

Examination: Fundamentals of Engineering (FE)

Report title: Subject Matter Report by Major and Examination

Exams administered: Jan 01—May 31, 2015

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, Paducah			
Major:	Chemical	FE Examination:	Chemical	

	Institution	ABET Comparator ²	
No. Examinees Taking ¹	1	747	
No. Examinees Passing	1	578	
Percent Examinees Passing	100%	77%	

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	8	7.5	10.7	3.1	0.70	-1.03
Probability and Statistics	4	7.7	10.7	3.5	0.72	-0.86
Engineering Sciences	4	9.3	10.4	3.4	0.89	-0.32
Computational Tools	4	9.4	10.6	3.4	0.89	-0.35
Materials Science	4	15.0	10.4	3.3	1.44	1.39
Chemistry	8	9.9	10.7	3.1	0.93	-0.26
Fluid Mechanics/Dynamics	8	8.4	9.9	2.3	0.85	-0.65
Thermodynamics	8	8.2	9.5	2.0	0.86	-0.65
Material/Energy Balances	8	8.3	9.5	2.3	0.87	-0.52
Heat Transfer	8	10.9	10.0	2.5	1.09	0.36
Mass Transfer and Separation	8	10.4	9.4	2.0	1.11	0.50
Chemical Reaction Engineering	8	10.5	9.3	2.2	1.13	0.55
Process Design and Economics	8	15.0	9.5	2.8	1.58	1.96
Process Control	5	15.0	9.4	3.0	1.60	1.87
Safety, Health, and Environment	5	15.0	9.4	3.4	1.60	1.65
Ethics and Professional Practice	2	6.7	11.1	5.4	0.60	-0.81

- 1. $\underline{\mathbf{0}}$ 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.
- 4. 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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Graduation Date: Examinees Testing within 12 months of Graduation Date

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

	Institution	ABET	
	institution	Comparator ²	
No. Examinees Taking ¹	5	3,105	
No. Examinees Passing	5	2,564	
Percent Examinees Passing	100%	83%	

Uncertainty Range for Scaled Score ⁴ ± 0.45

	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	10.6	2.9	0.99	-0.03
Probability and Statistics	4	10.0	10.0	3.2	1.00	0.00
Computational Tools	3	10.6	11.1	4.1	0.95	-0.12
Ethics and Professional Practice	3	13.7	11.6	3.9	1.18	0.54
Engineering Economics	3	11.2	10.7	4.0	1.05	0.13
Electricity and Magnetism	3	8.8	11.1	3.6	0.79	-0.64
Statics	8	8.9	9.8	2.4	0.91	-0.38
Dynamics, Kinematics, and Vibrations	9	9.3	9.7	2.1	0.96	-0.19
Mechanics of Materials	8	9.3	9.6	2.2	0.97	-0.14
Material Properties and Processing	8	8.5	9.7	2.1	0.88	-0.57
Fluid Mechanics	9	10.1	9.9	2.2	1.02	0.09
Thermodynamics	13	8.5	9.4	1.5	0.90	-0.60
Heat Transfer	9	8.9	9.6	2.2	0.93	-0.32
Measurements, Instrumentation, and Controls	5	9.0	9.2	3.1	0.98	-0.06
Mechanical Design and Analysis	9	9.2	9.1	2.3	1.01	0.04

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