

THE CURRENT STATUS OF ABET ACCREDITATION OF INFORMATION SYSTEMS PROGRAMS

Ronald J. MacKinnon, Georgia Southern University, rmackinn@georgiasouthern.edu

Kevin L. Elder, Georgia Southern University, kelder@georgiasouthern.edu

John N. Dyer, Georgia Southern University, jdyer@georgiasouthern.edu

ABSTRACT

As of March 2012 there were 35 Information Systems (IS) programs at 34 universities accredited by the Accreditation Board for Engineering and Technology (ABET). This paper investigates these ABET accredited IS programs to see what these programs have in common and how do they differ from other IS programs. The data was collected by visiting the web pages of the selected IS programs. This paper includes a study of the required IS courses, elective IS courses, required programming courses, required business courses, the title of the IS program (IS/MIS/CIS), the department and college where the IS program was located and the year of ABET accreditation. It is interesting to notice that after 21 years of IS accreditation, only one of the ABET accredited IS degrees is a BBA degrees. This study points out several significant differences between the ABET accredited IS programs and the typical BBA IS programs at the sample universities. The growth of ABET accreditation has been slow, 35 programs over 10 years. ABET accreditation of engineering and computer science is the norm but ABET accreditation of IS programs is not the norm. It is interesting to note that none of the top rated IS programs in US News & World Report are ABET accredited.

Keywords: ABET, Accreditation, Information Systems

INTRODUCTION

The Accreditation Board for Engineering and Technology (ABET) has been accrediting engineering programs since 1936, and almost every engineering program in the US is ABET accredited. In 1985 ABET helped to establish the Computer Science Accreditation Board (CSAB) and ABET has also become the standard for CS accreditation. 259 computer science programs have been ABET accredited by ABET by October 1, 2011 and ABET accredits a total of over 3,000 applied science, computing, engineering, and technology programs worldwide.

The Association to Advance Collegiate Schools of Business (AACSB) is the professional accrediting agency for business and accounting programs and by December 2011 AACSB has accredited 643 business and accounting programs. Most Information Systems (IS) programs are in schools of business and are included in the overall accreditation of the school of business. It was a surprise to many people that ABET started to accredit IS programs in 2000. Does AIS have a position on accreditation? Topi (2011) states “ Since Spring 2008, there has been an active debate within AIS regarding the role the Association should have in Information Systems accreditation.”

IS accreditation by ABET has been a topic of interest to IS professionals. In IACIS there have been articles (Kohun and Wood, 2004; Jones, 2004; MacKinnon and Butler, 2005, Kohun, DeLorenza & Rodi 2011), ISECON (Hilton and Stone, 2003; Hilton, Johnson and Kasper, 2004) and JISE (Kohum & Wood, 2003; Challa, Kasper, and Redmond 2005).

Hilton’s study of IS programs Hilton (2007), found that 92% of the IS programs that he surveyed had their business school accredited by AACSB and less than 1% of them were accredited by ABET (Hilton and Lo, 2007).

This paper summarizes the results of 2005 and 2008 ABET accreditation of IS programs and investigates the IS programs accredited since 2008.

METHODOLOGY AND DATA ANALYSIS

In 2005 the ISWorld web pages listed 251 IS programs at US universities. A sample of 20 of these universities was chosen by selecting every 12th university. These IS programs were compared to ABET accredited IS programs.

The analysis of the IS programs was done by examining the web pages of the universities. It is noted that some pages are up to date and some other universities take a while to update the curriculum changes on their web pages.

DEPARTMENT, TITLE AND COLLEGE

The results of the MacKinnon and Butler study (2005) are listed in Table 1.

#	University	Department	IS Course Title	Degree	College
1	Drexel U	None	IS	BS	IS & Technology
2	Illinois State U	School of IT	MIS	BIS	School of IT
3	Kennesaw State U	CS & IS	IS	BS	College of Science & Math
4	U of Nebraska, Omaha	IS & Quant	MIS	BS	College of IS & Technology
5	NJ Institute of Tech	IS	IS	BS	College of Computing Sciences
6	U of North Florida	C & IS Sciences	IS	BS	School of Computing
7	Pace U	None	IS	BS	School of CS & IS
8	Robert Morris U	CIS	ISM	BS	School of Comm & IS
9	U of South Alabama	C & IS	IS	BS	School of Computer & IS
10	Virginia Commonwealth U	IS	IS	BS	School of Business

Table 1. ABET Accredited IS Programs in 2005

The title of the IS courses and the department they are located in are not surprising but it is surprising that of the first 10 IS programs approved by ABET only one program was located in a school of business.

