COURSE NAME:	Medical Coding
TOTAL DURATION:	45 Hrs
MODE OF DELIVERY	PHYSICAL CLASSROOM TRAINING AT RESPECTIVE COLLEGES
TRAINER TO STUDENT RATIO:	1:50
TOTAL MARKS:	75

TABLE 1	
OVERALL COURSE OBJECTIVE:	1. Develop foundational knowledge in healthcare systems, clinical terminology, and medical coding standards. 2. Equip learners with the ability to navigate ICD-10-CM, CPT, and HCPCS Level II coding systems. 3. Build proficiency in interpreting clinical documentation and applying accurate medical codes. 4. Enhance analytical skills for compliance, insurance claim processing, and coding audits. 5. Foster ethical and legal understanding of health information management.
LEARNING OUTCOME:	1. Interpret healthcare documentation and identify appropriate coding categories. 2. Apply coding guidelines to assign accurate diagnosis and procedure codes. 3. Utilize coding manuals and electronic systems to complete coding tasks efficiently. 4. Demonstrate awareness of compliance standards and reimbursement processes. 5. Evaluate coding accuracy through audit simulation and error analysis.

TABLE 2: MODULE WISE COURSE CONTENT AND OUTCOME

SL. NO	MODULE NAME	MODULE CONTENT	MODULE LEARNING OUTCOME	DURATION (45HRS)
1	Medical Terminology, Anatomy, and ICD-10-CM Coding	- Advanced medical terminology, anatomy, and physiology. - Detailed ICD-10-CM coding conventions, guidelines, and applications.	- Demonstrate proficiency in navigating and applying ICD-10-CM coding guidelines for complex medical diagnoses. - Analyze anatomical terms and medical terminology to ensure accurate assignment of ICD-10-CM codes.	10
2	CPT, HCPCS, and E/M Coding	- Advanced procedural coding, modifiers, E/M services, HCPCS codes. - Detailed E/M coding guidelines, documentation requirements.	- Apply coding guidelines to accurately document and code complex medical procedures and services using CPT and HCPCS codes. - Evaluate E/M service levels and apply appropriate codes to inpatient and outpatient medical cases.	10
3	Compliance, Regulatory Guidelines, and	- HIPAA, OIG compliance, fraud and abuse prevention, coding	Evaluate coding practices to ensure adherence to ethical	10

	Ethical Coding Practices	ethics. - Use of coding software tools like Encoder Ro, 3M Coding, and grouping tools.	standards and regulatory guidelines, including HIPAA and OIG compliance. - Demonstrate proficiency in utilizing industry-standard coding software tools for efficient and accurate coding.	
4	Auditing, Quality Assurance, and Specialty Coding	- Coding audit processes, quality improvement, error identification. - Coding for specialties like cardiology, oncology, orthopaedics, etc.	- Perform coding audits to assess coding accuracy and implement quality improvement strategies for better compliance and error reduction. - Apply specialty-specific coding knowledge to accurately assign codes for complex medical procedures in cardiology, oncology, and orthopaedics.	5
5	Advanced Case Studies and Real-World Applications	- Complex coding scenarios, real-life case studies, problem-solving. - Preparation for certification exams and review of test-taking strategies.	- Synthesize advanced coding knowledge to solve real-world medical coding problems through case studies and practical	10

			applications. - Create comprehensive coding solutions, integrating theoretical knowledge with practical coding applications for healthcare scenarios, preparing for professional certifications.	

TABLE 3: OVERALL COURSE LEARNING OUTCOME ASSESSMENT CRITERIA AND USECASES			
LEARNING OUTCOME	**ASSESSMENT CRITERIA**	**PERFORMANCE CRITERIA**	**USECASES**
Advanced Diagnosis Coding Skills	- Accuracy and specificity in ICD-10-CM coding	- Demonstrates precise ICD-10-CM code assignment with minimal errors. - Accurately identifies diagnoses with multiple comorbidities.	Use Case 1: Code complex diagnoses with multiple comorbidities. Use Case 2: Assign codes for rare diseases using ICD-10-CM.
Proficiency in Procedural Coding	- Correct use of CPT and HCPCS codes and modifiers	- Correctly applies CPT and HCPCS codes for multi-step procedures. - Uses modifiers accurately in complex procedural coding.	Use Case 1: Code surgical procedures with multiple steps and modifiers. Use Case 2: Assign appropriate HCPCS codes for

			medical supplies and equipment.
Compliance and Ethical Coding Practices	- Adherence to regulations and ethical guidelines	-Identifies and resolves coding discrepancies such as upcoding or unbundling. - Ensures patient data privacy and compliance with regulations.	Use Case 1: Identify and correct upcoding and unbundling errors. Use Case 2: Ensure patient data privacy during coding processes.
Coding Audit and Quality Improvement	- Ability to audit and enhance coding quality	- Conducts thorough coding audits and identifies discrepancies or areas for improvement. - Suggests effective strategies for improving coding accuracy and quality.	Use Case 1: Perform an audit on a set of medical records to identify coding errors. Use Case 2: Develop a plan to improve coding accuracy in a clinic.
Specialty Coding Expertise	- Handling of specialty-specific coding scenarios	- Demonstrates proficiency in coding complex treatments and procedures in specialties. - Accurately applies codes for specialty surgeries and treatments.	Use Case 1: Code complex oncology treatments and chemotherapy sessions. Use Case 2: Assign codes for orthopaedic surgeries involving implants.

TABLE 4: LIST OF FINAL PROJECTS (20 PROJECTS THAT COMPREHENSIVELY COVER ALL THE LEARNING OUTCOME)
1. Develop a virtual assistant script that schedules appointments based on user input. 2. Create prompts for an AI tutor that provides explanations for complex topics in simple terms. 3. Design a chatbot for customer service that can handle FAQs effectively. 4. Craft prompts to generate creative story ideas in specific genres. 5. Build a prompt set that helps generate marketing copy for new products. 6. Optimize prompts for translating documents between multiple languages accurately. 7. Create a prompt workflow for summarizing legal documents. 8. Develop prompts for generating data analysis reports from raw data descriptions. 9. Design an AI system that provides personalized book recommendations based on user preferences. 10. Create prompts that assist in code debugging by analysing error messages. 11. Build a knowledge base assistant that answers questions about company policies. 12. Develop prompts for generating social media content that aligns with brand voice. 13. Craft an AI-driven interview simulator to help users prepare for job interviews. 14. Create prompts for an AI that can compose music lyrics in various styles. 15. Design a virtual tour guide that provides information about tourist attractions. 16. Optimize prompts for sentiment analysis of customer reviews. 17. Develop an AI model that assists in medical diagnosis based on symptom descriptions (ethical considerations applied). 18. Create prompts for generating personalized meal plans based on dietary restrictions. 19. Build a language learning tool that helps users practice conversation in a new language. 20. Design prompts for an AI that generates design ideas for architectural projects.

TABLE 5: COURSE ASSESSMENT RUBRICS (TOTAL MARKS: 75)				
ASSESSMENT CRITERIA	**DESCRIBE THE CRITERIA OF THE BELOW CATEGORY PERFORMANCE**			**TOTAL MARKS**
	FAIR (1-5)	**GOOD (6-8)**	**EXCELLENT (9-10)**	
1. Accuracy in Medical Coding (ICD-10-CM and CPT)	- Demonstrates limited application of ICD-10-CM and CPT codes with frequent errors. - Rarely synthesizes coding manuals effectively.	- Applies ICD-10-CM and CPT codes with minimal errors and uses manuals efficiently. - Assigns most codes correctly.	Demonstrates exceptional proficiency in applying ICD-10-CM and CPT codes accurately across varied cases. - Consistently evaluates and refines the coding process to ensure precision.	10
	FAIR (0-7)	**GOOD (8-12)**	**EXCELLENT (13-15)**	
2.Procedural Coding Proficiency (CPT, HCPCS, Modifiers)	- Struggles with applying complex procedures and modifiers. - Fails to differentiate when modifiers should be applied.	- Applies CPT and HCPCS codes and modifiers to most procedural scenarios with minor errors. - Analyses procedural requirements and applies modifiers	Demonstrates full command in applying CPT, HCPCS, and modifiers to multi-step procedures and specialized cases. - Critically evaluates the use of modifiers and codes in	15

		appropriately.	complex cases.	
3.Compliance and Ethical Practices in Coding	- Identifies some ethical coding issues but fails to resolve them adequately. - Overlooks regulatory and privacy standards.	- Applies ethical guidelines and HIPAA regulations with minor lapses. - Analyses coding errors and ethical issues but occasionally misses fine details.	- Consistently adheres to ethical coding practices and HIPAA regulations. - Critically evaluates coding practices for compliance and resolves discrepancies with clarity and precision.	15
4. Coding Audit and Quality Assurance	- Identifies coding errors but provides limited or ineffective solutions. - Misses key issues in coding documentation.	- Analyses coding errors and recommends solutions with good accuracy. - Applies quality assurance methods to improve coding.	- Evaluates medical records for errors with great attention to detail. - Synthesizes audit results into actionable plans that significantly improve coding accuracy and compliance.	15
5.Specialty -Specific Coding	- Struggles with specialty coding tasks, making frequent errors in assigning codes.	- Applies correct specialty-specific codes in most cases with some minor	- Excels in coding complex procedures and treatments in various specialties	10

	- Lacks understanding of specialty-specific coding requirements.	mistakes. - Demonstrates a basic understanding of specialty coding practices.	(e.g., oncology, cardiology, orthopaedics). - Critically analyses specialty-specific coding issues and applies the most appropriate solutions.	
6.Application of Advanced Coding Knowledge (Case Studies)	- Fails to apply coding knowledge effectively in case studies. - Struggles to synthesize theoretical knowledge into practical coding solutions.	- Applies advanced coding knowledge in case studies with minor errors. - Synthesizes theory with practical coding solutions but occasionally overlooks key factors.	- Synthesizes advanced coding principles to solve real-world case studies with flawless application. - Critically evaluates complex scenarios, integrating theoretical knowledge with precise coding practice.	10