2015 IE Report Transmittal form

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The information included in the attached reports is current and correct to the best of my knowledge.

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Date approved by Board of Trustees or Area Commission: | Clemson University Board of Trustees

Date approved by Commission on Higher Education: | 2001

Check list of IE Reports due **August 10, 2015**

_x__ Professional Examinations Table

Date Submitted: | August 10, 2015

CLEMSON UNIVERSITY

**SUMMARY REPORT
ON
INSTITUTIONAL EFFECTIVENESS**

**SUBMITTED TO
THE SOUTH CAROLINA COMMISSION ON HIGHER EDUCATION**

AUGUST 2015

Results of Professional Examinations

APPLICABLE TO ALL SECTORS – REPORTED FOR APRIL 1, 2014- MARCH 31, 2015

According to Section 59-101-350, the Commission is responsible for collecting "student scores on professional examinations with detailed information on state and national means, passing scores, and pass rates, as available, and with information on such scores over time, and the number of students taking each exam" from four- and two-year institutions to be included in the annual report to the General Assembly. The Commission on Higher Education also uses this information as the primary source with which to fulfill requirements in Section 59-103-30 for performance funding to collect information on Instructional Quality and Graduates' Achievements by looking at the scores of graduates on post-undergraduate professional, graduate, or employment-related examinations and certification tests.

Past committee work and the development of performance funding have defined the collection of this information to include only first-time test takers (except the teacher education exams at four-year institutions, which include all test takers) for those students who completed an examination during the period of **April 1, 2014 through March 31, 2015**. The following tables display the exams that each sector has reported in the past. Please use this list as a guide for the exams you report this year on the table provided. **Please be aware that your institution may have students taking certification exams that have not been reported on in the past.** This would be the case if students were just beginning to complete a new program. In such cases, please report the scores and indicate that the exam is new to the table. New exams will not be used for Performance funding reporting.

THE COMMISSION WILL REQUEST NATIONAL AND STATE PASS RATES AND ANY ADDITIONAL INFORMATION FOR THESE EXAMINATIONS, AS IT IS AVAILABLE, FROM NATIONAL AND STATE AGENCIES TO BE USED IN THE REPORT TO THE GENERAL ASSEMBLY. THESE NATIONAL AND STATE AGENCIES CAN BE FOUND IN "A CLOSER LOOK."

Construction Science and Management: Constructor Certification Level 1

Clemson University's Bachelor of Science in construction science and management was established in 1962 and is accredited by the American Council for Construction Education. Below are the pass rates for the American Institute of Constructors Constructor Certification Level I examination for the past ten years:

Certification of Construction Science Graduates

Year	Pass Rate
2005	58%
2006	60%
2007	75%
2008	80%
2009	77%
2010	65%
2011	79%
2012	82%
2013	69%
2014	76%

As the table demonstrates, after making a significant and steady improvement over the previous four years, the pass rate began to fall in 2009. In 2010 the pass rate dropped to 65% (the national average is 63%). Due to the substantial change in pass rates over the past several years, the faculty met to determine the cause and attempt to rectify the problem. The faculty found that one of the reasons for the decline in pass rates was that the students were not receiving instruction in one of the key areas assessed by the exam until after they took the exam. Steps are currently in progress to rectify this problem.

Nursing: NCLEX Examination

Clemson University School of Nursing NCLEX pass rate for 2014 is 92.86%. We are continuing with a number of strategies that have led to increased success over the past six years. Faculty members continue to carefully review the curriculum to identify and eliminate any areas of omission or excessive redundancy and to coordinate content among courses in each semester to facilitate student application and long-term learning in preparation for professional nursing practice. The Kaplan comprehensive testing program has been well received. This program includes specialty testing in each clinical area. Students are expected to pass the test at or above the national average before moving to the next semester. Alternate exams are available and the program offers a wide variety of online remediation for each specialty area. The identification and elimination of learning gaps in each area strengthens preparation as nursing professionals as well. These exams give the students additional practice on a nationally normed exam with the NCLEX format and additional resources if they need additional review in a particular content area. Before including this testing plan, many of our honors students were paying out of pocket for the live review following the completion of the program. Now all students attend this strategies focused testing review between final exams and graduation. The high stakes nature of the exam that is now required for employment justifies the additional testing and preparation.