By 2008 there were 23 IS programs accredited by ABET, as shown in Table 2 (MacKinnon and Han, 2008). There was a major change with the 13 additional accredited IS programs. Now ten of twenty three IS programs were located in a school or college of business. There is a wide variety in the names of the departments are housed. For course titles, 8 universities use IS, 5 universities use MIS and 5 universities use CIS and there are 5 other names.

By 2012 there were an additional 13 IS programs accredited by ABET. Only 4 of these programs were in schools/colleges of business as shown in Table 3.

The number of IS programs accredited by year is shown in Table 4. Over the past 10 years 35 programs have been accredited. That is an average of 3.5 programs but only 1 program was accredited in 2010.

The summary of the 35 IS programs accredited in 2012 are listed in table 5

To put these results into perspective, Table 6 lists 20 typical IS programs selected from ISWorld. There are two items that stand out. Most IS programs are in schools/colleges of business and are BBA degrees. The ABET accredited IS programs have 33 BS degrees and only one BBA degree. This was true in the 2005 study and the 2008 study and it is still true in 2012.

University	Department	IS Title	College
Drexel U	None	IS	IS & Technology
Gannon	Computer & Info Sciences	MIS	College of Hum, Bus & Educ
Houston-Clear Lake	Comp & Math Division	CIS	School of Sci & Engineering
Illinois State U	School of IT	MIS	School of IT
Jacksonville SU	Math, Computing & IS	CIS	College of Arts & Science
James Madison	CIS & Mgmt Sci	CIS	<i>College of Business</i>
Kennesaw State U	CS & IS	IS	Science & Math
Lock Haven	Bus, CS & IT	CIS	College of Arts & Science
Maine	SIS & Engineering	ISE	Engineering
Metropolitan S College	CIS	MIS	<i>School of Business</i>
U of Nebraska, Omaha	IS & Quant	MIS	IS & Technology
NJ Institute of Tech	IS	IS	Computing Sciences
U of North Florida	C & IS Sciences	IS	Engin & Construction
Pace U	None	IS	School of CS & IS
Quinnipiac U	Info Sys Mgmt	ISM	<i>School of Business</i>
Robert Morris U	CIS	ISM	School of Comm & IS
U Scranton	Comp Sciences	CIS	School of Management
Slippery Rock	Computer Science	IS	Bus, Info & Social Sci
U of South Alabama	C & IS	IS	School of Computer & IS
U South Carolina	Computer Sci & Engineer	BIS	College of Engin & Comput
Utah S U	Computer Science	CS	College of Science
Virginia Commonwealth U	IS	IS	<i>School of Business</i>
Wright SU	IS & Oper Mgmt	MIS	<i>College of Business</i>

Table 2. ABET Accredited IS Programs in 2008

#	University	Department	IS Course Title.	Deg	College
1	Arkansas Tech U?	C & Info Sc	IS	BS	Applied Sciences
2	California SU, Chico	Acct & MIS	MIS	BS	Business
3	California U of Penn	Math, CS & IS	CIS	BS	Science & Tech
4	Fitchburg S College	Computer Science	CIS	BS	None
5	Florida Memorial U	CS & Math	CIS	BS	School of Arts & Sc
6	Grand Valley SU	School of Comp & IS	IS	BA	Engineering & Comp
7	Radford U	Info Tech	IS	BS	Science & Technology
8	Regis U	None	CIS	BS	School of C & IS
9	Rowan U	None	MIS.	BS	Business.
10	Southern Utah U	CSIS, S Comp & Tech	IS	BS	Science & Engineering
11	U of Tampa	Info & Tech Mgmt	MIS	BS	Business
12	U Arkansas, Little Rock	Info Sc	IS	BS	Engin & IT
13	U of North Alabama	CS & IS	CIS	BBA	Business
14	Utah Valley U	IS & Technology	INFO	BS	Technology & Computing

