

# **Part 1: Course Details**

**Division/Department requesting change: Health Professions/Health Information Management Program**

**Course developer name and contact information: Kathleen Walters, ext. 5734**

**Division Dean: Grant Matthews**

**Academic year (e.g., 2018-19) change will take effect: 2019-20**

**TYPE OF COURSE**

**Lower Division Collegiate**  **Professional/Technical** **Developmental, numbered below 100**

**CHANGES TO COURSE**

|  |  |  |
| --- | --- | --- |
| **Enter Current Course Information**  **(fill out this column completely)** | **Proposed Change type  (check all that apply)** | **Proposed Course Changes** |
| Course number: HIT 111 | **Course number** |  |
| Course title: Implement and Customize Electronic Health Records | **Course title** |  |
| Credits  \_3\_\_ Lecture  \_\_\_ Lecture/Lab  \_1\_\_ Lab  \_4\_\_ Total Credits | **Credit change** | \_4\_\_ Lecture  \_\_\_ Lecture/Lab  \_\_\_ Lab  \_4\_\_ Total Credits |
| Contact hours per week  \_3\_\_ Lecture  \_\_\_ Lecture/Lab  \_3\_\_ Lab  \_6\_\_ Total Contact Hours/Week | **Contact hours per week (see formula below)**  **1 lecture = 4 contact hour per week** | \_4\_\_ Lecture  \_\_\_ Lecture/Lab  \_\_\_ Lab  \_\_4\_ Total Contact Hours/Week |
| **Prerequisites (current)**  **HIT 107** | **Prerequisites** | **Prerequisites (proposed)**  **HIT 107** |
| **Placement test and code (**e.g., 4cpa score of 75-120; contact testing for codes) | **Prerequisite placement test/score** |  |
| **Co-requisites** | **Co-requisites** |  |
| **Grade option (letter or P/NP):** | Grade option (letter or P/NP) | **Grade option (proposed):** |
| **Copy/paste current course description.** If this course is repeatable for credit, please include a sentence in your description. E.g., “This course is repeatable for up to \_\_\_ credits.”  Pre-requisite: HIT107 with a grade of C or higher, or instructor consent. Through this course the student will learn basic methods for working with an Electronic Health Record system that satisfies ONC/CMS meaningful use criteria in a health care setting. Students will develop skills at customizing an EHR to meet the information needs and practices of various users in clinical settings. Offered online. | **Course description (300 characters). For examples, see** [Sample Course Descriptions](https://www.lanecc.edu/currsched/sample-course-descriptions)**.** | **Enter revised description (aim for 300-400 characters/approximately 60-70 words):**  Through this course the student will learn basic methods for assessing, selecting, and implementing an Electronic Health Record system that satisfies ONC/CMS meaningful use criteria in a health care setting. The student will define the underlying healthcare goals that drive meaningful use criteria and demonstrate the implementation of criteria for using and maintaining certified electronic health records (EHRs).Students will also work in a simulated EHR environment and develop skills at customizing an EHR to meet the information needs and practices of various users in clinical settings. |
| **Copy/paste current learning outcomes:** | **Course learning outcomes, Core Learning Outcomes, and assessments** | **Enter new outcomes, assessments in chart below** |
| 1. Describe the process of migration to an electronic health record (EHR) including organizational strategy, planning, analysis of EHR options, decision-making techniques, training, and implementation strategies.   2. Understand the national strategy for the widespread adoption of EHRs throughout healthcare in the US, including the guiding principles and the meaningful use criteria.  3. Discuss the importance and use of clinical decision support systems for clinical and administrative use.  4. Define vendor requirements for a specific case study.   1. Write an RFP for a case study.   6. Describe a framework to use for evaluating and making a selection from contending vendor systems.  7. Analyze the need for specific training and suggest appropriate training solutions.  8. Demonstrate an understanding of implementation strategies and pitfalls.  9.Recognize and describe different implementation issues for different health care settings  10.ConductPost Implementation Evaluation, and  11. Create a plan for maintenance of the EHR. |  | 1. Describe the process of migration to an electronic health record (EHR) including organizational strategy, planning, analysis of EHR options, decision-making techniques, training, and implementation strategies.  2. Understand the national strategy for adoption of EHRs throughout healthcare in the US, and meaningful use criteria.  3. Discuss the importance and use of clinical decision support systems for clinical and administrative use.  4.Define vendor requirements for an EHR system  5. Demonstrate an understanding of implementation strategies and pitfalls.  6.Recognize and describe different implementation issues for different health care settings  7.Analyze the documentation in the health record to ensure it support the diagnosis & reflect the patient’s progress, clinical findings, & discharge status  8.Verify the documentation in the health record is timely, complete & accurate  9.Identify complete health record according to organizational policies, external regulations, & standards  10.Apply policies/procedures to ensure accuracy of health data governance  11.Identify & use secondary data sources  12.Utilize software in the completion of HIM processes  13.Utilize health information to support enterprise-wide decision support for strategic planning  14.Explain analytics and decision support  15.Analyze data to identify trends  16.Explain common research methodologies and why they are used in healthcare  17.Apply policies and procedures to ensure the accuracy and integrity of health data both internal and external to the health care system |

