

Organizational Area	Summary Results	2017-2018 Academic Year Data or 2017 Calendar Year Data - Action Plan Summary Results																																																						
Indiana University System AMS » Indiana University: Kokomo » Academic Affairs » School of Sciences <b>Informatics</b>	<p><b>Overall Statistics</b></p> <ul style="list-style-type: none"> <li>• <b>17%</b> (2/12) outcomes were included</li> <li>• <b>100%</b> (2/2) of outcomes included have at least one measure specified</li> <li>• <b>100%</b> (2/2) of outcomes included have measures with findings specified</li> </ul> <table border="1" data-bbox="499 488 1493 862"> <thead> <tr> <th colspan="2">2 Total Measures (Includes measures that do not have findings)</th> <th colspan="2">2 Total Measures with Findings</th> </tr> <tr> <th>Measure Type/Method</th> <th>Measure Level</th> <th colspan="2">Acceptable Target Achievement</th> </tr> </thead> <tbody> <tr> <td>Student Artifact   0 (0%)</td> <td>Course   2 (100%)</td> <td>Not Met   0 (0%)</td> <td rowspan="5"> <table border="1"> <thead> <tr> <th colspan="2">2 Total Actions with Status Report</th> </tr> <tr> <th colspan="2">Current Status</th> </tr> </thead> <tbody> <tr> <td>Not started</td> <td>0 (0%)</td> </tr> <tr> <td>In Progress</td> <td>0 (0%)</td> </tr> <tr> <td>Completed</td> <td>2 (100%)</td> </tr> <tr> <td>Not Implemented</td> <td>0 (0%)</td> </tr> </tbody> </table> </td> </tr> <tr> <td>Exam   0 (0%)</td> <td>Program   0 (0%)</td> <td>Met   2 (100%)</td> </tr> <tr> <td>Portfolio   0 (0%)</td> <td>Institution   0 (0%)</td> <td>Exceeded   0 (0%)</td> </tr> <tr> <td>Other   2 (100%)</td> <td>Other   0 (0%)</td> <td>Unspecified   0 (0%)</td> </tr> <tr> <td><b>Total Direct</b>   2 (100%)</td> <td>Unspecified   0 (0%)</td> <td></td> </tr> <tr> <td>Survey   0 (0%)</td> <td></td> <td></td> </tr> <tr> <td>Focus Group   0 (0%)</td> <td></td> <td></td> </tr> <tr> <td>Interview   0 (0%)</td> <td></td> <td></td> </tr> <tr> <td>Other   0 (0%)</td> <td></td> <td></td> </tr> <tr> <td><b>Total Indirect</b>   0 (0%)</td> <td></td> <td></td> </tr> <tr> <td><b>Unspecified</b>   0 (0%)</td> <td></td> <td></td> </tr> </tbody> </table>	2 Total Measures (Includes measures that do not have findings)		2 Total Measures with Findings		Measure Type/Method	Measure Level	Acceptable Target Achievement		Student Artifact   0 (0%)	Course   2 (100%)	Not Met   0 (0%)	<table border="1"> <thead> <tr> <th colspan="2">2 Total Actions with Status Report</th> </tr> <tr> <th colspan="2">Current Status</th> </tr> </thead> <tbody> <tr> <td>Not started</td> <td>0 (0%)</td> </tr> <tr> <td>In Progress</td> <td>0 (0%)</td> </tr> <tr> <td>Completed</td> <td>2 (100%)</td> </tr> <tr> <td>Not Implemented</td> <td>0 (0%)</td> </tr> </tbody> </table>	2 Total Actions with Status Report		Current Status		Not started	0 (0%)	In Progress	0 (0%)	Completed	2 (100%)	Not Implemented	0 (0%)	Exam   0 (0%)	Program   0 (0%)	Met   2 (100%)	Portfolio   0 (0%)	Institution   0 (0%)	Exceeded   0 (0%)	Other   2 (100%)	Other   0 (0%)	Unspecified   0 (0%)	<b>Total Direct</b>   2 (100%)	Unspecified   0 (0%)		Survey   0 (0%)			Focus Group   0 (0%)			Interview   0 (0%)			Other   0 (0%)			<b>Total Indirect</b>   0 (0%)			<b>Unspecified</b>   0 (0%)			
2 Total Measures (Includes measures that do not have findings)		2 Total Measures with Findings																																																						
Measure Type/Method	Measure Level	Acceptable Target Achievement																																																						
Student Artifact   0 (0%)	Course   2 (100%)	Not Met   0 (0%)	<table border="1"> <thead> <tr> <th colspan="2">2 Total Actions with Status Report</th> </tr> <tr> <th colspan="2">Current Status</th> </tr> </thead> <tbody> <tr> <td>Not started</td> <td>0 (0%)</td> </tr> <tr> <td>In Progress</td> <td>0 (0%)</td> </tr> <tr> <td>Completed</td> <td>2 (100%)</td> </tr> <tr> <td>Not Implemented</td> <td>0 (0%)</td> </tr> </tbody> </table>	2 Total Actions with Status Report		Current Status		Not started	0 (0%)	In Progress	0 (0%)	Completed		2 (100%)	Not Implemented	0 (0%)																																								
2 Total Actions with Status Report																																																								
Current Status																																																								
Not started	0 (0%)																																																							
In Progress	0 (0%)																																																							
Completed	2 (100%)																																																							
Not Implemented	0 (0%)																																																							
Exam   0 (0%)	Program   0 (0%)	Met   2 (100%)																																																						
Portfolio   0 (0%)	Institution   0 (0%)	Exceeded   0 (0%)																																																						
Other   2 (100%)	Other   0 (0%)	Unspecified   0 (0%)																																																						
<b>Total Direct</b>   2 (100%)	Unspecified   0 (0%)																																																							
Survey   0 (0%)																																																								
Focus Group   0 (0%)																																																								
Interview   0 (0%)																																																								
Other   0 (0%)																																																								
<b>Total Indirect</b>   0 (0%)																																																								
<b>Unspecified</b>   0 (0%)																																																								

