



NCEES

Examination: Fundamentals of Engineering (FE)
Report title: Subject Matter Report by Major and Examination
Exams administered: Jul 01 – Dec 31, 2022
Examinees included: First-Time Examinees from EAC/ABET-Accredited Engineering Programs
Graduation Date: Examinees Testing within 12 months of Graduation Date

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

	Institution	ABET Comparator ²
No. Examinees Taking ¹	1	16
No. Examinees Passing	1	10
Percent Examinees Passing	100%	63%

Uncertainty Range for Scaled Score ⁴ ± 1.00
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	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	9.3	8.3	2.9	1.12	0.34
Probability and Statistics	6	9.8	9.4	2.1	1.04	0.19
Chemistry	5	10.4	9.4	2.5	1.11	0.40
Instrumentation and Controls	4	8.5	9.5	3.0	0.89	-0.33
Engineering Ethics and Societal Impacts	5	15.0	10.9	3.7	1.38	1.11
Safety, Health, and Environment	6	7.5	9.3	2.3	0.81	-0.78
Engineering Economics	6	15.0	9.4	2.9	1.60	1.93
Statics	9	9.3	9.2	2.1	1.01	0.05
Dynamics	9	9.5	10.0	2.3	0.95	-0.22
Strength of Materials	9	7.6	9.1	1.0	0.84	-1.50
Materials	6	9.6	9.5	1.0	1.01	0.10
Fluid Mechanics	12	8.7	9.6	1.0	0.91	-0.90
Basic Electrical Engineering	6	10.3	9.5	3.0	1.08	0.27
Thermodynamics and Heat Transfer	9	7.2	8.3	3.0	0.87	-0.37

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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	289
No. Examinees Passing	2	208
Percent Examinees Passing	100%	72%

**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	15.0	10.2	3.1	1.47	1.55
Probability and Statistics	4	12.2	10.7	3.6	1.14	0.42
Engineering Sciences	4	11.6	9.8	3.4	1.18	0.53
Materials Science	4	9.2	10.4	3.7	0.88	-0.32
Chemistry and Biology	7	10.5	9.9	2.8	1.06	0.21
Fluid Mechanics/Dynamics	8	12.1	9.6	2.7	1.26	0.93
Thermodynamics	8	12.7	9.5	2.6	1.34	1.23
Material/Energy Balances	10	12.4	9.2	2.3	1.35	1.39
Heat Transfer	8	13.0	9.7	2.9	1.34	1.14
Mass Transfer and Separation	8	12.7	9.6	2.4	1.32	1.29
Solids Handling	3	12.4	9.7	4.3	1.28	0.63
Chemical Reaction Engineering	7	15.0	9.9	2.8	1.52	1.82
Economics	4	12.6	9.7	3.4	1.30	0.85
Process Design	7	11.6	10.2	2.7	1.14	0.52
Process Control	4	12.8	9.9	3.6	1.29	0.81
Safety, Health, and Environment	5	10.5	9.9	3.3	1.06	0.18
Ethics and Professional Practice	3	11.6	11.2	4.5	1.04	0.09

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

	Institution	ABET Comparator ²
No. Examinees Taking ¹	26	3,389
No. Examinees Passing	20	2,035
Percent Examinees Passing	77%	60%

Uncertainty Range for Scaled Score ⁴ ± 0.20
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	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	10.2	9.2	2.3	1.11	0.43
Ethics and Professional Practice	4	10.9	10.5	3.6	1.04	0.11
Engineering Economics	5	10.2	9.5	3.2	1.07	0.22
Statics	8	9.7	8.9	2.6	1.09	0.31
Dynamics	4	9.1	9.2	3.6	0.99	-0.03
Mechanics of Materials	7	9.3	8.9	2.2	1.04	0.18
Materials	5	9.0	9.1	2.8	0.99	-0.04
Fluid Mechanics	6	10.1	9.2	2.8	1.10	0.32
Surveying	6	10.3	8.8	2.7	1.17	0.56
Water Resources and Environmental Engineering	10	9.4	9.0	2.0	1.04	0.20
Structural Engineering	10	8.9	8.7	1.8	1.02	0.11
Geotechnical Engineering	10	9.6	9.0	2.0	1.07	0.30
Transportation Engineering	9	9.2	9.0	1.9	1.02	0.11
Construction Engineering	8	9.9	9.1	2.4	1.09	0.33

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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	6	676
No. Examinees Passing	6	457
Percent Examinees Passing	100%	68%

Uncertainty Range for Scaled Score ⁴ ± 0.41
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	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	11.6	9.5	2.5	1.22	0.84
Probability and Statistics	4	11.0	10.0	3.6	1.10	0.28
Ethics and Professional Practice	4	10.3	11.1	3.8	0.93	-0.21
Engineering Economics	5	11.3	9.7	3.1	1.16	0.52
Properties of Electrical Materials	4	9.2	9.9	3.7	0.93	-0.19
Circuit Analysis (DC and AC Steady State)	11	10.6	9.3	2.1	1.14	0.62
Linear Systems	5	9.0	9.1	3.1	0.99	-0.03
Signal Processing	5	9.9	9.2	2.9	1.08	0.24
Electronics	7	10.5	9.2	2.3	1.14	0.57
Power Systems	8	10.9	9.2	2.2	1.18	0.77
Electromagnetics	4	12.1	9.3	3.3	1.30	0.85
Control Systems	6	8.7	9.2	2.5	0.95	-0.20
Communications	5	11.5	9.0	2.8	1.28	0.89
Computer Networks	4	11.9	9.6	3.3	1.24	0.70
Digital Systems	8	10.6	9.4	2.4	1.13	0.50
Computer Systems	5	10.4	9.0	3.1	1.16	0.45
Software Engineering	4	11.4	9.9	3.8	1.15	0.39

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

	Institution	ABET Comparator ²
No. Examinees Taking ¹	6	1,958
No. Examinees Passing	6	1,341
Percent Examinees Passing	100%	68%

Uncertainty Range for Scaled Score ⁴ ± 0.41
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	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	11.3	9.6	2.8	1.18	0.61
Probability and Statistics	4	8.3	9.7	3.4	0.86	-0.41
Ethics and Professional Practice	4	10.9	10.9	3.6	1.00	0.00
Engineering Economics	4	12.9	9.9	3.5	1.30	0.86
Electricity and Magnetism	5	10.0	9.8	3.0	1.02	0.07
Statics	9	10.5	9.3	2.3	1.13	0.52
Dynamics, Kinematics, and Vibrations	10	10.5	9.2	2.2	1.14	0.59
Mechanics of Materials	9	10.7	9.1	2.0	1.18	0.80
Material Properties and Processing	7	9.6	9.4	2.5	1.02	0.08
Fluid Mechanics	10	9.9	9.2	2.0	1.08	0.35
Thermodynamics	10	10.8	9.0	1.8	1.20	1.00
Heat Transfer	7	10.7	9.4	2.5	1.14	0.52
Measurements, Instrumentation, and Controls	5	10.3	9.1	3.0	1.13	0.40
Mechanical Design and Analysis	10	10.6	9.2	2.0	1.15	0.70

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