# **Part 2: Rationale, Equity, Library Resources, Course Overlap**

**RATIONALE: Describe the rationale for this course revision**

**With the availability of affordable multiple online EHR’s available via the internet, Lane CC lab time is not needed and is actually a detriment in providing distant learning for HIM program students.**

**CURRICULUM EQUITY STATEMENT** Please do not copy/paste the [COPPS equity statement](https://www.lanecc.edu/copps/documents/curriculum-equity). Reflect how your course supports equity. **To promote an environment where all learners are encouraged to develop their full potential, this course will support Lane’s Curriculum Equity policy in the following way(s):**

In practice, the course hopes to provide a means of introducing the field of health information technology education as a possible career path to students who may not have the same opportunities as other students. Designed to introduce students to teaching, culturally responsive teaching practices will be modeled and interwoven throughout each major theme of the course. In a culturally diverse classroom, students have the opportunity to help to create a classroom community of learners. Students will begin by addressing and building upon their own cultures. As they confront their own biases they will be given the opportunity to interact with colleagues and authors who may have a different background from their own. Through readings, software and online access, students will gain access to a plethora of diverse learning opportunities. A major outcome of the course involves the creation of a reciprocal relationship between the instructor and the students in class, so that the students, as future health information technology/management professionals themselves will be better equipped to work with others from diverse populations

**LIBRARY CONSULTATION Please contact your liaison librarian to schedule a 30+ minute individualized instructional consultation and collaboration session. In addition to your specific course-related questions, your librarian will be prepared to share:**

* **Library resources and services that support your teaching and student learning needs**
* **OER (Open Educational Resources) options that align with your program and course curriculum**
* **Strategies for integrating the development of information literacy skills into course content and/or assignments**

Please allow one week for the librarian to prepare for your consultation. If you are not sure who your liaison librarian is, you can either look it up on the [Library’s website](https://library.lanecc.edu/services/liaison) or call the Library Reference Desk at 463-5355. (Librarian signature required above.)

**COURSE OVERLAP Indicate any topic/content overlap with other courses. How will this course's topics and content be differentiated?** If there is overlap, faculty of overlapping courses must **agree on the extent of overlap and** **include a rationale** explaining its necessity. The dean of the division in which overlap occurs must sign their approval (see p.1).

|  |  |  |  |
| --- | --- | --- | --- |
| Division | Course Number / Title | Rationale | Dean of overlap course (name) |
|  |  |  |  |
|  |  |  |  |

**CAREER/TECHNICAL COURSE TRACKING (required only for career/technical courses)**

Career/Technical courses are tracked within programs for purposes of Carl Perkins funding and budgetary planning. Indicate all degree or certificate programs for which this course will be required.

|  |  |
| --- | --- |
| **Programs in which course will be required** | **Division** |
| AAS HIM (Health Information Management) | Health Professions |
| HIM one year certificate | Health Professions |

