

Examination: Principles and Practice of Engineering (PE) **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

Name of Institution:	University of Kentucky, Paducah		
Major:	Chemical	PE Examination:	Chemical

		Institution	Comparator ²	
No. Examinees Taking ¹		1	161	
No. Examinees Passing		1	113	
Percent Examinees Passing		100%	70%	
	Number of Exam Questions	Institution Average Percent Correct	ABET Comparator Average Percent Correct	ABET Comparator Standard Deviation ³
Mass Energy Balances and Thermodynamics: Mass Balances	8	87.5	58.4	1.5
Mass Energy Balances and Thermodynamics: Energy Balances and Thermodynamics	10	80.0	60.0	2.0
Heat Transfer: Mechanisms	7	71.4	70.7	1.6
Heat Transfer: Applications	6	50.0	64.5	1.6
Kinetics: Reaction Parameters	5	100.0	63.5	1.2
Kinetics: Reactors	4	75.0	61.6	1.0
Fluids: Mechanical-Energy Balance	9	55.6	67.8	1.8
Fluids: Flow and Pressure Measurement Techniques	4	75.0	55.1	0.9
Mass Transfer: Phase Equilibria	4	75.0	57.5	1.0
Mass Transfer: Continuous Vapor-Liquid Contactors	6	83.3	61.1	1.4
Mass Transfer: Miscellaneous Mass Transfer Processes	1	100.0	33.5	0.5
Plant Design and Operation: Economic Considerations	1	100.0	80.1	0.4
Plant Design and Operation: Design	8	62.5	61.9	1.5

ABET

75.4

69.7

8.0

1.0

Institution

66.7

75.0

- 1. **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. The standard deviation is based on number of questions correct, not percentage of questions correct.

TERMS AND CONDITIONS OF DATA USE

Plant Design and Operation: Operation

Environment

Plant Design and Operation: Safety; Health; and

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3

4

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•	Name of Institution:	University of Kentucky, Paducah		
	Major:	Mechanical	PE Examination:	Environmental

No. Examinees Taking ¹		1	5	
No. Examinees Passing		0	2	
Percent Examinees Passing		0%	40%	
	Number of Exam Questions	Institution Average Percent Correct	ABET Comparator Average Percent Correct	ABET Comparator Standard Deviation ³
Water: Basic Principles	4	75.0	55.0	1.5
Water: Wastewater	10	50.0	62.0	0.7
Water: Stormwater	4	75.0	55.0	0.7
Water: Potable Water	10	50.0	50.0	1.9
Water: Water Resources	4	50.0	60.0	1.0
Solid Waste: Basic Principles	4	100.0	65.0	1.4
Solid Waste: Municipal and Industrial Solid Waste	5	100.0	68.0	1.2
Solid Waste: Hazardous Waste	6	50.0	66.7	1.1
Solid Waste: Medical; Radioactive; Other Waste	3	0.0	33.3	0.9
Air: Basic Principles	8	25.0	57.5	1.9
Air: Pollution Control	15	46.7	65.3	2.8
Site Assessment and Remediation: Basic Principles	5	40.0	64.0	1.5
Site Assessment and Remediation: Site Assessment	3	66.7	73.3	0.7
Site Assessment and Remediation: Remediation	4	75.0	80.0	0.7
Environmental Health and Safety: Environmental Health and Safety	8	37.5	52.5	1.6
Associated Engineering Principles: Associated Engineering Principles	7	57.1	77.1	1.6

ABET

Comparator ²

Institution

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TERMS AND CONDITIONS OF DATA USE

Principles

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Name of Institution:		University of Kentucky, Paducah		
Major:	Mechanical	PE Examination:	Mechanical-Thermal and Fluids Systems	

No. Examinees Taking ¹		1	360	
No. Examinees Passing		0	241	
Percent Examinees Passing		0%	67%	
	Number of Exam Questions	Institution Average Percent Correct	ABET Comparator Average Percent Correct	ABET Comparator Standard Deviation ³
Basic Engineering Practice: Basic Engineering Practice	12	75.0	69.0	2.2
Mechanical Systems & Materials: Principles	5	60.0	62.8	1.2
Mechanical Systems & Materials: Applications	3	66.7	72.6	0.7
Hydraulic & Fluids: Principles	3	100.0	83.7	0.7
Hydraulic & Fluids: Applications	4	100.0	78.1	0.9
Energy & Power Systems: Principles	3	33.3	59.4	1.0
Energy & Power Systems: Applications	3	33.3	72.4	0.9
HVAC & Refrigeration: Principles	4	50.0	74.7	1.1
HVAC & Refrigeration: Applications	3	33.3	70.6	0.7
Principles: Materials Properties (density)	2	50.0	56.0	0.8
Principles: Fluid Mechanics	4	50.0	46.7	1.1
Principles: Heat Transfer Principles (convection)	4	75.0	71.5	1.0
Principles: Mass Balance Principles (evaporation)	3	33.3	60.6	0.9
Principles: Thermodynamics	4	75.0	54.0	1.0
Principles: Related Principles	1	0.0	75.8	0.4

ABET

Comparator ²

54.2

50.1

76.4

1.6

2.8 0.6

Institution

57.1

15.4

50.0

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TERMS AND CONDITIONS OF DATA USE

Applications: Equipment

Applications: Codes & Standards

Applications: Systems

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13

2

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