SUNY Fredonia
College of Arts & Sciences
Computer and Information Sciences Assessment Report
2012-2013

Department Information	
Department	Computer and Information Sciences
Academic Programs	Computer Science; Computer Information Systems
Degrees	*BS*
Contact Person (*This should be the person coordinating/reporting on the department's assessment efforts)*	
Name	Reneta Barneva
Title	Professor
E-Mail Address	Reneta.Barneva@fredonia.edu
Extension	4750

Department Mission Statement and Goals: In accordance with the SUNY Fredonia mission and SUNY principles, the mission of the Department of Computer and Information Sciences is to provide state-of-the-art education to our students to excel in key fields of computer and information sciences and engage them in activities that enhance the welfare of Western New York region and society at large. Through student-centered education in an environment that fosters creative thinking and innovative problem-solving, we prepare our graduates for an assortment of career goals including graduate studies. We view scholarly investigations and software development as an integral part of instruction, providing opportunities to students for active learning through practicum, research, and internship. Through active involvement in general education and interaction with cross-discipline course work, our programs embody students with life skills that help them become productive citizens of the society.

Mission Statement: *Have you revised your mission statement? If so, please insert here*:

To provide state-of-the-art education to our students to excel in key fields of computer and information sciences and engage them in activities that enhance the welfare of Western New York and our society at large. Through student-centered education in an environment that fosters creative thinking and innovative problem-solving, we prepare our graduates for an assortment of career goals, including graduate studies. We view scholarly investigations and software development as an integral part of instruction, providing opportunities to students for active learning through practicum, research, and internship. Through active involvement in general education and interaction with cross-discipline course work, our programs embody students with life skills that help them become productive citizens and professionals.

Is your department's mission statement posted on your department's webpage? X Yes ☐ No

Please specify your department's current goals and the progress made toward those goals during 2012-2013. (Please refer to the agreed upon goals for the faculty and staff in the department resulting from the past 5-year (periodic) review, or from the most recent accreditation report if program(s) are approved by discipline-based accrediting bodies (e.g., NCATE). **This is not the place to list student learning goals/outcomes**.)

The goals are resulting from the 5-year review conducted in 2010-11, Goals and Action Plan Document and the MOU the Dean sent us.

2011-2012 Department Goals and Progress	2012-2013 Department Goals
Curriculum: Revising and reducing the number of tracks in the CS program. Eliminating some of the courses which have low enrolment or are outdated, making them elective, or changing their frequency. . **Completed.**	**Curriculum:** Following the recommendations of Chancellor Zimpher for experiential education, encourage more students to take internships. **Completed.** *This year 10 students took internships in computer and information sciences. Many other students took business internships with CIS component as part of their business requirements for the CIS program.*
Revising the Business elective courses in the CIS program and making sure that they are offered by the School of Business, do not require many prerequisites, and are available for enrollment to our students. **Completed.**	Improving further online teaching by getting feedback from the students several times a semester. Get approval for more online courses. **Ongoing.** *Dr. Arnavut was approved for offering CSIT 121, Dr. Zubairi was approved for offering CSIT 120, and Prof. Mendez was approved for offering CSIT 251. Online courses are offered mostly in the summer of J-term.*
With the increased opportunities for internships, incorporating CSIT 300 as an option in our programs. **Completed.**	Consulting with partner disciplines and the Dean in order to increase the department's role in providing technology courses to the campus. **Ongoing.** *The course CSIT 201 Computer Security and Ethics was approved as elective of Criminal Justice Program. The course CSIT 473 Data Warehousing and Mining is approved as part of the Statistics Minor.*
Improving online teaching by getting feedback from the students several times a semester. **Progress.** Only one of the online instructors was getting regular positive feedback. We will continue monitoring them closely.	Improving teaching organization. Continuing to reward good teaching with department awards. **Ongoing.** *The department considered the results of assessment and made suggestions for improvement. Teaching Awards are awarded a Prof. Cole was honored for a second year in a row.*
	Designing and implementing a Game Development Course and, later on, a concentration. **In progress.** *The course CSIT 208 Computer Game Design and Implementation is offered for three consecutive semesters.*
Assessment and Accreditation: Aligning the learning goals with ABET learning outcomes and creating program educational objectives for each of the CS and CIS programs. **Progress.** We are only at the beginning of this process. Currently we are contacting employers and alumni to invite them to the Advisory Board.	**Assessment and Accreditation:** Aligning the learning goals with ABET learning outcomes and creating program educational objectives for each of the CS and CIS programs. **Completed.** *An advisory Board consisting of Alumni, Employers, and current faculty was established. It approved the program educational objectives.*
Rewriting the Assessment Plan with the new learning goals. **Progress.** Drs. Barneva and Zubairi prepared a new assessment plan for the ABET student outcomes. It needs some corrections, though, due to last-minute information received.	Rewriting the Assessment Plan with the new learning goals. **Completed.** *Drs. Barneva and Zubairi prepared a new assessment plan for the ABET student outcomes. Dr. Barneva prepared surveys for assessment of PEOs. Dr. Zubairi aligned PEOs to the learning outcomes.*

Faculty: If Dr. Abu-Jeib does not come in the Fall 2011 when his unpaid leave terminates, having a search for a tenure-track replacement for him. **Completed.**	**Faculty:** Hiring new faculty. **Some progress.** *One tenure-track faculty was hired.*
Cooperating with the chair and contributing to build a collegial climate. **Some progress.** Some faculty are cooperating with the chair and volunteering to help. Good example is the team effort to urgently cover the classes of a colleague on sick leave. However, there is still room for improvement. The department may need some professional help.	Lessening the dependence of the department on adjunct faculty. **Not completed.** *Although we were allowed to search for two positions, one of the searches failed. With Dr. Hansen being on sabbatical, the number courses offered by tenured/tenure-track faculty is significantly lower than the number of courses offered by part-time faculty. We hope to be able to search again for a tenure-track faculty.*
	Cooperating with the chair and contributing to build a collegial climate. Tenured/tenure-track faculty are expected to provide leadership in the department events and committees. They should take the complete responsibility of organizing events and accomplishing the department tasks. **Some progress.** *Some faculty are cooperating with the chair and volunteering to help. However, there is still room for improvement. The department is hopeful that professional help will be provided.*
Recruitment: Continuing giving talks at the Liberal Arts Seminar. **Completed.**	**Recruitment:** Continuing giving talks at the Liberal Arts Seminar. **Completed**. *We not only gave talks to the Liberal Arts students, but to those that were our advisees and were interested in a major or a minor in our field, we gave personal orientation.*
Continuing with the Department Expo and making it more popular among the undecided majors. **Completed.**	Continuing with the Department Expo and making it more popular among the undecided majors. **Completed**. *This year the Expo lasted longer and there were many attendees, including from the Technology Incubator.*
Continuing to update and improve the department website. **Completed.**	Continuing to update and improve the department website. **Completed**. *The chair got professional help from Mike Barone and Nick Gunner for professionally redesigning the web site. Prof. Olson maintains a web site for alumni on Facebook.*
Continuing to enhance our departmental image and visibility through organizing annual High School Contests. **Completed.**	Continuing to enhance our departmental image and visibility through organizing annual High School Contests. **Completed.** *On May 20 the department organized a successful new edition of the High School Contests under the leadership of Prof. Szocki.*
	Visiting high schools and spread the word about our programs. **Completed**. *We visited three schools in the vicinity and we are planning how to outreach schools*

