ABET

Computing Accreditation Commission

THE INFORMATION SYSTEMS ENVIRONMENT ∙

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*This document is intended to provide additional clarification regarding the meaning and use of the concept “information systems environment” in the context of Information Systems program criteria. Its target audiences include team chairs, program evaluators and institutions that currently have or are considering ABET accreditation of a degree program in Information Systems.*

The Program Specific Criteria for CAC Information Systems accreditation require “at least 15 additional semester credit hours (or equivalent) of a cohesive set of topics that provide an understanding of an information systems environment.” The CAC defines an information systems environment as “an organized domain of activity within which information systems are used to support and enable the goals of the activity. Examples of information systems environments include (but are not limited to) business, health care, government, not-for-profit organizations, and scientific disciplines.”

An ***information systems environment*** is an area of practice in which information systems professionals integrate processes, managerial practices, and information technology to support and enable the area’s goals. An IS ***environment*** cannot consist of a single, narrowly focused *technical* knowledge area. Instead, an environment represents a broader application domain within which information systems are employed. The environment encompasses and influences the systems and technologies within it, and the systems and technologies impact the environment within which they are used. The inputs, processes and outputs of the environment are closely intertwined with the information systems within the environment. All 15 semester hours must relate to a single IS environment, forming a “cohesive set of topics”.

Table 1 shows several examples of IS environments (Column 1) and IS Curriculum examples (Column 2). Column 3 consists of examples that would **not** fulfill the concept of an IS environment.

The examples in Table 1 are not intended to be the only means of satisfying the criteria.

* Adapted from Yaverbaum, G., Feinstein, D., Gorgone, J.,Topi, H., Kasper, G., Valacich, J., Zant, R. Information Systems Environment, Penn State Harrisburg, SBA Working Paper Series, #35, 2004, [http://www.personal.psu.edu/gjy1/ISEnvironmentWorkingPaper.pdf](about:blank) .
* Updated in February 2023 based on the recommendation by the CAC IS Criteria subcommittee. Approved by [to be completed]

**Table 1**

| **IS Environment Examples** (*note:* The environment represents the ecosystem in which information systems are employed) | **IS Curriculum Related to the Environment**  This includes IS Management, IS Systems, Technologies, and  Applications | **Related Examples that Do Not Constitute an IS Environment** |
| --- | --- | --- |
| **Business:** Coverage of processes and functional business areas**,** such as human resources management, accounting, marketing, finance, operations management, and other processes that integrate the areas specified above. | Management Information Systems including core technologies plus advanced systems and technologies with management and/or business applications. | Sole focus on technologies such as telecommunications, database management, programming, and systems analysis and design. Collections of courses that do not have the application area focus such as statistics or economics. |
| **Health care**: Health care and patient management, health insurance, health finance and accounting, service marketing. | Technology and issues core to health-related applications. For example, data warehousing and data mining, imaging, and HIPAA software applications are all applicable to the application area. | Sole focus on digital imaging, intelligent diagnostic devices, telemedicine, and other medical technologies. |
| **E-business**: International or general accounting and finance, web management, e-marketing, the psychology of interface design, logistics and supply chain  management | Technology core, advanced technologies related to the web, for example, user experience design, client-server, advanced networking, web development technologies, etc. | Sole focus on Web technologies/WEB Management, XML, JavaScript, Visual Basic  .NET, user interface  programming, telecommunications, database. |
| **Government and non-profit environments**: management in the non-profit sector, finance and accounting; economics; marketing of non-profits; government accounting, | Core technologies plus advanced technologies with public sector applications, web applications, social services applications, public administration applications and  issues | Sole focus on specific government applications and their infrastructure, such as electronic voting systems. |
| **Museums:** Museum management, museum financial management, marketing for non-profit organizations, art history; docent  management/training | Core technologies plus specialized museum applications such as financial, audio development, art database applications, museum management,  etc. | Sole focus on supporting technologies, such as imaging, art and the computer, object databases, etc. |
| **Geographical Information Sciences**: Homeland security issues and policies, regional (or more widespread) geography, state and regional planning, management in the public sector, public policy | All core technologies, e.g., programming, database, telecommunications, etc. Data Warehousing, user interface design and application, Security related to GIS, Geographic Information Systems Applications, Traffic  management systems | Sole focus on specific GIS applications and technologies, such as wireless security, database applications for GIS |