

## Course & Title:

### HIM 330- Electronic Health Records

#### Instructor:

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#### Contact Information:

The best way to contact me is through email at pamela.chandler@wku.edu I will make every effort to respond within 24 hours.

#### Credit Hours:

Three semester hours

**Prerequisites:** HIM 100 or HCA 340 or CD 280 or NUR 105 or SWK 205 or other introductory health profession course approved by instructor.

**Course description:** Utilization, application, analysis, and evaluation of an electronic health record system for data collection, communication, storage, reporting, and exchange of health information.

#### Course Materials

There is no required textbook **but there is a required subscription** to EHRGo a simulated online electronic health record system. The EHR GO subscription information is located in the Course Modules- Introduction to the Course link. Click on [The EHR GO REGISTRATION LINK](#). There is also a Student Guide to help you navigator the purchase process and software usage. Note that you can purchase the subscription through either the WKU Store or through the EHR GO website. For the cost at the WKU Store is \$83 for a 16 week subscription, but only \$70 on the EHR GO website for the semester subscription.

Semester Subscription	978-0-9858379-8-3	\$70.00
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WHILE YOU CAN PURCHASE A SUBSCRIPTION NOW, **DO NOT ACTIVATE UNTIL A DAY OR TWO BEFORE SCHOOL STARTS BECAUSE WHEN ACTIVATED THE SUBSCRIPTION CLOCK STARTS TICKING.**

EHR Go subscription is a computerized patient chart, central database, and a communication and decision support tool. The EHRGo subscription key code can be accessed through Blackboard.

### **Evaluation:**

The final grade will be derived from the following:

All Assignments            100%

The following grading system will be used:

100% - 90%    A

89% - 80%     B

79% - 70%     C

69% - 60%     D

59% - 50%     F

### **Attendance Policy:**

Students are expected to meet all due dates.

### **Due Dates:**

Refer to schedule below. You may submit work earlier than the due date, but I will grade assignments after the due date.

### **Academic Misconduct: (Information below on Academic Misconduct, along with additional information, can be obtained from**

<https://www.wku.edu/studentconduct/process-for-academic-dishonesty.php>)

*The University expects students to operate with the highest standard of integrity in all facets of the collegiate experience. Broadly defined, academic misconduct is any unethical self-serving action in the performance of an academic activity, deliberate or unintentional, that affords a student an unfair, unearned, or undeserved advantage. (Excerpt from the WKU Student Handbook, 2016)*

***The maintenance of academic integrity is of fundamental importance to the University. Thus it should be clearly understood that acts of plagiarism or any other form of cheating will not be tolerated and that anyone committing such acts will be held accountable for violation of the student code of conduct.***

*Students who commit any act of academic dishonesty may receive from the instructor a failing grade in that portion of the course work in which the act is detected or a failing grade in a course without possibility of withdrawal. The faculty member may also present the case to the Office of Student Conduct.*

### ***Dishonesty***

*Such as cheating, plagiarism, misrepresenting of oneself or an organization, knowingly furnishing false information to the University, or omitting relevant or necessary information to gain a benefit, to injure, or to defraud is prohibited.*

### ***Cheating***

*No student shall receive or give assistance not authorized by the instructor in taking an examination or in the preparation of an essay, laboratory report, problem assignment or other project which is submitted for purposes of grade determination.*

### **Plagiarism**

*To represent written work taken from another source as one's own is plagiarism. Plagiarism is a serious act. The academic work of a student must be his/her own. One must give any author credit for source material borrowed from him/her. To lift content directly from a source without giving credit is a flagrant act. To present a borrowed passage without reference to the source after having changed a few words is also plagiarism.*

#### *Examples of Areas Where Academic Misconduct Most Likely Occurs*

*"Essentially, students are expected to do work that is assigned to them and submit products that represent personal and individual effort only."*

#### **1. In an exam setting**

- a. Presenting as your work, test answers that are not your work, including the following:
  - i. Using resources other than those specifically allowed by the instructor (e.g., notes or another person)
  - ii. Copying from another student's test
  - ii. Using notes from any source during a test when notes are not allowed
  - iv. Using materials that the instructor is not making available to the whole class (Exception: students with disabilities needing accommodations)
  - v. Recycling an assignment that has been used in another course (unless approved by the instructor)
- b. Acquiring a copy of the exam without permission
- c. Providing answers for or soliciting answers from another student with or without permission of the other student (Note: This may either be an attempt to help or harm the targeted student)
- 2. On a written assignment
  - a. Presenting as your own work duplicated work that you did not create
    - i. Purchasing written work from an external source
    - ii. Copying work from a free external source (online or otherwise)
    - iii. Presenting as your work something another person has created
  - b. Altering text from another source
    - i. Altering select words of some original text in order to conceal plagiarism
- 3. Academic dishonesty that is possible in various settings
  - a. Providing money or favors in order to gain academic advantage
  - b. Falsely stating that work was given to the instructor at a certain time when it was not
  - c. Correcting the responses of a graded assignment and presenting them to the instructor as incorrectly graded material
  - d. Pretending to be someone you are not; taking the place of another
- 4. Or any other behavior that violates the basic principles of integrity and honesty

**(Above information was an Excerpt from the Academic Integrity Statement Ad Hoc Subcommittee on Academic Integrity in the College of Education and Behavioral Sciences, 2012)**

**Program Policies** state that "Unprofessional conduct or violation of the rules, regulations or policies of the University or Health Information Management Program may result in dismissal from the program."

**Cheating:**

**I expect each student to submit their own work. Sharing your work, assignments, project, or answers with another student or receiving the information from another student constitutes cheating. Any student found to have shared information or obtained information from another student or other source will receive a 0% on that assignment and it may result in dismissal from the program.**

**Plagiarism**

**I expect each student to submit their own work or give credit to the appropriate source.**

**Any student found to have plagiarized work from another source will receive a 0% on that assignment and it may result in dismissal from the program.**

**Title IX Misconduct/Assault Statement:**

*Western Kentucky University (WKU) is committed to supporting faculty, staff and students by upholding WKU's Title IX Sexual Misconduct/Assault Policy (#0.2070) at <https://wku.edu/eoo/documents/titleix/wkutitleixpolicyandgrievanceprocedure.pdf> and*

*Discrimination and Harassment Policy (#0.2040) at [https://wku.edu/policies/hr\\_policies/2040\\_discrimination\\_harassment\\_policy.pdf](https://wku.edu/policies/hr_policies/2040_discrimination_harassment_policy.pdf).*