# **Part 3: Outcomes, Assessments, and Topics**

**List course outcomes, Core Learning Outcomes (CLOs), and Assessments** The information in this section should be used to create your course outline and syllabus. How are Lane’s Core Learning Outcomes emphasized and measured or demonstrated through course assessments? Please indicate which [Core Learning Outcomes and Dimensions](https://www.lanecc.edu/assessment/core-learning-outcomes) are linked to your course outcomes. Need help? Contact Tammy Salman, Faculty Coordinator, Assessment and Curriculum Development or Sarah Lushia, Core Learning Outcomes Coordinator.

|  |  |  |
| --- | --- | --- |
| [**Core Learning Outcomes and Dimension**s](https://www.lanecc.edu/assessment/core-learning-outcomes) **You do not need a CLO for each course outcome**.  **EXAMPLE** CLO 1.2:Determine information need, find and cite relevant information | **COURSE-LEVEL LEARNING OUTCOMES** (course outcomes)  [See this page for guidance on writing outcomes](https://www.lanecc.edu/assessment/developing-and-refining-learning-outcomes)  **EXAMPLE**  Upon successful completion of this course, students will be able to:  1. Describe and explain general plant structure and function in relation to plant growth and development.  2. Demonstrate knowledge of horticultural principles in the cultivation of plants. | **ASSESSMENTS** Include specific assignments you will use to measure/observe student attainment of outcomes. For assessment ideas see [Authentic Tasks](http://jfmueller.faculty.noctrl.edu/toolbox/tasks.htm) |
| **CLO 1.1** | 1. Describe the process of migration to an electronic health record (EHR) including organizational strategy, planning, analysis of EHR options, decision-making techniques, training, and implementation strategies. | Software application activities, chapter review exercises, quizzes, case studies and forums |
| CLO 1.2 | 2. Understand the national strategy for adoption of EHRs throughout healthcare in the US, and meaningful use criteria. | Software application activities, chapter review exercises, quizzes, case studies and forums |
| CLO 1.3 | 3. Discuss the importance and use of clinical decision support systems for clinical and administrative use. | Software application activities, chapter review exercises, quizzes, case studies and forums |
| CLO 1.4 | 4.Define vendor requirements for an EHR system | Software application activities, chapter review exercises, quizzes, case studies and forums |
| CLO 1.5 | 5. Demonstrate an understanding of implementation strategies and pitfalls. | Software application activities, chapter review exercises, quizzes, case studies and forums |
| CLO 1.6 | 6.Recognize and describe different implementation issues for different health care settings | Software application activities, chapter review exercises, quizzes, case studies and forums |
| CLO 1.7 | 7.Analyze the documentation in the health record to ensure it support the diagnosis & reflect the patient’s progress, clinical findings, & discharge status | Software application activities, chapter review exercises, quizzes, case studies and forums |
| CLO 1.8 | 8.Verify the documentation in the health record is timely, complete & accurate | Software application activities, chapter review exercises, quizzes, case studies and forums |
| CLO 1.9 | 9.Identify complete health record according to organizational policies, external regulations, & standards | Software application activities, chapter review exercises, quizzes, case studies and forums |
| CLO 1.10 | 10.Apply policies/procedures to ensure accuracy of health data governance | Software application activities, chapter review exercises, quizzes, case studies and forums |
| CLO 1.11 | 11.Identify & use secondary data sources | Software application activities, chapter review exercises, quizzes, case studies and forums |
| CLO 1.12 | 12.Utilize software in the completion of HIM processes | Software application activities, chapter review exercises, quizzes, case studies and forums |
| CLO 1.13 | 13.Utilize health information to support enterprise-wide decision support for strategic planning | Software application activities, chapter review exercises, quizzes, case studies and forums |
| CLO 1.14 | 14.Explain analytics and decision support | Software application activities, chapter review exercises, quizzes, case studies and forums |
| CLO 1.15 | 15.Analyze data to identify trends | Software application activities, chapter review exercises, quizzes, case studies and forums |
| CLO 1.16 | 16.Explain common research methodologies and why they are used in healthcare | Software application activities, chapter review exercises, quizzes, case studies and forums |
| CLO 1.17 | 17.Apply policies and procedures to ensure the accuracy and integrity of health data both internal and external to the health care system | Software application activities, chapter review exercises, quizzes, case studies and forums |

**COMPETENCIES AND TOPICS COVERED (include in course outline)**

Example: [Course Outline Sample](https://www.lanecc.edu/copps/course-outline-sample) (from COPPS)

**Course Content/Outline:**

**Unit 1: Meaningful Use Review**

*Description:*

Define healthcare goals for meaningful use and understand the essential components of meaningful use including

1. Use of certified EHR technology,
2. Electronic exchange of health data, and
3. Using the EHR to submit clinical quality measures.

