

Fundamentals of Engineering (FE) Subject Matter Report by Major and Examination Jan 01-Jun 30, 2021 First-Time Examinees from EAC/ABET-Accredited Engineering Programs Examinees Testing within 12 months of Graduation Date

Name of Institution: University of Kentu			ucky, Lexington		
Major:	Agricultural	FE Examination:	Other Disciplines		
			Institution	ABET Comparator ²	
No. Examinees Taking ¹			1	72	

No. Examinees Passing Percent Examinees Passing	Number of Exam Questions	0 0% Institution Average Performance Index ³	44 61% ABET Comparator Average Performance Index	ABET Comparator Standard Deviation	Ratio Score ⁴	Uncertainty Range for Scaled Score ⁴ ± 1.00 Scaled Score ⁴
Mathematics	8	8.4	8.6	2.2	0.98	-0.09
Probability and Statistics	6	8.4	9.1	3.0	0.92	-0.23
Chemistry	5	9.6	9.4	3.2	1.02	0.06
Instrumentation and Controls	4	15.0	9.2	3.5	1.63	1.66
Engineering Ethics and Societal Impacts	5	8.8	10.5	3.4	0.84	-0.50
Safety, Health, and Environment	6	7.0	9.3	2.3	0.75	-1.00
Engineering Economics	6	15.0	8.9	2.8	1.69	2.18
Statics	9	7.5	8.9	2.2	0.84	-0.64
Dynamics	9	7.2	9.0	2.3	0.80	-0.78
Strength of Materials	9	6.9	8.8	1.9	0.78	-1.00
Materials	6	9.1	8.9	2.2	1.02	0.09
Fluid Mechanics	12	9.0	9.3	2.0	0.97	-0.15
Basic Electrical Engineering	6	5.3	8.6	3.2	0.62	-1.03
Thermodynamics and Heat Transfer	9	5.5	8.9	1.8	0.62	-1.89

<u>0</u> examinees have been removed from this data because they were flagged as a random guesser.
Comparator includes all examinees from programs accredited by the ABET commission noted.
Performance index is based on a 0–15 scale.

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TERMS AND CONDITIONS OF DATA USE



No. Examinees Passing

Percent Examinees Passing

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lame of Institution: University of Kentucky			tucky, Lexingtor	ı
Major:	Chemical	FE Examination:		Chemical
			Institution	ABET Comparator ²
No. Examinees Taking ¹			2	668

						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	12.4	10.1	3.3	1.23	0.70
Probability and Statistics	4	15.0	10.4	3.5	1.44	1.31
Engineering Sciences	4	9.4	10.0	3.6	0.94	-0.17
Materials Science	4	11.8	10.2	3.4	1.16	0.47
Chemistry and Biology	7	15.0	9.9	3.0	1.52	1.70
Fluid Mechanics/Dynamics	8	8.2	9.6	2.5	0.85	-0.56
Thermodynamics	8	8.6	9.3	2.0	0.92	-0.35
Material/Energy Balances	10	9.7	9.1	2.3	1.07	0.26
Heat Transfer	8	7.7	9.9	2.5	0.78	-0.88
Mass Transfer and Separation	8	9.4	9.6	2.1	0.98	-0.10
Solids Handling	3	9.6	10.1	3.4	0.95	-0.15
Chemical Reaction Engineering	7	8.9	9.7	2.5	0.92	-0.32
Economics	4	12.8	9.7	3.8	1.32	0.82
Process Design	7	12.9	9.9	2.7	1.30	1.11
Process Control	4	11.4	9.9	3.5	1.15	0.43
Safety, Health, and Environment	5	9.3	10.0	3.2	0.93	-0.22
Ethics and Professional Practice	3	7.8	11.7	4.3	0.67	-0.91

2

100%

494

74%

Uncertainty Range for

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Percent Examinees Passing

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Name of Institution:	University of Kentucky, Lexington					
Major:	Civil	FE Examination:		Civil		
			Institution	ABET Comparator ²		
No. Examinees Taking ¹			30	5,813		
No. Examinees Passing			24	4,072		

	Number of Exam Questions	Institution Average Performance Index ³	ABET Comparator Average Performance Index	ABET Comparator Standard Deviation	Ratio Score ⁴	Scaled Score ⁴ ± 0.18 Scaled Score ⁴
Mathematics and Statistics	8	10.3	9.5	2.5	1.08	0.32
Ethics and Professional Practice	4	10.9	10.6	3.6	1.03	0.08
Engineering Economics	5	10.1	9.9	3.2	1.02	0.06
Statics	8	9.6	9.2	2.4	1.04	0.17
Dynamics	4	9.0	9.6	3.5	0.94	-0.17
Mechanics of Materials	7	9.6	9.2	2.3	1.04	0.17
Materials	5	9.3	9.3	2.8	1.00	0.00
Fluid Mechanics	6	10.2	9.7	2.8	1.05	0.18
Surveying	6	9.7	9.4	2.4	1.03	0.13
Water Resources and Environmental Engineering	10	9.3	9.3	1.8	1.00	0.00
Structural Engineering	10	8.8	8.9	1.7	0.99	-0.06
Geotechnical Engineering	10	8.9	9.2	1.8	0.97	-0.17
Transportation Engineering	9	9.0	9.2	2.0	0.98	-0.10
Construction Engineering	8	9.7	9.3	2.4	1.04	0.17

80%

70%

Uncertainty Range for

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

	Institution	Comparator ²
No. Examinees Taking ¹	1	115
No. Examinees Passing	1	84
Percent Examinees Passing	100%	73%

						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	11	8.8	9.4	2.2	0.94	-0.27
Probability and Statistics	4	15.0	9.8	3.7	1.53	1.41
Ethics and Professional Practice	4	15.0	11.4	3.7	1.32	0.97
Engineering Economics	5	15.0	9.4	3.1	1.60	1.81
Properties of Electrical Materials	4	9.6	9.3	3.6	1.03	0.08
Circuit Analysis (DC and AC Steady State)	11	8.7	8.9	2.1	0.98	-0.10
Linear Systems	5	8.1	8.7	3.6	0.93	-0.17
Signal Processing	5	6.6	9.3	2.6	0.71	-1.04
Electronics	7	9.8	9.1	2.0	1.08	0.35
Power Systems	8	9.9	8.6	2.4	1.15	0.54
Electromagnetics	4	15.0	9.3	3.4	1.61	1.68
Control Systems	6	7.2	8.9	2.3	0.81	-0.74
Communications	5	10.2	9.6	2.4	1.06	0.25
Computer Networks	4	7.7	9.9	2.8	0.78	-0.79
Digital Systems	8	11.3	10.3	2.6	1.10	0.38
Computer Systems	5	10.0	10.6	3.5	0.94	-0.17
Software Engineering	4	15.0	11.2	3.6	1.34	1.06

Uncertainty Range for Scaled

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Name of Institution:		ersity of Kentucky, Lexington			
Major:	Electrical	FE Examination:	E Examination: Electrical and Computer		
			ABET		

	Institution	Comparator ²
No. Examinees Taking ¹	6	1,026
No. Examinees Passing	2	749
Percent Examinees Passing	33%	73%

						Score ⁴ ± 0.41
	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	8.9	9.5	2.3	0.94	-0.26
Probability and Statistics	4	6.7	10.2	3.5	0.66	-1.00
Ethics and Professional Practice	4	12.7	11.0	3.7	1.15	0.46
Engineering Economics	5	9.0	9.6	3.2	0.94	-0.19
Properties of Electrical Materials	4	8.3	10.0	3.5	0.83	-0.49
Circuit Analysis (DC and AC Steady State)	11	8.5	9.4	2.1	0.90	-0.43
Linear Systems	5	9.5	9.0	2.9	1.06	0.17
Signal Processing	5	8.6	9.5	2.7	0.91	-0.33
Electronics	7	7.7	9.1	2.2	0.85	-0.64
Power Systems	8	10.0	9.5	2.3	1.05	0.22
Electromagnetics	4	8.4	9.7	3.5	0.87	-0.37
Control Systems	6	5.8	9.2	2.6	0.63	-1.31
Communications	5	9.7	9.1	2.6	1.07	0.23
Computer Networks	4	8.7	9.2	2.8	0.95	-0.18
Digital Systems	8	8.8	9.6	2.3	0.92	-0.35
Computer Systems	5	7.8	9.3	2.9	0.84	-0.52
Software Engineering	4	10.0	10.4	3.7	0.96	-0.11

Uncertainty Range for Scaled

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Name of Institution:	ntucky, Lexington			
Major:	Materials	Materials FE Examination: Other Disciplines		
			Institution	ABET Comparator ²

		Comparator ²	
No. Examinees Taking ¹	1	25	
No. Examinees Passing	1	17	
Percent Examinees Passing	100%	68%	

						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	8	8.9	9.2	2.5	0.97	-0.12
Probability and Statistics	6	15.0	10.1	3.4	1.49	1.44
Chemistry	5	10.8	9.9	3.3	1.09	0.27
Instrumentation and Controls	4	9.1	9.5	3.0	0.96	-0.13
Engineering Ethics and Societal Impacts	5	15.0	10.5	3.6	1.43	1.25
Safety, Health, and Environment	6	9.8	9.1	1.5	1.08	0.47
Engineering Economics	6	8.1	9.4	2.9	0.86	-0.45
Statics	9	8.5	9.0	1.5	0.94	-0.33
Dynamics	9	9.2	8.9	2.9	1.03	0.10
Strength of Materials	9	9.6	9.4	2.0	1.02	0.10
Materials	6	10.6	10.6	2.6	1.00	0.00
Fluid Mechanics	12	7.9	9.2	1.9	0.86	-0.68
Basic Electrical Engineering	6	10.9	9.1	3.4	1.20	0.53
Thermodynamics and Heat Transfer	9	10.5	9.0	1.9	1.17	0.79