Report : Assessment Cycle Details for : Informatics

Report Generated by Taskstream

Workspace : Academic Program Assessment and Planning Workspace

Assessment Plan: 2018-2019 Assessment Cycle: Assessment Plan and Assessment Findings

Assessment Plan Template : IU Kokomo Academic Assessment Template

Report Generated : Thursday, May 02, 2019

## Measures and Findings

### *Informatics Learning Outcomes*

#### Outcome

#### **SLO 1 for Information Organization and Processing**

*Students will understand and utilize digital representations of information for presentation and/or processing.*

#### **Mapped to:**

*No Mapping*

#### **Measure**

*INFO I101 (Introduction to Informatics) - Hands-on Activities of Binary Encoding*

#### **COURSE LEVEL; DIRECT - OTHER**

#### **Details/Description:**

Students were asked to work on hands-on activities of binary encoding, which include number encoding, text encoding, image encoding and sound encoding. Besides, students were asked to utilize the knowledge to complete an encoding puzzle in one of the exam. In this puzzle, students were given a digital image of 56 pixels, in which a secret message was embedded in the image. The students need to utilize the digital representation knowledge to decode the image. These activities are chosen for assessing learning outcome (C1) mainly because it was graded based on the correctness of the information encoding and decoding, and the correctness of the information representation and processing. These grading criteria are aligned properly with the components of the learning outcomes in question.

#### **Acceptable Target:**

The level of performance where students develop satisfactory understanding and utilization of digital representations of information for presentation and/or processing for the assigned assignments in INFO I101 will be considered acceptable.

We expect that Seventy Five Percent (75%) or higher of students will provide satisfactory or exceptional work in digital representation understanding and utilization of data

#### **Implementation Plan (timeline):**

Students enrolled in the spring 2018 offering of INFO I101 (Introduction to Informatics) will be evaluated. I101 is the first Informatics course for Informatics students. The course is also mandatory for all majors in the school of sciences. As such, the student body in this course is diverse.

In SP18 offering of INFO I101, there were 24 students enrolled in this course. The students came from various majors, such Informatics, Computer Science, Biology and Business. Most students of Informatics or Computer Science were freshmen. Some students of Biology or Biochemistry were juniors or seniors. I 101 was offered in the face-to-face format.