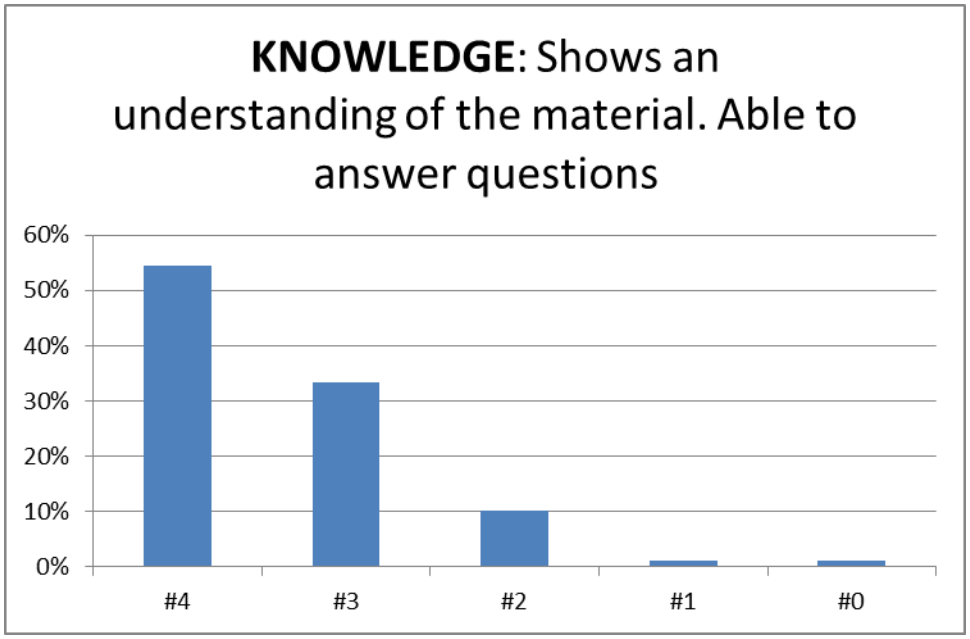
	outside of WNY.
Facilities: Having learning space where the students can work together and build a sense of community. **Not completed.** We hope that we will have more space with the opening of the new Science Building.	**Facilities:** Having learning space where the students can work together and build a sense of community. **Not completed.** *We hope that we will have more space with the opening of the new Science Building.*
Having adequate meeting space. **Some progress.**	Having adequate meeting space. **Some progress.** *We are grateful to Dean Kijinski for addressing some of the office space issues. We reorganized CS Commons and the department and committee meetings are held there. However, the space is insufficient for a larger group of people.*
Having more courses taught in a lab. **Some progress.**	Having more courses taught in a lab. **Some progress.** *With the reorganization of Modern Languages Lab, the students can use it from 9 AM as an open-access lab. This would give us the possibility to use Lab 115 from 8 AM to 11 AM for classes and start the open access at 11 AM.*
Community: Strengthen the ties with SUNY Fredonia Technology Incubator and contribute through it to the development of the region. **Completed.**	**Community:** Strengthen the ties with SUNY Fredonia Technology Incubator and contribute through it to the development of the region. **Completed.** *The employers of the Technology Incubator are keeping in touch with us. One of them, Mr. Kelley, is teaching a course for the department. Many of the incubator tenants are offering internships to our students. The chair is often invited to events at the Incubator.*
	Alumni: Developing a special part of the departmental web page for alumni. **Completed.** *A web page for alumni is developed.*
	Continuing to publish the newsletter yearly and distributing it to alumni. **Completed.** *For a third year in a row newsletters are produced and sent to alumni.*
	Continuing to improve alumni contact and follow-up. **Ongoing.** An alumni survey is developed and next year it will be sent for feedback.

If needed, please complete the "Assessment of Student Learning Outcomes" table once for each program in your department, copying and pasting the rows/table additional times as needed in order to address the assessment process for each set of learning outcomes in your department.

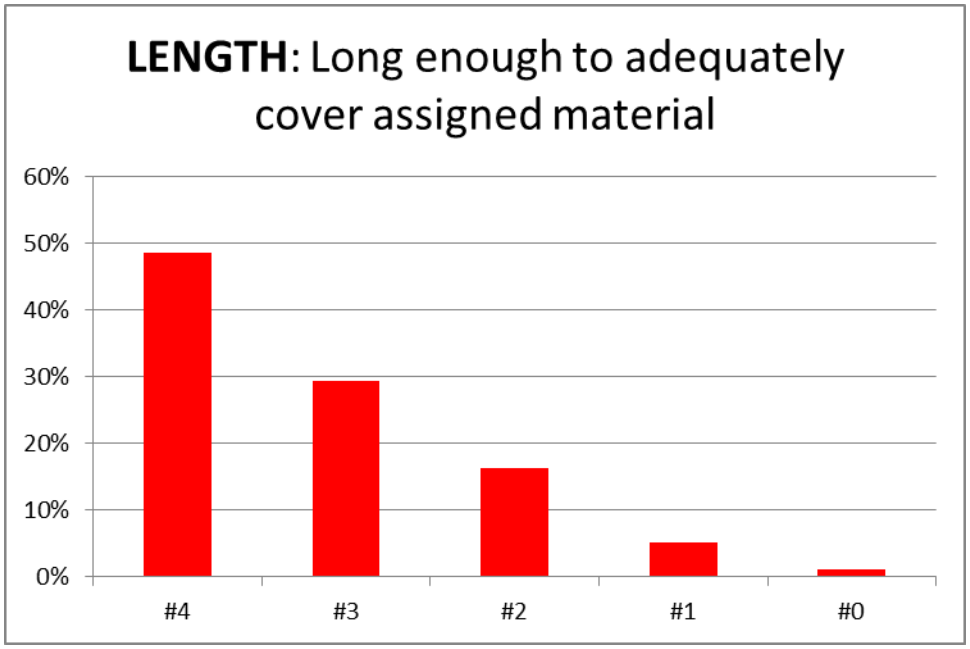
Assessment of Student Learning Outcomes	
Programs: Computer Science and Computer Information Systems	
Outcome 1:	Demonstrate core knowledge of computing/information technology and demonstrate robust programming skills.
Assessment Method(s)	Instructors assign programs to be developed by CSIT205 and CSIT221 students. The programs are thoroughly reviewed and graded by the instructors. The instructors provide the Assessment Committee Chair with a portfolio of a number of assignments.
Data Source	Data source is the programs written by students and graded by instructors in CSIT205 and CSIT221.
Assessment Results	Assessment results for Goal 1 were included in the 2010-11 Assessment Report.
Outcome 2:	Be familiar with the computer organization and system software.
Assessment Method(s)	At the end of the courses, before the exam week, the instructors gave a short quiz prepared by the Assessment Committee to all students. The quiz papers are collected by the Assessment Committee chair. Then the Committee Members apply a rubric system developed to specifically assess the achievement of Goal 2 as well as simple statistical methods.
Data Source	The data was collected in Fall2011 in the course CSIT 311 and in Spring 2012 in CSIT 312. Total sample size is 32 in both courses. Appendix I shows the questions and rubrics that were used in the assessment.
Assessment Results	Assessment results for Goal 2 were included in the 2011-12 Assessment Report.
Outcome 3:	Clearly communicate the computer science/computer information systems concepts.
Assessment Method(s)	Presentations in the oral communication courses are assessed. Both peer evaluations and instructor evaluations are applied. Five performance indicators were assessed: • Knowledge • Length • Content • Design • Hand-on activity using the rubric in Attachment 1. The scale is from 4 to 0, 4 being “mostly agree” and 0 being “least agree”. The students and the instructor fill out the rubric form for each presentation. We assume that the scale corresponds to the following meaning: 4 – outstanding 3 – good 2 – average 1 – below average 0 – unsatisfactory The performance indicators are measured as follows:

