

# University of Louisiana at Lafayette

## Detailed Assessment Report 2015-2016 Informatics Program BS

As of: 11/22/2016 11:11 AM CENTRAL

(Includes those Action Plans with Budget Amounts marked *One-Time, Recurring, No Request.*)

### Mission / Purpose

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*The Mission and Purpose of the Informatics Program is to educate undergraduate students in the use of the scientific method for the application of computing and information technologies, as well as the design, maintenance, and adaptation of information systems that solve problems, with an understanding of human needs and context.*

### Goals

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#### **G 2: A. Students' Professional and Graduate Studies Preparation**

A. Prepare students to function professionally in the field of informatics and/or graduate studies in informatics or other related fields.

#### **G 3: B. Students' Computational and Critical Thinking, Problem Solving, Scientific Method**

B. Develop students' computational and critical thinking, as well as problem-solving skills, through use of the scientific method.

### Student Learning Outcomes/Objectives, with Any Associations and Related Measures, Targets, Findings, and Action Plans

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#### **SLO 1: A.1. Principles of Science of Informatics**

A.1. Understand and employ the fundamental principles of the science of Informatics, including those of pervasive themes in Informatics, history of information technology, information technology and its related and informing disciplines, and application domains.

#### **Connected Document**

[INFX 481 FA14 assessment Results Compilation](#)

#### **Relevant Associations:**

##### **General Education/Core Curriculum Associations**

- 1.1 Think critically and read with comprehension.
- 1.2 Write essays that make arguments appropriately supported by evidence, while synthesizing and documenting sources.
- 1.3 Speak cogently in presenting information.
- 2.1 Apply key processes and scientific reasoning to draw reasonable conclusions within the natural sciences.
- 2.2 Use critical and logical thinking, knowledge of accepted scientific methods, and appropriate sources to evaluate the credibility of information with scientific content
- 6.1 Search electronic sources for information.
- 6.2 Collect, evaluate and utilize retrieved data to advance arguments.
- 6.3 Communicate through electronic media.

#### **Related Measures**

## **M 2: Provide analysis of the project develop cycle with 4 lenses**

What are four lenses? Elaborate your project with two most applicable lenses. Provide at least one analysis for each lens.

Source of Evidence: Faculty pre-test / post-test of knowledge mastery

### **Connected Documents**

[Fall 2015 Informatics Assessment Students' Work](#)  
[Informatics Program Assessment Report Fall 2015](#)  
[INFX 481 FA14 assessment Results Compilation](#)

### **Target:**

At least 70% of the students shall earn an overall score of 75% average or higher on evaluations.

### **Connected Documents**

[Fall 2015 Informatics Assessment Students' Work](#)  
[INFX 481 FA14 assessment Results Compilation](#)

### **Finding (2015-2016) - Target: Met**

#### **ASSESSMENT REPORT**

In order to validate the students' ability to understand and employ the fundamental principles of Informatics, course-embedded assessment (from INFX 481 course) that will be reviewed by an INFX faculty member, using a department-approved rubric. The reviewer shall assess students on their ability to understand and employ the fundamental principles of the science of Informatics, including those of pervasive themes in Informatics, history of information technology, information technology and its related and informing disciplines, and application domains.

Course embedded assessment was measured by way of twenty students' submissions, as per INFX 481 coursework. As indicated earlier, the assessment criteria are as follows:

"At least 70% of the students shall earn an overall score of 75% average or higher on evaluations."

Assessment results indicate that 80% of the students earned an overall score of 75% or higher on evaluations. As such, the assessment goal for Fall 2015 was met. Detailed assessment results are shown in the table in the accompanying document.

Preliminary "closing the loop" suggests that a higher requirement should be considered for the 2016-2017 assessment cycle. Results from Spring 2016 assessment should be helpful in making a final determination.

### **Connected Document**

[Fall 2015 Informatics Assessment Students' Work](#)

### **Related Action Plans (by Established cycle, then alpha):**

#### **Action Plan 2015-2016**

In order to validate that students understand and employ the fundamental principles of Informatics, course-embedded assessment from INFX 481 course will be reviewed by an assessor (faculty member), using a department-approved rubric. The reviewers will assess students on their ability to analyze, design, implement, and test computing and information technology hardware and software infrastructures, of varying complexity and configuration with respect to a variety of criteria relevant to the task.