Table 3. ABET Accredited IS Programs 2008-2012

Year Program Was Accredited	No of IS Programs Accredited	Year Program Was Accredited	No of IS Programs Accredited
2000	1	2006	4
2001	6	2007	2
2002	3	2008	3
2003	3	2009	3
2004	4	2010	1
2005	3	Total 2000-2010	35

Table 4 The Number of IS Programs Accredited by Year

#	University	ABET Acred Year	Department	IS Title	Deg	College
1	Arkansas Tech	2006	C & Info Science	IS	BS	Applied Science
2	California SU, Chico	2008	Acct & MIS	MIS	BS	Business
3	California U of Penn	2008	Math, CS & IS	CIS	BS	Science & Tech
4	Drexel U	2001	None	IS	BS	IS & Technology
5	Fitchburg State College	2006	Computer Science	CIS	BS	None
6	Florida Memorial U	2008	CS & Math	CIS	BS	School of Arts & Science
7	Gannon	2004	Computer & Info Sciences	MIS	BS	Hum, Bus & Education
8	Grand Valley SU	2007	School of Comp & IS	IS	BA	Engineering & Comp
9	Illinois State U	2001	School of IT	MIS	BiS	School of IT
10	Jacksonville SU	2003	Math, Computing & IS	CIS	BS	Arts & Science
11	James Madison	2003	CIS & Mgmt Sci	CIS	BS	Business
12	Kennesaw State U	2002	CS & IS	IS	BS	Science & Math
13	Metropolitan S College	2005	CIS	MIS	BS	School of Business
14	NJ Institute of Tech	2002	IS	IS	BS	Computing Sciences
15	Pace U	2000	None	IS	BS	School of CS & IS
16	Quinnipiac U	2005	Info Sys Mgmt	ISM	BS	School of Business
17	Radford U	2008	Info Tech	IS	BS	Science & Technology
18	Regis U	2010	None	CIS	BS	School of C & IS
19	Robert Morris U	2001	CIS	ISM	BS	School of Comm & IS
20	Rowan U	2006	None	MIS	BS	Business
21	Slippery Rock	2003	Computer Science	IS	BS	Bus, Info & Social Sci
22	Southern Utah U	2009	CSIS, Sch Comp & Tech	IS	BS	Science & Engineering
23	U of Tampa	2009	Info & Tech Mgmt	MIS	BS	Business
24	U Arkansas, Little Rock	2006	Info Sc	IS	BS	Engineering & IT
25	U Houston, C of Tech	2009	Info & Logistics Technology	CIS	BS	Technology
26	U Houston-Clear Lake	2004	Comp & Math Division	CIS	BS	Sch of Science & Engin
27	U Nebraska, Omaha	2002	IS & Quant	MIS	BS	IS & Technology
28	U North Alabama	2006	CS & IS	CIS	BBA	Business
29	U North Florida	2001	C & IS Sciences	IS	BS	School of Computing
30	U of South Alabama	2001	C & IS	IS	BS	School of Computer & IS
31	U South Carolina	2004	Computer Sci & Engineering	BIS	BS	Engin & Computing
32	Utah S U	2005	Computer Science	CS	BS	Science
33	Utah Valley U	2007	IS & Tech	IS	BS	Technology & Computing
34	Virginia Commonwealth	2001	IS	IS	BS	School of Business
35	Wright SU	2004	IS & Oper Mgmt	MIS	BS	College of Business

Table 5. ABET Accredited IS Programs in 2012

University	Department	IS Title	College
Baylor U	IS	ISY	COB
Bowling Green SU	A & MIS	MIS	CBA
Central Connecticut SU	MIS	MIS	SOB
Colorado State U	CIS	BD	COB
Eastern Michigan U	CIS	ISM	COB
Florida Gulf Coast U	CIS	ISM	COB
Georgia College & SU	IS,C & M	CBIS	COB
James Madison	IT & MS	CIS	COB
Louisiana State U	IS & DS	ISDS	COB
Middle Tennessee SU	CIS	CIS	COB
Northwest Missouri SU	CS/IS	MIS	COB
Oklahoma State U	MS & IS	MIS	COB
San Diego State U	IDS	IDS	COB
Temple U	MIS	MIS	SOB
U of Alabama, Huntsville	None	MIS	CAS
U of Central Florida	MIS	MIS	COB
U of Maryland, BC	IS	IS	None
U New Mexico	M,IS & DS	MGT	SOM
U of South Florida	IS DS	MIS	COB
Western Carolina U	BCIS &Econ	CIS	COB

Table 6. Random Sample of IS Departments in 2005

IS DEGREE NAME AND BUSINESS CREDITS REQUIRED

Table 6 (MacKinnon, Butler, 2005) shows the college and the department and the IS course title of IS programs that were ABET accredited in 2005. Nine of the degrees were BS degrees and one degree was a Bachelor of Information Systems (BIS) degree.

