

**Elective Cardiology Rotation Information (including Rotation Learning Outcomes,
Instructional Objectives, Preceptor Evaluation of Student Form, and Rotation-Specific
Curriculum Integration Table)**

Instructor of Record for Cardiology Rotation:

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Cardiology Medicine Clinical Rotation Topics

Cardiology System

Cardiomyopathy: Dilated, Hypertrophic, Restrictive

Conduction disorders/dysrhythmias: Atrial fibrillation/flutter, Atrioventricular block, Bundle branch block, Paroxysmal supraventricular tachycardia, Premature beats, Sick sinus syndrome, Sinus arrhythmia, Torsades de pointes, Ventricular fibrillation, Ventricular tachycardia

Congenital heart disease: Atrial septal defect, Coarctation of aorta, Patent ductus arteriosus, Tetralogy of Fallot, Ventricular septal defect

Coronary artery disease: Acute myocardial infarction, Non–ST-segment elevation, ST-segment elevation, Angina pectoris, Prinzmetal variant, Stable, Unstable

Heart failure

Hypertension: Essential hypertension, Hypertensive emergencies, Secondary hypertension

Hypotension: Cardiogenic shock, Orthostatic hypotension, Vasovagal hypotension

Lipid disorders: Hypercholesterolemia, Hypertriglyceridemia

Traumatic, infectious, and inflammatory heart conditions: Acute and subacute bacterial endocarditis, Acute pericarditis, Cardiac tamponade, Pericardial effusion

Valvular disorders: Aortic, Mitral, Pulmonary, Tricuspid

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

Hematologic System

Coagulation disorder: Clotting factor disorders

Pulmonary System

Pulmonary circulation: Cor pulmonale, Pulmonary embolism, Pulmonary hypertension

Cardiology Rotation Learning Outcomes and Instructional Objectives

Upon completion of the cardiology clinical rotation,

Rotation Learning Outcomes	Instructional Objectives
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 Cardiology Clinical Rotation Topics above) encountered in cardiology.	
	Cardiology instructional objective: Explain the pathophysiology of the clinical presentations of conditions listed in the Cardiology Clinical Rotation Topics (above) (MK-PLO3).
	Cardiology instructional objective: Describe the etiology and epidemiology of the clinical conditions listed in the Cardiology Clinical Rotation Topics (above). (MK-PLO3)
	Cardiology instructional objective: Distinguish normal aging from pathologic process. (MK-PLO3)
	Cardiology instructional objective: Identify the patient presentation of conditions listed in the Cardiology Clinical Rotation Topics (above). (MK-PLO3)
	Cardiology instructional objective: Explain the appropriate diagnostic workup of the clinical conditions listed in the Cardiology Clinical Rotation Topics (above). (MK-PLO3)
	Cardiology instructional objective: Formulate a differential diagnosis for patient presentations of conditions listed in the Cardiology Clinical Rotation Topics (above). (MK-PLO3)
	Cardiology instructional objective: Compare and contrast the risks and benefits of diagnostic studies and treatment plans for conditions listed in the Cardiology Clinical Rotation Topics (above). (MK-PLO3)

	Cardiology instructional objective: Summarize the indications and contraindications of procedures commonly used in the treatment of conditions listed in the Cardiology Clinical Rotation Topics (above). (MK PLO-2)
	Cardiology instructional objective: Compare and contrast the risks and benefits of procedures indicated for conditions listed in the Cardiology Clinical Rotation Topics (above). (MK PLO-3)
	Cardiology instructional objective: Outline the appropriate management of the clinical conditions listed in the Cardiology Clinical Rotation Topics (above). (MK-PLO3)
	Cardiology instructional objective: Identify the common medication problems specific to cardiology, including polypharmacy, potential toxic interactions of drugs, compliance issues, and the complexity of new medication prescribing. (MK-PLO3)
	Cardiology instructional objective: Describe health promotion in relation to the management of the clinical conditions listed in the Cardiology Clinical Rotation Topics (above). (MK-PLO3)
	Cardiology instructional objective: Describe disease prevention for clinical conditions listed in the Cardiology Clinical Rotation Topics (above). (MK-PLO3)
	Cardiology instructional objective: Identify national screening guidelines for the applicable clinical conditions listed in the Cardiology Clinical Rotation Topics (above). (MK-PLO2)
	Cardiology instructional objective: Recognize when it is appropriate to obtain informed consent.
	Cardiology instructional objective: Discuss medications commonly used in the treatment of conditions listed in the Cardiology Clinical Rotation Topics (above), including indications, contraindications, possible drug interactions, mechanism of action, most common side effects, need for laboratory

