

ABET Progress Report

**Department of Business Administration, Computer
Science and Information Technology**

Lock Haven University

Mark A. Cohen

Wednesday, June 27, 2007

Table of Contents

INTRODUCTION	3
WEAKNESS WITH RESPECT TO STANDARDS III-1, III-3, AND III-4	3
PROGRESS WITH RESPECT TO STANDARDS III-1, III-3, AND III-4	3
<i>Progress towards relevant terminal degrees</i>	<i>3</i>
<i>Grants and awards since focus visit.....</i>	<i>4</i>
<i>Publications since focus visit.....</i>	<i>4</i>
<i>Presentations since focus visit</i>	<i>5</i>
<i>Conferences attended since focus visit.....</i>	<i>5</i>
<i>Upcoming conference attendance.....</i>	<i>5</i>
<i>Editorial work and scholarly service since focus visit.....</i>	<i>6</i>
<i>Additional recent scholarly achievements</i>	<i>6</i>
WEAKNESS WITH RESPECT TO STANDARD VII-5.....	6
PROGRESS WITH RESPECT TO STANDARD VII-5	6
CONCERNS WITH RESPECT TO STANDARDS IV-3 AND IV-11	7
PROGRESS WITH RESPECT TO STANDARDS IV-3 AND IV-11	7
CONCERNS WITH RESPECT TO STANDARD IV-9.....	7
PROGRESS WITH RESPECT TO STANDARDS IV-9	7
CONCERNS WITH RESPECT TO STANDARD VI-2.....	7
PROGRESS WITH RESPECT TO STANDARDS VI-2	7
CONCERNS WITH RESPECT TO STANDARD VI-3.....	8
PROGRESS WITH RESPECT TO STANDARDS VI-3	8
CONCERNS WITH RESPECT TO STANDARD VII-6.....	8
PROGRESS WITH RESPECT TO STANDARDS VII-6.....	8
SUMMARY.....	8

Introduction

Following an evaluation by ABET, which consisted of an initial visit in September 2004, and a focused visit in October 2005, accreditation was granted to the Computer Information Science (CIS) program at Lock Haven University. Accreditation was approved for the period from October 1, 2004 until September 30, 2008.

As part of the accreditation agreement, the CIS program was requested to initiate a reaccreditation report evaluation by January 31, 2007, and to follow up with a progress report by July 1, 2007.

This document represents the requested follow-up progress report describing the actions taken by the CIS program to correct the shortcomings identified in the final statement of the 2004-2005 ABET evaluation.

In this document, each weakness and concern reported by ABET is restated, and a description of progress addressing each weakness and concern is given.

Weakness with Respect to Standards III-1, III-3, and III-4

Standard III-1: “The interests and qualifications of the faculty members, as indicated by the strong computer science orientation of a number of the courses in the program and the lack of scholarly and professional development activities in information systems among the faculty, cause a concern with respect to Standard III-1.”

Standard III-3: “There is a concern because a majority of the faculty members do not hold terminal degrees, and no faculty member holds a Ph.D. in information systems.”

Standard III-4: “The low level of faculty activities in scholarly and professional development events in information systems causes a concern with respect to the expectation that all faculty members remain current in the discipline.”

Standard VII-4: “The level of faculty participation in information systems professional development or scholarly activities over the last five years is very low. This causes concerns with respect to the expectations that all faculty remain current in the discipline.”

Progress with Respect to Standards III-1, III-3, and III-4

The qualifications of newly hired faculty members, and the increased participation in information systems scholarly and professional development activities by current faculty members, has lead to significant progress towards the resolution of the weaknesses expressed in Standards III-1, III-3, and III-4.

The following sections provide detailed evidence of this progress.

Progress towards relevant terminal degrees

Since the ABET focus visit, Mark Cohen, Assistant Professor in Computer Information Science, has made considerable progress towards a Ph.D. from the College of

Information Sciences and Technology (IST) at Pennsylvania State University. Mr. Cohen has completed all of his required coursework, passed the comprehensive exam, and successfully defended his Ph.D. thesis proposal. He anticipates completing the degree in August, 2008.

In addition, two faculty members responsible for teaching classes in the CIS program have recently retired: John Potter who was an Associate Professor of Computer Science and Paula Bell who was an Associate Professor of Computer Information Science. Neither of these faculty members held a terminal degree.

To fill the computer science vacancy, the department has recently hired Dr. Krish Pillai, Assistant Professor in Computer Science, with a Ph.D. in Computer Engineering from Southern Methodists University. Dr. Pillai was hired to replace John Potter and will be responsible for teaching some of the CIS courses including, Introduction to Computers, Programming I, Programming II, and Fundamentals of Networking.

In addition to his strong teaching record, Dr. Pillai has nine years of industry experience in networking technologies. At Nortel Networks Dr. Pillai was the recipient of four CEO/CTO Invention Awards for his innovative work. This work has lead to three U.S. patents and one patent-pending for work he co-authored and co-developed with colleagues at Nortel Networks. His most recent research, which is patent-pending, is entitled “A priori Radio Resource Reservation for Wireless Networks.” This research addresses the problems associated with the migration to Wireless WAN of the communication between emergency response teams.

The department is continuing its search for an Assistant Professor in Computer Information Science, with a terminal degree in information systems, to replace Paula Bell. Once the hiring process is complete, and Mark Cohen has completed his Ph.D., all but one faculty member in the CS/CIS programs will hold a terminal degree. In addition, two of these faculty members will have degrees in information systems.

Grants and awards since focus visit

Since the last focus visit, CIS faculty members have received the following grants and awards:

- Paula Bell was awarded a \$2,200 grant for “Promoting Technology Adoption for Progress”. This grant was used in the Systems Analysis & Design class during the fall 2005 semester.
- Mark Cohen’s article on his interfaced-based game playing framework was chosen as one of the top six best articles ever published by ACM Crossroads.

Publications since focus visit

Since the last focus visit, CIS faculty members have published the following manuscripts:

- Cohen, A. M., Ritter, F. E., & Haynes, S. R. (2007). Using Reflective Learning to Master Opponent Strategy in a Competitive Environment. *In Proceedings of International Conference on Cognitive Modeling*, Ann Arbor, MI.
- Ritter, F. E., Kase, S. E., Bhandarkar, D., Lewis, B., & Cohen, A. M. (2007). dTank updated: Exploring moderator-influenced behavior in a light-weight synthetic environment. In proceedings of the *16th Conference on Behavior Representation in Modeling and Simulation*, Norfolk, VA.
- Ritter, F. E., Haynes, S. R., Cohen, M. A., Howes, A., John, B. E., Best, B., Lebiere, C., Jones, R. M., Lewis, R. L., St Amant, R., McBride, S. P., Urbas, L., Leuchter, S., & Vera, A. (2006). High-level behavior representation languages revisited. In proceedings of the *Seventh International Conference on Cognitive Modeling*, 404-407. Trieste, Italy: Edizioni Goliardiche.
- Haynes, S. R., Skattebo, A. L., Singel, J. A., Cohen, M. A., & Himelright, J. L. (2006). Collaborative architecture design and evaluation. In proceedings of the *ACM DIS 2006: The Conference on Designing Interactive Systems*.

Presentations since focus visit

Since the last focus visit, CIS faculty members have presented the following research:

- Cohen, M.A., Ritter, F. E., Haynes, S. R. (2007). Using a high-level behavior representation language and graphical development environment to teach cognitive modeling and agent programming. Presented at the 2007 Pennsylvania Association of Computer and Information Science Educators Conference, Lock Haven, PA
- Ritter, F. E., Haynes, S. R., & Cohen, M. A. (2006). Real world behavioral modeling with the Herbal High-Level Language. Presented at the Office of Naval Resources Affordable Human Behavior Modeling Workshop, Arlington, VA

Conferences attended since focus visit

Since the last focus visit, CIS faculty members have attended the following conferences:

- Association of Information Technology Professionals, National Collegiate Conference (2006 and 2007).
- Summer Academy for the Advancement of College Teaching (Summer 2007)
- Pennsylvania Association of Computer and Information Science Educators Conference (Spring 2007)
- Office of Naval Resources Affordable Human Behavior Modeling Workshop (Fall 2006)
- Dartmouth Artificial Intelligence Conference: The Next Fifty Years (Summer 2006)
- Designing Interactive Systems Conference (Summer 2006)

Upcoming conference attendance

In the upcoming months, CIS faculty members will be attending the following conferences:

- The International Conference on Cognitive Modeling in Ann Arbor, MI (Summer 2007)
- The 2007 ISECON conference in Pittsburgh, PA (Fall 2007)

Editorial work and scholarly service since focus visit

Since the last focus visit, CIS faculty members have participated in the following scholarly service:

- Textbook reviewer (Paul Bell): three text books reviewed for Prentice-Hall including a computer literacy textbook, a computer concepts textbook, and a Microsoft Office textbook.
- Grant proposal reviewer (Mark Cohen): 2007 Annual Grants Program of the Faculty Professional Development Council for the PA State System of Higher Education.
- The CIS program hosted the 2007 Pennsylvania Association of Computer and Information Science Educators Annual Meeting. Members of the department acted as conference chair (Susan Strayer), presentation chair (Mark Cohen), programming contest chair (Bruce Wooley), and registration chair (Paula Bell).
- Conference reviewer (Mark Cohen): 2006 Pennsylvania Association of Computer and Information Science Educators Annual Meeting
- Editorial board member (Susan Strayer) for the proceedings of the 2005-2007 Pennsylvania Association of Computer and Information Science Educators Annual Meeting

Additional recent scholarly achievements

In collaboration with researchers at Penn State, Mark Cohen's cognitive modeling environment (acs.ist.psu.edu/herbal) has been used to teach in four different undergraduate and graduate courses at Penn State and Lock Haven University. Most recently, his research was used this spring in a graduate level course in cognitive modeling at the College of IST at Penn State.

Weakness with Respect to Standard VII-5

Standard VII-5: "The low level of faculty participation in professional development and other scholarly activities also raises a concern as to whether faculty members have sufficient time for scholarly activities and professional development."

Progress with Respect to Standard VII-5

During the 2007 spring semester, Mark Cohen was awarded three credits of release time to make progress towards his Ph.D. and to conduct research. Administration has awarded similar release time in the Fall 2007 for another faculty member in the department.

This release time has been beneficial to Mr. Cohen's Ph.D. pursuit, and other faculty members are looking forward to taking advantage of release time in the future.

Concerns with Respect to Standards IV-3 and IV-11

Standards VII-3 and VII-11: “The extent to which three semester credits of quantitative analysis in addition to the six credits from two math courses are provided adequately in the material of other courses must be observed.”

Progress with Respect to Standards IV-3 and IV-11

Starting in the Fall 2007, Math for Management (MATH180) has been added as a required course for all CIS majors. This course adds three required credits of relevant and practical quantitative analysis to the program resulting in an explicit nine credits and thereby eliminating this concern.

Concerns with Respect to Standard IV-9

Standard IV-9: “The extent to which there is an adequate coverage of information systems theory and practice must be observed.”

Progress with Respect to Standards IV-9

Starting in Fall 2007, a new course in web-based application development has been added to the CIS program as a required course for all CIS majors. This course provides a survey of web-based application development technologies and how they can be used to provide e-commerce solutions. In addition to learning about how to apply various technologies, issues such as privacy and equal access are discussed.

This course provides additional coverage of information systems theory and practice and therefore eliminates this concern.

The department has also planned a course in human computer interaction for Fall 2008 that focuses on the impact that systems have on potential users and how to consider this impact during design and implementation. This course will continue to strengthen the coverage of information systems theory and practice in the program.

Concerns with Respect to Standard VI-2

Standard VI-2: “It remains to be determined whether the additional support that has been made available to support faculty attendance at technical and professional meetings is adequate.”