University Names	ABET IS Accredited Year	ABET IS Degree Name	Business Credits Required	Existence of BBA IS	Existence of CS Degree
Drexel U	2001	BS	27	Y	Y
Illinois State U	2001	BIS	22	BIS	Y
Kennesaw State U	2002	BS	27	N	Y
U of Nebraska, Omaha	2002	BS	20	N	Y
NJ Institute of Tech	2002	BS	15	N	Y
U of North Florida	2001	BS	12	N	Y
Pace U	2000	BS	6 + 17 opt	Y	Y
Robert Morris U	2001	BS	15	N	SE
U of South Alabama	2001	BS	24	N	Y
Virginia Commonwealth U	2001	BS	39	N	Y
Average			20.7-21.8		

Table 7. ABET IS Accredited Characteristics in 2005

University	Year ABET Accred	ABET IS Name	Business Credits Required	Existence of CS	Existence of IT	Existence of BBA IS	Bus AACSB Accred
Drexel U	2001	BS	27	Y	Y	Y	Y
Gannon	2004	BS	33	Y	N	N	N
Houston-Clear Lake	2004	BS	12	Y	N	BS CIS	Y
Illinois State	2001	BIS	22	Y	N	BIS	Y
Jacksonville S	2003	BS	21	Y	N	Mgmt/IM	Y
James Madison	2003	BBA	40-45	Y	N	Y	Y
Kennesaw SU	2002	BS	27	Y	Y	N	Y
Lock Haven	2005	BS	21	Y	N	N	N
Maine	2007	BS	15	Y	N	N	Y
Metropolitan SC	2005	BS	30	Y	N	N	N
Nebraska, Omaha	2002	BS	20	Y	PhD	N	Y
NJ Inst of Tech	2002	BS	15	Y	Y	N	Y
North Florida	2001	BS	12	Y	N	N	Y
Pace U	2000	BS	6+17 opt	Y	Y	Y	Y
Quinnipiac U	2005	BS	40	Y	N	N	Y
Robert Morris U	2001	BS	15	SE	N	N	N
U Scranton	2005	BS	18	Y	N	N	Y
Slippery Rock	2003	BS	18	Y	Y	N	N
South Alabama	2001	BS	24	Y	Y	N	Y
South Carolina	2006	BS	60	Y	N	N	Y
Utah SU	2005	BS	12	Y	N	BA	Y
Virginia Commonwealth	2001	BS	39	Y	Y	N	Y
Wright SU	2004	BSB	39	Y	N	N	Y
Average			24.6-25.3				

Table 8. ABET IS Accredited Characteristics in 2008

University	Year ABET Accred	ABET IS Degree	Business Credits Required	Exist of CS	Exist of IT	Exist Of Engin	Exist of BBA IS	Bus AACSB Accred
Arkansas Tech U	2006	BS	15	Y	Y	Y	N	Y
California SU, Chico	2008	BS	24	Y	N	Y	Y	Y
California U of Penn	2008	BS	15	Y	N	Y	N	N
Fitchburg SU	2006	BS	12	Y	N	N	N	N
Florida Memorial U	2008	BS	15	Y	N	N	N	N
Grand Valley SU	2007	BS	24	Y	N	Y	BA	Y
Radford U	2008	BS	24	Y	N	N	N	Y
Regis U	2010	BS	9	Y	N	Y	N	N
Rowan U	2006	BS	24	Y	N	Y	N	Y
Southern Utah U	2009	BS	18	Y	N	Y	N	Y
U of Tampa	2009	BS	36	N	N	N	N	Y
U of Arkansas, Little Rock	2006	BS	15	Y	N	Y	N	Y
U of North Alabama	2006	BBA	36	Y	N	N	N	Y
Utah Valley U	2007	BS	24	Y	Y	N	N	Y
Average			20.8					