*Under these policies, discrimination, harassment and/or sexual misconduct based on sex/gender are prohibited. If you experience an incident of sex/gender-based discrimination, harassment and/or sexual misconduct, you are encouraged to report it to the Title IX Coordinator, Andrea Anderson, 270-745-5398 or Title IX Investigators, Michael Crowe, 270-745-5429 or Joshua Hayes, 270-745-5121.*

*Please note that while you may report an incident of sex/gender based discrimination, harassment and/or sexual misconduct to a faculty member, WKU faculty are "Responsible Employees" of the University and **MUST** report what you share to WKU's Title IX Coordinator or Title IX Investigator. If you would like to speak with someone who may be able to afford you confidentiality, you may contact WKU's Counseling and Testing Center at 270-745-3159.*

**ADA Accommodation Statement:**

*In compliance with University policy, students with disabilities who require academic and/or auxiliary accommodations for this course must contact the Student Accessibility Resource Center located in Downing Student Union, 1074. SARC can be reached by phone number at 270-745-5004 [270-745-3030 TTY] or via email at [sarc.connect@wku.edu](mailto:sarc.connect@wku.edu). Please do not request accommodations directly from the professor or instructor without a faculty notification letter (FNL) from The Student Accessibility Resource Center.*

**Food Security:** Food insecurity is defined as a condition where persons, in this case students, do not have adequate resources to feed themselves, either nutritiously or not at all (USDA, 2013). According to a recent national study (Hunger on Campus, 2016), food insecurity is common at colleges and universities across the country, potentially undermining the educational success of untold thousands of students. If food insecurity is an issue you, or someone you know, help is readily available. Contact the WKU Office of Sustainability at (270) 745-2508 or email [sustainability@wku.edu](mailto:sustainability@wku.edu).

**Emotional Support:** WKU offers confidential counseling for students at the WKU Counseling Center. The best way to schedule an appointment is to visit their office in Potter Hall, Room 409 or by calling their office at 270-745-3159. They are open Monday - Friday from 8:00am - 4:30pm. For emergency and after-hours information, call 270-745-3159

### **WKU Syllabus Statement:**

All students are strongly encouraged to [get the COVID-19 vaccine](#). Out of respect for the health and safety of the WKU community and in adherence with CDC guidelines and practices of all public universities and colleges in [Kentucky](#), the University requires that a cloth face covering (reusable or disposable) that covers both the nose and mouth must be worn at all times when in public areas within all buildings. Students must properly wear face coverings while in class regardless of the room size or the nature of the classroom activities. Students who fail to wear a face covering as required will be in violation of the WKU Student Code of Conduct and will be asked to comply or will face disciplinary action, including possible dismissal from the University. Accommodations can be requested in special cases through the Student Accessibility and Resource Center ([SARC](#)): [270-745-5004](tel:270-745-5004) (voice), [270-745-3030](tel:270-745-3030) (TTY), or [270-288-0597](#) (video).

All students must immediately report a positive Covid-19 test result or close contact with a person who has tested positive to the Covid-19 Assistance Line at 270-745-2019. The assistance line is available to answer questions regarding any Covid-19 related issue. This guidance is subject to change based on requirements set forth by public health agencies or the office of the governor. Please refer to the Healthy on the Hill website for the most current information. [www.wku.edu/healthyonthehill](http://www.wku.edu/healthyonthehill)

### **Disclaimer:**

References to external websites are provided for the convenience of the student. These sites may contain articles on politically and socially controversial topics and are presented from the prospective of providing information. The instructor is not responsible for the content of these external sites and does not necessarily endorse the views or agree with the information held on these sites; the instructor does not take moral stances on issues.

### **Syllabus Changes:**

Class and exam schedules are subject to change.

Dev. 8/2023



## HIM330: Electronic Health Records Systems

*Schedule for the semester (Note: the number of assignments each week vary based on how long the activities should take to do)*

<b>Week/Activity</b>	<b>ACTIVITY DESCRIPTION</b>	<b>DUE DATE</b>
<b>Week 1</b>	<b>Introduce Yourself! And Introduction to the EHR</b>	
Introductions	Introduce Yourself!	<b>FRIDAY, January 19, MIDNIGHT</b>
EHR Orientation	Introduction to the EHR Series This activity introduces the concept of an electronic health record and the EHR Go educational EHR. (est. 50 minutes)	<b>SUNDAY, January 21, MIDNIGHT</b>
Tools and Resources in EHR Go	This activity provides an overview of the tools and resources available in the EHR Go educational electronic health record. (est. 15 minutes)	<b>SUNDAY, January 21, MIDNIGHT</b>
EHR Documentation Standards	This activity has been developed as an introduction to documentation standards in the electronic health record. The student will be presented with generally accepted professional standards of documentation, the use of abbreviations in medical records and the application of medical terminology. The student will answer questions that will expand on their current knowledge of documentation and medicine as well as apply critical thinking skills. The student will need to use additional resources to complete this activity. (est. 30 minutes)	<b>SUNDAY, January 21, MIDNIGHT</b>
The Power of the EHR	This activity is intended for any student in a healthcare course that is learning about electronic health records (EHR). The focus is on what the EHR can do and how it can be used in improving healthcare outcomes. The student will need to use additional resources to prepare for this skill. These resources may include videos, textbooks and/or online websites (est. 30 minutes)	<b>SUNDAY, January 21, MIDNIGHT</b>
<b>Week 2</b>	<b>Intro to the EHR (continued)</b>	
Introduction to Privacy, Security	This activity has been developed as an introduction to privacy, security, confidentiality and cybersecurity in the EHR. To complete this activity the student will be expected to have a basic knowledge of the healthcare laws and rules related to privacy and security in the EHR. The student will need to use additional resources to complete activity. These resources may include chart resources, videos, textbooks and/or online websites. (est. 90 minutes)	<b>SUNDAY, January 28, MIDNIGHT</b>



<b>Week/Activity</b>	<b>ACTIVITY DESCRIPTION</b>	<b>DUE DATE</b>
Introductory Evaluation	This activity requires students to demonstrate the necessary skills and understanding to access an EHR system and identify and interpret patient data. (est. 20 minutes)	<b>SUNDAY, January 28, MIDNIGHT</b>
Health Information Terminology	This activity introduces terms used in healthcare, the medical office, and in the EHR Go medical record. (est. 30 minutes)	<b>SUNDAY, January 28, MIDNIGHT</b>
<b>Week 3</b>	<b>Registration, Insurance, and Scheduling</b>	
New Patient Registration A	In this activity, the student will register a new patient and record the patient's insurance information. (est. 45 minutes)	<b>SUNDAY, February 4, MIDNIGHT</b>
Checking in a Patient A	In this activity the student will complete the check-in process in a patient's electronic health record. (est. 30 minutes)	<b>SUNDAY, February 4, MIDNIGHT</b>
Updating Patient Registration, A	This activity provides practice with updating changes in patient's registration. (est. 30 minutes)	<b>SUNDAY, February 4, MIDNIGHT</b>
Editing Patient Information	In this activity the student will edit demographic and insurance information in an electronic health record of a patient. (est. 15 minutes)	<b>SUNDAY, February 4, MIDNIGHT</b>
Outpatient Encounter	In this activity, the student will walk through each step of completing an outpatient encounter, including registration and insurance, encounter entry, and claim submission. (est. 30 minutes)	<b>SUNDAY, February 4, MIDNIGHT</b>
<b>Week 4</b>	<b>Claims, Ledgers, and Billing and Managing Clinical Aspects</b>	
CMS 1500 Billing (BS)	This activity provides an in-depth look at the CMS 1500 billing form requirements. Students will audit an electronic claim in EHR Go and identify any missing fields that could cause claims to be rejected. (est. 30 minutes)	<b>SUNDAY, February 11, MIDNIGHT</b>
Creating a Claim A	This activity provides practice with creating and submitting a claim for payment by a patient's insurance company. (est. 30 minutes)	<b>SUNDAY, February 11, MIDNIGHT</b>
Posting Payments and Adjustments A	This activity provides practice with using an Explanation of Benefits (EOB) to post payments and adjustments to the patient ledger. (est. 20 minutes)	<b>SUNDAY, February 11, MIDNIGHT</b>

<b>Week/Activity</b>	<b>ACTIVITY DESCRIPTION</b>	<b>DUE DATE</b>
Data Entry (starts the Managing Clinical Aspects)	This activity provides practice of basic data entry and documentation skills in the EHR. (est. 30 minutes)	<b>SUNDAY, February 11, MIDNIGHT</b>
<b>Week 5</b>	<b>Managing Clinical Aspects Continued....</b>	
Adding Orders A	This activity provides practice with entering patient care and medication orders in a patient's EHR. (est. 60 minutes)	<b>SUNDAY, February 18, MIDNIGHT</b>
Structured and Unstructured Data (BS)	The activity introduces structured data versus unstructured data in an EHR and provides students with the opportunity to evaluate both data types in EHR Go. (est. 60 minutes)	<b>SUNDAY, February 18, MIDNIGHT</b>
Communication in the EHR	This activity addresses some of the communication issues that may arise in EHR documentation, with a focus on the patient's problem list and the use of abbreviations. (est. 90 minutes)	<b>SUNDAY, February 18, MIDNIGHT</b>
<b>Week 6</b>	<b>Understanding the EHR Series</b>	
HITECH and the History of EHRs (BS) (starts the Understanding the EHR Series)	This activity explores the history of electronic health records and the vision and impact of the HITECH Act. Students will review a patient's chart in EHR Go to look for key attributes of an EHR and note the interrelationships of different organizations and providers across the health care delivery system. (est. 45 minutes)	<b>SUNDAY, February 25, MIDNIGHT</b>
Health Information Exchange (BS)	The activity involves a review and audit of the health information exchange (HIE) organization that exists between two service locations in a continuity of care record (CCR). (est. 60 minutes)	<b>SUNDAY, February 25, MIDNIGHT</b>
Understanding TJC's Tracer Methodology (BS)	The activity involves using the electronic health record to facilitate The Joint Commission's on-site survey methodology. (est. 60 minutes)	<b>SUNDAY, February 25, MIDNIGHT</b>
<b>Week 7</b>	<b>Quality Improvement and Best Practices</b>	
Quality Improvement with the EHR (BS)	This activity examines continuous quality improvement (CQI) in regards to hospital re-admission rates, and evaluates a CQI intervention using the Plan, Do, Study/Check, Act method. (est. 60 minutes)	<b>SUNDAY, March 3, MIDNIGHT</b>
Evidence Based Practice Clinical Audit T2DM	An introduction to clinical guidelines and the clinical audit process of evaluating for evidence-based practice. (est. 60 minutes)	<b>SUNDAY, March 3, MIDNIGHT</b>

<b>Week/Activity</b>	<b>ACTIVITY DESCRIPTION</b>	<b>DUE DATE</b>
<b>Week 8</b>	<b>Data Query Series</b>	
UHDDS and the EHR (BS)	This activity explores how coding and the UHDDS relate to one another. The student will abstract data from an inpatient chart in EHR Go based on UHDDS guidelines. (est. 45 minutes)	<b>SUNDAY, March 10, MIDNIGHT</b>
Implementing Clinical Decision Support (BS)	This activity will introduce and demonstrate Clinical Decision Support (CDS) by simulating parts of the CDS Starter Kit: Smoking Cessation in EHR Go. In completing the activity, the students will develop their own clinical decision support plan. (est. 60 minutes)	<b>SUNDAY, March 10, MIDNIGHT</b>
<b>Week 9</b>	<b>Data Query Series continued Plus Chart Review Series</b>	
Retrieval of Data (BS)	This activity provides an introduction to data retrieval within the electronic health record. Students will locate key information from a patient's chart to support the application of national safety standards. (est. 60 minutes)	<b>SUNDAY, March 17, MIDNIGHT</b>
Cause and Effect: CDS Evaluation (BS)	In this activity the student will learn about CDS, find examples of CDS in an EHR, and evaluate these examples against best-practices for Clinical Decision Support. (Meaningful Use, Stage 2 states that providers must use clinical decision support to improve performance on high-priority health conditions. (Health IT.Gov, 2016) One of the measures for eligible providers is to implement five clinical decision support (CDS) interventions related to four or more clinical quality measures at a relevant point in patient care.) (est. 60 minutes)	<b>SUNDAY, March 17, MIDNIGHT</b>
Case Study Review (BS)	The activity includes a detailed case study review, or audit, of a patient's EHR. The student is introduced to documentation in the health record, and how the diagnosis, patient progress, clinical findings, and discharge status are supported through documentation. (est. 45 minutes)	<b>SUNDAY, March 17, MIDNIGHT</b>
<b>WEEK 10</b>	<b>Chart Review Series continued...Plus Release of Information</b>	
Pathophysiology and Pharmacology Case Review (BS)	This activity provides a detailed review of a patient's EHR: problems, medical diagnosis, disease processes, treatments, medications, and labs. Students will use the tools in EHR Go and external resources to research pathophysiology and pharmacology issues for this patient. (est. 60 minutes)	<b>SUNDAY, March 24, MIDNIGHT</b>
Release of Information (BS)	The activity explores the privacy and security safeguards afforded by HIPAA and how its protection relates to release of patient health information. The student will review a patient's medical record and apply the legal background provided within the activity to analyze and apply established principles of release of information. (est. 60 minutes)	<b>SUNDAY, March 24, MIDNIGHT</b>

<b>Week/Activity</b>	<b>ACTIVITY DESCRIPTION</b>	<b>DUE DATE</b>
ROI & Accounting of Disclosures (BS)	The activity provides an introduction to the issues surrounding release of information (ROI) and a patient's right to an accounting of disclosures of their protected health information (PHI). (est. 45 minutes)	<b>SUNDAY, March 24, MIDNIGHT</b>
<b>Week 11</b>	<b>Management Series</b>	
Assessing Employee Productivity (BS)	This activity provides a detailed look at the assessment of employee productivity related to industry suggested standards. Students will review and practice the concept of productivity related to coding based on simulated reports derived from the EHR system. (est. 50 minutes)	<b>SUNDAY, March 31, MIDNIGHT</b>
SAFER Analysis: Clinical Communications (BS)	In this activity, students will analyze results of the SAFER Checklist for Clinician Communication and determine next steps. (The SAFER Guides are designed to help healthcare organizations conduct self-assessments to optimize the safety and safe use of electronic health records (EHRs) in a number of key areas. The SAFER Guides are designed in part to help deal with safety concerns created by the continuously changing landscape that healthcare organizations face.) (est. 45 minutes)	<b>SUNDAY, March 31, MIDNIGHT</b>
Introduction to Clinical Reminders	In this activity, students will examine the Clinical Reminder system for Clinical Decision Support (CDS) and analyze data as part of a mock CDS audit. (est. 45 minutes)	<b>SUNDAY, March 31, MIDNIGHT</b>
EHR Implementation (BS)	This activity provides students with a scenario in which they work for a hospital that implemented an electronic health record system a year ago. That implementation did not go smoothly, and now there are strong EHR advocates and strong EHR-dissenters on the team. The hospital is now looking to implement a bar-coded medication administration feature for the EHR, and students are tasked with managing the implementation. Students will need to review the case history of the EHR implementation and the best practices documentation available from national HIT organizations. (est. 120 minutes)	<b>SUNDAY, March 31, MIDNIGHT</b>
<b>Week 12</b>	<b>Informatics, Analytics, and Visualization Series</b>	
SNOMED CT (BS)	This activity will help students understand the SNOMED CT terminology, applications, and benefits. They will also explore the differences between SNOMED CT and other coding systems such as ICD-10. (est. 60 minutes)	<b>SUNDAY, April 7, MIDNIGHT</b>

<b>Week/Activity</b>	<b>ACTIVITY DESCRIPTION</b>	<b>DUE DATE</b>
Orientation to Data Analytics I	This activity will evaluate a microbiology report of culture and sensitivity results for various microbes and antibiotics. Microsoft Excel® will be used to analyze and compile the data to draw meaningful conclusions. (est. 60 minutes)  <b>This activity is the first activity in a sequential 5-activity series.</b>	<b>SUNDAY, April 7, MIDNIGHT</b>
Applied Data Analytics II	The activity provides students with a scenario in which the Shoreline Birth Center received what they perceived as "bad press" when mentioned in a local newspaper article about the nation's high rate of C-Section deliveries. The Birth Center feels that the press will negatively impact their bottom line. Students are asked to review and analyze the Birth Center's delivery data and present the facts to address the public concern. (est. 90 minutes)	<b>SUNDAY, April 7, MIDNIGHT</b>
<b>Week 13 &amp; 14</b>	<b>Informatics, Analytics, and Visualization Series Continued...</b>	
Applied Data Analytics III	The activity provides students with the opportunity to apply data analytics. (Shoreline Birth Center's birth data revealed a cesarean section rate that is higher than the national average. Shoreline's medical director believes that the Birth Center has a higher cesarean section rate because they are the area's only high-risk birth center, and they receive a higher percentage of high risk births that often require a cesarean section for a safer birth experience. Shoreline's Public Relations officer feels the public needs to know that Shoreline is the safest place to give birth. She would like to know the perioperative mortality rate (POMR) at Shoreline. Students will analyze Shoreline's patient data to research this issue and present their findings to the Shoreline Board. )(est. 110 minutes)	<b>SUNDAY, April 21, MIDNIGHT</b>
Orientation to Data Visualization IV	The activity introduces the concept of data visualization. The activity addresses correlation versus causation, and provides students with the opportunity to create a bar graph using a data set provided from the Centers for Disease Control and Prevention (CDC). Students will also explore other ways to view the data and draw conclusions. (est. 60 minutes)	<b>SUNDAY, April 21, MIDNIGHT</b>
Clinical Reminder Data Visualization V	Students will examine the Central Clinic's preventive care clinical reminders, observing how they are resolved, their schedule, and when they were last completed. They will then use exported Central Clinic patient data to analyze and answer questions regarding which patients need the screening, which are up-to-date, and which screening tests they receive. (est. 90 minutes)	<b>SUNDAY, April 21, MIDNIGHT</b>
<b>Week 15</b>	<b>Informatics, Analytics, and Visualization Series Continued...</b>	

<b>Week/Activity</b>	<b>ACTIVITY DESCRIPTION</b>	<b>DUE DATE</b>
Query Basic Orientation	A required pre-requisite for all other query activities. A step-by-step beginner activity to introduce students to using the querying tool in EHR Go to enter basic queries.	<b>SUNDAY, April 28, MIDNIGHT</b>
Query Readmission Analysis	A step-by-step beginner activity that requires basic query logic. Activity scenario: the General Hospital is performing a self-assessment of readmissions and students are asked to prepare a report with data on selected discharge diagnoses	<b>SUNDAY, April 28, MIDNIGHT</b>
MPI Duplication analysis (Informatics)	Students will review recent registrations at the General Hospital for potential duplicate records and then categorize and analyze the causes for the duplicates. Students are then asked to make recommendations for decreasing duplicate record formation. (65 min.)	<b>SUNDAY, April 28, MIDNIGHT</b>
WEEK 16	EVALUATION OF CLASS (BONUS POINTS ASSIGNED)	<b>SUNDAY, April 28, MIDNIGHT</b>

Rev. 1/2024

## Competencies

At the conclusion of this course, the student should be able to meet the following 2018 CAHIIM HIM Baccalaureate Degree Competencies:

	2018 CAHIIM Curricula Competencies	Guidance	EHR Go Activity and Bloom's Level (in parentheses)
	<b>Domain I. Data Structure, Content, and Info Governance</b>		
5	I.1. Compare diverse stakeholder perspectives through the delivery of healthcare services.	Stakeholders, External Forces, Internal Forces	HITECH and the History of EHRs Understanding TJC's Tracer Methodology
4	I.2. Analyze strategies for the management of information.	IG Strategies, Policy Strategies, Organizational Strategies	Cause and Effect: CDS Evaluation Clinical Reminder Data Visualization V Health Information Exchange Implementing Clinical Decision Support Introduction to Clinical Reminders SAFER Analysis: Clinician Communication MPI Duplication Analysis
5	I.3. Evaluate policies and strategies to achieve data integrity.	Data Governance, DM Software, Technology and Tools, Data Standards, Data Integrity Policies and Strategies, Data Reporting	Assessing Employee Productivity Cause and Effect: CDS Evaluation Communication in the EHR Quality Improvement with the EHR
5	I.4. Recommend compliance of health record content across the health system.	Health Records Requirements, Health Records and the Continuum of Care, General Requirements (Promoting Interoperability)	Analyzing for Chart Deficiencies Case Study Review Communication in the EHR Introduction to Chart Deficiencies Pathophysiology and Pharmacology Review Understanding TJC's Tracer Methodology MPI Duplication Analysis
3	I.5. Utilize classification systems, clinical vocabularies, and nomenclatures.	Types of Health Info Data Structures	Classification and Terminology Systems Clinical Reminder Data Visualization V CMS 1500 Billing Form SNOMED CT MPI Duplication Analysis

5	I.6. Evaluate data dictionaries & data sets for compliance with government standards.	Data and Database Management, Standards and Compliance (Data Interchange Standards, standardization, Resolving Duplicate MPIs, Accreditation standards, Data Set Standards), Strategies & Analytics	Implementing Clinical Decision Support Structured and Unstructured Data
<b>Domain II. Information Protection: Access, Use, Disclosure, Privacy, and Security</b>			
5	II.1. Recommend privacy strategies for health information.	Privacy Standards & Regulation, Privacy Mgmt.	Release of Information ROI and Accounting of Disclosures
5	II.2. Recommend security strategies for health information.	Security Standards & Regulation, Security Mgmt., Security Risk Analysis	Release of Information ROI and Accounting of Disclosures
4	II.3. Analyze compliance requirements throughout the health information life cycle.	Health Info Life Cycle, Standards	Release of Information ROI and Accounting of Disclosures
<b>Domain III. Informatics, Analytics, and Data Use</b>			
4	III.1. Examine health informatics concepts for the management of health information.	Utilization of Technology, Systems Development Life Cycle, Clinical Informatics in the Delivery of Healthcare	Cause and Effect: CDS Evaluation EHR Implementation SAFER Analysis: Clinician Communication
4	III.2. Analyze technologies for health information management.	Data Analysis	Cause and Effect: CDS Evaluation Introduction to Clinical Reminders SAFER Analysis: Clinician Communication Orientation to Data Analytics I Applied Data Analytics II Clinical Reminder Data Visualization V



5	III.3. Interpret statistics for health services.	Statistical Data Analysis	Orientation to Data Analytics I Applied Data Analytics II Applied Data Analytics III Clinical Reminder Data Visualization V Introduction to Clinical Reminders
4	III.4. Examine health care findings with data visualizations.	Data Tools and Standards, Data Interpretation and Presentation	Applied Data Analytics III Implementing Clinical Decision Support Structured and Unstructured Data
5	III.6. Manage data within a database management system	Database Management	EHR Implementation Retrieval of Data Applied Data Analytics II Applied Data Analytics III Orientation to Data Visualization IV Clinical Reminder Data Visualization V
3	III.7. Identify standards for exchange of health information.	Information Exchange, Standards, HI Systems	Applied Data Analytics II EHR Implementation
Domain IV. Revenue Cycle Management			
5	IV.1. Evaluate assignment of diagnostic and procedural codes and groupings in accordance with official guidelines.	Official Coding Guidelines (NCCI edits, UHDDS and other data sets), Coding Compliance, Validation, and Audits	Analyzing for Chart Deficiencies Case Study Review Classification and Terminology Systems Communication in the EHR Introduction to Chart Deficiencies Pathophysiology and Pharmacology Review UHDDS and the EHR Understanding TJC's Tracer Methodology
5	IV.2. Manage components of the revenue cycle.	Reimbursement Across the Healthcare Continuum, Revenue Management Life Cycle, Coding Compliance and QI (Coding audits, queries, CDI, Fraud detection), Case Mix	Classification and Terminology Systems CMS 1500 Billing Form

5	IV.3. Evaluate compliance with regulatory requirements and reimbursement methodologies.	Reimbursement Models, Reimbursement Methods, Coding Validation	Classification and Terminology Systems UHDDS and the EHR Understanding TJC's Tracer Methodology
Domain V. Health Law & Compliance			
5	V.1. Comply with legal processes impacting health information.	Laws and Legal System, Legal Consideration for Health Settings, The Legal Health Record	Release of Information
5	V.2. Evaluate compliance external forces.	Organizational Compliance (Accreditation, licensing, and Certification; HIPAA), External Compliance	Release of Information Understanding TJC's Tracer Methodology
4	V.4. Analyze the impact of policy on health.	Impact of Policy on Health (Governmental policy-making process, healthcare delivery of ACOs and medical homes, Public Health Initiatives, Effects of population health initiatives on exchange of HI, Effects of state and federal P4P on quality and content of record documentation (core measures, MACRA	Cause and Effect: CDS Evaluation SAFER Analysis: Clinician Communication Understanding TJC's Tracer Methodology
Domain VI. Organizational Management & Leadership			
4	VI.1. Facilitate fundamental leadership skills.	Leadership Skills, Personal Leadership Skills, Team Leadership	EHR Implementation SAFER Analysis: Clinician Communication Understanding TJC's Tracer Methodology
5	VI.2. Assess the impact of organizational change.	Strategic Planning (IM, HIT-CACs, encoders, and CDI programs), Collaboration with IG initiatives, Info as a strategic Resource)	Assessing Employee Productivity EHR Implementation
4	VI.3. Analyze human resource strategies for organizational best practices.	Change Management, Work Optimization (Re-engineering, Workflow, Organizational design	Assessing Employee Productivity EHR Implementation