The NCLEX test gives the successful tester increasingly difficult questions. The number of items on the exam ranges from 75-250. Students compete among themselves for the smallest number of questions for a successful outcome. We continue to have a large number of students who report taking only the minimum 75 questions. The Clemson University undergraduate nursing program maintains close to a 100 percent job placement rate within 3 months of graduation.

National Council Licensure Exam (NCLEX) 2008-2014

Name of Exam	Year	# of 1st Time Examinees	# of 1st Time Examinees who Passed	% 1st Time Examinees Passing
National Council Licensure Exam (NCLEX) - Registered Nurse (BS)				
Clemson University	2008	104	94	90.38%
South Carolina NCLEX Pass Rate	2008	1911	1669	87.34%
National NCLEX Pass Rate	2008	129114	111979	86.73%
Clemson University	2009	103	98	95.15%
South Carolina NCLEX Pass Rate	2009	2158	1907	88.37
National NCLEX Pass Rate	2009	134728	119131	88.42
Clemson University	2010	107	96	89.72
South Carolina NCLEX Pass Rate	2010	2197	1967	89.53
National NCLEX Pass Rate	2010	140883	123158	87.42
Clemson University	2011	114	104	91.23
South Carolina NCLEX Pass Rate	2011	2215	1986	89.66
National NCLEX Pass Rate	2011	144565	127074	87.90
Clemson University	2012	97	93	95.88
South Carolina NCLEX Pass Rate	2012	2.337	2,182	93.37
National NCLEX Pass Rate	2012	150,251	135, 743	90.34
Clemson University	2013	101	91	90.10
South Carolina NCLEX Pass Rate*	2013	2297	1995	86.85
National NCLEX Pass Rate*	2013	155,095	128,792	80.34
Clemson University*	2014	98	91	92.86
South Carolina NCLEX Pass Rate*	2014	2360	2055	87.08
National NCLEX Pass Rate*	2014	157,357	128,700	81.79

*Source: South Carolina Board of Nursing:
http://www.llr.state.sc.us/POL/Nursing/pdf/NursingPrograms/NCLEX for RN bsn LLR BON web page 2011.pdf

Clemson, South Carolina, and National NCLEX Pass Rates
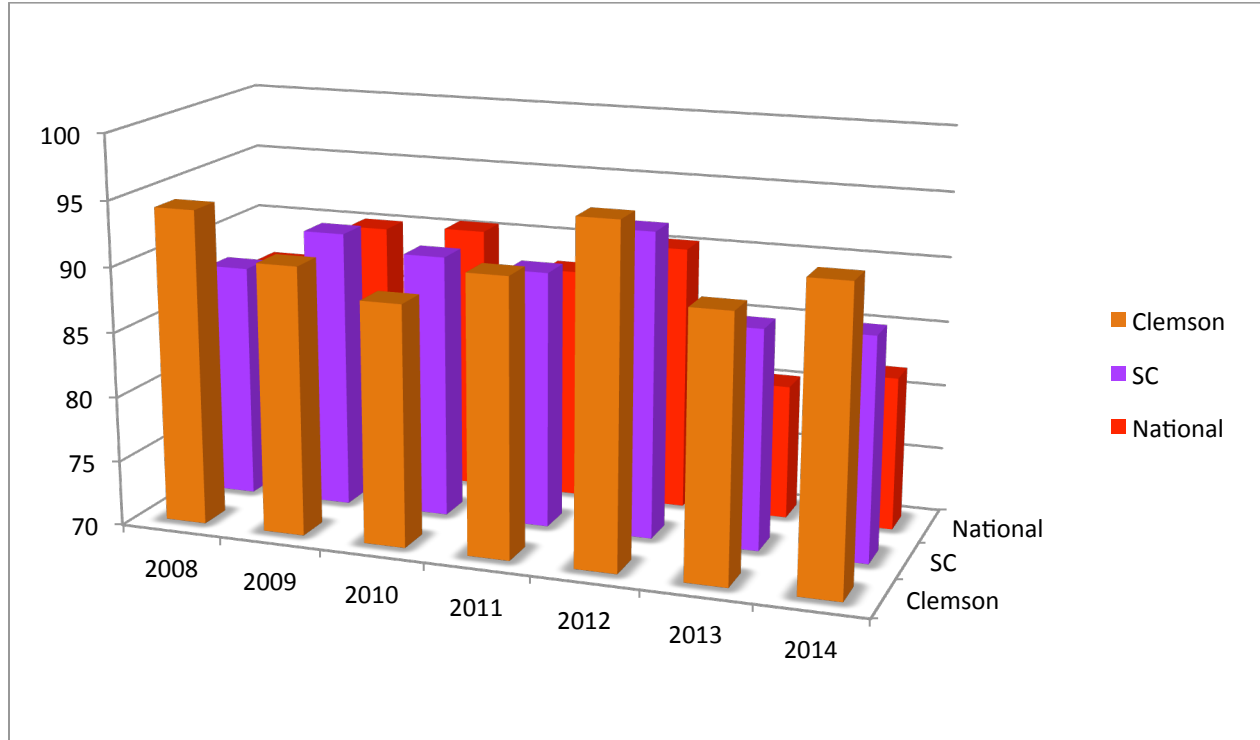
Accounting: CPA Examination

Since 1989 the School of Accountancy and Finance has held AACSB Accounting Accreditation for its undergraduate and graduate programs. Clemson University's Accounting programs were reaccredited this year (2015) by AACSB. AACSB International is the premier accrediting agency for management education and the only grantor of accounting accreditation.

South Carolina requires at least 1 year of accounting experience under the direct supervision and review of a CPA or Public Accountant who is licensed to practice in some state or territory of the United States, or the District of Columbia to sit for the CPA Examination and be licensed to practice. The faculty at Clemson believes the best preparation to sit for the CPA Examination is to wait until a master of accountancy degree program is completed. Clemson has a coordinated undergraduate/graduate program that will meet the 150-hour requirement to be licensed as a CPA. This program of study provides excellent preparation for the CPA Examination, as well as, a career in accounting. The Master of Professional Accountancy (MPAcc) program added to the undergraduate program exceeds the 150-hour requirement for licensure and allows the student to specialize in either assurance and management services or taxation.

School of Education: PRAXIS Examinations

State licensure is required for initial level teacher preparation program candidates to become practicing teachers in SC. Candidates must pass the PRAXIS I for admission to the professional level (junior-senior year) of education programs or may exempt PRAXIS I with state standard acceptable level of ACT or SAT scores. Candidates must take and pass PRAXIS II Principles of Learning and Teaching (PLT) and the subject area test(s) for their degree and content area. Clemson University's Eugene T. Moore School of Education submits Title II Reports that generate official PRAXIS II licensure test pass rates annually. The 2013-14 Title II report was complete in April 2015. Clemson presents this official report below on 2013-14 program completers rather than providing a best estimate on the current year since official Title II report is not yet released for the 2014-15 year's candidates.

Educational leadership, school counseling and literacy education advanced level programs require passes for PRAXIS II subject area tests for certification and practice as school counselors, school leaders, and literacy specialists. Pass rates for all three are 100% for 2014-15. These tests are not included in the table below.

PRAXIS II Examination Pass Rates: Initial Teacher Licensure Programs
### Program Completers 2013-14[1]

Name of Exam	Date(s) Administered	# of Examinees	# of Examinees who Passed	% Examinees Passing
PRAXIS SERIES II: PRINCIPLES OF LEARNING & TEACHING (EARLY CHILDHOOD)	Computer based monthly	23	23	100%
PRAXIS SERIES II: PRINCIPLES OF LEARNING & TEACHING (K-6)	Computer based monthly	69	69	100%
PRAXIS SERIES II: PRINCIPLES OF LEARNING & TEACHING (5-9)	Computer based monthly	29	28	97%
PRAXIS SERIES II: PRINCIPLES OF LEARNING & TEACHING (7-12)	Computer based monthly	60	58	97%
PRAXIS SERIES II: SPECIALTY AREA TESTS	Computer based monthly	165	163	98%

[1] from TITLE II Report, April 2015.

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Engineering: Fundamentals of Engineering Examination

All seniors in the engineering programs at Clemson University are encouraged to take the Fundamentals of Engineering (FE) examination. The programs involved are: Bioengineering, Biosystems Engineering, Chemical and Biomolecular Engineering, Civil Engineering, Electrical and Computer Engineering, General Engineering, Industrial Engineering, Materials Science and Engineering, and Mechanical Engineering. The FE pass rates for all engineering programs for 2003-2015 are given below:

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Academic Year	Percentage Passing
03-04	92%
04-05	86%
05-06	57%
06-07	90%
07-08	81%
08-09	80%
09-10	83.4%
10-11	86.1%
11-12	83.7%
12-13	85.5%
13-14	85.6%
14-15	87.5%

FE Pass Rates
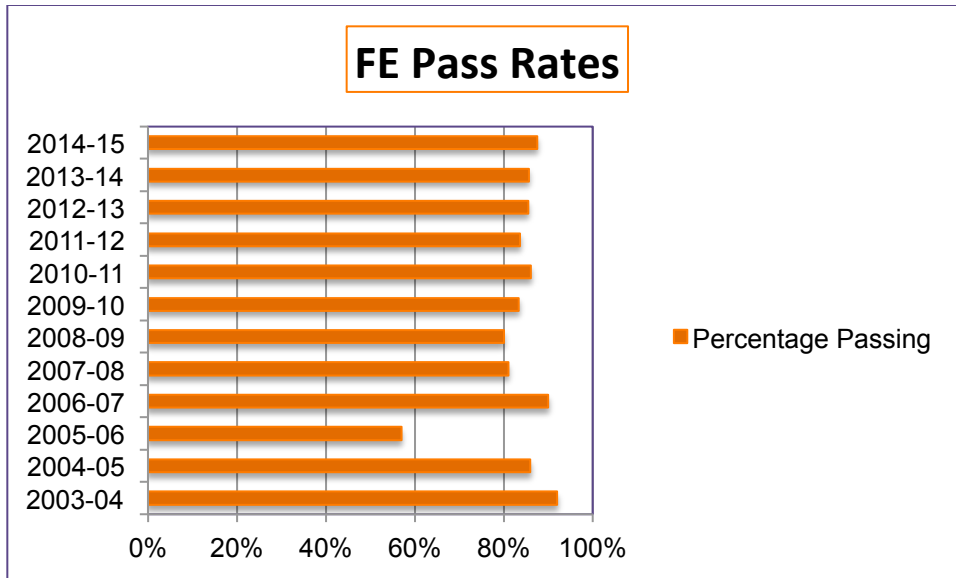
Health Science, Health Promotion and Education: CHES Examination

The Health Promotion and Education Concentration within the Department of Public Health Sciences (DPHS) program was designed to provide students with the competencies of the Certified Health Education Specialist (CHES). Participation in the national CHES exam is optional. The National Commission for Health Education Credentialing recently announced that Clemson University was among the top 10 schools with the most students taking the CHES exam in 2007. For the past 12 years, Clemson University DPHS students have scored above the national average. The table below gives the most recent CHES Examination results.

Clemson University: April 2014-October 2014									
	Assess Needs	Plan Programs	Implement Programs	Evaluate Programs	Administer Programs	Act as a Resource	Communicate/ Advocate	Total Score	Percent Passed
Cohort National Average Scores	12.00	14.71	24.95	14.55	12.29	16.79	7.56	102.11	68.84%
Clemson Average Scores	13.00	17.00	30.50	19.50	12.20	16.50	9.50	126.50	100%

Nutrition and Dietetics: CDR Examination

The Nutrition and Dietetics concentration within the Food Science degree at Clemson University is accredited by the Accreditation Council for Education in Nutrition and Dietetics (ACEND®). ACEND® is the Academy of Nutrition and Dietetics' accrediting agency for education programs preparing students for careers as registered dietitians or registered dietetic technicians. ACEND® is recognized by the United States Department of Education. ACEND® serves and protects students and the public by assuring the quality and continued improvement of nutrition and dietetics education programs.

To earn the Registered Dietitian Nutritionist (RDN) credential, students must complete a bachelor's degree and dietetics coursework accredited through ACEND®, complete an ACEND® accredited supervised practice program, pass a national examination administered by the Commission on Dietetic Registration (CDR), and complete continuing professional educational requirements. Clemson's Nutrition and Dietetics program allows students to complete the first step of the process to become an RDN.

To assure Clemson's program is preparing students appropriately for practice, graduate's performance on the National Registration Examination for Dietitians is measured and monitored. To meet ACEND® accreditation requirements a first-time pass rate of 80% is expected. Reviewing the 5-year pass rate, Clemson graduates have exceeded the expectation as shown in the table below:

Year	Number of Students Taking the Exam for the First Time (A)	Students Passing the CDR Exam		Pass Rate Percentages	
		Number of Students Passing on Their First Try (B)	Number of Students Passing within One Year of Their First Try (C)	First-Time Pass Rate (B/A)	One-Year Pass Rate (C/A)
2010	4	4	4	100%	100%
2011	7	7	7	100%	100%
2012	11	9	11	82%	91%
2013	15	14	15	93%	100%
2014	20	17	19	85%	95%
Current Five Years 2010 - 2014	57	51	56	89.5%	98%

The Registration Examination for Dietitians is a criterion-referenced test. Each examinee is measured against a predetermined standard. This testing approach ensures only those candidates who possess sufficient knowledge and skill are eligible for entry-level dietetic practice.

The examination represents four domains of practice and the results are reported in two categories – Nutrition and Food Service. The total maximum scaled score is 50 and the maximum scaled score for Nutrition and Food Service is 30 each. The table below compares Clemson graduates examination mean scores to the national examination mean scores:

Year		Total		Nutrition		Food Service	
		Mean	SD	Mean	SD	Mean	SD
2010	Clemson	29.50	2.96	18.50	3.20	16.75	2.38
2010	National	27.26	3.80	16.14	3.32	16.04	3.67
2011	Clemson	30.00	3.07	18.57	2.82	18.14	2.70
2011	National	27.55	3.89	16.33	3.41	16.42	3.84
2012	Clemson	28.43	4.37	17.43	3.50	16.57	4.97
2012	National	27.44	3.94	16.35	3.42	16.12	3.74
2013	Clemson	29.19	2.55	17.63	2.32	18.06	2.70
2013	National	27.42	3.96	16.29	3.38	16.26	3.74
2014	Clemson	27.55	3.00	16.77	2.67	15.95	2.80
2014	National	27.14	3.80	16.29	3.19	16.11	3.51

Architecture: Architect Registration Examination (ARE)

The Architect Registration Examination (ARE) administered by the National Council of Architecture Accrediting Boards (NCARB) tests candidates on their knowledge, skills, and abilities in various aspects of the practice of architecture. The content of the ARE examination relates to actual situations that an architect will encounter in practice. The ARE treats the practice of architecture as an integrated whole measuring not just knowledge areas but also critical thinking and judgment. The most recent results available, for the 2014 administration, are in the table below.

	Programming, Planning & Practice	Site Planning & Design	Building Design and Construction Systems	Schematic Design	Structural Systems	Building Systems	Construction Documents and Services
Clemson	68%	78%	60%	83%	72%	50%	82%
U.S.	62%	69%	64%	77%	68%	68%	62%

ETS Proficiency Profile

The ETS Proficiency Profile is a nationally-normed, standardized test that measures skills in critical thinking, reading, writing, mathematics, humanities, social sciences, and natural sciences. Since Fall 2011 all incoming freshmen have been required to take the test. In Spring 2016 all seniors will be required to take the test. In this way we can do a longitudinal tracking on individual students to measure the "value-added" component of a Clemson education. Clemson University will be the first institution to use the Proficiency Profile in this way. The skill areas are scored from 100-130. The Overall Score is on a scale of 400-500. As may be seen from the following chart, Clemson students score significantly higher in each skill and in overall score than the national average (ETS 5-Year National Scores).

ETS Proficiency Profile: Summary of Scaled Scores 2008-2015

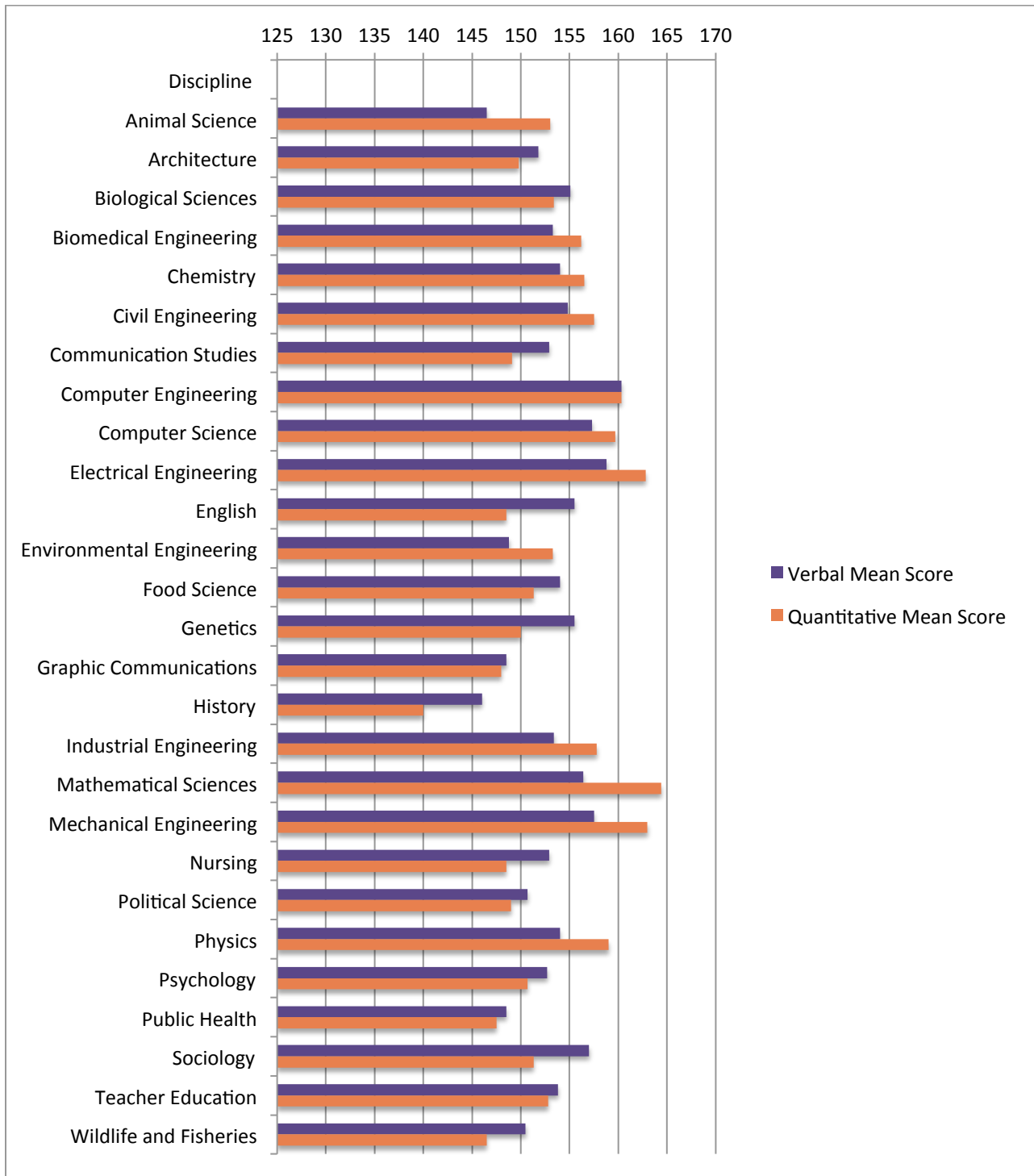| Academic Year	Class	Overall Score	Critical Thinking	Reading	Writing	Mathematics	Humanities	Social Sciences	Natural Sciences
2014-15	Freshmen	462.07	115.32	122.26	117.74	118.73	117.89	116.39	118.55
	Seniors	458.64	114.97	121.23	117.48	117.19	117.62	115.37	118.18
2013-14	Freshmen	461.86	115.38	122.17	117.78	118.48	118.11	116.14	118.53
	Seniors	454.72	114.06	119.95	116.24	116.60	116.37	115.07	117.01
2012-13	Freshmen	458.53	115.16	121.35	116.70	117.85	117.46	116.40	118.36
	Seniors	460.11	115.11	121.28	117.17	118.37	117.57	116.03	117.85
2011-12	Freshmen	457.29	114.95	121.17	116.45	117.5	117.27	116.29	118.14
	Seniors	457.53	115.03	120.85	116.18	118.11	117.42	116.31	117.77
2010-11	Freshmen	451.51	113.12	119.88	116.13	115.55	116.31	114.79	116.83
	Seniors	457.78	115.3	121.05	116.31	117.58	119.96	116.21	117.99
2009-10	Freshmen	449.07	112.65	119.36	115.37	114.95	115.93	114.28	116.47
	Seniors	457.26	114.75	120.96	116.26	117.81	117.29	116.36	117.74
2008-09	Freshmen	450.36	113.03	119.61	115.77	115.30	116.11	114.68	116.66
	Seniors	459.22	115.42	121.52	116.36	118.35	118.01	116.84	118.07
ETS 5-Year National Scores	Freshmen	437.0	109.7	115.5	112.9	111.8	112.9	111.5	113.3
	Seniors	447.89	112.8	119.0	114.9	114.2	115.7	114.4	116.1

Graduate Record Examination (GRE)*

Discipline	Sample Size	Verbal Mean Score (range)	Quantitative Mean Score (range)	Writing Mean Score (range)
Animal Science	6	146.5 (137-155)	153.0 (143-163)	3.58 (3-4)
Architecture	17	151.8 (143-162)	149.8 (143-157)	3.59 (2.5-5)
Biological Sciences	12	155.1 (147-165)	153.4 (143-167)	4.04 (3-5)
Biomedical Engineering	15	153.3 (144-159)	156.2 (149-166)	3.50 (3-4)
Chemistry	2	154.0 (152-156)	156.5 (155-158)	4.25 (4-4.5)
Civil Engineering	6	154.8 (150-165)	157.5 (154-161)	3.83 (3-4.5)
Communication Studies	8	152.9 (148-162)	149.1 (141-159)	3.69 (3-5)
Computer Engineering	3	160.3 (147-170)	160.3 (154-165)	4.67 (4-5.5)
Computer Science	3	157.3 (157-158)	159.7 (159-161)	4.33 (4-4.5)
Electrical Engineering	11	158.8 (143-165)	162.8 (152-170)	3.95 (2.5-5)
English	2	155.5 (145-166)	148.5 (148-149)	4.00 (3-5)
Environmental Engineering	4	148.8 (145-153)	153.3 (153-155)	3.83 (2.5-4.5)
Food Science	4	154.0 (146-158)	151.3 (147-153)	3.75 (2.5-4.5)
Genetics	2	155.5 (153-158)	150.0 (146-154)	4.00 (3.5-4.5)
Graphic Communications	2	148.5 (148-149)	148.0 (144-152)	3.75 (3.5-4)
History	3	146.0 (145-150)	140.0 (134-143)	3.67 (3-4)
Industrial Engineering	5	153.4 (146-161)	157.8 (152-165)	4.10 (3-5.5)
Mathematical Sciences	5	156.4 (150-166)	164.4 (156-170)	4.20 (4-4.5)
Mechanical Engineering	4	157.5 (151-157)	163.0 (158-168)	4.13 (3.5-4.5)
Nursing	10	152.9 (138-162)	148.5 (141-159)	3.60 (3-4.5)
Political Science	3	150.7 (146-153)	149.0 (148-156)	4.00 (3.5-4.5)
Physics	2	154.0 (148-160)	159.0 (158-160)	4.25 (4-4.5)
Psychology	17	152.7 (144-160)	150.7 (136-161)	3.94 (2.5-5.5)
Public Health	4	148.5 (146-151)	147.5 (139-155)	4.13 (3.5-5)
Sociology	3	157.0 (150-164)	151.3 (143-156)	3.17 (3-3.5)
Teacher Education	4	153.8 (147-158)	152.8 (150-155)	4.00 (3.5-4.5)
Wildlife and Fisheries	2	150.5 (144-157)	146.5 (143-150)	3.50 (3-4)
Worldwide GRE Average Scores 2013-14	572,779	150.2	152.5	3.50

The Graduate Record Examination is not a professional licensure examination but it provides insight into the general performance of students who select to take the examination and apply to graduate programs at Clemson University. Undergraduate or graduate students may take the examination and it may be taken multiple times.