#### **Key/Responsible Personnel:**

The professor who teaches INFO I101 will evaluate the performance of the students on the hands-on assignments

**Supporting Attachments:**

## ***Findings***

### *for INFO I101 (Introduction to Informatics) - Hands-on Activities of Binary Encoding*

---

#### **Summary of Findings:**

Component#1 for Learning Outcome C1: Digital Representation Understanding  
Performance Criteria:

- Unsatisfactory
- Satisfactory
- Exceptional

In INFO I101, student performance was very good and met the 75% benchmark. In this course, students were asked to encode numbers, texts, images and sounds in 6 tasks in a digital representation assignment. More specifically, Task 1 lets the students explore the RGB color encoding and explain the meaning of the hexadecimal codes. Task 2 and Task 3 are given to help students understand the ASCII and Unicode text encoding. Task 4 asks the students to use 0 and 1 to encode black/white images. Task 5 helps the students understand sound encoding. Task 6 asks the students to understand shift cipher. Regarding the overall grade, one student (4%) was unsatisfactory, four students were exceptional (16.67%) and the remaining students were satisfactory (79.2%).

Component#2 for Learning Outcome C1: Digital Representation Utilization

Performance Criteria:

- Can't utilize
- Limited mastery
- Satisfactory mastery
- Exceptional mastery

In INFO I101, students were given a problem-solving question in the mid-term exam in which they needed to utilize the digital representation and encoding methods. The students were asked to encode a digit image and convert the binary to text. Given the text, the students need to decrypt the text using the shift cipher to get the plaintext. Each step was graded based on the correctness of the answer. The overall grade shows that 5 students (20.8%) were unsatisfactory, 5 students were exceptional (20.8%) and 14 students were satisfactory (58.3%).

In INFO I101, the data collected showed that:

- The assignment of digital encoding helped the students understand the data representation. One student (4%) was unsatisfactory, four students were exceptional (16.67%) and the remaining students were satisfactory (79.2%).
- The problem-solving question in the midterm exam assessed the students' capability of utilizing the knowledge of digital representation. 5 students (20.8%) were unsatisfactory, 5 students were exceptional (20.8%) and 14 students were satisfactory (58.3%).
- The students finished the assignment managed to reach at least the satisfactory

level in the exam.

- A few number of students didn't reach satisfactory. These students didn't complete the assignment. They are not majored in informatics/CS. It may indicate that some students from non-CS/Informatics may have showed some lack of interests in learning digital representation.

**Acceptable Target Achievement:**

Met

**Reflections/Notes:**

Based on the data we collected in this assessment cycle, the students in INFO-I101 demonstrated a good overall knowledge of digital representation understanding and utilization.

**Substantiating Evidence:**

***Action***

*in 2017-2018 Academic Year Data or 2017 Calendar Year Data - Action Plan*

***Keep using hands-on assignments and motivating students***

**Action details:**

According the collected data, the instructor who will teach INFO I101 in the future needs to keep the hands-on assignments since it has been shown that these activities are beneficial for the students to understand the concepts. In order to address issue related to lack of interests, the instructor needs spend more time motivating the students from other majors (non-Informatics/CS) and emphasizing on the connection of the digital representation to other majors.

**Implementation Plan**

**(timeline):**

The professor who teaches the course in the future will implement this action

**Key/Responsible**

**Status**

for Keep using hands-on assignments and motivating students

**Current Status:**

Completed

**Additional information:**

**Next Steps:**

**Substantiating Evidence:**

**Personnel:**

Dr. Chen Zhong who usually teaches this course

**Measures:**

The action will be considered complete when the professor spends time motivating students who are not informatics/CS students and implements /emphasized more hands-on practice activities in the following year

**Supporting Attachments:**

### SLO 3 for Information Organization and Processing

*Students will organize and categorize information to improve understanding and interpretation of the information.*

**Mapped to:**

*No Mapping*

### Measure

*Selected Case studies and Projects in INFO I303 (Organizational Informatics)*

**COURSE LEVEL; DIRECT - OTHER****Details/Description:**

The students were asked to work in teams to conduct two case study projects and a term-long case study project throughout the semester. The case study topics were provided to the students that were related to the classes. In each case study project, 3 to 5 students worked in a team to complete the case study. The case study projects are selected for assessing learning outcome (SLO3) mainly because the students were asked to gather data about an information system that supports an organizational operation/business and specify the impacts and potential issues with the information system by organizing and interpreting the collected data. These projects were graded based on the application of the course topics and analytical soundness. The grading criteria are aligned properly with the components of the learning outcome in question.