**Established in Cycle:** 2015-2016

**Implementation Status:** Planned

**Priority:** Medium

**Relationships (Measure | Outcome/Objective):**

**Measure:** Provide analysis of the project develop cycle with 4 lenses | **Outcome/Objective:** A.1. Principles of Science of Informatics

**Implementation Description:** In order to validate that students understand and employ the fundamental principles of Informatics, course-embedded assessment from INFX 481 course will be reviewed by an assessor (faculty member), using a department-approved rubric. The reviewers will assess students on their ability to analyze, design, implement, and test computing and information technology hardware and software infrastructures, of varying complexity and configuration with respect to a variety of criteria relevant to the t

**Projected Completion Date:** 09/2017

**Responsible Person/Group:** INFX Assessment Committee

**Additional Resources:** N/A

#### **Action Plan 2015-2016**

The requirement potentially may be increased as follows: "At least 75% of the students shall earn an overall score of 75% average or higher on evaluations." Final decision about this shall be made by the Informatics Assessment Committee.

**Established in Cycle:** 2015-2016

**Implementation Status:** Planned

**Priority:** Medium

**Relationships (Measure | Outcome/Objective):**

**Measure:** Provide analysis of the project develop cycle with 4 lenses | **Outcome/Objective:** A.1. Principles of Science of Informatics

**Implementation Description:** The requirement potentially may be increased as follows: "At least 75% of the students shall earn an overall score of 75% average or higher on evaluations." Final decision about this shall be made by the Informatics Assessment Committee.

**Projected Completion Date:** 09/2017

**Responsible Person/Group:** Informatics Assessment Committee

**Additional Resources:** N/A

#### **INFX 481 Assessment Action Plan 2016-2017**

The assessment target of "at least 70% of the students shall earn a score of 75% or higher on the assessment rubric" was met. In addressing new challenge to the Informatics Program and the INFX 481 class, this action plan proposes the following: At least 75% of the students shall earn a score of 70% or higher on the assessment rubric. Two objectives will be assessed: a. Principles of Science of Informatics; b. Ability to problem solve. As can be seen, the target is modified to echo the growth of INFX program. The expectation of the 400-level classes will be assessed with two objectives and the rubric of the assessment will be changed accordingly.

**Established in Cycle:** 2015-2016

**Implementation Status:** Planned

**Priority:** High

**Relationships (Measure | Outcome/Objective):**

**Measure:** Compare/Contrast Traditional Project Management (TPM) and Agile Project Management (APM) |

**Outcome/Objective:** A.2. Ability to Design and Implement IT Infrastructures

**Measure:** Provide analysis of the project develop cycle with 4 lenses | **Outcome/Objective:** A.1. Principles of Science of Informatics

**Implementation Description:** At least 75% of the students shall earn a score of 70% or higher on the assessment rubric

**Responsible Person/Group:** INFX Faculty

## **SLO 2: A.2. Ability to Design and Implement IT Infrastructures**

A.2. Have the ability to analyze, design, implement, and test computing and information technology hardware and software infrastructures, of varying complexity and configuration with respect to a variety of criteria relevant to the task.

### Relevant Associations:

#### **General Education/Core Curriculum Associations**

- 1.1 Think critically and read with comprehension.
- 2.1 Apply key processes and scientific reasoning to draw reasonable conclusions within the natural sciences.
- 2.2 Use critical and logical thinking, knowledge of accepted scientific methods, and appropriate sources to evaluate the credibility of information with scientific content
- 6.1 Search electronic sources for information.
- 6.2 Collect, evaluate and utilize retrieved data to advance arguments.
- 6.3 Communicate through electronic media.

### Related Measures

#### **M 1: Compare/Contrast Traditional Project Management (TPM) and Agile Project Management (APM)**

Compare and contrast Traditional Project Management (TPM) and Agile Project Management (APM). What are the advantages and disadvantages? Use your team project to provide references to the project life cycle for traditional PM (initiation, planning, execution and closing) and Agile PM (Scrum, Sprint/iterations, analysis, design, build and test, scaling, and staging).

Source of Evidence: Writing exam to assure certain proficiency level

#### **Connected Documents**

[INFX 101 Assessment Table - SP 16](#)

[INFX101assessment Report - SP 16](#)

#### **Target:**

*Assessment Criteria:*

At least 70% of the students shall earn an overall score of 75% average or higher on evaluations.

#### **Connected Documents**

[INFX 101 Assessment Table - SP 16](#)

[INFX101assessment Report - SP 16](#)

#### **Finding (2015-2016) - Target: Met**

**INFX 101 Assessment**

**Learning Objective A.1**

**Intended Outcome: The student shall demonstrate the ability to analyze, design, implement, and test computing and information technology hardware and software infrastructures, of varying complexity and configuration with respect to a variety of criteria relevant to the task.**

## ASSESSMENT REPORT

Course embedded assessment was measured by way of twenty students' submissions, as per INFX 101 coursework. As indicated earlier, the assessment criteria are as follows:

"At least 70% of the students shall earn an overall score of 75% average or higher on evaluations."

Assessment results indicate that 86.36% of the students earned an overall score of 75% or higher on evaluations. As such, the assessment goal for Spring 2016 was met. Detailed assessment results are shown in the table.

Preliminary "closing the loop" suggests that a equivalent requirement should be maintained for the 2016-2017 assessment cycle. Results from Spring 2016 assessment should be considered for an assessment of a different objective.

### Connected Documents

[INFX 101 Assessment Table - SP 16](#)

[INFX101assessment Report - SP 16](#)

### Related Action Plans (by Established cycle, then alpha):

#### **Action Plan for 2014-2015 Assessment Cycle**

This assessment cycle is the very first for the newly-created Informatics Program. Because the assessment target of "at least 70% of the students shall earn a score of 70% or higher on the assessment rubric" was met (that is, 76.9% of students earned 2014 a score of 70% or higher), the assessment target shall be revised for the next cycle, so that it shall be as follows:

"At least **75%** of the students shall earn a score of 70% or higher on the assessment rubric."

As can be seen, the target shall be tightened, so to speak, such that the expected percentage of students who earn a score of 70% or higher shall be increased, thereby closing the loop.

**Established in Cycle:** 2013-2014

**Implementation Status:** Finished

**Priority:** High

#### **Relationships (Measure | Outcome/Objective):**

**Measure:** Compare/Contrast Traditional Project Management (TPM) and Agile Project Management (APM) |

**Outcome/Objective:** A.2. Ability to Design and Implement IT Infrastructures

#### **Connected Document**

[INFX 481 FA14 assessment Results Compilation](#)

#### **INFX 481 Assessment Action Plan 2016-2017**

The assessment target of "at least 70% of the students shall earn a score of 75% or higher on the assessment rubric" was met. In addressing new challenge to the Informatics Program and the INFX 481 class, this action plan proposes the following: At least 75% of the students shall earn a score of 70% or higher on the assessment rubric. Two objectives will be assessed: a. Principles of Science of Informatics; b. Ability to problem solve. As can be seen, the target is modified to echo the growth of INFX program. The expectation of the 400-level classes will be assessed with two objectives and the rubric of the assessment will be changed accordingly.

**Established in Cycle:** 2015-2016

**Implementation Status:** Planned

**Priority:** High

**Relationships (Measure | Outcome/Objective):**

**Measure:** Compare/Contrast Traditional Project Management (TPM) and Agile Project Management (APM) |

**Outcome/Objective:** A.2. Ability to Design and Implement IT Infrastructures

**Measure:** Provide analysis of the project develop cycle with 4 lenses | **Outcome/Objective:** A.1. Principles of Science of Informatics

**Implementation Description:** At least 75% of the students shall earn a score of 70% or higher on the assessment rubric

**Responsible Person/Group:** INFX Faculty

**SLO 3: B.1. Application of Computational, Natural, Mathematical, and Social Sciences**

B.1. Apply concepts and analytical methods used in the computational, natural, mathematical, and social sciences, to the design and implementation of computing and information technology solutions across multiple domains.

**Relevant Associations:**

**General Education/Core Curriculum Associations**

- 1.1 Think critically and read with comprehension.
- 2.1 Apply key processes and scientific reasoning to draw reasonable conclusions within the natural sciences.
- 2.2 Use critical and logical thinking, knowledge of accepted scientific methods, and appropriate sources to evaluate the credibility of information with scientific content
- 5.1 Use mathematical methods and models to solve quantitative problems and to communicate solutions effectively.
- 5.2 Analyze and critically evaluate numerical and graphical data to draw reasonable and valid conclusions about “real-world” situations.

## **Analysis Questions and Analysis Answers**

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**How were assessment results shared and evaluated within the unit?**

The following was distributed to all F/T continuing Informatics faculty, inviting questions, concerns, feedback:

Informatics Program (2015-2016 Assessment Cycle)

Goals

- A. Students' Professional and Graduate Studies Preparation
- B. Students' Computational and Critical Thinking, Problem Solving, Scientific Method

Outcomes Objectives

- A.1. Principles of Science of Informatics
- A.2. Ability to Design and Implement IT Infrastructures
- B.1. Application of Computational, Natural, Mathematical, and Social Sciences

Measures and Findings

1. Compare/Contrast Traditional Project Management (TPM) and Agile Project Management (APM)

FALL 2015. INFX 481 Assessment Learning Objective A.1 In order to validate the students' ability to understand and employ the fundamental principles of Informatics, course-embedded assessment (from INFX 481 course) that will be reviewed by an INFX faculty member, using a department-approved rubric. The reviewer shall assess students on their ability to understand and employ the fundamental principles of the science of Informatics, including those of pervasive themes in Informatics, history of information technology,

information technology and its related and informing disciplines, and application domains. Course embedded assessment was measured by way of twenty students' submissions, as per INFX 481 coursework. As indicated earlier, the assessment criteria are as follows: "At least 70% of the students shall earn an overall score of 75% average or higher on evaluations." Assessment results indicate that 80% of the students earned an overall score of 75% or higher on evaluations. As such, the assessment goal for Fall 2015 was met. Detailed assessment results are shown in the table in the accompanying document. Preliminary "closing the loop" suggests that a higher requirement should be considered for the 2016-2017 assessment cycle. Results from Spring 2016 assessment should be helpful in making a final determination.

SPRING 2016. INFX 101 Assessment Learning Objective A.1 Intended Outcome: The student shall demonstrate the ability to analyze, design, implement, and test computing and information technology hardware and software infrastructures, of varying complexity and configuration with respect to a variety of criteria relevant to the task. ASSESSMENT REPORT Course embedded assessment was measured by way of twenty students' submissions, as per INFX 101 coursework. As indicated earlier, the assessment criteria are as follows: "At least 70% of the students shall earn an overall score of 75% average or higher on evaluations." Assessment results indicate that 86.36% of the students earned an overall score of 75% or higher on evaluations. As such, the assessment goal for Spring 2016 was met. Detailed assessment results are shown in the table. Preliminary "closing the loop" suggests that a equivalent requirement should be maintained for the 2016-2017 assessment cycle. Results from Spring 2016 assessment should be considered for an assessment of a different objective.

2. Provide analysis of the project develop cycle with 4 lenses
3. Application of Informatics

#### Action Plan (2016-2017)

The assessment target of "at least 70% of the students shall earn a score of 75% or higher on the assessment rubric" was met. In addressing new challenge to the Informatics Program and the INFX 481 class, this action plan proposes the following: At least 75% of the students shall earn a score of 70% or higher on the assessment rubric. Two objectives will be assessed: a. Principles of Science of Informatics; b. Ability to problem solve. As can be seen, the target is modified to echo the growth of INFX program. The expectation of the 400-level classes will be assessed with two objectives and the rubric of the assessment will be changed accordingly.

**Identify which action plans [created in prior cycle(s)] were implemented in this current cycle. For each of these implemented plans, were there any measurable or perceivable effects? How, if at all, did the findings appear to be affected by the implemented action plan?**

INFX 481 assessment action plan for 15-16 (Established in Cycle: 2014-2015)

Description: The assessment target of "at least 70% of the students shall earn a score of 70% or higher on the assessment rubric" was met. In addressing new challenge to the Informatics Program and the iNFX 481 class, this action plan proposes add one more objective to be assessed, i.e., problem-solving skill (the object 5 in this 14-15 cycle. The assessment target shall be revised for the next cycle, so that it shall be as follows: At least 75% of the students shall earn a score of 70% or higher on the assessment rubric. Two objectives will be assessed: a. Principles of Science of Informatics; b. Ability to problem solve. As can be seen, the target is modified to echo the growth of INFX program. The expectation of the 400-level classes will be assessed with two objectives and the rubric of the assessment will be changed accordingly.

Implementation Description: The course content of INFX 481 has modified, such as focusing on business process management/mapping/configurations, different modules of business processes in SAP ERP. The rubric of the assessment will be modified to better address the two targeted objectives.

Measurable Effects:

**FALL 2015.** *INFX 481 Assessment Learning Objective A.1 In order to validate the students' ability to understand and employ the fundamental principles of Informatics, course-embedded assessment (from INFX 481 course) that will be reviewed by an INFX faculty member, using a department-approved rubric. The reviewer shall assess students on their ability to understand and employ the fundamental principles of the science of Informatics, including those of pervasive themes in Informatics, history of information technology, information technology and its related and informing disciplines, and application domains. Course embedded assessment was measured by way of twenty students' submissions, as per INFX 481 coursework. As indicated earlier, the assessment criteria are as follows: "At least 70% of the students shall earn an overall score of 75% average or higher on evaluations." Assessment results indicate that 80% of the students earned an overall score of 75% or higher on evaluations. As such, the assessment goal for Fall 2015 was met. Detailed assessment results are shown in the table in the accompanying document. Preliminary "closing the loop" suggests that a higher requirement should be considered for the 2016-2017 assessment cycle. Results from Spring 2016 assessment should be helpful in making a final determination.*

It appears that modification of the INFX 481 content resulted in improved learning by students. This shall hopefully become more apparent in future assessment cycles.

**What has the unit learned from the current assessment cycle? What is working well, and what is working less well in achieving desired outcomes?**

Given that the Informatics Program has completed five full years of existence (began in Fall 2011). Formal assessment within the Informatics Program began in the 2014-2015 Cycle. Thus far, assessment results suggest that desired outcomes are being realized.