



State University of New York at Fredonia

Department of Computer and Information Sciences

2154 Fenton Hall (716) 673-4820

## **ASSESSMENT REPORT FALL 2011**

**By**

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**Chair/Coordinator, Assessment Committee**

The Department of Computer and Information Sciences performs assessment of its students using several coursework tools and survey of graduating students. The department approved and adopted a comprehensive assessment plan in Fall-2010. This plan includes the following goals of student learning:

1. Demonstrate core knowledge of computing/information technology and demonstrate robust programming skills.
2. Be familiar with the computer organization and system software.
3. Clearly communicate the computer science/computer information systems concepts.
4. Be able to analyze a real-life problem, identify and define computing requirements for its solution and use appropriate software to solve it.

It was decided to perform the assessment of goal 2 in 2011-12, in addition to the survey of graduating students. The formal assessment of goal 2 is done through the advanced courses CSIT 311 Assembly Language and Computer Organization and CSIT 312 Computer Structures. Each of our majors and minors is required to take one of these basic courses. Both courses entail extensive discussion of computer internals and low level programming. Instructors include the questions that test the students for goal-2. The questions are thoroughly reviewed and graded by the instructors. The instructors provide the Assessment Committee Chair with the students' responses to questions for assessment of goal-2.

### **Goal 2 Assessment Results.**

The Instructor teaching CSIT311 in Fall 2011 was informed about including the questions for testing goal-2 in a quiz. The instructor chose to assess the students about operating systems, linking and assembling and CPU units. The Instructor handed over the graded material to the assessment committee chair and coordinator for processing. The committee chair/coordinator used the rubric sheet as in Appendix-1.

The results of goal-2 assessment are quite positive. The charts show the results in Figure-1, 2 and 3. For all the three performance indicators combined, there is only one negative result where the student

failed to exhibit the understanding of CPU and its units. 88% of the students are able to meet or exceed the standards for operating systems and assembly or linking of programs. 77% of the students meet or exceed the standards for understanding the CPU operation.

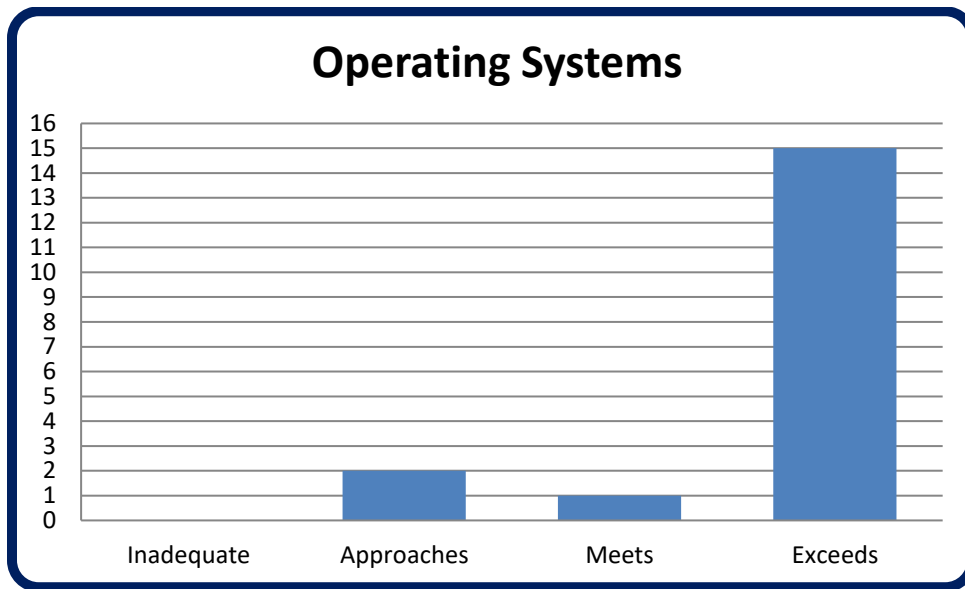


Figure 1: Operating Systems Performance Indicator Results

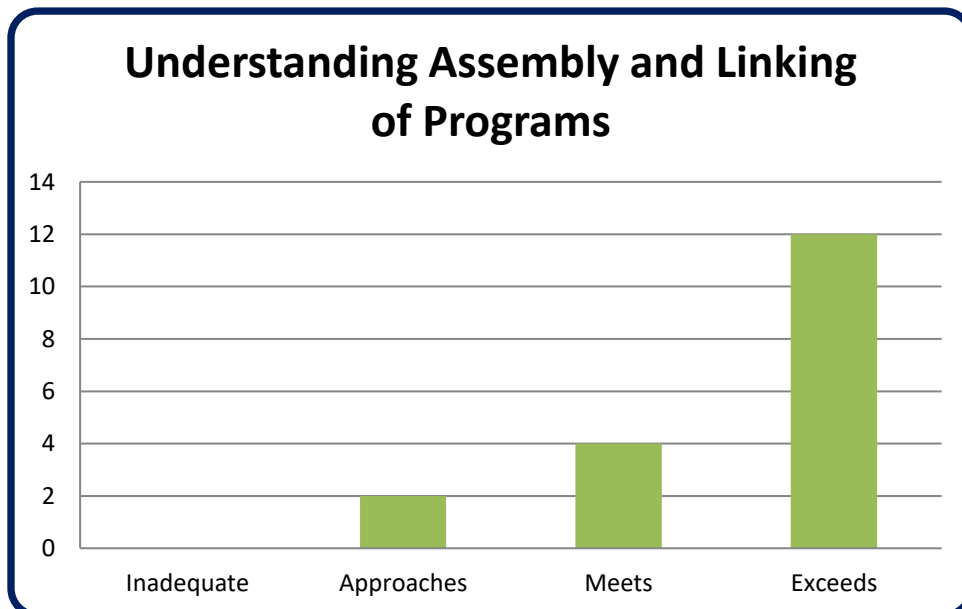


Figure 2: Assembly and Linking Performance Indicator Results

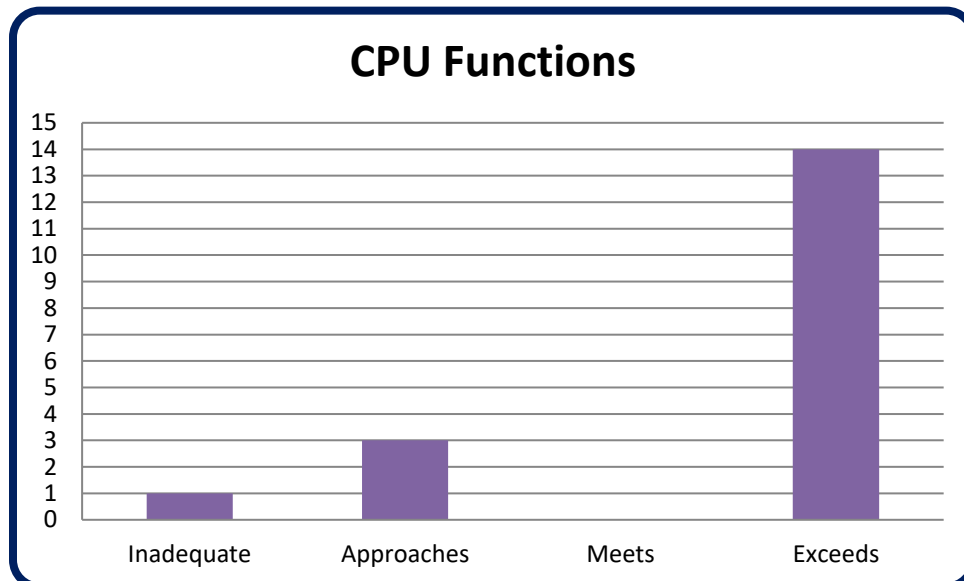


Figure 3: CPU Operation Performance Indicator Results

### **CONCLUSION**

It is clear that the students of CSIT311 have exhibited excellent understanding of the basic concepts involved in computer organization and system software. Since these courses (CSIT311/CSIT312) do not emphasize the topics of disk drives and digital media in detail, it is recommended that the department should not include Question 3 in future for assessment of goal-2. It was noted that the lowest score of 77% was in response to the question about CPU and its functions. It is recommended that the department convey to the instructors of CSIT311 and CSIT312 the concern that the students need further exposure to the CPU and its various functions and sub-units.

## APPENDIX-I



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## QUESTION SHEET FOR ASSESSMENT OF GOAL 2

*"Be familiar with the computer organization and system software"*

The students are asked to answer the following questions:

1. (system software) Distinguish between the terms "translation," "interpretation," and "compilation."
2. (system software) Describe the functions of the operating system.
3. (computer organization) Describe various storage media that could be used as secondary storage devices. Describe major characteristics of disk storage.
4. (computer organization) Describe the functions of CPU.

The Assessment Committee evaluates each question using the scale:

*Inadequate*  
*Approaches Standards*  
*Meets Standards*  
*Exceeds Standards*

*Prepared by Dr. Barneva*