Table 9. ABET IS Accredited Characteristics 2006-2012

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University Names	ABET IS Name	Business Credits Required	Existence of CS	AACSB IS Accredited
Baylor U	BBA	54	Y	Y
Bowling Green SU	BS	57	Y	Y
Central Connecticut SU	BBA	27	Y	N
Colorado State U	BBA	33	Y	Y
Eastern Michigan U	BBA	36	Y	Y
Florida Gulf Coast U	BBA	30	Y	Y
Georgia College & SU	BBA	18	Y	Y
James Madison	BBA	39	Y	Y
Louisiana State U	BBA	36	Y	Y
Middle Tennessee SU	BBA	45	Y	Y
Northwest Missouri SU	BBA	33	Y	N
Oklahoma State U	BBA	36	Y	Y
San Diego State U	BBA	33	Y	Y
Temple U	BBA	58	Y	Y
U of Alabama, Huntsville	BBA	48	Y	Y
U of Central Florida	BBA	45	Y	Y
U of Maryland, BC	BS	18	Y	Y
U of New Mexico	BBA	36	Y	Y
U of South Florida	BA/BS	39	Y	Y
Western Carolina U	BSBA	45	Y	Y
Average		38.3		

Table 10. Sample Universities Degrees & Business Credits Required

University	IS Credits Required	IS Credits Electives	IS Credits Total	Programming Credits Required
Drexel	41	16	56	9
Illinois State	22	20-23	42-45	9
Kennesaw State	34	9-15	43-49	9
Nebraska, Omaha	33	12	45	4
NJ Institute of Tech	42	15	57	6
North Florida	27	12	39	11
Pace	39	6	45	12
Robert Morris	27	12	39	3
South Alabama	50	9	59	6
Virginia Commonwealth	30	9	39	6
Average	34.5	12-12.9	46.4-47.3	7.5

Table 11. ABET IS Requirements 2005

REQUIRED IS AND PROGRAMMING CREDITS

The total required IS credits, elective IS credits, the total IS credits and the number of programming credits required are in Table 11 for 2005, Table 12 for 2008 and Table 13 for 2012. Because the BS degrees in IS generally do not require as many business credits they are able to take significantly more credits in IS.

University	IS Credits Required	IS Credits Electives	IS Credits Total	Programming Credits Required
Drexel	41	16	56	9
Gannon	45	6	51	18
Houston-Clear Lake	18	0	18	6
Illinois State	22	20-23	42-45	9
Jacksonville SU	42	12	54	9 incl COBOL
James Madison	22	6	28	Offered as elective
Kennesaw State	34	9-15	43-49	9
Lock Haven	27	15	42	18
Maine	54	15	69	9
Metropolitan S College	21	6	27	3
Nebraska, Omaha	33	12	45	4
NJ Institute of Tech	42	15	57	6
North Florida	27	12	39	11
Pace	39	6	45	12
Quinnipiac	29	6	35	6
Robert Morris	27	12	39	3
U Scranton	40	18	58	7
Slippery Rock	31	3	34	9
South Alabama	50	9	59	6
South Carolina	40	3	43	12
Utah SU (CS not IS)	21	6	27	10
Virginia Commonwealth	30	9	39	6
Wright SU	30	4	34	6
Average	33.3	9.6-10.0	42.8-43.2	8.1

Table 12. ABET IS Programs' Requirements 2008

University	IS Credits Required	IS Credits Electives	IS Credits Total	Programming Credits Required
Arkansas Tech U	56	3	59	13
California SU, Chico	40	3	43	6
California U of Penn	46	3	49	12
Fitchburg SU	33	9	42	9
Florida Memorial U	45	9	54	6
Grand Valley SU	39	3	42	3
Radford U	36	0	36	6
Regis U	48	0	48	3
Rowan U	36	0	36	0
Southern Utah U	42	16	54	6
U of Tampa	34	3	37	0
U of Arkansas, Little Rock	46	12	58	5
U of North Alabama	30	6	36	6
Average	40.8	5.2	46.0	6.2