**Acceptable Target:**

The level of performance where students categorize information to improve the level of understanding and interpretation of data for the assigned case study projects in INFO I303 will be considered acceptable.

We expect that 75% or higher of students will provide satisfactory or exceptional work in data organization to improve understanding of data.

**Implementation Plan (timeline):**

Informatics students enrolled in INFO I303 (Organizational Informatics) in SP18 will be evaluated. In INFO I303, there were 16 students enrolled in the course. Most students are junior or senior Informatics students. I 303 was offered in the face-to-face format.

In the case project, the students formed 4 teams with 4 people in each team. The teams were asked to report their study in presentations and write a paper. All the teams completed the term project. Their performance is graded based on the instructor evaluation and peer evaluation.

The instructor teaches the course has devised grading criteria that are aligned properly with the components of the learning outcomes in question.

**Key/Responsible Personnel:**

The course's instructor will evaluate the performance of the students in the chosen case projects

**Supporting Attachments:*****Findings******for Selected Case studies and Projects in INFO I303 (Organizational Informatics)***

---

**Summary of Findings:**

Performance Criteria used for this learning outcome:

- Doesn't improve understanding
- Provides limited improvement in understanding
- Improves the understanding

In INFO I303, student performance was very good and met the 75% benchmark. In this course, there were 2 case study projects were provided to the students. 3-5 students worked in groups in the projects. Besides, there was a term project in which students also worked in groups to conduct a larger-scale case study. In each case study, the students were asked to investigate an information system in an organizational setting and study how the information system addresses the challenges faced by the organization. The students were asked to collect evidence to support their claims and conclude the knowledge/lesson gained from the case study. All the case study projects were completed and satisfactory.

All teams demonstrated the performance that "improves the understanding".

The informatics students in INFO-I 303 demonstrated good knowledge of data organization in conducting the case study projects.

In INFO I303, the data collected showed that:

- The students completed all the case study projects. In the final term project, all teams demonstrated the performance that "improves the understanding".
- It is helpful to provide the detailed requirements and templates to the students at the beginning. All of the teams had followed the instruction and used the template, which guaranteed the complete case studies.
- All the papers were well-organized and the claims were well-supported by data and evidence. Two teams had in-depth discussion about the implication and impact and future development.

. Two students in two teams failed to contribute to the term project paper. They failed to attend the group meetings and turned in their contribution to the group at the end of the semester.

**Acceptable Target Achievement:**

Met

**Reflections/Notes:**

Relating the data collected for this learning outcome, it was noted that case studies

are helpful to improve the students' understanding of data organization. The notable challenge is the group work. It was noted that the workload among team members was not always distributed evenly. Some students may have family emergency, work-related or sickness issues, which may influence the overall performance of the team. Therefore, the instructor needs to assess team work periodically and promote team work if needed.

**Substantiating Evidence:**

***Action***

*in 2017-2018 Academic Year Data or 2017 Calendar Year Data - Action Plan*

***Assess team work periodically and promote team work with a fair distribution of workload***

**Action details:**

In INFO I303, it had been made clear that the students' performance were graded based on the team performance and the peer evaluation of the level of contribution. Adding the peer evaluation worked well for the course and was helpful for keeping most of the students engaged in the team project, although there were still two students stopped making efforts at the end of the term project.

**Implementation Plan**

**(timeline):**

The action will be implemented in future offerings of INFO I303

**Key/Responsible**

**Personnel:**

Dr. Zhong who usually teaches this course is responsible for implementing this action

**Measures:**

The action will be considered complete when

**Status**

for Assess team work periodically and promote team work with a fair distribution of workload

**Current Status:**

Completed

**Additional information:**

**Next Steps:**

**Substantiating Evidence:**

the instructor implements  
the action in future offerings  
of the course

**Supporting Attachments:**