

**Assurance of Student Learning Report
2022-2023**

College of Health and Human

Public Health

Services Health Informatics Certificate- 1740

Jan Hunt-Shepherd

Is this an online program? Yes No

Please make sure the Program Learning Outcomes listed match those in CourseLeaf . Indicate verification here
 Yes, they match! (If they don't match, explain on this page under **Assessment Cycle**)

Use this page to list learning outcomes, measurements, and summarize results for your program. Detailed information must be completed in the subsequent pages.

Program Student Learning Outcome 1: Apply information technology to meet health care needs

Instrument 1

Direct: Development of pivot table in EHR Go Clinical Reminder Data Visualization V Assignment

Instrument 2

Direct: Examination of data interoperability in Health Information Exchange Assignment

Instrument 3

Direct: Demonstration of ability to navigate an electronic health record system in Introductory Evaluation Assignment

Based on your results, check whether the program met the goal Program Student Learning Outcome 1.

Met

Not Met

Program Student Learning Outcome 2: Explore database management and analytics to manage health care clinical pathways, clinical outcomes, quality initiatives, and departmental and administrative workflow

Instrument 1

Direct: Analysis of health data to identify trends in EHR Go Clinical Reminder Data Visualization V assignment

Instrument 2

Direct: Recommendation of antibiotics based on analysis of clinical outcomes in EHR Go Orientation to Data Analytics I assignment

Instrument 3

Program Student Learning Outcome 3: Recommend privacy/security strategies for health information

Instrument 1

Direct: Analysis of Privacy, Security, Confidentiality and Cybersecurity in the EHR.

Instrument 2

Based on your results, check whether the program met the goal Program Student Learning Outcome 2.

Met

Not Met

Assessment Cycle Plan:

Results from this assessment indicate that the mean scores for all SLOs have been met and the certificate program has reached and/or exceeded the self-reported assessment goals. Results are similar to the ASL for 2021-2022. In the ASL for 2021-2022, there was a plan to add a third Program Student Learning Outcome for 2022-2023. This was completed with the addition of the Program Student Learning Outcome 3: Recommend privacy/security strategies for health information. This outcome will be added to CourseLeaf.

The certificate is currently in the Undergraduate Curriculum review process. If the proposed changes are passed, the certificate courses will change for Fall 2023. The changes are occurring due to the discontinuation of one course and changes made in the Business Data Analytics Program. In addition, CIT courses are now restricted to CIT students, so the CIT course is no longer an option in the certificate. The Program Student Learning Outcomes, nor the Instrument Measures, are affected by the proposed changes.

There are two planned additions of Instrument Measures in the ASL for 2023-20224. A new Instrument Measure from HIM 430 will be added to the Program Student Learning Outcome 2 and another Instrument Measure will be added to the Program Student Learning Outcome 3. Other additional or revision to Measurement Instruments will also be considered.

Program Student Learning Outcome 1

Program Student Learning Outcome	Apply information technology to meet health care needs- Students should be able to demonstrate ability to utilize information technology to make appropriate decisions in managing data related to health care needs		
Measurement Instrument 1	Direct measure of Program Student Learning Outcome: Students were required in the HIM 330 (Electronic Health Record Systems) course to generate a pivot table for “Colorectal Screen Status” in the EHR Go Clinical Reminder Data Visualization V assignment. This measure aligns with the learning outcome by requiring the student to show competency in creating a pivot table which shows the ability to apply information technology. No “rubric” exists. The student either creates a pivot table or does not.		
Criteria for Student Success	Students should at the end of the assignment correctly generate a pivot table of healthcare data. Student must provide a copy of the pivot table created. Student receives 100% credit for providing this correct pivot table.		
Program Success Target for this Measurement	80% of students can correctly create a pivot table receiving a score of 100%.	Percent of Program Achieving Target	96% (27/28) were able to correctly create a pivot table receiving a score of 100%.
Methods	Direct: (N=28) Assignments were collected from students. A portion of EHR Go Clinical Reminder Data Visualization V Assignment required students to generate a specific pivot table of healthcare data. This assignment element was graded for each student. Grading was based on whether the students were successful with creating the pivot table. In this portion of the assignment, the students receive a score of 100% for correctly completing the pivot table. A score of 0 is assigned if the student cannot correctly create a pivot table. Results of measure are accessed by faculty/program director from Blackboard. 100% of the student submissions are reported.		
Measurement Instrument 2	Direct measure of Program Student Learning Outcome: Students were required in HIM 330 (Electronic Health Record Systems) course assignment “Health Information Exchange” to evaluate an electronic health record for exchange of data between two organizations. This measure aligns with the learning outcome by requiring the student to show competency in evaluating the exchange of data which shows the ability to apply information technology. No rubric exists. Each question in the assignment is either correct or incorrect.		
Criteria for Student Success	Students should at the end of the assignment receive a passing grade of 70% or higher for this assignment.		
Program Success Target for this Measurement	80% of students completing assignment will receive a score of 70% or above.	Percent of Program Achieving Target	79.3% (23/29) students completing assignment received a score of 70% or above.
Methods	Direct measure of Program Student Learning Outcome: (N=29) Assignments were collected from all student submissions. The assignment was graded for all elements contained within the assignment. The assessment involves a review and audit of the health information exchange (HIE) that exists between two service locations in a continuity of care record. Results of measure are accessed by program director from Blackboard. 100% of the students are reported.		