Table 13. ABET IS Requirements 2008-2012

CONCLUSION

The trends noted in 2005 and 2008 are still valid in 2012. Thirty one of the 35 IS programs that are accredited by ABET are BS degrees. Most of these BS degrees are located in non-business colleges. There has been a slow but a steady growth of ABET accreditation of IS programs (35 programs in 10 years) but there were 3 new IS programs accredited in 2009 and only one new IS program accredited in 2010. ABET accreditation of IS programs has not yet become the standard IS accreditation. The MIS Rankings (2011), published by the US News & World Report lists the top ranked MIS programs in the US. . It is notable that none of the 35 accredited IS programs listed in Table 5 are listed in these MIS rankings. For faculty interested in IS accreditation, the Topi (2011) paper gives a good summary of why accreditation should be important for information systems. The Kohun, DeLorenzo and Rodi (2011) paper presents an excellent explanation of the ABET “2001 Criteria for Computing Programs”. After looking at the above data, it is recommended that if an IS program is not in a school/college of business, they should consider ABET accreditation. A selected number of chairs of IS programs in Colleges of Business were asked if it was worth all the work to become ABET accredited. All the chairs, except one, stated that they thought that ABET accreditation was worth all the work. One chair was not sure.

REFERENCES

1. AACSB (2012). Accreditation. Retrieved March 5, 2012, from <http://www.aacsb.edu/accreditation/>
2. ABET (2012a). Accredited Information Systems Programs, -ordered by name. Retrieved March 4, 2012 from <http://main.abet.org/aps/Accreditedprogramsearch.aspx>
3. ABET (2012b). Criteria for Accrediting Computing Programs, 2012-2013. Retrieved, March 4, 2012, from <http://www.abet.org/computing-criteria-2012-2013/>
4. Challa, C.D., Kasper, G.M., & Redmond R. (2005). The Accreditation Process for IS Programs in Business Schools. *Journal of Information Systems Education*, 16 (2), 207-217.
5. Gorgone, J.T. (2004). Draft Information Systems Accreditation Criteria for 2006, *the Special Interest Group on Computer Science Education (SIGCSE) Bulletin*, 36(2), 15-17.
6. Hilton, T. S. & Stone, M. (2003). MIS Program Accreditation: Comparing AACSB and ABET. *IACI*, Retrieved from <http://isedj.org/isecon/2003/2211/ISECON.2003.Hilton.pdf>
7. Hilton, T. S., Johnson, D. A., & Kasper, G.M. (2004), ABET Accreditation of MIS Programs in AACSB Schools, *In the Proceedings of Information Systems Education Conference (ISECON)*, 21, 1-16.
8. Hilton, T. S. & Lo. B. W. (2007), IS Accreditation in AACSB Colleges via ABET, *JAIS* 8(1), Article 1 1-15
9. Jones, C. G. (2004). An Analysis of Programmatic Differences Between Dual ABET/AACSB and ABET-Only Accredited Information Systems Programs, *IACIS*, 2, 544-530.
10. Kohun, F. G. & Wood, D.F. (2003). The ABET CAC Accreditation Experience – Intent and Reality – the Information Systems Perspective, *JISE*, 1(43), 3-11.
11. Kohun, F. G. & Wood, D.F. (2004). The ABET CAC Accreditation: Is Accreditation Right for Information Systems?, *International Association for Computer Information Systems (IACIS)*, 2, 579-583.
12. Kohun, F.G. DeLorenzo, G.J. & Roull, A. F. (2011) Are All Information Systems Created Equal – Does Accreditation Solidify Information As a Discipline?, *IACIS*, 12, 2, 264-272.
13. MacKinnon, R. J. & Butler, S.E. (2005). How Do IS Programs Compare with ABET Accredited Programs? *International Association for Computer Information Systems (IACIS)*, 6, 332-338.
14. MacKinnon, R. J. & Han, HJ. (2008). An Analysis of IS Programs Accredited by ABET, *Communications of the IIMA*, 8,1,43-52.
15. MIS Rankings (2011), US News and World Report, Retrieved March 5, 2012 from
16. <http://colleges.usnews.rankingsandreviews.com/best-colleges/rankings/business-management-information-system>
17. Topi, Heikki (2011) *IS Education: Accreditation of Degree Programs in Information Systems, ACM SIGCSE Bulletin, Volume 41, Issue 2, June 2009, 70-71.*