

Report title: Subject Matter Report by Major and Examination

Exams administered: Jan 01—Jun 30, 2018

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	1	5
No. Examinees Passing	1	4
Percent Examinees Passing	100%	80%

Uncertainty Range for Scaled Score ⁴ ± 1.00

	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	9.9	8.6	1.1	1.15	1.18
Probability and Statistics	6	9.1	9.1	0.9	1.00	0.00
Chemistry	7	11.0	9.8	1.2	1.12	1.00
Instrumentation and Data Acquisition	4	9.4	8.7	0.7	1.08	1.00
Ethics and Professional Practice	3	15.0	9.1	3.1	1.65	1.90
Safety, Health, and Environment	4	15.0	12.8	2.7	1.17	0.81
Engineering Economics	7	15.0	10.9	2.3	1.38	1.78
Statics	8	9.6	9.0	0.8	1.07	0.75
Dynamics	7	10.7	9.3	1.1	1.15	1.27
Strength of Materials	8	8.7	9.4	1.1	0.93	-0.64
Materials Science	6	10.9	10.1	2.7	1.08	0.30
Fluid Mechanics and Dynamics of Liquids	8	11.0	10.9	2.4	1.01	0.04
Fluid Mechanics and Dynamics of Gases	4	15.0	9.8	3.0	1.53	1.73
Electricity, Power, and Magnetism	7	15.0	10.2	2.5	1.47	1.92
Heat, Mass, and Energy Transfer	9	8.8	9.6	1.0	0.92	-0.80

- 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.
- These scores are made available for assessment purposes. See the NCEES publication entitled Using the FE as an Outcomes Assessment Tool at http://ncees.org/licensure/educator-resources/.

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

	Institution	ABET Comparator ²
No. Examinees Taking ¹	1	198
No. Examinees Passing	1	150
Percent Examinees Passing	100%	76%

Uncertainty Range for Scaled Score ⁴ + 1 00

						± 1.00
	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	9.1	10.4	3.2	0.88	-0.41
Probability and Statistics	4	15.0	10.9	3.4	1.38	1.21
Engineering Sciences	4	15.0	10.2	4.2	1.47	1.14
Computational Tools	4	15.0	10.4	3.4	1.44	1.35
Materials Science	4	15.0	10.5	3.4	1.43	1.32
Chemistry	8	15.0	10.6	3.2	1.42	1.38
Fluid Mechanics/Dynamics	8	10.4	10.3	2.8	1.01	0.04
Thermodynamics	8	11.7	9.8	2.1	1.19	0.90
Material/Energy Balances	8	15.0	9.9	2.7	1.52	1.89
Heat Transfer	8	15.0	10.2	2.5	1.47	1.92
Mass Transfer and Separation	8	15.0	9.7	2.5	1.55	2.12
Chemical Reaction Engineering	8	15.0	9.6	2.6	1.56	2.08
Process Design and Economics	8	9.9	9.9	2.8	1.00	0.00
Process Control	5	11.2	9.3	3.1	1.20	0.61
Safety, Health, and Environment	5	15.0	9.5	3.7	1.58	1.49
Ethics and Professional Practice	2	15.0	11.1	5.4	1.35	0.72

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

Name of Institut	ion:	University of Kentucky,	Lexington
Major:	Civil	FE Examination:	Civil

	Institution	ABET Comparator ²
No. Examinees Taking ¹	3	619
No. Examinees Passing	1	344
Percent Examinees Passing	33%	56%

Uncertainty Range for Scaled Score ⁴ ± 0.58

	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	8.7	9.2	2.9	0.95	-0.17
Probability and Statistics	4	6.6	9.3	3.6	0.71	-0.75
Computational Tools	4	8.9	9.8	3.8	0.91	-0.24
Ethics and Professional Practice	4	8.2	10.1	3.5	0.81	-0.54
Engineering Economics	4	10.9	9.6	3.8	1.14	0.34
Statics	7	8.3	9.0	2.9	0.92	-0.24
Dynamics	4	9.5	9.3	3.6	1.02	0.06
Mechanics of Materials	7	9.1	8.8	2.3	1.03	0.13
Materials	4	8.1	9.4	3.5	0.86	-0.37
Fluid Mechanics	4	7.4	9.8	3.6	0.76	-0.67
Hydraulics and Hydrologic Systems	8	7.6	8.9	2.4	0.85	-0.54
Structural Analysis	6	6.9	8.5	2.5	0.81	-0.64
Structural Design	6	7.7	8.5	2.7	0.91	-0.30
Geotechnical Engineering	9	7.9	8.7	1.9	0.91	-0.42
Transportation Engineering	8	8.6	9.0	2.1	0.96	-0.19
Environmental Engineering	6	9.4	8.5	2.6	1.11	0.35
Construction	4	13.2	9.8	3.8	1.35	0.89
Surveying	4	6.1	8.0	3.8	0.76	-0.50

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

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

	Institution	ABET Comparator ²
No. Examinees Taking ¹	8	598
No. Examinees Passing	6	382
Percent Examinees Passing	75%	64%