Measurement Instrument 3	Direct measure of Program Student Learning Outcome: Students were required in HIM 330 (Electronic Health Record Systems) course assignment 3 “Introductory Evaluation” to demonstrate competency in utilizing an electronic health record system. This measure aligns with the learning outcome by requiring the student to show competency in utilizing an electronic health record system which shows the ability to apply information technology. No rubric exists. Each question in the assignment is either correct or incorrect.		
Criteria for Student Success	Students should at the end of the assignments receive a passing grade of 70% or higher for this assignment.		
Program Success Target for this Measurement	80% of students completing assignment will receive a score of 70% or above.	Percent of Program Achieving Target	100% (29/29) students completing assignment received a score of 70% or above.
Methods	Direct measure of Program Student Learning Outcome: (N=29) Assignments were collected from student submissions. The assignment was graded for all elements contained within the assignment. This assessment requires students to demonstrate the necessary skills and understanding to access an EHR system and identify and interpret patient data. Results of measure are accessed by program director from Blackboard. 100% of the students are reported.		
Based on your results, highlight whether the program met the goal Program Student Learning Outcome 1.		<input checked="" type="checkbox"/> Met	<input type="checkbox"/> Not Met
Results, conclusion, and Plans for Next Assessment Cycle (Describe what worked, what didn't, and plan going forward)			
Results: The program student learning outcome was met with all three Measurement Instruments also being met.			
Conclusions: Measurement Instrument 2 was .7% (79.3% actual with a target of 80%) below target, the difference is not enough to warrant concern at this time.			
Plans for Next Assessment cycle: Measurement Instrument I will be modified to require Pivot Tables to be provided in Excel. This will allow for viewing of any potential errors in the pivot table in the future. No action is needed for Instrument 2 or 3. Continue to monitor outcomes in 2023-2024 and evaluate if different measurement instruments or outcomes might be appropriate if program continues to meet all goals set. The instrument measurement data is reviewed in Blackboard by the HI Certificate Coordinator. This outcome will be reassessed at the end of the school year.			

Program Student Learning Outcome 2			
Program Student Learning Outcome	Explore database management and analytics to manage health care clinical pathways, clinical outcomes, quality initiatives, and departmental and administrative workflow. Students should be able to achieve a level of competence in this element to be able to successfully work in a health care setting in analyzing health care data to promote clinical and administrative functions.		
Measurement Instrument 1	Students were required in the EHR Go Clinical Reminder Data Visualization V assignment to analyze a report “Clinical Reminder Data” and a pivot table to determine how many patients were overdue for colorectal cancer screening. This measure aligns with the learning outcome by requiring the student to show competency in utilizing databases and analytics to support decision making and healthcare functions. No “rubric” exists. The student either answers the question correctly or incorrectly.		
Criteria for Student Success	Students should at the end of the assignment be able to correctly determine how many patients were overdue for colorectal cancer screening. Students had to correctly identify the total number of patients overdue for a colorectal cancer screening. A grade of 100% should be achieved on the question.		
Program Success Target for this Measurement	80% students completing assignment will receive a score of 100% on the question	Percent of Program Achieving Target	96% (27/28) students completing assignment received a score of 100% on the question.