* *Clemson undergraduates who applied to Clemson graduate programs.*

Clemson Graduates Graduate Record Examination Results

Horizontal bar chart showing Verbal Mean Score and Quantitative Mean Score for each discipline.

Discipline	Verbal Mean Score	Quantitative Mean Score
Animal Science		
Architecture		
Biological Sciences		
Biomedical Engineering		
Chemistry		
Civil Engineering		
Communication Studies		
Computer Engineering		
Computer Science		
Electrical Engineering		
English		
Environmental Engineering		
Food Science		
Genetics		
Graphic Communications		
History		
Industrial Engineering		
Mathematical Sciences		
Mechanical Engineering		
Nursing		
Political Science		
Physics		
Psychology		
Public Health		
Sociology		
Teacher Education		
Wildlife and Fisheries		

Program-Specific Accreditation

Program-specific accreditations are a reliable indicator of the quality of particular academic programs. In addition to institutional accreditation through SACSCOC, academic programs may be accredited through program-specific accrediting bodies. The following table lists accredited programs at Clemson University in academic year 2014-2015.

Accrediting Agency and Degree Program	Accreditable Program	Fully-Accredited Program	Last Accreditation	Next Accreditation
Association to Advance Collegiate Schools of Business - International (AACSB)				
Business (BUS)--Baccalaureate, Master's and Doctoral degree programs in business administration and management	X	X	2015	2020
Business (BUSA)--Baccalaureate, Master's and Doctoral degree programs in accounting	X	X	2015	2020
Accrediting Board for Engineering and Technology, Inc. (ABET)				
Engineering (ENG) - Baccalaureate programs in engineering Master's programs in engineering	X	X	2012	2018
Computer Science (COMP)-Baccalaureate programs in computer science	X	X	2012	2018
American Council for Construction Education (ACCE)				
Construction Education (CONST) - Baccalaureate degree programs	X	X	2013	2019
Construction Education (CONST) - Master's degree programs	X	X	2012	2017

American Society of Landscape Architects (ASLA)				
Landscape Architecture (LSAR)- Baccalaureate programs leading to the first professional degree (BLA)	X	X	2014	2019
Landscape Architecture (LSAR)-Master's programs leading to the first professional degree (MLA)	X	X	2010	2016
Accreditation Council for Education in Nutrition and Dietetics (ACEND)				
Nutrition and Dietetics – Baccalaureate program	X	X	2007	2017
Commission on Collegiate Nursing Education (CCNE)				
Baccalaureate degree in nursing education programs	X	X	2010	2020
Graduate degree nursing education programs	X	X	2010	2020
Council for Accreditation of Counseling and Related Education Programs (CACREP)				
Master's degree programs to prepare individuals for community counseling, mental health counseling, marriage and family counseling, school counseling, student affairs practice in higher education	X	X	2007	2015

National Architectural Accrediting Board, Inc. (NAAB)				
Architecture (ARCH) - first professional degree programs	X	X	2011	2017
National Association of Schools of Arts and Design (NASAD)				
Art & Design (ART) - Degree-granting schools and departments and non-degree-granting schools	X	X	2007	2015
National Council for Accreditation of Teacher Education (NCATE now CAEP)				
Baccalaureate and graduate programs for the preparation of teachers and other professional personnel for elementary and secondary schools	X	X	2013	2020
National Recreation and Park Association (COAPRT)				
Parks, Recreation, and Tourism Management – undergraduate and graduate programs	X	X	2010	2015
Planning Accreditation Board (PAB)				
Master of City and Regional Planning (MRCP)	X	X	2008	2015
Society of American Foresters (SAF)				
Forestry (FOR) programs leading to a bachelor's degree or higher first professional degree	X	X	2012	2023