*Objectives:*

At the end of this unit the student should be able to

1. Describe the underlying healthcare goals to which all meaningful use criteria map.
2. Review and understand the criteria for Stage 1 and Stage 2 of meaningful use for eligible professionals and eligible hospitals.
3. Define the process and purpose of EHR certification and the work of other certifying bodies.
4. Describe how the exchange of electronic health data relates to meaningful use.
5. Understand how clinical quality measures relate to meaningful use.
6. Navigate Neehr Perfect's EHR learning essential skills: using filters, setting preferences and more detailed aspects of the electronic chart.

**Unit 2: Implementation of an EHR-Commercial EHR Vendor**

*Description:*

Describes the essential processes involved in implementing an EHR which includes planning, assessing, selecting, implementing, customizing and maintaining the EHR system. Specific topics include:

1. EHR Life Cycle (user needs assessment, proto-type development, system selection, system implementation, customization for maximum benefits and maintenance).
2. Choosing the EHR system steering committee.
3. Developing and using criteria to select a vendor.
4. Development of timelines for choosing and implementing an EHR.
5. Developing RFIs and RFPs.
6. Analyzing vendor systems in relation to RFP criteria.
7. Essential discussion points when negotiating an EHR contract with a vendor.

*Objectives:*

At the end of this unit the student should be able to

1. Describe the process of initial planning, including identification of stakeholders, champions, management and implementation teams, and determining appropriate members for a steering committee
2. Develop a timeline for choosing and implementing an electronic health record
3. Develop functional requirements, including a workflow analysis and a gap analysis
4. Develop and apply criteria for selecting an appropriate vendor for the electronic health record including: how to generate an RFI/RFP and interface requirements
5. Select an appropriate system, including utilizing an appropriate ranking model
6. Compare and contrast EHR solutions (e.g. locally hosted versus cloud solutions)
7. Develop an understanding of how to negotiate a contract, develop a training plan and plan for the installation.
8. Navigate Neehr Perfect's Commercial EHR Vendor Activity.
9. Determine appropriate members for an implementation leadership team and/ or project management team when implementing an electronic health record,
10. Use information collection and analysis tools such as surveys and data flow diagrams to analyze the information needs and processes of the organization,
11. Develop and apply criteria for writing an RFP and for selecting an appropriate EHR system,
12. Identify the essential components to negotiate a contract with a vendor.

**Unit 3: Needs Assessment, Clinical Decision Support (CDS) and Quality Improvement Utilizing the EHR**

*Description:*

The Request for Information (RFI) and needs assessment are defined to purchase an EHR. Clinical decision support (CDS) is defined and learning how the EHR serves as a CDS tool. Best practice for quality improvement will be introduced.

*Objectives:*

* Define and discuss clinical decision support
* Define the assessment stage of EHR implementation
* Discuss the value of these EHR functions as clinical decision support tools
* Explore the steps necessary for a needs assessment: Gap Analysis, Barrier Identification, Prioritization, and Summarize Results.
* Demonstrate the ability to retrieve and interpret data from the patient chart.
* Describe Alerts/Notifications in an  EHR environment
* Analyze the implementation of the EHR in the quality improvement process.
* Produce quality assessment including quality management, data quality, and identification of best practices for health information systems

**Unit 4: Clinical Workflow and Tracer Methodology**

*Description:*

Understand how workflow analysis as a key tool to help understand the change(s) that will take place as an EHR is implemented or prior to go live. The Joint Commission’s on-site survey process that involves an evaluation method in which surveyors select a patient and use that individual’s record as a roadmap to move through an organization to assess and evaluate the organization’s compliance with selected TJC standards and requirements is introduced.

