**Examination:** Fundamentals of Engineering (FE)

Report title: Subject Matter Report by Major and Examination

Exams administered: Jan 01—Jun 30, 2019

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 <sup>2</sup>
No. Examinees Taking <sup>1</sup>	1	1,047
No. Examinees Passing	1	806
Percent Examinees Passing	100%	77%

Uncertainty
Range for
Scaled
Score 4
± 1.00

	Number of Exam Questions	Institution Average Performance Index <sup>3</sup>	ABET Comparator Average Performance Index	ABET Comparator Standard Deviation	Ratio Score <sup>4</sup>	Scaled Score <sup>4</sup>
Mathematics	8	8.4	10.1	2.8	0.83	-0.61
Probability and Statistics	4	15.0	10.1	3.4	1.49	1.44
Engineering Sciences	4	10.2	10.0	3.5	1.02	0.06
Computational Tools	4	7.5	10.3	3.4	0.73	-0.82
Materials Science	4	8.9	10.1	3.4	0.88	-0.35
Chemistry	8	15.0	10.2	3.0	1.47	1.60
Fluid Mechanics/Dynamics	8	9.4	9.8	2.3	0.96	-0.17
Thermodynamics	8	11.3	9.3	2.0	1.22	1.00
Material/Energy Balances	8	11.5	9.5	2.5	1.21	0.80
Heat Transfer	8	10.1	9.8	2.4	1.03	0.13
Mass Transfer and Separation	8	12.1	9.7	2.0	1.25	1.20
Chemical Reaction Engineering	8	9.7	9.7	2.3	1.00	0.00
Process Design and Economics	8	15.0	9.7	2.6	1.55	2.04
Process Control	5	15.0	9.8	3.1	1.53	1.68
Safety, Health, and Environment	5	10.1	9.8	3.3	1.03	0.09
Ethics and Professional Practice	2	15.0	11.8	5.0	1.27	0.64

- 1. **Q** examinees have been removed from this data because they were flagged as a random guesser.
- ${\it 2. } \ \ {\it Comparator includes all examinees from programs accredited by the ABET commission noted.}$
- 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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**Graduation Date:** Examinees Testing within 12 months of Graduation Date

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

	Institution	ABET Comparator <sup>2</sup>
No. Examinees Taking <sup>1</sup>	2	4,219
No. Examinees Passing	2	3,354
Percent Examinees Passing	100%	79%

Uncertainty
Range for
Scaled
Score 4
± 0.71

	Number of Exam Questions	Institution Average Performance Index <sup>3</sup>	ABET Comparator Average Performance Index	ABET Comparator Standard Deviation	Ratio Score <sup>4</sup>	Scaled Score <sup>4</sup>
Mathematics	6	5.2	10.1	3.0	0.51	-1.63
Probability and Statistics	4	8.4	9.8	3.3	0.86	-0.42
Computational Tools	3	10.8	10.8	4.0	1.00	0.00
Ethics and Professional Practice	3	12.3	11.3	3.9	1.09	0.26
Engineering Economics	3	12.0	10.1	4.1	1.19	0.46
Electricity and Magnetism	3	8.4	10.1	4.1	0.83	-0.41
Statics	8	9.2	9.6	2.3	0.96	-0.17
Dynamics, Kinematics, and Vibrations	9	8.9	9.4	2.1	0.95	-0.24
Mechanics of Materials	8	9.6	9.5	2.0	1.01	0.05
Material Properties and Processing	8	8.1	9.6	2.1	0.84	-0.71
Fluid Mechanics	9	9.3	9.6	2.1	0.97	-0.14
Thermodynamics	13	8.7	9.3	1.5	0.94	-0.40
Heat Transfer	9	8.4	9.7	2.2	0.87	-0.59
Measurements, Instrumentation, and Controls	5	7.7	9.4	2.9	0.82	-0.59
Mechanical Design and Analysis	9	8.9	9.2	2.3	0.97	-0.13

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