5	VI.4. Leverage data-driven performance improvement techniques for decision making.	HR Management, Workforce Calculations and Statistics, Performance Standards, Employee/Staff Development, Labor Regulations, Tools and Techniques (Lean, Six Sigma, Benchmarking, Labor Analytics), Improvement and Impact Areas (Health IT, EHR, Workflow, Performance measures, disease management, case management, critical paths, customer satisfaction, safety initiatives)	Applied Data Analytics III Assessing Employee Productivity EHR Implementation Implementing Clinical Decision Support Quality Improvement with the EHR
4	VI.5. Verify financial management processes.	Concepts (accounting principles, financial statements, effects of acquisitions), Budgets, Resource Management (Cost-benefit analysis, procurement process), Supplier Management (vendor contracts, outsourcing)	EHR Implementation
4	VI.6. Examine behaviors that embrace cultural diversity.	Diversity Topics, Managing Cultural Diversity	EHR Implementation
4	VI.8. Facilitate consumer engagement activities.	Consumer Engagement	EHR Implementation
4	VI.9. Facilitate training needs for a healthcare organization.	Training and Development	Implementing Clinical Decision Support MPI Duplication Analysis

5	VI.10. Compare project management methodologies to meet intended outcomes.	Project Management (project planning and life cycle, team group dynamics), Project Management Tools (Gantt Chart, dashboards, project reports), Project management software (Excel, Smartsheet, Workzone), Communication tools (reports)	EHR Implementation SAFER Analysis: Clinician Communication
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## **Course Content**

### **A. Introduction to the Electronic Health Records**

- EHR Orientation
- EHR Documentation Standards
- The Power of the EHR
- Introductory Evaluation
- Introduction to Privacy and Security
- Tools and Resources in EHR Go
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### **B. Clinical and Administrative Procedures**

- New Patient Registration and Scheduling
- Scheduling a Follow-up Appointment
- Updating Pt Registration Insurance
- Checking in a Patient
- Data Entry
- Adding Orders
- Documenting a Patient Phone Call
- Editing Patient Information
- Updating Health Information
- Creating a Claim
- Posting Payments and Adjustments
- New Patient Registration, Exam and Billing
- CMS 1500 Billing
- Outpatient Encounter

### **C. Management**

- EHR Implementation
- Assessing Employee Productivity
- SAFER Analysis: Clinician Communication
- Release of Information
- ROI and Accounting of Disclosures
- Introduction to Clinical Reminders

### **D. Chart Review**

- Introduction to Chart Deficiencies
- Analyzing for Chart Deficiencies
- Pathophysiology and Pharmacology

### **E. Understanding the EHR**

- Understanding TJC's Tracer Methodology
- Clinical Decision through Orders

- Communication within the EHR
- Health Information Exchange
- Introducing HITECH and the History of EHRs
- Quality Improvement

**F. Data Informatics and Analytics**

- Retrieval of Data
- Classification and Terminology Systems
- SNOMED CT
- Structured and Unstructured Data
- Implementing Clinical Decision Support
- Cause and Effect: CDS Evaluation
- UHDDS and the EHR
- Orientation to Data Visualization
- Practice with Data Visualization Tools
- Introduction to Data Visualization
- Data Visualization in the EHR
- Clinical Reminder Data Visualization

## Course Objectives

### EHR SCAVENGER HUNT SERIES

#### EHR Orientation

1. **Demonstrate** the technical skills necessary to access an EHR system.
2. **Locate** and **evaluate** patient data and details.
3. **Navigate** essential information of a patient's electronic medical chart.
4. **Complete** documentation.

#### EHR Documentation Standards

1. **Identify** acceptable healthcare terminology.
2. **Identify** the roles and responsibilities of various providers and disciplines, to support documentation requirements.
3. **Interpret** patient's medical information as it's seen in the electronic health record.
4. **Apply** current knowledge of electronic health records and appropriate, accurate documentation.

#### The Power of the HER

1. **Identify** the differences between coded and non-coded data entry.
2. **Identify** the differences between structured and unstructured data entry.
3. **Evaluate** the clinical implications of structured versus unstructured data entry in the EHR.
4. **Relate** the use of coded data to meeting the objectives of the Meaningful Use effort for implementation of electronic health records.
5. **Apply** current knowledge of electronic health records and appropriate, accurate documentation.

#### Introductory Evaluation

5. **Navigate** essential areas of an electronic patient chart.
6. **Interpret** details within the EHR.
7. **Evaluate** data entry in the EHR.

### INTRODUCTION TO ELECTRONIC HEALTH RECORDS SERIES

#### Tools and Resources in EHR Go **(available june 1)**

1. Demonstrate where to locate the Tools and Help menus.
2. Demonstrate how to use the resources available.
3. Apply the appropriate resource to apply in practice.

#### Health Information Terminology

1. **Apply** healthcare legal terminology (3)

#### HITECH and the History of EHRs Available June 1

1. Understand the history of HITECH.
2. Explain what the ARRA is.
3. Explain what the IOM is.
4. Identify how the HITECH provisions support healthcare reform efforts.
5. Explain the requirements of Stage 1 and Stage 2 of Meaningful Use.
6. Explain how the key attributes identified by the Institute of Medicine were identified for a computer-based patient record.
7. Recognize the Veterans Health Information Systems and Technology Architecture (VistA) and its relation to Neehr Perfect.
8. Identify how Neehr Perfect plays a role in student preparedness in using electronic health records in practice.

#### EHR Implementation available August 1

1. Recognize the Veterans Health Information Systems and Technology Architecture (VistA) and its relation to Neehr Perfect.
2. Compare the different forms of information exchange.
3. Explain what a health information exchange is and what it is used for.
4. Identify and use secondary data sources.

#### Introduction to Privacy and Security

1. **Differentiate** between privacy, security and confidentiality related to the electronic health record.
2. **Discuss** how electronic health records affect privacy and security.
3. **Recognize** threats to security as it relates to the internet, cybersecurity and mobile devices.
4. **Identify** when a patient's health information may be shared without written consent.
5. **Discuss** the implications and complications of violating HIPAA.
6. **Apply** current knowledge of electronic health records.

#### RELEASE OF INFORMATION SERIES

##### Release of Information

1. **Apply** healthcare legal terminology (3)
2. **Identify** the use of legal documents (3)
3. **Apply** legal concepts and principles to the practice of HIM (3)
4. **Apply** policies and procedures surrounding issues of access and disclosure of protected health information (3)
5. **Apply** confidentiality, privacy and security measures and policies and procedures for internal and external use and exchange to protect electronic health information (3)
6. **Analyze** policies and procedures to ensure organizational compliance with regulations and standards (4)



7. **Adhere** to the legal and regulatory requirements related to health information management (3)
8. **Identify** laws and regulations applicable to health care (3)
9. **Analyze** legal concepts and principles to the practice of HIM (4)
10. **Create** policies and procedures to manage access and disclosure of personal health information (6)
11. **Protect** electronic health information through confidentiality and security measures, policies and procedures (3)
12. **Analyze** privacy, security and confidentiality policies and procedures for internal and external use and exchange of health information (4)

#### Release of Information & Accounting of Disclosures **available June 1**

1. Select the correct patient chart using two identifiers.
2. Demonstrate the ability to retrieve and interpret data from the patient chart.
3. Demonstrate calculations for an Accounting of Disclosures form.
4. Apply legal concepts and principles to the practice of health information management.

### **UNDERSTANDING THE EHR SERIES**

#### SAFER Analysis: Clinician Communication

1. **Take part** in the development of networks, including intranet and Internet applications. (4)
2. **Take part** in the development of information management plans that support the organization's current and future strategy and goals. (4)
3. **Take part** in the planning, design, selection, implementation, integration, testing, evaluation, and support of health information technologies. (4)
4. **Appraise** current laws and standards related to health information initiatives. (5)
5. **Determine** processes for compliance with current laws and standards related to health information initiatives and revenue cycle. (5)
6. **Take part** in effective communication through project reports, business reports and professional communications. (4)
7. **Take part** in enterprise-wide committees. (4)
8. **Facilitate** the use of enterprise-wide information assets to support organizational strategies and objectives. (4)
9. **Manage** information as a key strategic resource and mission tool. (5)

#### Communication within the EHR **available June 1**

1. Demonstrate ability to locate necessary data from a patient chart.
2. Apply diagnosis codes according to current guidelines.
3. Identify errors in documentation within a patient chart.

Quality Improvement Utilizing the EHR available june 1

EHR Documentation Evaluation ??????

Understanding The Joint Commission's Tracer Methodology

1. **Understand** the importance of healthcare policy-making as it relates to the healthcare delivery system (2)
2. **Describe** types of organizations, services and personnel, and their interrelationships across the health care system (2)
3. **Identify** complete health records according to organizational policies, external regulations, and standards (3)
4. **Identify** departmental and organizational survey readiness for accreditation, licensing and/or certification processes (3)
5. **Identify** the different types of organizations, services, and personnel and their interrelationships across the health care delivery system (3)
6. **Analyze** the documentation in the health record to ensure it supports the diagnosis and reflects the patient's progress, clinical findings, and discharge status (4)
7. **Verify** the documentation in the health record is timely, complete and accurate (4)
8. **Verify** that documentation in the health record supports the diagnosis and reflects the patient's progress, clinical findings, and discharge status (4)
9. **Examine** required documentation and record structures (4)
10. **Differentiate** the roles and responsibilities of various providers and disciplines, to support documentation requirements, throughout the continuum of healthcare (5)
11. **Interpret** health information standards (5)
12. **Evaluate** how healthcare policy-making both directly and indirectly impacts the national and global healthcare delivery systems (5)

Structured and Unstructured Data available June 1

1. Apply current knowledge of electronic health records and their design.
2. Demonstrate the ability to identify discrepancies between supporting documentation and coded data.
3. Identify the difference between structured and unstructured data in the EHR.
4. Identify the connection between structured data, unstructured data and interoperability.

Implementing Clinical Decision Support available June 1

1. Examine online materials for applicable use.
2. Apply the basic concepts of Clinical Decision Support in the EHR.
3. Demonstrate data entry steps that support meaningful use and clinical decision support.
4. Apply practice guidelines in an educational environment.
5. Apply critical thinking skills to identify a need for clinical decision support.
6. Develop a simple CDS plan that would meet a current or potential need.

#### Clinical Decision through Orders **available June 1**

1. Identify the importance of clinical decision support in the EHR.
2. Evaluate the purpose of order checks in the EHR.
3. Explain the importance of order checks and clinical reminders in relation to clinical decision support.

### **DATA ENTRY SERIES EHR**

#### Data Entry

1. **Apply** diagnosis/procedure codes according to current guidelines.
2. **Demonstrate** documentation in the health record that is timely, complete, and accurate.
3. **Apply** data entry skills.

#### Registering a Patient and Adding Orders

1. **Create** a patient's medical record
2. **Utilize** an EMR
3. **Input** patient data utilizing a practice management system

#### Adding Orders

1. **Apply** data entry skills to enter information in a patient chart.
2. **Demonstrate** timely, complete and accurate entry of health care data.

#### CMS 1500 Billing Form **available June 1**

1. Apply current knowledge of electronic health records and location of information.
2. Apply resources outside of the EHR to comply with CMS regulations.
3. Identify advantages and disadvantages to electronic completion of billing forms as compared to completing on paper.
4. Identify what makes a claim unprocessable.
5. Demonstrate current knowledge of electronic health records and location of information.

### **DATA QUERY SERIES**

UHDDS and the EHR **available June 1**

1. Apply current knowledge of electronic health records and their design.
2. Demonstrate the ability to navigate the patient chart.
3. Demonstrate the ability to retrieve and interpret data from the patient chart as it pertains to the UHDDS.
4. Discuss the importance of the UHDDS and its relationship to diagnostic coding.

Retrieval of Data

1. **Collect** and **maintain** health data (2)
2. **Apply** knowledge of database architecture and design to meet organizational needs (3)

Cause and Effect: CDS Evaluation **available June 1**

1. Demonstrate the ability to filter and locate the correct chart.
2. Compare human error, system error and design flaws.
3. Identify where HIT systems could increase and decrease potential user error.
4. Compare current HIT design with a potentially better design to prevent errors.

**CHART REVIEW SERIES**

Case Study Review

1. **Apply** policies and procedures to ensure the accuracy and integrity of health data both internal and external to the health system (3) (AS)
2. **Verify** that documentation in the health record supports the diagnosis and reflects the patient's progress, clinical findings, and discharge status (4)

Introduction to Chart Deficiencies

1. **Analyze** the documentation in the health record to ensure it supports the diagnosis and reflects the patient's progress, clinical findings, and discharge status (4)
2. **Verify** the documentation in the health record is timely, complete, and accurate (4)
3. **Identify** a complete health record according to organizational policies, external regulations, and standards (3)
4. **Develop** appropriate physician queries to resolve data and coding discrepancies (6)
5. **Verify** that documentation in the health record supports the diagnosis and reflects the patient's progress, clinical findings, and discharge status (4)

Analyzing for Chart Deficiencies **available June 1**

1. Apply knowledge of medical and healthcare related terminology
2. Demonstrate the ability to recognize deficient data in a patient chart per facility guidelines.
3. Analyze the documentation in the health record to ensure it support the diagnosis and reflect the patient's progress, clinical findings and discharge status.
4. Utilize critical thinking skills to explain your personal opinion.

#### Pathophysiology and Pharmacology Review **available June 1**

1. Apply current knowledge of electronic health records and location of information.
2. Make use of the resources available in the EHR.
3. Explain the pathophysiology of identified problems, medical diagnosis and medical procedures.
4. Explain the indications, contraindications, adverse reactions, routes and doses of identified medications and treatments.
5. Demonstrate adequate interpretation of normal and abnormal vital signs.
6. Demonstrate adequate interpretation of normal and abnormal lab values.
7. Apply critical thinking skills.
8. Apply basic research skills as needed to answer activity questions.

#### **ePAS SERIES**

##### New Patient Registration A, B and C and Checking in a Patient

1. **Apply** current knowledge of electronic health records.
2. **Demonstrate** the ability to enter and verify patient information accurately.
3. **Communicate** effectively and professionally within the electronic health record.

##### New Patient Registration and Scheduling

1. **Apply** current knowledge of electronic health records.
2. **Demonstrate** the ability to enter and verify patient information accurately.
3. **Communicate** effectively and professionally within the electronic health record.
4. **Select** the appropriate date and time for an appointment electronically.
5. **Illustrate** the ability to schedule an appointment based on clinic guidelines

##### Scheduling a Follow-up Appointment

1. **Select** the appropriate date and time for an appointment using the EHR Scheduling system.
2. **Illustrate** the ability to schedule an appointment based on clinic guidelines.
3. **Apply** current knowledge of electronic health records and appropriate, accurate documentation.

#### **OUTPATIENT ENCOUNTER SERIES**

Outpatient Encounter available June 1

#### Editing Patient Information

1. **Apply** current knowledge of electronic health records.
2. **Demonstrate** the ability to enter and edit patient information accurately.
3. **Communicate** effectively and professionally within the electronic health record.

#### Documenting a Patient Phone Call

1. **Demonstrate** professional transcription skills when documenting in an Electronic Health Record (EHR).
2. **Document** accurately in the patient record.\*
3. **Structure, Organize, and Prioritize** interview data into a professional note in the patient's electronic health record.
4. **Analyze** communications in providing appropriate responses/feedback.\*
5. **Advocate** on behalf of patients.\*
6. **Apply** current knowledge of electronic health records and appropriate, accurate documentation.
7. **Demonstrate** telephone techniques\* (if completed in lab setting).

#### Updating a Patient Registration Insurance

1. **Apply** current knowledge of electronic health records.
2. **Demonstrate** the ability to enter and verify patient information accurately.
3. **Communicate** effectively and professionally within the electronic health record.

#### New Patient Registration, Exam and Billing

1. **Apply** current knowledge of electronic health records and appropriate, document patient care accurately.
2. **Perform** procedural and diagnostic coding, and work with the provider to achieve the maximum reimbursement.
3. **Apply** critical thinking skills in performing patient assessment and care.
4. **Apply** HIPAA rules regarding privacy.

#### Updating Health Information

1. **Demonstrate** effective communication.
2. **Demonstrate** feedback techniques to obtain patient information.

3. **Apply** critical thinking skills when interpreting patient information and clarifying statements.
4. **Apply** current knowledge of electronic health records and appropriate, accurate documentation.

#### Creating a Claim

1. **Perform** accounts receivable procedures to patient accounts including posting charges
2. **Complete** an insurance claim form

#### Posting Payments and Adjustments

1. **Perform** accounts receivable procedures to patient accounts including posting payments and adjustments.

### MANAGEMENT SERIES

#### Assessing Employee Productivity

1. **Apply** policies and procedures to ensure the accuracy and integrity of health data both internal and external to the health system (3)
2. **Utilize** tools and techniques to monitor, report, and improve processes (3)
3. **Report** staffing levels and productivity standards for health information functions (3)
4. **Perform** quality assessment including quality management, data quality, and identification of best practices for health information systems (4)
5. **Analyze** workflow processes and responsibilities to meet organizational needs (4)
6. **Evaluate** staffing levels and productivity, and provide feedback to staff regarding performance (5)

EHR Implementation **available June 1**

Introduction to Clinical Reminders **available June 1**

### INFORMATICS AND ANALYTICS SERIES

#### Classifications and Terminology

1. **Apply** diagnosis/procedure codes according to current guidelines (3)

2. **Identify** the functions and relationships between healthcare classification systems (3)
3. **Analyze** current regulations and established guidelines in clinical classification systems (4)
4. **Map** terminologies, vocabularies and classification systems (4)
5. **Evaluate** the accuracy of diagnostic and procedural coding (5)
6. **Evaluate, implement and manage** electronic applications/systems for clinical classification and coding (5)
7. **Evaluate** the accuracy of diagnostic and procedural coding (5)
8. **Interpret** terminologies, vocabularies and classification systems (5)

SNOMED CT **(available june 1)**

**DATA VISUALIZATION SERIES (available june 1)**

Orientation to Data Visualization

Practice with Data Visualization Tools

Level I Applied Data Visualization

Level II Applied Data Visualization

Clinical Reminder Data Visualization

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