*Objectives:*

At the end of the unit the student will be able to

1. Analyze workflow as a key tool to help understand the change(s) that will take place as an EHR is implemented or prior to go live
2. Apply current knowledge of electronic health records and location of information.
3. Demonstrate the ability to retrieve and interpret data from the patient chart as it pertains to TJC’s survey process.
4. Analyze a patient’s chart and relate the information found to TJC’s Tracer Methodology.
5. Identify where information is uncertain or missing and employ appropriate additional information gathering techniques
6. Develop the concept of clinical workflows
7. Describe the importance of clinical workflows in the functioning of EHRs
8. Perform a basic work flow analysis
9. Describe what clinical workflows are and the purpose they serve to implementing an EHR

**Unit 5: Planning Stage of EHR Implementation and Structured and Unstructured Data**

*Description:*

This unit provides a good foundation to understanding structured and unstructured data, coding and meaningful use. Meetings are an important activity in the planning stage of EHR implementation. Ineffective meetings waste time and resources and, most importantly, often produce poor decisions and other outcomes. Students will identify hat are the characteristics of organized and productive meetings? Consider characteristics of a good meeting: before, during and after. Students will also identify the connection between structured data, unstructured data and interoperability.

*Objectives:*

At the end of this unit the student should be able to

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. Refine and research the steps in selecting and implementing an EHR system
5. Appreciate the importance of project planning, workflow analysis and optimization, and user training
6. Understand the common pitfall in system selection and implementation that could lead to project failure
7. Apply current knowledge of electronic health records and their design.
8. Demonstrate the ability to identify discrepancies between supporting documentation and coded data.
9. Identify the difference between structured and unstructured data in the EHR.
10. Identify the connection between structured data, unstructured data and interoperability

**Unit 6: Selection of an EHR and Implementing Clinical Decision Support**

*Description:*

* This unit will introduce and demonstrate Clinical Decision Support (CDS) by simulating parts of the CDS Starter Kit: Smoking Cessation in the Neehr Perfect educational EHR. In completing the activity, the student will develop their own clinical decision support plan. The concepts involved in selection of an EHR will be introduced: What are you buying? Vendor state of affairs, Interoperability, Requirements analysis, Going to market with request for proposal, and key differentiators among EHR products.

*Objectives:*

At the end of this unit the student will be able to

1. Compare and contrast COTS (Commercial Off The Shelf) and In-House/Homegrown systems and describe their relative advantages and disadvantages
2. Verify system components and compliance with ONC certification
3. Apply the basic concepts of Clinical Decision Support in the EHR.
4. Demonstrate data entry steps that support meaningful use and clinical decision support.
5. Apply critical thinking skills to identify a need for clinical decision support.

**Unit 7: Request for Proposal and Clinical Decision Through Orders**

*Description:*

This unit covers a request for information(RFI) and request for proposal (RFP) as a method of collating information from different suppliers prior to formally sourcing products or services. It is normally used where there are many potential suppliers and not enough information is known about them. It is a structured process for choosing and implementing an electronic health record. Students will learn the importance of order checks and clinical reminders in relation to clinical decision support.

*Objective:*

At the end of this unit the student will be able to

1. Describe common and distinguishing features of common EHR systems
2. Demonstrate concept knowledge of the request for proposal (RFP) process
3. Discuss stakeholders’ involvement, and their roles in selecting an EHR
4. Review the costs when selecting an EHR: the capital, the maintenance and staffing costs.
5. Identify the importance of clinical decision support in the EHR.
6. Evaluate the purpose of order checks in the EHR.
7. Explain the importance of order checks and clinical reminders in relation to clinical decision support

**Unit 8: EHR Functionalities and Interoperability, Personal Health Records and Chart Deficiencies**

*Description:*

The student will review the data in the assigned patient chart in detail, and, using critical thinking skills, list what is present, deficient, incorrect or incomplete in the patient chart. The concept of EHR interoperability will be introduced.

*Objectives:*

At the end of this unit the student will be able to

1. Describe system and database architectures used in commercial EHRs and the need for EHRs to exchange information Pharmacy, Laboratory and other systems.
2. Briefly discuss security, privacy, auditing and performance monitoring.
3. Define what is meant by interoperability;
4. Describe commercial EHR vendor strategies for terminology and knowledge management, and how these impact interoperability;
5. Describe how these concepts facilitate the use of personal health records.
6. Describe five EHR functionalities.
7. Apply medical and healthcare terminology.
8. Demonstrate the ability to navigate and search the patient chart.
9. Demonstrate the ability to recognize data in the chart and what is missing or incomplete.
10. Apply critical thinking skills when unsure about appropriate documentation of the deficiency.

