------------------|-------------------|--------------------|-------------|
| Promote a safe environment for patients seeking care in an Interventional Radiology setting (SBP#1) | | | | | |
| Demonstrate knowledge of quality improvement methodologies and metrics in interventional radiology (SBP#2) | | | | | |
| Recognize the unique roles of PAs and those of other healthcare professions in interventional radiology (SBP#3) | | | | | |
| work effectively with other health professionals to provide collaborative, | | | | | |

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| patient centered interventional radiology care (SBP#4) | | | | | |
| Work effectively in an inpatient and/or outpatient health delivery setting (SBP#5) | | | | | |
| Incorporate considerations of cost awareness and funding sources into patients seeking care in an interventional radiology setting (SBP#6) | | | | | |
| Describe basic health payment systems and practice models for interventional radiology (SBP#7) | | | | | |
| Additional Comments: | | | | | |

8. Did the student have any absences during the rotation?
 - a. Yes
 - b. No
 - c. If yes, please indicate dates and reason for absence:
9. Please write a short note commenting on this student's particular strengths.
10. Please write a short note commenting on this student's particular areas for improvement.
11. Was this evaluation discussed with the student?
 - a. Yes
 - b. No
 - c. Additional comments:
12. Preceptor Signature: