All laboratories must have adequate technical support in terms of professional staff to provide for installation and maintenance of the equipment. The staff should be proficient in both the hardware and software applications. Complete documentation must also be available.

Laboratories should be able to support the following types of functions:

1. Structured Laboratories

   A structured laboratory is a closed, scheduled, supervised experience in which students complete specified exercises. An instructor who is qualified to provide necessary support and feedback to the students provides supervision. Exercises are designed to reinforce and complement the lecture material.

2. Open/Public Laboratories

   Student ownership of computers has continued to increase. However, laboratories remain essential for those students who do not own a computer and for providing additional resources not available on personal machines.

3. Specialized Laboratories

   Laboratory facilities are necessary to support team projects and special computing environments. Special facilities may be needed for systems development, network infrastructure, and other advanced technologies.

Classrooms

Suitable classroom facilities, equipped with information technology teaching resources, should be provided. A computing system with multimedia facilities is necessary for demonstrating the development, implementation, and application of information technology as well as conducting walkthroughs and making presentations. Classrooms should have access to the Internet and extranet networks, either with port per seat or wireless networking capabilities.

Library

Library support is an important part of an academic program. It is especially important for disciplines with rapid development of knowledge such as the Information Systems field. Libraries should provide both traditional and digital access wherever possible to journals, proceedings, monographs, and reference books. The holdings should include access to digital journals and proceedings of the computing professional societies.

13. SHARED COURSES WITH OTHER COMPUTING DISCIPLINES

As explained earlier in the report, there is a close relationship between the academic fields of Information Systems and other computing disciplines, and there are also very significant differences. The context for Information Systems is an organization and its systems. In contrast, the context for Computer Science is algorithmic processes for information processing and

associated technical and technology issues. There are complementary strengths for these academic units in preparing graduates for information systems work in organizations.

An Information Systems academic unit is typically strong in preparing students for the organizational environment. This advantage is especially strong when the Information Systems program is within or closely tied to organizational or business studies. The challenge for an IS unit may be in maintaining adequate depth of instruction in some technology subjects. On the other hand, a Computer Science program sometimes reverses the comparative position of an IS unit. It is typically strong in teaching technology and related algorithmic processes, but organizational functions and systems may not be an area of emphasis for them.

Of course, there is so much variety in the actual organization of academic units that these remarks cannot be taken too literally. Even in the case of a single academic unit that covers multiple computing curricula, one often sees these complementary strengths among programs.

This high level perspective of complementary strengths suggests that there may be opportunities for courses taught by any computing area that also meets the needs of IS majors; similarly for courses taught by IS for students desiring more IS knowledge from other areas. It is also possible to conceptualize a common core for multiple programs, and in fact, such shared core courses are taught at a number of institutions. This report has not attempted a formal definition of such a course sequence because there is no fixed organizational model of the relationship between the varied programs to which such a definition could be addressed. If a common core sequence appears to be useful for an institution, a useful approach is for the institution to take the core requirements for IS as described in this report and, considering the local situation in terms of organization of academic units and distribution of strengths of faculty and laboratory resources, to design a common core sequence.