	monitoring, and appropriate dosage. (MK PLO-3)
	Cardiology instructional objective: Interpret and apply healthcare guidelines for Hypertension, Hyperlipidemia, Heart Failure, and Stable Angina. (MK PLO-3)
	Cardiology instructional objective: Select appropriate prescription medication(s) and dosing for the treatment of conditions listed in the Cardiology Clinical Rotation Topics (above). (MK PLO-3)
	Cardiology instructional objective: Actively participate in the management of patients. (MK- PLO3)
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 Cardiology Clinical Rotation Topics above) commonly encountered in patients seeking care in a cardiology setting.	
	Cardiology instructional objective: Demonstrate an age-appropriate problem-focused history and physical exam for patients in a cardiology setting. (PC PLO-1, PC-PLO-2)
	Cardiology instructional objective: Select and interpret appropriate diagnostic and laboratory studies for conditions listed in the Cardiology Clinical Rotation Topics (above) for patients in a cardiology setting. (PC-PLO3)
	Cardiology instructional objective: Formulate an appropriate differential diagnosis based on history, physical examination, diagnostic data, and clinical reasoning for patients in a cardiology setting. (PC-PLO4)

	Cardiology instructional objective: Develop an appropriate assessment, management care plan, and disposition of patients, given all pertinent medical data, including history, physical exam, laboratory, and diagnostic data in a cardiology setting. (PC-PLO4)
	Cardiology instructional objective: Actively participate in the management of patients with conditions listed in the Cardiology Clinical Rotation Topics (above) in a cardiology setting. (PC- PLO4)
Students will document information clearly and appropriately in cardiology.	
	Cardiology instructional objective: Document an acute problem-focused medical note for patients. (ICS-PLO2)
	Cardiology instructional objective: Document a chronic problem-focused medical note for patients. (ICS-PLO2)
	Cardiology instructional objective: Document information clearly and accurately at an appropriate level for patients, colleagues, and teachers. (ICS-PLO2)
	Cardiology instructional objective: Document care plans for patients with multiple conditions, ensuring integration of comorbidities and prioritization of care needs." (ICS-PLO2)
	Cardiology instructional objective: Document medical information in a manner that synthesizes large volumes of data and summarizes complex care plans, tailored to a cardiology setting. (ICS-PLO2)
Students will listen empathetically and effectively, communicate clearly, utilize shared decision-making, and provide patient education and patient counseling for patients seeking care in cardiology.	
	Cardiology instructional objective: Utilize open-ended questions, active listening, and empathetic communication to elicit patient preferences, values, goals, and concerns while providing space for patients to fully articulate their thoughts without interruption. (ICS-PLO1)

	Cardiology instructional objective: Communicate complex medical information clearly and comprehensively, using plain language and avoiding medical jargon, while tailoring the content and delivery to the patient's level of understanding and health literacy. (ICS-PLO3)
	Cardiology instructional objective: Deliver clear, concise, and well-organized oral case presentations using a structured format, ensuring the inclusion of pertinent patient information to effectively communicate with preceptors and the healthcare team, fostering collaboration and continuity of care. (ICS-PLO3)
	Cardiology instructional objective: Identify and address communication barriers with diverse patient populations and adapt communication style and information context to ensure understanding, effective interaction, and culturally sensitive care. (ICS PLO-3)
	Cardiology instructional objective: Collaborate with the patient and family to identify realistic goals, develop a shared understanding of diagnoses and treatment options, and explain the risks and benefits of diagnostic studies and treatments, while demonstrating empathetic listening to clarify misconceptions and address concerns or fears. (ICS PLO-5)
	Cardiology instructional objective: Deliver age-appropriate patient-centered education and counseling, including health promotion, disease prevention, and evidence-based written materials tailored to the patient's needs and health literacy, to patients seeking care in cardiology. (ICS-PLO5)
	Cardiology instructional objective: Provide patient-centered counseling that addresses emotional, psychological, and social concerns (ICS-PLO5)
	Cardiology instructional objective: Assess patient understanding of medical information and treatment plans and address any gaps in comprehension (ICS-PLO3)

Students will facilitate difficult health care conversations in cardiology.	
	Cardiology instructional objective: Establish rapport and trust with patients and their family members by demonstrating empathy, active listening, and respect for their emotions, perspectives, and concerns while maintaining professionalism and objectivity. (ICS PLO-4)
	Cardiology instructional objective: Create a supportive environment conducive to open and honest dialogue, ensuring that the patient and their family feel comfortable expressing their thoughts, emotions, and preferences. (ICS PLO-4)
	Cardiology instructional objective: Demonstrate sensitivity and cultural competence in addressing sensitive topics, such as end-of-life care, advance directives, or difficult treatment decisions, while respecting diverse perspectives and values. (ICS PLO-4)
	Cardiology instructional objective: Provide emotional support and connect patients and their families with appropriate resources to help them cope with difficult emotions and navigate the healthcare system effectively. (ICS PLO-4)
Students will demonstrate compassion, integrity, respect, patient responsiveness, and accountability while providing care to patients in cardiology.	
	Cardiology instructional objective: Demonstrate empathy, understanding, compassion, and sensitivity to the emotional, social, developmental, cultural, and diverse backgrounds of patients and their families, including age, gender, and disabilities. (P-PLO1)
	Cardiology instructional objective: Respect patient confidentiality and privacy, ensuring that sensitive information is handled appropriately and securely. (P-PLO1)

	Cardiology instructional objective: Use inclusive language and cultural sensitivity when interacting with patients and their families to foster trust and respect. (P-PLO1)
	Cardiology instructional objective: Exhibit professionalism in interactions with patients, families, and healthcare team members, including maintaining appropriate dress, punctual attendance, and a professional attitude in all clinical settings. (P-PLO1)
	Cardiology instructional objective: Prioritize patient care over personal comfort or preferences, demonstrating a willingness to adjust schedules or extend work hours to accommodate patient needs. (P-PLO2)
	Cardiology instructional objective: Demonstrate flexibility, attentiveness, and responsiveness in addressing patient concerns and unexpected changes. (P-PLO2)
	Cardiology instructional objective: Take accountability for actions, decisions, and the quality of care provided, ensuring continuous evaluation and improvement. (P-PLO3)
	Cardiology instructional objective: Evaluate and integrate community resources to support patient care in cardiology. (P PLO-3)
	Cardiology instructional objective: Demonstrate motivation and desire to learn. (P PLO-3)
	Cardiology instructional objective: Demonstrate knowledge of the legal and regulatory requirements of the role of a physician assistant. (P-PLO4)
	Cardiology instructional objective: Exhibit integrity by adhering to ethical standards, acting with honesty, and maintaining professional accountability in all interactions and decisions." (P-PLO1)
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 cardiology.	

	Cardiology instructional objective: Proactively seek feedback from their preceptor on clinical performance, communication skills, and professional behavior, demonstrating openness to constructive criticism and willingness to apply it to improve. (PBL PI-PLO1)
	Cardiology instructional objective: Develop action plans based on feedback including specific goals and timelines for implementation. (PBL PI-PLO1)
	Cardiology instructional objective: Recognize personal and professional limitations, and locate assistance from preceptors, colleagues, and reference materials to address areas needing improvement. (PBL PI-PLO1)
	Cardiology instructional objective: Monitor progress towards goals over time, adjusting action plans as necessary based on ongoing reflection and feedback. (PBL PI PLO-2)
	Cardiology instructional objective: Develop the ability to learn from practice. (PBL PI PLO-2)
	Cardiology instructional objective: Demonstrate lifelong learning by interpreting independent readings, assessing medical evidence, and applying decision-making tools to provide evidence-based patient care in cardiology. (PBL PI-PLO3)
	Cardiology instructional objective: Recognize the importance of lifelong learning in the medical field. (PBL PI PLO-3)
	Cardiology instructional objective: Assess and effectively communicate medical evidence to patients, colleagues, and healthcare teams to support shared decision-making and patient care. (PBL PI PLO-3)
	Cardiology instructional objective: Utilize medical information technology to access and appraise online medical resources, enhance personal education, support clinical decision-making, and educate patients. (PBL PI PLO-3)

