

Report title: Subject Matter Report by Major and Examination

Exams administered: Jan 01—Jun 30, 2017

Examinees included: First-Time Examinees from EAC/ABET-Accredited Engineering Programs

Graduation Date: Examinees testing more than 12 months after graduation date

Name of Institution:		University of Kentucky, Lex	ington
Major:	Agricultural	FE Examination:	Other Disciplines

	Institution	ABET Comparator ²
No. Examinees Taking ¹	2	6
No. Examinees Passing	0	2
Percent Examinees Passing	0%	33%

Uncertainty Range for Scaled Score ⁴ ± 0.71

	Number of Exam Questions	Institution Average Performance Index ³	ABET Comparator Average Performance Index	ABET Comparator Standard Deviation	Ratio Score ⁴	Scaled Score ⁴
Mathematics and Advanced Engineering Mathematics	12	7.7	7.7	0.4	1.00	0.00
Probability and Statistics	6	8.4	8.4	0.6	1.00	0.00
Chemistry	7	8.6	8.2	1.4	1.05	0.29
Instrumentation and Data Acquisition	4	10.2	9.4	1.3	1.09	0.62
Ethics and Professional Practice	3	11.4	12.7	3.3	0.90	-0.39
Safety, Health, and Environment	4	8.8	9.8	2.4	0.90	-0.42
Engineering Economics	7	9.6	8.8	1.1	1.09	0.73
Statics	8	7.2	7.9	1.0	0.91	-0.70
Dynamics	7	8.9	8.9	1.4	1.00	0.00
Strength of Materials	8	8.1	8.5	1.5	0.95	-0.27
Materials Science	6	8.2	8.7	0.5	0.94	-1.00
Fluid Mechanics and Dynamics of Liquids	8	6.5	7.9	1.3	0.82	-1.08
Fluid Mechanics and Dynamics of Gases	4	4.3	7.1	3.4	0.61	-0.82
Electricity, Power, and Magnetism	7	6.5	8.1	1.8	0.80	-0.89
Heat, Mass, and Energy Transfer	9	7.4	8.5	1.7	0.87	-0.65

- 1. **Q** examinees have been removed from this data because they were flagged as a random guesser.
- 2. Comparator includes all examinees from programs accredited by the ABET commission noted.
- 3. Performance index is based on a 0–15 scale.
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Name of Institution:		University of Kentucky, Lexington	
Major:	Chemical	FE Examination:	Chemical

	Institution	ABET Comparator ²
No. Examinees Taking ¹	2	209
No. Examinees Passing	2	161
Percent Examinees Passing	100%	77%

Uncertainty Range for Scaled Score ⁴ + 0.71

						± 0.71
	Number of Exam Questions	Institution Average Performance Index ³	ABET Comparator Average Performance Index	ABET Comparator Standard Deviation	Ratio Score ⁴	Scaled Score ⁴
Mathematics	8	12.5	10.8	3.1	1.16	0.55
Probability and Statistics	4	12.1	10.9	3.7	1.11	0.32
Engineering Sciences	4	10.1	10.5	3.5	0.96	-0.11
Computational Tools	4	8.8	10.5	3.4	0.84	-0.50
Materials Science	4	11.5	10.1	3.4	1.14	0.41
Chemistry	8	10.0	10.8	3.1	0.93	-0.26
Fluid Mechanics/Dynamics	8	10.9	10.1	2.5	1.08	0.32
Thermodynamics	8	11.9	9.5	1.9	1.25	1.26
Material/Energy Balances	8	8.5	9.9	2.6	0.86	-0.54
Heat Transfer	8	10.2	9.9	2.5	1.03	0.12
Mass Transfer and Separation	8	12.1	9.4	2.1	1.29	1.29
Chemical Reaction Engineering	8	9.3	9.3	2.4	1.00	0.00
Process Design and Economics	8	9.9	9.4	2.7	1.05	0.19
Process Control	5	9.1	9.2	3.2	0.99	-0.03
Safety, Health, and Environment	5	9.8	9.2	3.5	1.07	0.17
Ethics and Professional Practice	2	11.2	11.3	5.6	0.99	-0.02

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Name of Institution:		University of Kentucky, L	exington
Major:	Civil	FE Examination:	Civil

	Institution	ABET Comparator ²
No. Examinees Taking ¹	4	610
No. Examinees Passing	4	336
Percent Examinees Passing	100%	55%

Uncertainty
Range for
Scaled
Score 4
± 0.50

	Number of Exam Questions	Institution Average Performance Index ³	ABET Comparator Average Performance Index	ABET Comparator Standard Deviation	Ratio Score ⁴	Scaled Score ⁴
Mathematics	7	13.8	9.4	3.0	1.47	1.47
Probability and Statistics	4	12.0	9.3	3.3	1.29	0.82
Computational Tools	4	9.5	9.7	3.5	0.98	-0.06
Ethics and Professional Practice	4	9.9	10.1	3.3	0.98	-0.06
Engineering Economics	4	10.5	9.5	3.6	1.11	0.28
Statics	7	10.4	8.9	2.7	1.17	0.56
Dynamics	4	9.6	9.2	3.5	1.04	0.11
Mechanics of Materials	7	9.2	8.8	2.3	1.05	0.17
Materials	4	11.6	9.1	3.1	1.27	0.81
Fluid Mechanics	4	11.5	9.6	3.8	1.20	0.50
Hydraulics and Hydrologic Systems	8	8.8	8.7	2.1	1.01	0.05
Structural Analysis	6	10.8	8.6	2.4	1.26	0.92
Structural Design	6	10.1	8.5	2.7	1.19	0.59
Geotechnical Engineering	9	10.0	8.7	2.0	1.15	0.65
Transportation Engineering	8	10.5	8.8	2.0	1.19	0.85
Environmental Engineering	6	8.7	8.7	2.7	1.00	0.00
Construction	4	10.4	9.4	3.6	1.11	0.28
Surveying	4	9.0	7.8	3.9	1.15	0.31

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Name of Institution:		University	of Kentucky, Lexington
Major:	Electrical	FE Examination:	Electrical and Computer

	Institution	ABET Comparator ²
No. Examinees Taking ¹	4	584
No. Examinees Passing	1	382
Percent Examinees Passing	25%	65%

Uncertainty Range for Scaled Score ⁴ ± 0.50

	Number of Exam Questions	Institution Average Performance Index ³	ABET Comparator Average Performance Index	ABET Comparator Standard Deviation	Ratio Score ⁴	Scaled Score ⁴
Mathematics	11	9.9	9.5	2.4	1.04	0.17
Probability and Statistics	4	9.2	9.7	3.5	0.95	-0.14
Ethics and Professional Practice	3	9.4	11.6	3.9	0.81	-0.56
Engineering Economics	3	9.0	10.1	4.0	0.89	-0.28
Properties of Electrical Materials	4	10.1	9.8	3.1	1.03	0.10
Engineering Sciences	6	7.9	9.9	3.2	0.80	-0.63
Circuit Analysis (DC and AC Steady State)	10	9.2	9.3	2.2	0.99	-0.05
Linear Systems	5	9.0	8.9	3.0	1.01	0.03
Signal Processing	5	8.2	8.9	3.0	0.92	-0.23
Electronics	7	8.7	9.1	2.2	0.96	-0.18
Power	8	9.2	9.2	2.2	1.00	0.00
Electromagnetics	5	11.3	9.4	2.9	1.20	0.66
Control Systems	6	9.2	8.9	2.4	1.03	0.13
Communications	5	8.9	8.7	2.9	1.02	0.07
Computer Networks	3	8.3	9.6	4.3	0.86	-0.30
Digital Systems	7	8.5	8.9	2.6	0.96	-0.15
Computer Systems	4	9.9	8.7	3.7	1.14	0.32
Software Development	4	8.6	9.1	3.8	0.95	-0.13

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Name of Institution:			University of Kentucky, Lexington			
	Major:	Mechanical	FE Examination:	Mechanical		

	Institution	n ABET n Comparator ²	
No. Examinees Taking ¹	2	717	
No. Examinees Passing	2	532	
Percent Examinees Passing	100%	74%	

Uncertainty Range for Scaled Score ⁴ ± 0.71

	Number of Exam Questions	Institution Average Performance Index ³	ABET Comparator Average Performance Index	ABET Comparator Standard Deviation	Ratio Score ⁴	Scaled Score ⁴
Mathematics	6	9.9	10.2	2.9	0.97	-0.10
Probability and Statistics	4	12.7	9.9	3.3	1.28	0.85
Computational Tools	3	11.8	10.7	3.9	1.10	0.28
Ethics and Professional Practice	3	14.9	11.6	3.7	1.28	0.89
Engineering Economics	3	3.8	10.1	3.9	0.38	-1.62
Electricity and Magnetism	3	8.2	10.0	4.0	0.82	-0.45
Statics	8	13.1	9.8	2.6	1.34	1.27
Dynamics, Kinematics, and Vibrations	9	9.3	9.4	2.3	0.99	-0.04
Mechanics of Materials	8	9.6	9.3	2.2	1.03	0.14
Material Properties and Processing	8	8.8	9.7	2.3	0.91	-0.39
Fluid Mechanics	9	10.8	9.7	2.3	1.11	0.48
Thermodynamics	13	9.9	9.3	1.8	1.06	0.33
Heat Transfer	9	8.5	9.4	2.2	0.90	-0.41
Measurements, Instrumentation, and Controls	5	7.2	8.6	3.3	0.84	-0.42
Mechanical Design and Analysis	9	3.9	8.9	2.5	0.44	-2.00

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