**Unit 9 Clinical Reminders and Privacy and Security**

*Description:*

This unit describes the Clinical Reminder system that allows the care team to track and improve preventive healthcare and disease treatment for patients and ensure that timely clinical interventions are initiated. Clinical Reminders perform automatic chart audits and schedule events based on pre-programmed criteria. Students will also learn what additional information is needed to clarify what problems may exist and what changes may be needed in terms of shared data between the institutions.

*Objectives:*

At the end of this unit the student will be able to

1. Compare and contrast the concepts of privacy and security and the regulatory frameworks for an EHR (breaches)
2. Describe the concepts and requirements for risk management
3. Describe authentication, authorization and accounting
4. Describe passwords and multi-factor authentication and their associated issues
5. Describe issues with portable devices
6. Describe elements of disaster preparedness and disaster recovery
7. Describe issues of physical security and malware concepts
8. Use appropriate resources in establishing and implementing security and privacy-related policies and procedures
9. Apply common procedures for securing sensitive health information
10. Distinguish among common concepts related to health informatics: privacy, confidentiality, security, covered entity and data integrity

**Unit 10: Go Live, Health Information Exchange (HIE) Data infrastructure and Uniform Hospital Date Discharge Set (UHDDS)**

*Description:*

This unit defines data infrastructure concepts including data architectures, data sets, repositories, data dictionaries, implementing data standards (e.g., HL7) , and data types- structured and unstructured . The student will be using the electronic health record of an assigned inpatient chart to gather data needed to answer critical thinking question related to the UHDDS (Uniform Hospital Data Discharge Set).

*Objectives:*

At the end of this unit the student should be able to

1. Compare and contrast the concepts of privacy and security and the regulatory frameworks for an EHR (breaches)
2. Describe the concepts and requirements for risk management
3. Describe authentication, authorization and accounting
4. Describe passwords and multi-factor authentication and their associated issues
5. Describe issues with portable devices
6. Describe elements of disaster preparedness and disaster recovery
7. Describe issues of physical security and malware concepts
8. Use appropriate resources in establishing and implementing security and privacy-related policies and procedures
9. Apply common procedures for securing sensitive health information
10. Distinguish among common concepts related to health informatics: privacy, confidentiality, security, covered entity and data integrity

# **Part 4: Financial and Student Impact**

**Financial Impact Analysis**

Describe the financial impact of the revised course, including: Instructional costs; workload (both FT and PT faculty and classified staff); physical space requirements (e.g., labs); additional equipment needs; additional fees; any cost reductions

There are no additional faculty, equipment, fees, etc. necessary.

**Student Impact Analysis**

Describe the revised course’s potential impact on students, including: Effect of changes on program requirements, articulations, cost, credit load, avoiding excess credits in transfer, financial aid credit limits, completion, and enrollments; determination of how new/revised courses transfer to four-year schools (please consult with your advisor).

With the advent of a fully online EHR this course is taught 100% by the instructor with no “lab” component

# **Part 5: Degree Requirements Applications (if applicable)**

If applying for any of the following, check the appropriate boxes and include your completed degree requirements forms with this course proposal. Go to the [Curriculum Office website](https://www.lanecc.edu/currsched/curriculum-forms) to download these forms.

AAOT (Career Technical courses not eligible)

Arts & Letters

Cultural Literacy

Information Literacy

Mathematics

Science /Computer Science

Social Sciences

Speech/Oral Communication

Health/Wellness/Fitness (all degrees)

Human Relations designation (for AAS degrees and certificates)

Sustainability course status (optional)

**College Approval (before signing, please see Curriculum Committee recommendations for this course in the committee’s** [**meeting minutes**](https://www.lanecc.edu/currsched/agendas)**)**

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Executive Dean for Academic Affairs Date

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Vice President for Academic & Student Affairs Date