<p>In a cardiology setting, students will (a) promote a safe environment, (b) demonstrate knowledge of quality improvement methodologies and metrics, (c) recognize the unique role of PAs and other health professions, (d) work effectively with other health professionals to provide collaborative, patient-centered care, (e) incorporate considerations of cost awareness and funding, and (g) describe basic health payment systems and practice models.</p>	
	<p>Cardiology instructional objective: Operate under the rules of HIPAA to preserve patient confidentiality in a cardiology setting. (SBP PLO-1)</p>
	<p>Cardiology instructional objective: Practice according to policy and procedures set forth by the health care facility. (SBP PLO-1)</p>
	<p>Cardiology instructional objective: Identify barriers and challenges to implementing quality improvement initiatives in a cardiology setting and propose strategies to overcome them. (SBP PLO-2)</p>
	<p>Cardiology instructional objective: Discuss the appropriate use of controlled substances and statewide tracking systems to ensure ethical and legal patient care in a cardiology setting. (SBP PLO-2)</p>
	<p>Cardiology instructional objective: Encourage a culture of safety and collaboration within the healthcare team by promoting open communication, error reporting, mutual respect, and teamwork while providing patient-centered care in a cardiology setting. (SBP-PLO3)</p>
	<p>Cardiology instructional objective: Identify the steps of the referral process for patients and the roles of other healthcare professionals in the participation of your patient's care in a cardiology setting. (SBP-PLO3)</p>
	<p>Cardiology instructional objective: Employ a professional relationship with the preceptors and other healthcare team members in a cardiology setting. (SBP-PLO4)</p>

	Cardiology instructional objective: Efficiently manage patient flow and clinic scheduling to optimize access to care and minimize wait times for patients seeking care in a cardiology setting. (SBP-PLO5)
	Cardiology instructional objective: Communicate effectively with administrative staff, medical assistants, and other members of the healthcare team to coordinate patient care activities and ensure smooth health care operations in a cardiology setting. (SBP-PLO4, SBP-PLO5)
	Cardiology instructional objective: Evaluate cost-effective healthcare resources that do not compromise the quality of care for patients in a cardiology setting. (SBP PLO-6)
	Cardiology instructional objective: Discuss treatment options for patient care in an unbiased manner, considering both clinical effectiveness and cost implications and involving patients in shared decision-making in a cardiology setting. (SBP PLO-6)
	Cardiology instructional objective: Describe common practice models in a cardiology setting. (SBP PLO-6)
	Cardiology instructional objective: Demonstrate an understanding of the roles and responsibilities of PAs and other healthcare professionals in a cardiology setting, including their contributions to population health, care coordination, and cost reduction through preventive services and chronic disease management. (SBP PLO-6)
	Cardiology instructional objective: Choose appropriate billing codes for payment services under the direct supervision of the preceptor in a cardiology setting. (SBP-PLO7)
	Cardiology instructional objective: Identify funding sources and payment systems, including eligible patient populations for Medicaid and Medicare, in a cardiology setting (SBP-PLO7)

Cardiology Rotation Curriculum Integration Table

Rotation Learning Outcome	Assessment Method (Benchmark Requirements)	PAS Program Goal	PAS Program Learning Outcome (ARC-PA)/Student Learning Outcomes (GVSU)
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 Cardiology Clinical Rotation Topics above) encountered in cardiology.	Preceptor Evaluation (80% average score on Medical Knowledge competency section)	Medical Knowledge and Competence in Patient Care	MK #2
			MK#3
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 Cardiology Clinical Rotation Topics above) commonly encountered in patients seeking care	Preceptor Evaluation (80% average score on Patient Care competency section)	Medical Knowledge and Competence in Patient Care	PC #1
			PC #2
			PC #3
			PC #4

in a cardiology setting.			
Students will document information clearly and appropriately in cardiology.	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, utilize shared decision-making, and provide patient education and patient counseling for patients seeking care in cardiology.	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 cardiology.	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 cardiology.	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 Proficiency Improvement competency section)	Lifelong Learning	PBLPI #1
			PBLPI #2
			PBLPI #3

based studies related to cardiology.			
In a cardiology setting, students will (a) promote a safe environment, (b) demonstrate knowledge of quality improvement methodologies and metrics, (c) recognize the unique role of PAs and other health professions, (d) work effectively with other health professionals to provide collaborative, patient-centered care, (e) incorporate considerations of cost awareness and funding, and (g) describe basic health payment systems and practice models.	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