	• **Knowledge**: Shows an understanding of the material. Able to answer questions • **Length**: Long enough to adequately cover assigned material • **Content**: Topic covered thoroughly. Enough information given to understand topic. Did not exclude any important information or include any unnecessary information • **Design**: Very creative. Easy to see and follow. Did not include any unnecessary graphics • **Hands-on activity**: Included class in the learning process. Did more than lecture to the class The scores reflect the subjective perception of the evaluators – the peers and the instructors.
Data Source	The Instructors teaching oral communication courses in Fall 2012 and Spring 2013 were requested to use the rubric sheet of the Assessment Plan for assessment Goal 3. The Assessment Committee coordinator provided a draft of the assessment report where the data of the courses CSIT 413, 425, and 462 was summarized. Unfortunately, there was no information whether data from all students was collected or only from a representative sample, neither what the number of the responses was and what scale was used. The draft is attached for information purposes only. After the resignation of the Assessment Committee coordinator in May, the department chair took the charge to write the report. She asked for assessment data and received it from two oral communication courses offered in Spring 2013: CSIT 425 Software Engineering and 431 Introduction to Operating Systems. Since it was the end of the semester, she could not ask for uniformity of the data and collected what was available. There were 15 students presenting in CSIT 425 and 6 students presenting in CSIT 431. In CSIT 425 each of the students had from 14 to 2 evaluations from peers. (Apparently some students did not evaluate their peers.) All together there were 99 returned rubric sheets in CSIT 425, which is considered as the sample size. In CSIT 431 there were only six students and a different scale was used – from 0 to 7 and the data was already summarized. That is why the result of assessment of the two courses is represented separately. The scale of CSIT 431 is converted to the scale of the assessment plan (from 0 to 4). The sample size is considered as 6.
Assessment Results	The overall results of the assessment of Goal 3 are quite positive. They show that 88% to 100% of the students exhibit good knowledge of the material in their presentations; 77% to 100% of the students' presentations have appropriate length covering the assigned material; 83% to 91% of the student's presentations give enough information to understand the topic and exclude any unnecessary information; 77% to 100% of the presentations have creative design that does not include unnecessary graphics. The only performance indicator that exhibits some flaws are the hands-on activities: only 50% to 54% of the students included the class in the learning process. Below we give the results of assessment of CSIT 425 and 431 separately.

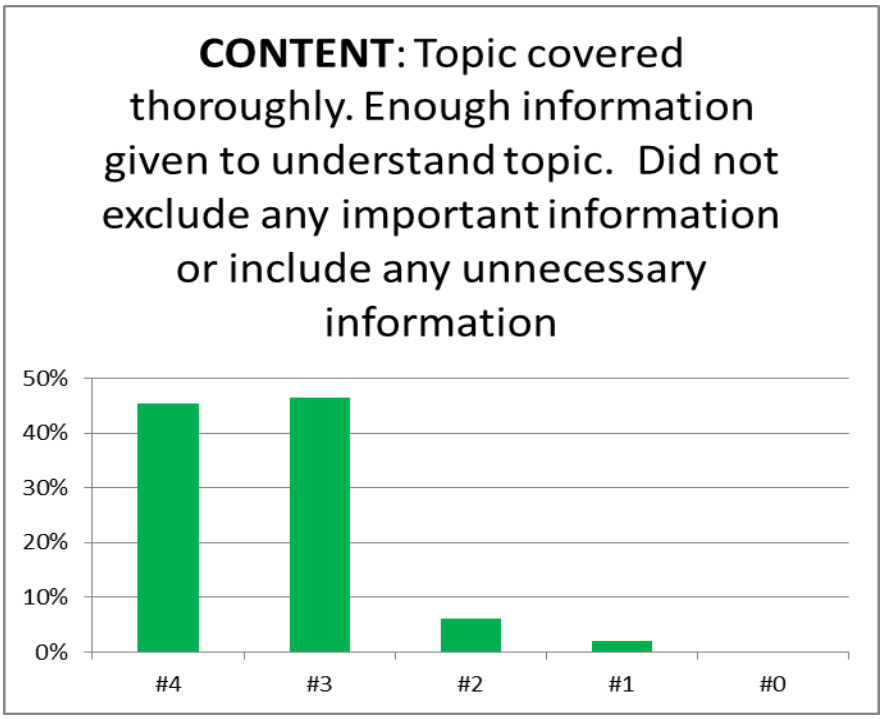
Assessment of CSIT 425



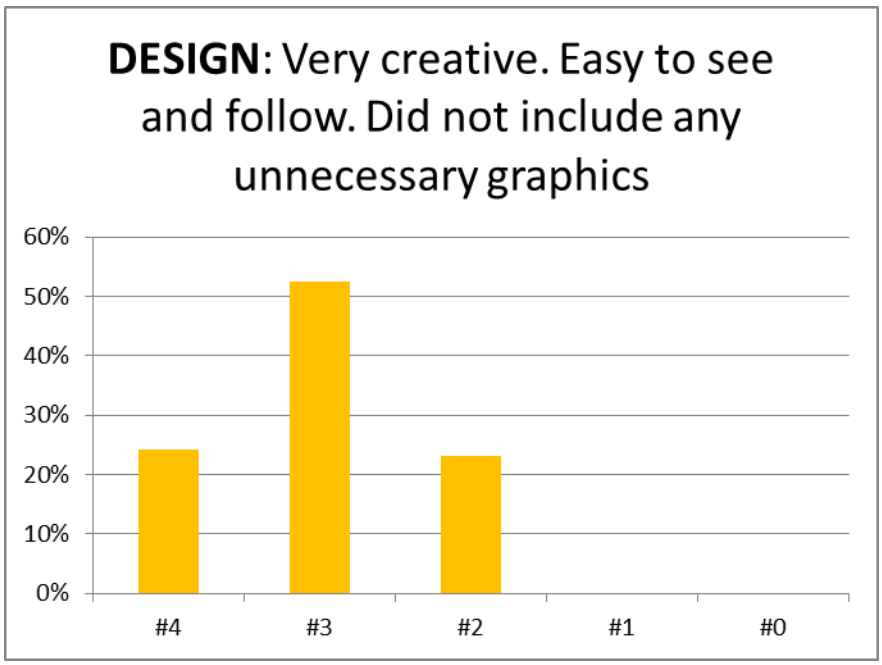
Mostly agree	4	3	2	1	0	Least agree
Number of rubric sheets	54	33	10	1	1	
Percentage	55%	33%	10%	1%	1%	



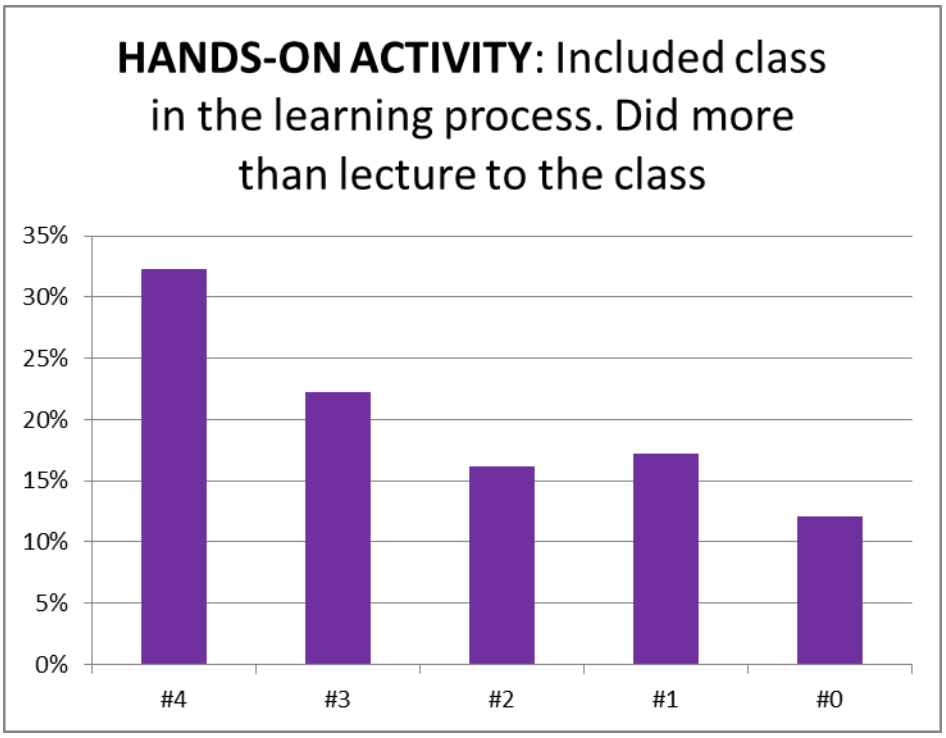
Mostly agree	4	3	2	1	0	Least agree
Number of rubric sheets	48	29	16	5	1	
Percentage	48%	29%	16%	5%	1%	



Mostly agree	4	3	2	1	0	Least agree
Number of rubric sheets	45	46	6	2	0	
Percentage	45%	46%	6%	2%	0%	

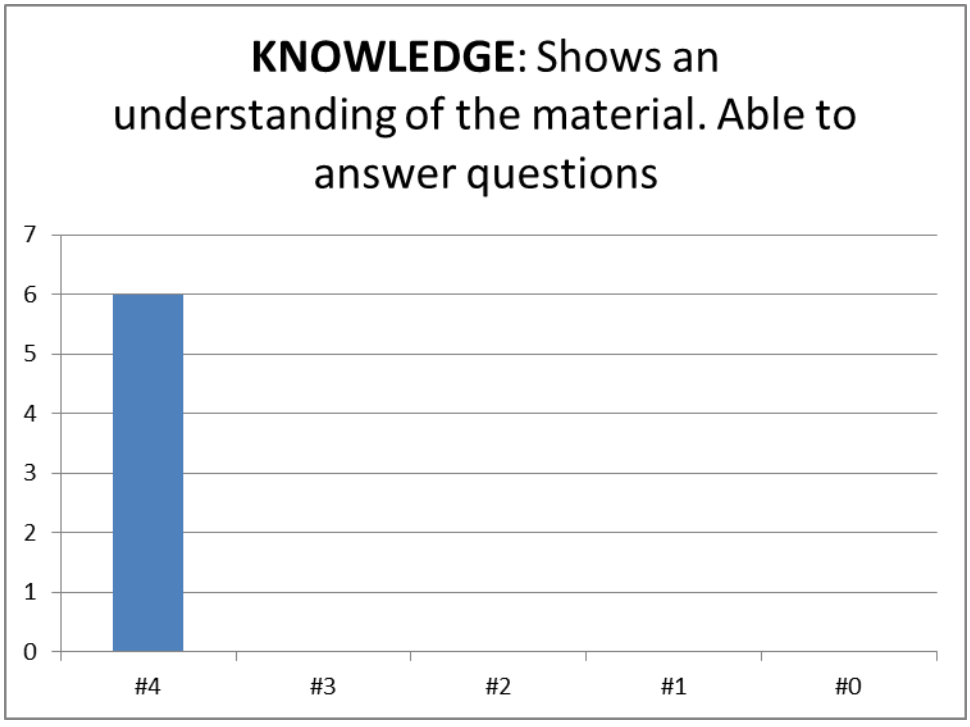


Mostly agree	4	3	2	1	0	Least agree
Number of rubric sheets	24	52	23	0	0	
Percentage	24%	53%	23%	0%	0%	

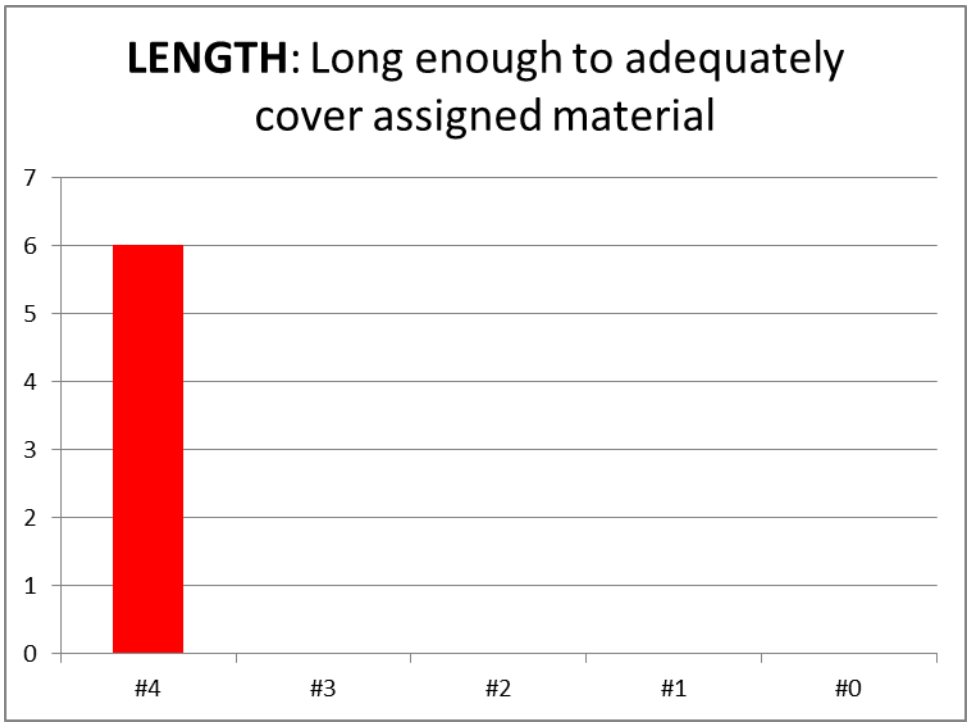


Mostly agree	4	3	2	1	0	Least agree
Number of rubric sheets	32	22	16	17	12	
Percentage	32%	22%	16%	17%	12%	

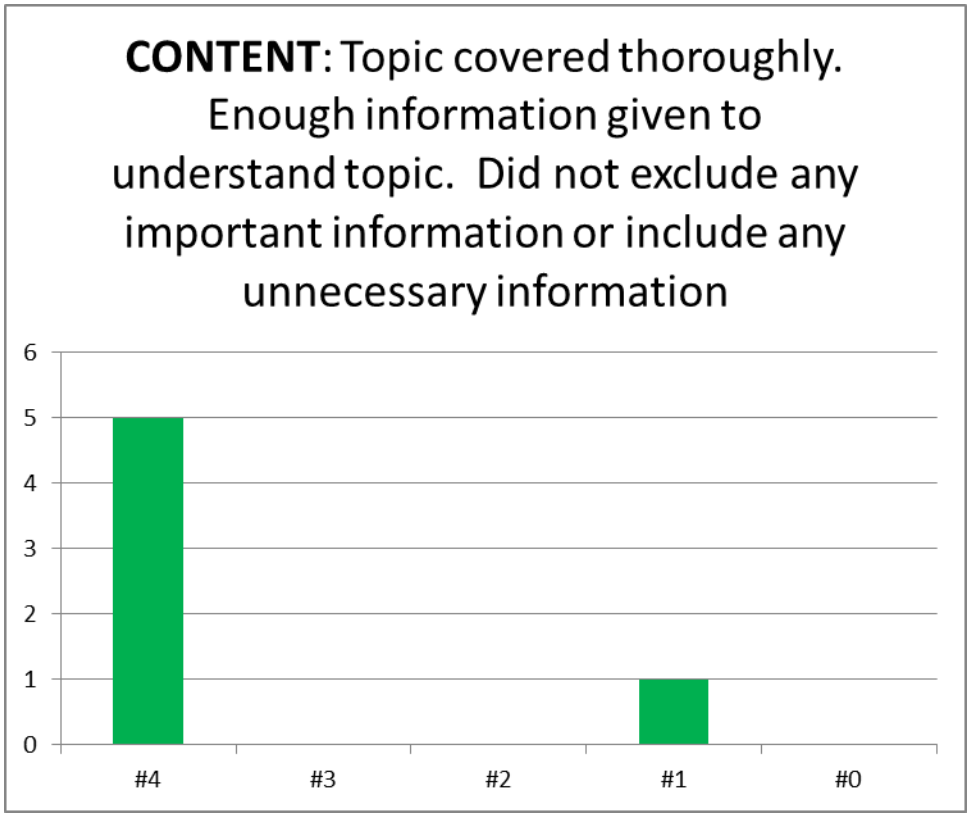
Assessment of CSIT 431



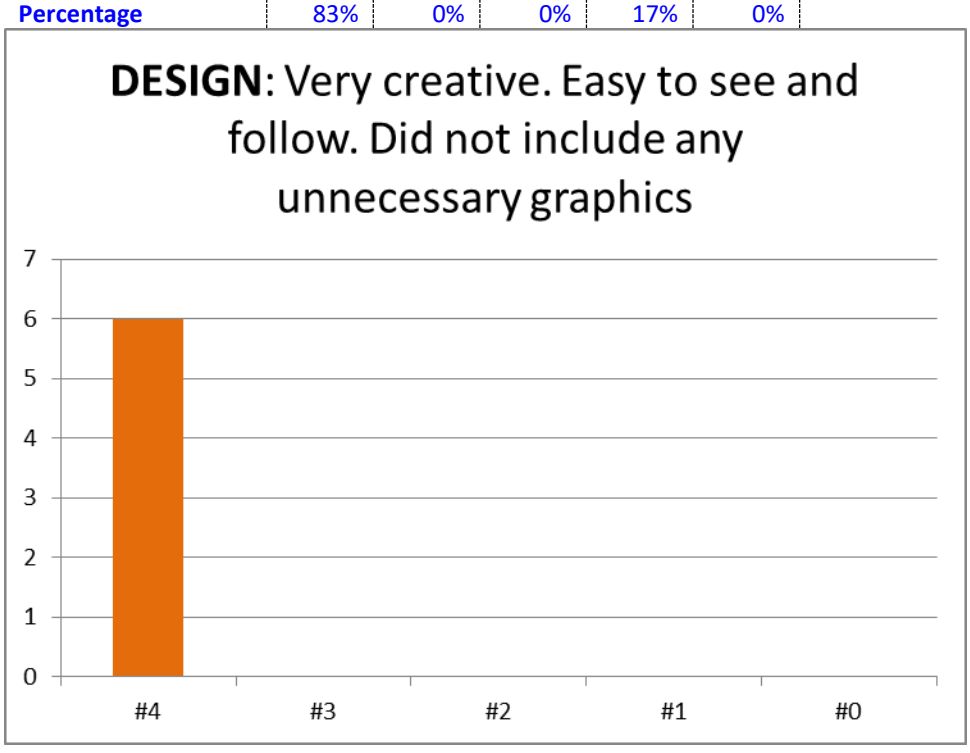
Mostly agree	4	3	2	1	0	Least agree
Number of students	6	0	0	0	0	
Percentage	100%	0%	0%	0%	0%	



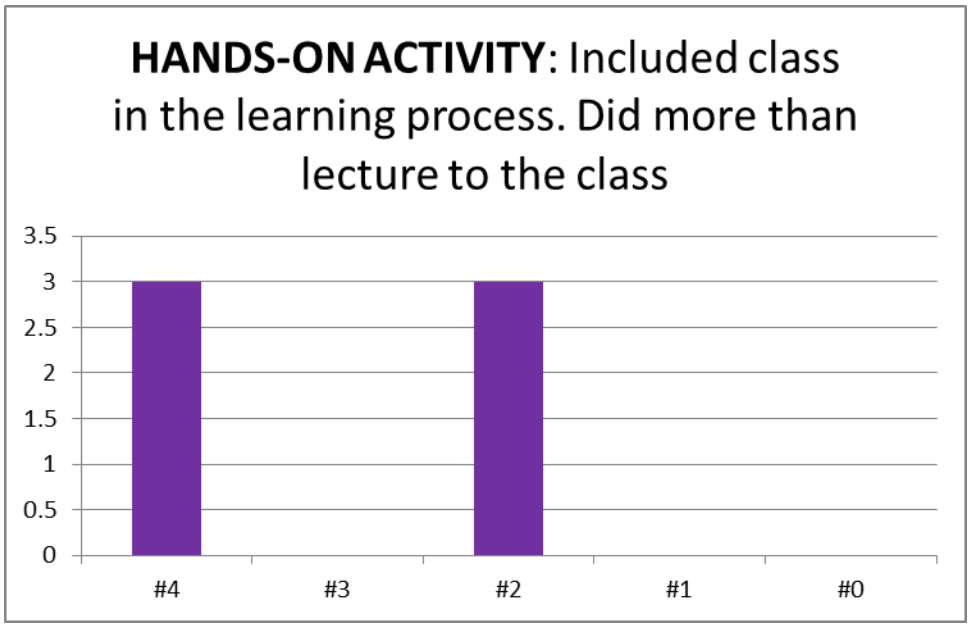
Mostly agree	4	3	2	1	0	Least agree
Number of students	6	0	0	0	0	
Percentage	100%	0%	0%	0%	0%	



Mostly agree	4	3	2	1	0	Least agree
Number of students	5	0	0	1	0	
Percentage	83%	0%	0%	17%	0%	



Mostly agree	4	3	2	1	0	Least agree
Number of students	6	0	0	0	0	
Percentage	100%	0%	0%	0%	0%	



Mostly agree	4	3	2	1	0	Least agree
Number of students	3	0	3	0	0	
Percentage	50%	0%	50%	0%	0%	

The results of the first four PIs: Knowledge, Length, Content, and Design are very good to excellent. The fifth PI Hands-on Activities needs further elaboration. It is recommended that the department conveys to the instructors of oral communication courses the concern that the students need further mastery of the interactivity of the presentations. Sample presentations demonstrating best practices may be useful. The materials developed by the Department of Communication may also be used.

Outcome 4:	Be able to analyze a real-life problem, identify and define computing requirements for its solution and use appropriate software to solve it.
Assessment Method(s)	The Assessment Committee identifies three 400-level courses every year when Goal 4 is assessed, collects the projects and the student grades in these courses, reviews them and assesses Goal 4.
Data Source	The data will be collected from Instructors offering selected 400-level courses.
Assessment Results	The assessment of this learning outcome was not scheduled in 2012-13.

Outcome 5:	Indirect assessment of the Programs through an exit survey
Assessment Method(s)	The department secretary and the chair invite and encourage the graduating students to fill out the attached survey (Appendix II). The chair also reminds the faculty to identify the graduating students and ask them to fill out anonymously the survey. This indirect method helps us refine the assessment of the Learning Goals.
Data Source	The data is collected by the department secretary. This year it was processed by the

	Department Chair following the pattern of last AY for easy comparison. Out of 15 graduating students in Fall 2012 and 30 in Spring 2013, 9 surveys were submitted in Fall and 23 in Spring which constitutes 71% response rate. The sample size is 32.
Assessment Results	Due to the improved procedure of graduation in the department and the reminders by the department chair and the faculty, the response rate rose from 28% in 2011-12 to 71% in 2012-13 which makes the results very representative. Of the surveys received, 19 were from CIS majors, 9 were from CS majors and three were from a CS/CIS minors. Not counting transfer students (there were 12), all students except three graduated in 4 years. Out of these three cases, one graduated in 6 years, although he/she transferred over 30 credits, another one graduated in 5 years, but changed his major, yet another one graduated in 3 years. Therefore, all of the students graduated in less than 6 years. Two students changed their majors. One graduated with both CS and CIS degree. It is also interesting to note that apparently there were internal transfers from CS to CIS, because usually we get more freshmen in CS than in CIS, but significantly more students (more than double) graduated in CIS. The respondents transferring into Fredonia from another school usually come with over 60 credits. It takes them on average two years at Fredonia to graduate. When asked to rate their level of satisfaction with the CIS Department on a scale of 1 to 6, the average score was 4.3, which shows a decrease from 5.1 last AY. As positive sides *the wide range of classes; the possibility of getting help when needed; strong student-teacher relationship; the work in the lab; the small class size; the professionalism of the teachers* were listed. As negative remarks the facts that *some professors do not have strong drive of teaching; many credits outside of the major must be taken; while the students would prefer taking CS courses; there must be less coding in the courses while other students thought that there must be more programming; the expectations of the assignments are not clearly stated in advance; there must be more usage of technology in class, such as presenting the lectures on PowerPoint* were indicated. Five of the graduating students indicated to have lined up a job. This may be a result of the relatively early administering of the survey. One of the students was accepted to graduate school. Most of the students are more interested in immediately entering the job market rather than pursuing a graduate education. Yet 54% do report that they expect to further their education at some point in the future. When asked to name their favorite courses, a wide range of courses were specified, both within and outside the CIS department. The courses that were most often mentioned were CSIT 107, 105, 221, 201, 203, 205, 207, 241, 341, 425, 433, 461, 462. When asked which electives they wish they had been able to take, we received two kinds of responses. Some people interpreted this as asking which of our courses they did not take because they didn't have time, while others thought it meant which courses did we not offer that they wished we did offer. In the former category, the most often mentioned courses were Android Programming, Java, Ruby on Rails, Game Development, and more database and networking classes. Students also wish that we offered courses on security, virus knowledge, data storage, Java, Java Script, AJAX, applications, computer repair, PC technician, and CISCO certification.

	Students were asked on a 1 to 5 scale whether they thought faculty offices and classrooms were accessible. The average score was 4.3. Students were also asked whether the workspace and equipment was adequate for them to do their coursework. This result was again 4.4 out of 5, but students indicated that they want more courses taught in labs.
Conclusions	
Have you had an opportunity to discuss these results within your department? If so, what form did this take?	A draft of the current report was posted on Angel for faculty review. The final version is posted on the department web site. Next semester, at the first department meeting, it will be discussed and measures towards curriculum improvement will be undertaken.
What conclusions were drawn about student learning as a result of their assessment efforts?	The overall results of the assessment of Goal 3 are quite positive. They show that over ¾ of the students exhibit good knowledge of the material in their presentations, use appropriate presentation length covering the assigned material, give enough information to understand the topic and exclude any unnecessary information, and apply creative design that does not include unnecessary graphics. The only performance indicator that exhibits some flaws are the hands-on activities: only 50% to 54% of the students included the class in the learning process. It is recommended that the department conveys to the instructors of oral communication courses the concern that the students need further mastery of the interactivity of the presentations. Sample presentations demonstrating best practices may be useful. The materials developed by the Department of Communication may also be used. The exit survey demonstrates high satisfaction of the education in C&IS Department 4.3/6. It also indicated the appreciation of the students of having more "hands-on" courses. The graduates indicate, however, that more courses should be taught in lab settings.

Dissemination and Use of Assessment Findings	
During the **past year**, in what ways did your department discuss/share results from assessment done this year or in previous years?	In AY 2011-12, Learning Goal #2 was assessed. The results were disseminated among faculty still in June 2012 and posted on the department web site. At department meetings on September 5, 2012 the results were discussed. The main findings were that the students need further exposure to the CPU and its various functions and sub-units. In addition, they should get additional exposure to the difference between assembly, linking and compilation of the programs. This was conveyed to the instructors and they were advised to use a simulator to explain the work of CPU, assembly, linking, and compilation. This AY, Dr. Barneva taught CSIT 312 and included Little Man Computer simulator in the course material. Student experience was pretty positive. Accordingly, the department approved steps to make improvements in the curriculum (see below).

How were these findings used to improve teaching and learning in your department? Please **specifically** describe the actions that were taken as a result of the findings.	*Describe how the data were used. Here are some examples to think about:* Changes to the Assessment Plan: ☐ revision of intended learning outcomes; ☐ revision of measurement approaches; ☐ changes in data collection methods; ☐ changes in the sampling Changes to the Curriculum: **X** changes in teaching techniques; ☐ revision of prerequisites; ☐ revision of course sequence; **X** revision of course content; ☐ addition of courses; ☐ deletion of courses Changes to the Academic Process: ☐ revision of admission criteria; ☐ revision of advising standards or processes; ☐ improvements in technology; ☐ changes in personnel; ☐ changes in frequency or scheduling of course offering If no changes were made, please explain why:

Closing the Loop: Review of Previous Assessment Findings and Changes *Assessment feedback from 2010-2011 and 2011-2012 is included below.*

2010-2011 Recommendation from Feedback Form:

Reword SLO's to make them more specific

2011-2012 Feedback from Executive Summary:

2. Be familiar with the computer organization and system software.

You have written a very strong assessment report and continue to make impressive progress toward department goals and with assessment of student learning. You are working toward last year's recommendation to reword your SLO's for ABET purposes. Your assessment of SLO #2 is solid and your report is thorough. (You do not need to include in our report methodology or results for SLO's you did not assess this year). Perhaps you could more clearly describe how you quantify your standards (inadequate, approaches, meets, exceeds). In the rubric you attached in Appendix 1, you do not indicate how these standards actually apply to what you are measuring, nor do you indicate how scores are determined. Excellent exit survey and report of results. You have also provided us with lots of quality detail on the extent to which your department is reflecting on and using assessment results for continuous improvement. Finally, we value the information you provided in the "Baccalaureate Goals: Planning Ahead" portion of the template. It is clear that your department's assessment efforts are authentic, useful, and faculty-driven.

Please identify one or more changes your department has implemented in recent years as a result of assessment data.	The results of assessment of Goal 1 indicated that most of our students in the intensive programming courses CSIT 205 and CSIT 221 are able to grasp the main concepts of developing software. The need for stressing program correctness and for testing the programs with own generated data was emphasized. In the exit interview the students indicated that they would appreciate more "hands on" applied work.

	At a department meeting we decided to include more testing practice in the courses CSIT 121 and 105 so that when reaching the courses CSIT 221 and 205 the students are able to independently test their results. Regarding the "hands-on" work, we understand that this type of education is more appealing to students, but the theoretical foundations should also be covered. Thus, we introduced many innovative courses such as Android, iPhone, Windows Phone, Ruby on Rails, Blender, Game Development, and others giving practical experience and giving competitive advantage to our students at the job market. We have also incorporated in our curriculum some more applied elements, such as practical network management skills (including network security), database administration, and significant coverage of design patterns and UML. The results of assessment of Goal 2 show that the students of CSIT311 and CSIT312 have exhibited good understanding of the concepts related to computer organization and system software. It was noted that the lowest score of 59% 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. In addition, they should get additional exposure to the difference between assembly, linking and compilation of the programs. The assessment report was discussed at the first department meeting in 2012-13. The main findings were that the students need further exposure to the CPU and its various functions and sub-units. In addition, they should get additional exposure to the difference between assembly, linking and compilation of the programs. This was conveyed to the instructors and they were advised to use a simulator to explain the work of CPU, assembly, linking, and compilation. This AY, Dr. Barneva taught CSIT 312 and included Little Man Computer simulator in the course material. Student experience was very positive.
Describe the process for implementing change.	The decision were made at department meetings. The changes were implemented specifically in individual courses by the course instructors. In addition, our network administrator and our student lab staff were instrumental in setting up a separate network (not attached to the college network) so students could work on network security issues. The additional courses were developed by the individual instructors.
How has this change been assessed?	Goals 1, 2, and 3 will be reevaluated after one assessment cycle. Indirectly, through the survey, we can assess that the new "practical" courses are appreciated.
What were the findings of the assessment(s)?	The exit student survey indirectly assesses the changes. The students are satisfied by the new practical courses and by their overall experience at SUNY Fredonia.
How do you plan to (continue to) use this information moving forward?	It's a delicate balance in our curriculum between theory and practice. We will continue to calibrate the quantity of each as we receive more information from student surveys.

General Education Assessment 2011-2012: *Categories assessed and the resulting data can be viewed using these links:* Written Communication, American History, Western Civilization, Critical Thinking, Foreign Language

Have you had an opportunity to discuss the results from 2011-2012 general education assessment findings within your department this year? If so, what form did this take?	No computer science courses were assessed in any of the General Education Assessment categories. However, Dr. Barneva participated in the assessment of Critical Thinking. She shared committee's findings with C & IS faculty. There was a suggestion to use the course of discrete mathematics for computer science or a subset of its material as a universal course for the critical thinking in General Education. This semester five faculty members participated in the assessment of CCC/Mathematics, but the results are not known yet.
What changes were planned, or conclusions were made, if any, regarding the improvement of student learning in general education courses in your department?	Dr. Barneva spoke to the chair of GenEd Revision Committee Dr. Mason about including the course Discrete Mathematics for Computer Science or another similar course in GenEd.

Experiential Learning

Please indicate if your department offers each of the following learning experiences for students, and if so, please describe both the experience and the student learning assessment process:

	No	Yes	Please describe the experience:	How is student learning from this experience currently assessed?
Community engagement	X			
Creative endeavors		X	CSIT 499 Senior Project. The students work under the supervision of a faculty mentor on a computer and information sciences project.	The student, the mentor, the advisor and the department chair sign a learning contract. The performance of the student is assessed according to this contract. Since CSIT 499 is not a required course, it is not included in the assessment plan, but the documentation is available in student folders.
Internship		X	CSIT 300 Internship. The students work under the supervision of a faculty sponsor and site supervisor. The duration is between 40 hours a semester (for 1 credit) to a full-time job the whole semester (for 12 credits). This year 9 students took an internship.	The student, the faculty sponsor, the site supervisor, and the CDO Director sign a learning contract. The performance of the student is assessed according to this contract. Since CSIT 300 is not a required course, it is not included in the assessment plan, but the documentation is available in student folders.
Research		X	CSIT 497 Thesis. The students work under the supervision of a faculty mentor on a computer and information sciences research topic and write a thesis.	The student, the mentor, the advisor and the department chair sign a learning contract. The performance of the student is assessed according to this contract. Only a faculty with a Ph.D. in computer and information sciences is eligible to serve as a mentor. Since CSIT 497 is not a required course, it is not included in the assessment plan, but the documentation is available in student folders.
Study abroad	X		Although the department does not have its own programs for Study Abroad, some of our students have participated in exchange programs.	
Teaching practicum	X			
Service Learning Courses		X	CSIT 305 Proctorship. 10 to 12 students every year serve as proctors in Lab 115 in Fenton Hall. They have to help the students with software, hardware, and	This is a non-credit course and it is not included in the assessment plan. However, a number of students who served as proctors indicated in the exit survey that they have learned a lot.

			programming issues.	
Co-curricular activities (student organizations associated with your department; lecture series; campus events, etc.)		X	CS Club – all department majors belong to the club, but about 30-40 are more active. They meet once a month and have lectures, sometimes by external speakers in the framework of the CS Seminar's Series. CS Team – consists of 5-6 students mentored by a faculty who prepares them for a regional contest. High School Contest – an annual event for high school students in the region in which some of our students volunteer as judges or question writers.	These activities are not formally assessed, although the students indicated that they highly appreciate them. An indication of the preparation of our students is the high ranking in regional events – 17th among all North-East colleges and 2nd among all SUNY teams.

Attachment I

State University of New York at Fredonia
Department of Computer and Information Sciences
2154 Fenton Hall (716) 673-4820

RUBRIC SHEET FOR ASSESSMENT OF GOAL 3

"Clearly communicate the computer science/computer information systems concepts"

KNOWLEDGE: Shows an understanding of the material. Able to answer questions

Mostly agree *4 3 2 1 0* *Least agree*

LENGTH: Long enough to adequately cover assigned material

Mostly agree *4 3 2 1 0* *Least agree*

CONTENT: Topic covered thoroughly. Enough information given to understand topic. Did not exclude any important information or include any unnecessary information

Mostly agree *4 3 2 1 0* *Least agree*

DESIGN: Very creative. Easy to see and follow. Did not include any unnecessary graphics

Mostly agree *4 3 2 1 0* *Least agree*

HANDS-ON ACTIVITY: Included class in the learning process. Did more than lecture to the class

Mostly agree *4 3 2 1 0* *Least agree*

Adapted from Rubrician.com by Dr. Barneva.

Attachment II

State University of New York at Fredonia
Department of Computer and Information Sciences
2154 Fenton Hall (716) 673-4820

SURVEY OF COMPUTER SCIENCE/COMPUTER INFORMATION SYSTEMS GRADUATES

Please check the appropriate entry, or choose the most suitable option, or fill the blanks for each of the question given below where possible.

1. You earned your B.S. degree in

   a. Computer Science
   b. Computer Information Systems

2. a. Year started at SUNY Fredonia_____ Year graduated_____

   b. Did you change your major? Yes _____ No_____

   If Yes:

   c. What was your previous major?_____

   d. Did you transfer from another college to SUNY Fredonia? Yes _____ No_____

   If Yes:

   e. How many credit hours did you transfer?

   Less than 30____ Between 30 and 60_____ Between 60 and 75____ Over 75____

   f. How many semesters overall you spent at college (at SUNY Fredonia and the college your transferred from)? _____

3. On a scale of 6 to 1 (with 6 being Excellent and 1 being very poor): How satisfied are you with your education at the Department of Computer and Information Sciences in SUNY Fredonia?

   ☐

4. Do you already have a job offer?

   a. Yes b. No

   If yes, is it related to your major?

   a. Yes b. No

5. Do you plan to attend graduate school?

   a. Yes, already accepted into graduate school; Field: _____
   b. Yes, applying now; Field: _____
   c. Yes, in the future
   d. No

6. List five courses you liked the most at Fredonia

a. _____

b. _____

c. _____

d. _____

e. _____

7. If you have a job offer, list four courses that were most beneficial to you in securing the job.

a. _____

b. _____

c. _____

d. _____

8. If you had the option to take more elective choices in the discipline, what topic areas would you have liked to have taken at SUNY Fredonia?

a. _____

b. _____

c. _____

d. _____

9. How accessible do you feel faculty offices and classrooms were?

(inaccessible) 1 2 3 4 5 (very accessible)

10. Do you think the access you had to workspace and equipment were sufficient for your coursework

(disagree) 1 2 3 4 5 (agree)

11. Do you have a positive remark/comment(s) to share?

_____

_____

_____

12. Do you have a negative remark/comment(s) to share?

_____

_____

_____

Prepared by Dr. Siddiqui
Revised by Drs. Arnavut, Barneva, Hansen, Ruslanov, Zubairi, and Prof. Mendez in Spring 2011. Approved by the Department on March 28, 2011.