Progress with Respect to Standards VI-2

Recent financial support provided by administration has increased the departmental travel budget by over 40% and has made it possible for CIS faculty to attend the AITP National Collegiate Conference the last two years. These same funds will be used to send two faculty members to ISECON 2007 this fall.

In addition, funds made available from other organizations, such as the Pennsylvania State System of Higher Education, have made it possible for a CIS faculty member to attend the Summer Academy for the Advancement of College Teaching in June, 2007

and for the CIS department to host the Pennsylvania Association of Computer and Information Science Educators Conference in the Spring 2007.

Lastly, CIS faculty members were able to leverage funds from outside sources to attend the Office of Naval Resources Affordable Human Behavior Modeling Workshop (Fall 2006), the Dartmouth Artificial Intelligence Conference: The Next Fifty Years (Summer 2006), the Designing Interactive Systems Conference (Summer 2006), and the International Conference on Cognitive Modeling (July 2007).

The program's presence at eight different conferences in the past year demonstrates administrative support for adequate attendance at technical and professional meetings and eliminates this concern.

Concerns with Respect to Standard VI-3

Standard VI-3: "The high teaching loads cause concerns as to whether there is adequate recognition and support for scholarly activities by faculty."

Progress with Respect to Standards VI-3

Again, during the 2007 spring semester Mark Cohen was awarded three credits of release time to make progress towards his Ph.D. and to conduct research. Administration has granted similar release time to the department for the fall, and this support has allowed the program to make progress towards this concern.

With respect to adequate recognition for scholarly activities, the Lock Haven University Promotion Policies and Procedures were updated (effective AY 2006) so that continuing scholarly growth and master of subject matter are given greater weight. The new policies and procedures have increased this weight to 25% of the overall promotion score.

This indicates greater recognition by administration for scholarly activities.

Concerns with Respect to Standard VII-6

Standard VII-6: "There has been no opportunity to evaluate the results of the plan to address uneven advising loads."

Progress with Respect to Standards VII-6

Since the last ABET visit, the advising load has been redistributed across the faculty to provide a more even load. This redistribution continues as new students enter the major and new faculty are hired.

Summary

This document represents a follow-up progress report describing the actions taken by the CIS program at Lock Haven University to correct the shortcomings identified in the final statement of the 2004-2005 ABET evaluation.

The weaknesses and concerns reported by ABET can be summarized into three categories: too strong a computer science orientation in the department; a need for greater scholarly activity and professional development; and a lack of support from administration for scholarly activities. As outlined in this document, the program has made excellent progress towards addressing these weaknesses and concerns.

With respect to the strong computer science orientation, the department has better defined its information systems program with the addition of more credits in quantitative analysis, a new course in web-based application development, and a planned course in human computer interaction. These courses will place a greater emphasis on information systems theory and practice.

With the hiring of a new CIS faculty member, and upon completion of Mr. Cohen's dissertation, the department will have added two new information systems-related terminal degrees. In addition, members of the program have begun regular attendance at the major information systems conferences to remain current in information systems theory and practice.

With respect to greater scholarly activity and professional development, a much larger percent of the faculty now have terminal degrees, and this number will approach 100% by the Summer 2008. In addition, since the last ABET visit, faculty members have received awards and grants, published and presented at major conferences, attended several information systems conferences, hosted the 2007 Pennsylvania Association of Computer and Information Science Educators Conference, and engaged in other academic service. These activities clearly show an increase in scholarly activity and professional development.

Finally, with respect to administrative support, the administration has significantly increased financial support for attendance at conferences and granted release time specifically for the purpose of scholarly activity in information systems. Continued funding and release time has been promised. In addition, promotion guidelines have been changed to show a greater recognition for scholarly development. Lastly, a conscious effort has been made to keep advising loads equally distributed to ensure the faculty has time to continue this level of scholarly engagement.

The progress made by the program towards addressing the weaknesses and concerns of ABET has been described in detail, as well as plans to continue this progress. We look forward to working with ABET in the future to continue the advancement of the CIS program at Lock Haven University.