Cardiology Preceptor Evaluation of the Student

What is your group and/or site name (i.e., Corewell Health Greenville Hospital Multispecialty Center - Oak St, Family Medicine)					
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%	80%	90%	100%
		(D+/ C-)	(C+/ B)	(B+/ A-)	(A)
Student demonstrated medical knowledge in pathophysiology, etiology, and epidemiology for patients seeking medical care for common conditions encountered in cardiology. (MK#2, 3)					
Student demonstrated medical knowledge of patient presentations for common conditions encountered in cardiology. (MK#2,3)					
Student demonstrated medical knowledge of differential diagnosis for patients seeking medical care for common conditions encountered in cardiology. (MK#2,3)					
Student demonstrated medical knowledge of the diagnostic work-up for patients seeking medical care for common conditions encountered in cardiology. (MK#2,3)					
Student demonstrated medical knowledge of patient management strategies for patients seeking medical care for common conditions encountered in cardiology. (MK#2,3)					
Student demonstrated medical knowledge of health promotion and disease prevention for patients seeking medical care for common conditions encountered in cardiology. (MK#2, 3)					
Additional Comments:					
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%	80%	90%	100%
		(D+/ C-)	(C+/ B)	(B+/ A-)	(A)

Student elicited a detailed and accurate history for patients encountered in cardiology (PC#1):					
Student performed an appropriate physical examination for patients encountered in cardiology (PC#1)					
Student demonstrated knowledge of the appropriate use and interpretation of diagnostic testing for patients encountered in cardiology (PC#3)					
Student demonstrated knowledge of the appropriate use and interpretation of laboratory studies for patients encountered in cardiology (PC#3):					
Student organized information from the interview, diagnostic testing, and physical examination to formulate differential diagnoses for patients encountered in cardiology (PC#4)					
Student organized information from the interview, diagnostic testing, and physical examination to formulate assessments for symptoms/conditions commonly encountered for the patients encountered in cardiology (PC#4)					
Student organized information from the interview, diagnostic testing, and physical examination to formulate management plans for symptoms/conditions commonly encountered for patients encountered in cardiology (PC#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)
Student documented information clearly and appropriately for cardiology encounters (ICS#2):					
Student listened empathetically and effectively to patients seeking care in cardiology (ICS#1)					
Student communicated information clearly in cardiology (ICS#3)					
Student utilized shared decision-making for patients seeking care in cardiology (ICS#5)					

Student provided patient education and counseling for patients seeking care in cardiology (ICS#5)					
Student facilitated difficult health care conversations in cardiology (ICS#4):					
Additional Comments:					
Professionalism: This section evaluates the student's ability to demonstrate commitment to carrying out professional responsibilities and adhering to ethical principles and practices in cardiology.					
Student demonstrated compassion, integrity, and respect to patients seeking care in cardiology (P#1)					
Student demonstrated patient responsiveness while providing care to patients in cardiology (P#2)					
Student showed accountability while providing care to patients in cardiology (P#3)					
Additional Comments:					
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%	80%	90%	100%
		(D+/ C-)	(C+/ B)	(B+/ A-)	(A)
Student sought, implemented, and accepted feedback related to cardiology (PBLPI#1)					
Student reflected on their performance to identify strengths and deficiencies in their knowledge and expertise and develop a plan for self-improvement related to cardiology (PBLPI#2)					
Student located, appraised, and integrated evidence-based studies related to cardiology (PBLPI#3)					
Additional Comments:					
Systems-Based Practice: This section evaluates the student's ability to engage with other healthcare professionals in a manner that optimizes care within the context of the larger healthcare system.					
	60% (Failing)	70%	80%	90%	100%
		(D+/ C-)	(C+/ B)	(B+/ A-)	(A)

Student promoted a safe environment for patients seeking care in a cardiology setting (SBP#1)					
Student demonstrated knowledge of quality improvement methodologies and metrics in a cardiology setting (SBP#2)					
Student recognized the unique roles of PAs and those of other healthcare professions in a cardiology setting (SBP#3)					
Student worked effectively with other health professionals to provide collaborative, patient-centered care in a cardiology setting (SBP#4)					
Student worked effectively in a cardiology setting (SBP#5)					
Student incorporated considerations of cost awareness and funding sources into patients seeking care in a cardiology setting (SBP#6)					
Student described basic health payment systems and practice models for a cardiology setting (SBP#7)					

Additional Comments:

Did the student have any absences during the rotation?

Yes

No

If yes, please indicate dates and reason for absence:

Please write a short note commenting on this student's particular strengths.

Please write a short note commenting on this student's particular areas for improvement.

Was this evaluation discussed with the student?

Yes

No

Additional comments

Preceptor Signature: