



NCEES

Examination: Fundamentals of Engineering (FE)
Report title: Subject Matter Report by Major and Examination
Exams administered: Jul 01—Dec 31, 2020
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, Lexington		
Major:	Chemical	FE Examination:	Chemical

	Institution	ABET Comparator ²
No. Examinees Taking ¹	1	231
No. Examinees Passing	1	165
Percent Examinees Passing	100%	71%

**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	6	9.8	10.0	3.3	0.98	-0.06
Probability and Statistics	4	15.0	10.0	3.6	1.50	1.39
Engineering Sciences	4	15.0	9.9	3.6	1.52	1.42
Materials Science	4	15.0	10.4	3.3	1.44	1.39
Chemistry and Biology	7	15.0	9.9	3.1	1.52	1.65
Fluid Mechanics/Dynamics	8	15.0	9.9	2.5	1.52	2.04
Thermodynamics	8	11.7	9.4	2.1	1.24	1.10
Material/Energy Balances	10	9.7	9.3	2.4	1.04	0.17
Heat Transfer	8	9.2	10.0	2.7	0.92	-0.30
Mass Transfer and Separation	8	15.0	9.5	2.0	1.58	2.75
Solids Handling	3	9.0	10.3	4.0	0.87	-0.33
Chemical Reaction Engineering	7	10.7	9.6	2.5	1.11	0.44
Economics	4	10.5	9.8	3.8	1.07	0.18
Process Design	7	11.2	9.4	2.9	1.19	0.62
Process Control	4	15.0	9.4	4.0	1.60	1.40
Safety, Health, and Environment	5	15.0	9.5	3.7	1.58	1.49
Ethics and Professional Practice	3	15.0	10.9	4.9	1.38	0.84

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- Comparator includes all examinees from programs accredited by the ABET commission noted.
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Name of Institution:	University of Kentucky, Lexington		
Major:	Civil	FE Examination:	Civil

	Institution	ABET Comparator ²
No. Examinees Taking ¹	4	523
No. Examinees Passing	2	335
Percent Examinees Passing	50%	64%

Uncertainty Range for Scaled Score ⁴ ± 0.50
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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	8.2	9.4	2.5	0.87	-0.48
Ethics and Professional Practice	4	9.9	10.7	3.7	0.93	-0.22
Engineering Economics	5	10.3	9.9	3.2	1.04	0.13
Statics	8	8.1	9.0	2.5	0.90	-0.36
Dynamics	4	9.1	9.5	3.5	0.96	-0.11
Mechanics of Materials	7	8.6	8.9	2.5	0.97	-0.12
Materials	5	9.2	9.2	2.7	1.00	0.00
Fluid Mechanics	6	8.1	9.6	3.0	0.84	-0.50
Surveying	6	8.9	9.3	2.5	0.96	-0.16
Water Resources and Environmental Engineering	10	8.5	9.0	1.9	0.94	-0.26
Structural Engineering	10	8.0	8.7	1.9	0.92	-0.37
Geotechnical Engineering	10	8.5	9.1	2.0	0.93	-0.30
Transportation Engineering	9	7.8	9.0	2.0	0.87	-0.60
Construction Engineering	8	9.9	9.1	2.6	1.09	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	2	463
No. Examinees Passing	1	303
Percent Examinees Passing	50%	65%

Uncertainty Range for Scaled Score ⁴ ± 0.71
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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	8.4	9.4	2.4	0.89	-0.42
Probability and Statistics	4	10.8	10.1	3.9	1.07	0.18
Ethics and Professional Practice	4	11.7	11.1	3.7	1.05	0.16
Engineering Economics	5	10.4	9.7	2.9	1.07	0.24
Properties of Electrical Materials	4	9.1	9.7	3.2	0.94	-0.19
Circuit Analysis (DC and AC Steady State)	11	8.2	9.3	2.2	0.88	-0.50
Linear Systems	5	8.2	8.9	3.0	0.92	-0.23
Signal Processing	5	10.1	9.2	2.8	1.10	0.32
Electronics	7	4.9	8.9	2.4	0.55	-1.67
Power Systems	8	9.3	9.4	2.4	0.99	-0.04
Electromagnetics	4	12.6	9.3	3.7	1.35	0.89
Control Systems	6	3.1	8.7	2.7	0.36	-2.07
Communications	5	7.3	8.7	2.7	0.84	-0.52
Computer Networks	4	12.1	9.1	3.3	1.33	0.91
Digital Systems	8	8.6	9.3	2.5	0.92	-0.28
Computer Systems	5	12.5	8.9	3.3	1.40	1.09
Software Engineering	4	11.3	9.3	4.2	1.22	0.48

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

	Institution	ABET Comparator ²
No. Examinees Taking ¹	5	997
No. Examinees Passing	3	739
Percent Examinees Passing	60%	74%

Uncertainty Range for Scaled Score ⁴ ± 0.45
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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	9.7	10.0	2.9	0.97	-0.10
Probability and Statistics	4	10.4	9.6	3.3	1.08	0.24
Ethics and Professional Practice	4	10.8	11.1	3.6	0.97	-0.08
Engineering Economics	4	11.7	10.4	3.5	1.13	0.37
Electricity and Magnetism	5	10.0	9.9	3.0	1.01	0.03
Statics	9	9.2	9.6	2.3	0.96	-0.17
Dynamics, Kinematics, and Vibrations	10	9.9	9.5	2.1	1.04	0.19
Mechanics of Materials	9	9.5	9.3	2.0	1.02	0.10
Material Properties and Processing	7	9.3	9.3	2.5	1.00	0.00
Fluid Mechanics	10	8.6	9.3	2.2	0.92	-0.32
Thermodynamics	10	8.4	9.3	2.0	0.90	-0.45
Heat Transfer	7	8.7	9.6	2.8	0.91	-0.32
Measurements, Instrumentation, and Controls	5	10.1	8.8	3.2	1.15	0.41
Mechanical Design and Analysis	10	7.1	9.1	2.5	0.78	-0.80

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