Uncertainty Range for Scaled Score ⁴ ± 0.35

	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	9.3	9.4	2.5	0.99	-0.04
Probability and Statistics	4	11.4	10.2	3.7	1.12	0.32
Ethics and Professional Practice	3	12.0	11.7	4.1	1.03	0.07
Engineering Economics	3	11.5	10.2	4.2	1.13	0.31
Properties of Electrical Materials	4	8.1	9.6	3.3	0.84	-0.45
Engineering Sciences	6	8.6	10.1	3.1	0.85	-0.48
Circuit Analysis (DC and AC Steady State)	10	8.5	9.1	2.1	0.93	-0.29
Linear Systems	5	9.3	8.9	2.7	1.04	0.15
Signal Processing	5	6.6	8.9	3.0	0.74	-0.77
Electronics	7	10.7	8.9	2.5	1.20	0.72
Power	8	9.5	9.3	2.3	1.02	0.09
Electromagnetics	5	9.7	9.1	2.8	1.07	0.21
Control Systems	6	7.8	8.8	2.6	0.89	-0.38
Communications	5	9.3	8.5	2.9	1.09	0.28
Computer Networks	3	9.2	9.7	4.1	0.95	-0.12
Digital Systems	7	9.9	8.9	2.7	1.11	0.37
Computer Systems	4	7.8	8.3	3.7	0.94	-0.14
Software Development	4	8.1	9.2	3.8	0.88	-0.29

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

Name o	of Institution:	University of Kentucky, Lexington			
Major:	Materials	FE Examination:	Other Disciplines		

	Institution	ABET Comparator ²
No. Examinees Taking ¹	1	13
No. Examinees Passing	1	13
Percent Examinees Passing	100%	100%

Uncertainty Range for Scaled Score ⁴ ± 1.00

	Number of Exam Questions	Institution Average Performance	ABET Comparator Average Performance	ABET Comparator Standard	Ratio Score ⁴	Scaled Score ⁴
		Index ³	Index	Deviation		
Mathematics and Advanced Engineering Mathematics	12	8.5	11.4	2.2	0.75	-1.32
Probability and Statistics	6	10.2	10.9	2.5	0.94	-0.28
Chemistry	7	10.8	11.8	2.4	0.92	-0.42
Instrumentation and Data Acquisition	4	8.7	12.1	2.8	0.72	-1.21
Ethics and Professional Practice	3	15.0	13.4	2.9	1.12	0.55
Safety, Health, and Environment	4	9.3	12.0	3.2	0.78	-0.84
Engineering Economics	7	7.4	10.6	1.7	0.70	-1.88
Statics	8	9.7	9.5	1.4	1.02	0.14
Dynamics	7	10.5	11.0	2.5	0.95	-0.20
Strength of Materials	8	11.2	10.8	2.6	1.04	0.15
Materials Science	6	10.6	12.7	2.5	0.83	-0.84
Fluid Mechanics and Dynamics of Liquids	8	8.9	10.3	2.2	0.86	-0.64
Fluid Mechanics and Dynamics of Gases	4	8.0	10.4	3.2	0.77	-0.75
Electricity, Power, and Magnetism	7	10.0	10.1	2.8	0.99	-0.04
Heat, Mass, and Energy Transfer	9	11.8	9.3	3.4	1.27	0.74

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

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

	Institution	ABET Comparator ²
No. Examinees Taking ¹	3	839
No. Examinees Passing	2	635
Percent Examinees Passing	67%	76%

Uncertainty Range for Scaled Score ⁴ ± 0.58

	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	10.3	10.0	3.0	1.03	0.10	
Probability and Statistics	4	7.3	10.1	3.3	0.72	-0.85	
Computational Tools	3	5.9	10.5	4.1	0.56	-1.12	
Ethics and Professional Practice	3	10.6	11.4	3.9	0.93	-0.21	
Engineering Economics	3	10.4	10.4	4.1	1.00	0.00	
Electricity and Magnetism	3	8.1	10.2	4.1	0.79	-0.51	
Statics	8	8.2	9.6	2.3	0.85	-0.61	
Dynamics, Kinematics, and Vibrations	9	8.0	9.5	2.2	0.84	-0.68	
Mechanics of Materials	8	8.1	9.2	1.9	0.88	-0.58	
Material Properties and Processing	8	7.9	9.5	2.2	0.83	-0.73	
Fluid Mechanics	9	8.0	9.7	2.2	0.82	-0.77	
Thermodynamics	13	9.2	9.2	1.5	1.00	0.00	
Heat Transfer	9	7.9	9.3	2.2	0.85	-0.64	
Measurements, Instrumentation, and Controls	5	5.9	8.6	3.4	0.69	-0.79	
Mechanical Design and Analysis	9	8.0	8.8	2.5	0.91	-0.32	

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Name of Institution:		University of Kentucky, Lexington		
N	Major:	Mining/Mineral	FE Examination:	Other Disciplines

	Institution	ABET Comparator ²
No. Examinees Taking ¹	1	7
No. Examinees Passing	1	6
Percent Examinees Passing	100%	86%

Uncertainty Range for Scaled Score ⁴ ± 1.00

	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	11.1	8.6	1.2	1.29	2.08
Probability and Statistics	6	10.7	9.9	2.5	1.08	0.32
Chemistry	7	8.4	9.5	2.7	0.88	-0.41
Instrumentation and Data Acquisition	4	9.1	8.7	2.8	1.05	0.14
Ethics and Professional Practice	3	7.2	12.9	3.4	0.56	-1.68
Safety, Health, and Environment	4	15.0	11.7	2.9	1.28	1.14
Engineering Economics	7	9.9	9.8	0.7	1.01	0.14
Statics	8	11.3	9.1	1.2	1.24	1.83
Dynamics	7	11.0	8.9	1.7	1.24	1.24
Strength of Materials	8	10.8	9.7	0.9	1.11	1.22
Materials Science	6	8.7	9.2	1.2	0.95	-0.42
Fluid Mechanics and Dynamics of Liquids	8	9.5	9.6	2.6	0.99	-0.04
Fluid Mechanics and Dynamics of Gases	4	8.6	9.7	2.2	0.89	-0.50
Electricity, Power, and Magnetism	7	7.7	8.4	0.9	0.92	-0.78
Heat, Mass, and Energy Transfer	9	7.9	8.3	1.0	0.95	-0.40

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