Uncertainty Range for Scaled

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Name of Institution: University of Kentucky, Lexington					
Major:	Mechanical	FE Examination:		Mechanical	
		Ir	nstitution	ABET	
			ionadon.	Comparator ²	

		Comparator	
No. Examinees Taking ¹	19	3,440	
No. Examinees Passing	18	2,599	
Percent Examinees Passing	95%	76%	

						± 0.23
	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	10.5	10.0	2.9	1.05	0.17
Probability and Statistics	4	9.9	9.7	3.2	1.02	0.06
Ethics and Professional Practice	4	11.4	11.1	3.6	1.03	0.08
Engineering Economics	4	10.3	9.9	3.5	1.04	0.11
Electricity and Magnetism	5	10.5	9.9	3.1	1.06	0.19
Statics	9	10.2	9.4	2.3	1.09	0.35
Dynamics, Kinematics, and Vibrations	10	9.6	9.3	2.0	1.03	0.15
Mechanics of Materials	9	10.8	9.3	1.9	1.16	0.79
Material Properties and Processing	7	9.1	9.5	2.3	0.96	-0.17
Fluid Mechanics	10	9.2	9.3	2.0	0.99	-0.05
Thermodynamics	10	9.8	9.2	1.7	1.07	0.35
Heat Transfer	7	9.6	9.7	2.6	0.99	-0.04
Measurements, Instrumentation, and Controls	5	11.3	9.4	2.9	1.20	0.66
Mechanical Design and Analysis	10	9.8	9.4	2.1	1.04	0.19

Uncertainty Range for Scaled Score 4

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No. Examinees Passing

Percent Examinees Passing

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Name of Institution:		University of Kentucky, Lexington					
Major:	Mining/Mineral		FE Examination:	Civil			
			Institution	ABET Comparator ²			
No. Examinees Taking ¹			1	5			

	Uncertainty Range for Scaled Score ⁴ ± 1.00
Ratio	Scaled

	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 Statistics	8	10.9	9.0	1.3	1.21	1.46
Ethics and Professional Practice	4	6.7	10.8	3.5	0.62	-1.17
Engineering Economics	5	15.0	10.8	2.3	1.39	1.83
Statics	8	8.8	8.1	1.3	1.09	0.54
Dynamics	4	15.0	9.1	3.1	1.65	1.90
Mechanics of Materials	7	10.8	9.8	0.9	1.10	1.11
Materials	5	8.5	9.8	2.7	0.87	-0.48
Fluid Mechanics	6	8.3	8.1	1.1	1.02	0.18
Surveying	6	9.4	8.9	0.6	1.06	0.83
Water Resources and Environmental Engineering	10	8.6	9.1	0.9	0.95	-0.56
Structural Engineering	10	8.7	7.7	0.8	1.13	1.25
Geotechnical Engineering	10	8.6	8.5	0.7	1.01	0.14
Transportation Engineering	9	8.1	8.9	1.1	0.91	-0.73
Construction Engineering	8	10.2	8.8	1.3	1.16	1.08

4

80%

1 100%

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Name of Institution: University of Ket			ntucky, Lexington			
Major:	Mining/Mineral		Other	Disciplines		
			Institution	ABET Comparator ²		

	Institution	Comparator ²	
No. Examinees Taking ¹	3	48	
No. Examinees Passing	3	19	
Percent Examinees Passing	100%	40%	

						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	8	9.6	8.1	1.7	1.19	0.88
Probability and Statistics	6	10.6	8.8	2.2	1.20	0.82
Chemistry	5	10.3	8.1	2.7	1.27	0.81
Instrumentation and Controls	4	11.6	8.4	3.4	1.38	0.94
Engineering Ethics and Societal Impacts	5	7.8	9.8	3.2	0.80	-0.63
Safety, Health, and Environment	6	13.2	9.9	3.0	1.33	1.10
Engineering Economics	6	8.8	8.9	2.5	0.99	-0.04
Statics	9	9.5	8.3	2.8	1.14	0.43
Dynamics	9	10.1	8.6	1.3	1.17	1.15
Strength of Materials	9	10.1	8.6	1.7	1.17	0.88
Materials	6	8.8	9.0	1.9	0.98	-0.11
Fluid Mechanics	12	9.6	8.3	1.9	1.16	0.68
Basic Electrical Engineering	6	12.6	8.8	3.0	1.43	1.27
Thermodynamics and Heat Transfer	9	9.8	8.0	2.2	1.23	0.82

Uncertainty Range for Scaled

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