

## College of Information Science and Technology



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# Cyber-Security in Library & Information Science Education

## Abstract

Information security (INFOSEC) includes confidentiality, access and authenticity, particularly of electronic information. INFOSEC has been studied extensively in computer science, business management and information systems, but not apparently in library & information science (LIS). While the library profession has long been concerned with issues of patron and record privacy, the electronic threat is newer. With threats of cyber-terrorism and data loss, and the overall reliance on electronic information, INFOSEC is, or should be, of great concern to LIS professionals and educators. This study explored a potential gap in the curricula of the LIS field.

## Methodology

Research questions addressed:

- To what extent are 'security' and 'privacy' explicit elements of ALA-accredited curricula
- Are there specific courses dedicated to these concepts
- What courses overall include these concepts

Websites of all 56 ALA-accredited LIS programs were searched for explicit mention of the keywords "security" or "privacy" in any course description or catalog. These two keywords were chosen as being representative of the core concepts of INFOSEC, and as likely components of LIS curricula. Terms were searched individually and frequencies noted, as were co-occurrences. Co-occurrences would more likely indicate content related to INFOSEC, as terms appearing individually may often be unrelated.

Collected data were entered in charts, and coded under headings for 16 course categories. Categories represented spectrum of offerings across LIS curricula. As INFOSEC has been studied extensively in computer science, more course headings appear for information systems-related courses. It was thought this was where "security/privacy" were most likely in curricula at present.

Introductory	Networking +/-or Internet	Web Develop-ment	Design +/-or Development
Social Context	Law + Policy	Advanced Networking	Healthcare
Databases	Archival +/-or Public Svcs.	Competitive Intelligence	Foundations of Info. Orgs.
Mngmt. of Info. (orgs.)	Data/Info Secu- rity	Library opera- tions/automation	Special/current topics

Course Categories used for coding; selected from knowledge of LIS curricula

## Methodology (cont.)

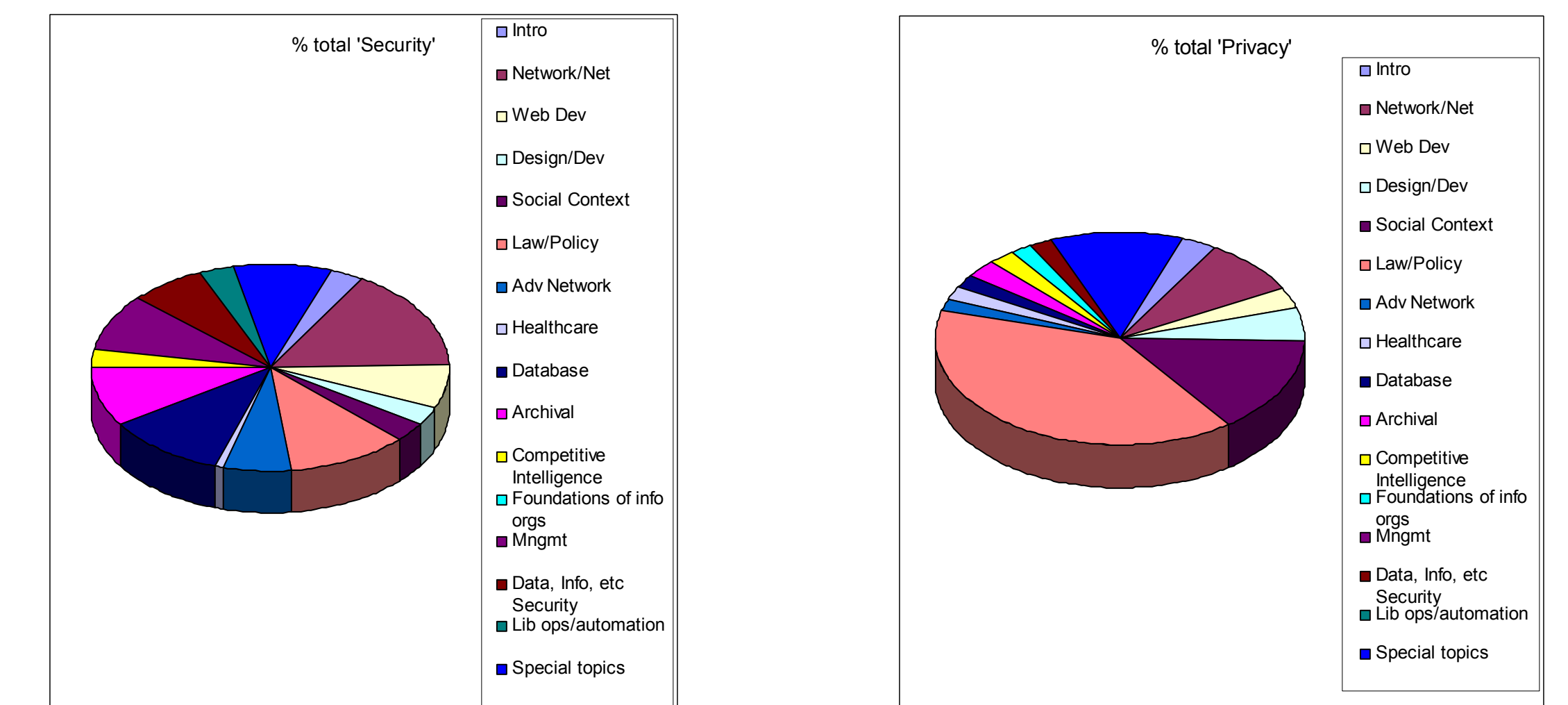
For coding, the letter 'p' or 's' was entered under the correct course category for each instance of a course listing/description, for each school's LIS program. If there were multiple courses offered under same heading, multiple coded entries were possible. No matter how many times a single course description explicitly used the keywords, only one coded mark was made for each keyword. Additional notes were made as to any problems encountered, discrepancies, "special topics" courses, or explicit mention of "information security."

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	
1	56 Universities				Net-work and Inter- net	Web Dev	Design and De- velop- ment	Social Context	Law & Policy	Adv. Net- work	Health- care	Pub- lic Svcs.	Archival	Compe- titive Intelligence	Founda- tions of Info. Orgs.	Mygr. Security	Data, Infor- mation, etc.	Lib. Auto- mation	Special Topics	SECURITY	PRIVACY
2	UNIVERSITY	DEGREE																			
44	Florida State University	BSIT							P											0	0
45	<a href="http://www.lis.fsu.edu">http://www.lis.fsu.edu</a>	MLIS																		0	1
46																					
47	Hawaii, University of	MLISc - has electives from CS dept							P, S		S					S	S			4	1
48	<a href="http://www.hawaii.edu/lis">http://www.hawaii.edu/lis</a>																				
49																					
50	Illinois, University of	MSLIS			D, S		P	P												2	3
51	<a href="http://libis.lis.uiowa.edu">http://libis.lis.uiowa.edu</a>																				
52																					
53	Indiana University	MLS																		1	0
54	<a href="http://www.lis.indiana.edu">http://www.lis.indiana.edu</a>	MIS																		0	0
55																					
56	Iowa, University of	MA LIS								P										0	1
57	<a href="http://www.lis.uiowa.edu/~libis/">http://www.lis.uiowa.edu/~libis/</a>																				
58																					
59	Kent State University	MLIS						P	P											0	2
60	<a href="http://www.lis.kent.edu">http://www.lis.kent.edu</a>																				
61																					
62	Kentucky, University of	MSLS			S															1	0
63	<a href="http://www.lis.uky.edu/CISGLS">http://www.lis.uky.edu/CISGLS</a>	MA																			
64																					

## Results

Nearly one third of the schools didn't explicitly mention either keyword in course descriptions (including Drexel). Only 4 schools had specialized courses in security/privacy, particularly as meant by INFOSEC. The most frequent occurrence of "security" was in courses on computers, networking, Internet; the most frequent occurrence for "privacy" was in the area of law and policy. There were several course categories with no mentions for one or the other keyword. Initial findings from this exploratory research indicate INFOSEC is not being widely addressed in LIS education and this topic needs further study.

## Results (cont.)



## Conclusion

The limitations of the scope and methodology of this project also warrant further, more in-depth review of the curricula situation.

Some of these limitations might give a less-than-accurate representation of the lack of INFOSEC coverage in the LIS curricula. These include: missing or unavailable course listings; human error in searching, scanning or coding; frequent changes to course listings; or language barriers on websites for schools where English is not the primary language of instruction.

It is also likely that many faculty mention, or even explicitly teach, aspects of security and privacy in several of their courses (particularly as 'privacy' is a key library value and concept) but do not mention either term in their course listings. However, it is our belief that core competencies should be explicitly mentioned in all descriptions—and if 'security' and 'privacy' are valued as such, they should appear clearly. A greater question for the LIS profession is what value is placed on these concepts, and how should they be handled in the curricula.

A further study of course syllabi might be beneficial as these are generally more detailed than course listings which offer only brief descriptions. Additionally we would like to evaluate the research interests of faculty in LIS programs for explicit mentions of 'security', 'privacy', and/or 'information security.' This might give a better indication of what professors are currently discussing in their courses. Interviews with faculty at selected schools, a short survey to faculty and/or students, or other more in-depth qualitative and/or quantitative methods may be employed as appropriate.