Methods	Direct: (N=28) Assignments were collected from students. The specific element from the EHR Go Clinical Reminder Data Visualization V Assignment for correctly identifying the total number of patients overdue for a colorectal cancer screening was graded for accuracy for each student. Results of measure are accessed by program director from Blackboard. 100% of the student submissions are reported.		
Measurement Instrument 2	Students were required in the EHR Go Orientation to Data Analytics I assignment to recommend antibiotics for urine-based E. Coli infection based on analysis of those most effective. This measure aligns with the learning outcome by requiring the student to show competency in utilizing analytics to make appropriate decisions to support the healthcare facility. The student either answers the question correctly or incorrectly.		
Criteria for Student Success	Students should at the end of the assignment be able to appropriately recommend antibiotics for urine-based E. Coli infection based on analysis of those most effective in certain situations. A grade of 100% should be achieved.		
Program Success Target for this Measurement	80% students completing assignment will receive a score of 100% on the question	Percent of Program Achieving Target	93% (28/30) students completing assignment received a score of 100% on the question.
Methods	Direct: (N=30) Assignments were collected from students. The specific element from the EHR Go Orientation to Data Analytics I Assignment for recommending appropriate antibiotics for urine-based E. Coli infection based on analysis of those most effective in certain situations was graded for appropriateness for each student. Results of measure are accessed by program director from Blackboard. 100% of the students are reported.		
Based on your results, circle or highlight whether the program met the goal Program Student Learning Outcome 2.			<input checked="" type="checkbox"/> Met <input type="checkbox"/> Not Met
Results, conclusion, and Plans for Next Assessment Cycle (Describe what worked, what didn't, and plan going forward)			
Results: The program student learning outcome was met with both Measurement Instruments also being met.			
Conclusions: Both Measurement Instruments 1 and 2 are appropriate to monitor for meeting the Program Student Learning Outcome. There have been no changes in teaching methods, There were no major changes in instructional materials, admission process, advisement process, program or course changes in 2022-2023.			
Plans for Next Assessment cycle: A new Measurement Instrument is planned to be added to the ASL for 2023-2024 from HIM 430. Continue to monitor outcomes in 2023-2024 and evaluate if different measurement instruments or outcomes might be appropriate if program continues to meet all goals set. The instrument measurement data is reviewed in Blackboard by the HI Certificate Coordinator. This outcome will be reassessed at the end of the school year.			
Program Student Learning Outcome 3			
Program Student Learning Outcome	Recommend privacy/security strategies for health information; Students should be able to achieve Bloom's Taxonomic level 5 (Evaluation) related to evaluating the legal processes in health information/informatics to achieve a level of competence in this element to be able to successfully work in a health care setting in meeting privacy and security requirements.		
Measurement Instrument 1	Direct measure of Program Student Learning Outcome: Students in the HIM 330 (Electronic Health Records) course were given a case study in an assignment to analyze the privacy, security, confidentiality and cybersecurity in the EHR. This measure aligns with the learning outcome by requiring the student to show competency in understanding and applying information use, privacy, and security strategies. Achievement at this level of competence promotes a certificate graduate's ability to successfully work in a health care setting in meeting privacy/security strategy requirements.		
Criteria for Student Success	Students should at the end of the project score a minimum of 14 out of 20 points (70%) for accurately assessing the case study and applying best practices in privacy and security.		

Program Success Target for this Measurement	80% will receive 70% or higher on case study	Percent of Program Achieving Target	100% received 70% or higher on case study
Methods	(N=31 students) Written project submissions were graded based on ability to use critical thinking skills to apply appropriate best practices in privacy. Students were expected to include evidence of appropriate analysis of the information use, privacy, and security of health information in a health care facility. Results of measure are accessed by program director from Blackboard. 100% of the students completing the assignment are reported.		
Based on your results, circle or highlight whether the program met the goal Program Student Learning Outcome 2.			<input checked="" type="checkbox"/> Met
Results, conclusion, and Plans for Next Assessment Cycle (Describe what worked, what didn't, and plan going forward)			
<p>Results: The program student learning outcome was met with all both Measurement Instruments also being met.</p> <p>Conclusions: This learning outcome is assessed due to the continuing need to prepare certificate students to meet the market demands for protecting patient privacy and security of information. The current learning outcome and measurement instruments are appropriate for continuation, though an additional Measurement Instrument is planned to be added for 2023-2024. There were no major changes in instructional materials, admission process, advisement process, program or course changes in 2022-2023.</p> <p>Plans for Next Assessment cycle: A new Measurement Instrument is planned to be added to the ASL for 2023-2024.</p> <p>Continue to monitor outcomes in 2023-2024 and evaluate if different measurement instruments might be appropriate if program continues to meet all goals set. The instrument measurement data is reviewed in Blackboard by the HI Certificate Coordinator. This outcome will be reassessed at the end of the school year.</p>			

CURRICULUM MAP TEMPLATE

Program name:	Health Informatics Certificate
Department:	Public Health
College:	College of Health and Human Services
Contact person:	Jan Hunt-Shepherd
Email:	jan.hunt-shepherd@wku.edu

KEY:

I = Introduced

R = Reinforced/Developed

M = Mastered

A = Assessed

			Learning Outcomes					
			LO1:	LO2:	LO3:	LO4:	LO5	LO6
			Utilize an education electronic health record system	Apply information technology to meet health care needs	Improve health care delivery by understanding basic health information technology	Articulate health technology privacy and security issues, threats, and solutions	Demonstrate knowledge of functionality of health information technology	Explore database management and analytics in order to manage health care clinical pathways, clinical outcomes, quality initiatives, and departmental
Course Subject	Numb.	Course Title						
either CIS	141	Analytics and Technology		I	I		I	I
or CS	145	Introduction to Computing						
CS	157	Information Security		I	I/R	I/R	I	
CIS	243	Principles of Mgmt of Info Systems		R	R			R
either BDAN	330	Structured Data Analysis						
or CIS	350	Database Administration		R	R		R	R/M
HIM	330	Electronic Health Records	I/R/M/A	R/M/A	R/M/A	M/A	M/A	M/A
HIM	430	Health Data Management & Analysis		M/A	M/A		M/A	M/A

Supporting Body of Knowledge (Prerequisites or Evidence of Knowledge)

Introductory Health Professions Course: HIM 100, DH 100, CD 280, HCA 340, Other health care intro class as approved by HI Certificate Advisor

NOTE: All certificate objectives specifically reference health. While the computer courses are not specific to healthcare, they are essential for students learning computer technology in order to apply that knowledge once they take the HIM courses.