NCEES
advancing licensure for engineers and surveyors

Examination: Principles and Practice of Engineering (PE)
Report title: Subject Matter Report by Major and Examination
Exams administered: Jun 01—Nov 30, 2015
Examinees included: First-Time Examinees from EAC/ABET-Accredited Engineering Programs

Name of Institution:	**University of Kentucky, Paducah**
Major: **Mechanical**	PE Examination: **Mechanical-HVAC and Refrigeration**

	Institution	ABET Comparator [2]
No. Examinees Taking [1]	1	295
No. Examinees Passing	1	247
Percent Examinees Passing	100%	84%

	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	66.7	71.1	2.0
Mechanical Systems & Materials: Principles	5	80.0	66.6	1.1
Mechanical Systems & Materials: Applications	3	33.3	62.6	0.8
Hydraulic & Fluids: Principles	3	33.3	68.7	0.9
Hydraulic & Fluids: Applications	4	75.0	61.5	1.1
Energy & Power Systems: Principles	3	100.0	71.9	0.8
Energy & Power Systems: Applications	3	100.0	77.4	0.9
HVAC & Refrigeration: Principles	4	100.0	78.0	1.0
HVAC & Refrigeration: Applications	3	100.0	83.2	0.8
Principles: Thermodynamics	3	66.7	75.2	0.7
Principles: Psychrometrics	6	100.0	73.6	1.3
Principles: Heat Transfer	5	60.0	59.9	1.3
Principles: Fluid Mechanics	3	100.0	52.6	0.9
Principles: Compressible Flow	1	100.0	59.6	0.5
Principles: Energy Balances	4	100.0	77.7	1.0
Applications: Equipment and Components	8	87.5	63.4	1.7
Applications: Systems	7	42.9	67.5	1.4
Applications: Supportive Knowledges	3	33.3	39.3	0.9

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.

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Name of Institution:	**University of Kentucky, Paducah**
Major: **Mechanical**	PE Examination: **Mechanical-Mechanical Systems and Materials**

	Institution	ABET Comparator [2]
No. Examinees Taking [1]	1	320
No. Examinees Passing	1	241
Percent Examinees Passing	100%	75%

	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	72.6	1.9
Mechanical Systems & Materials: Principles	5	40.0	77.4	1.0
Mechanical Systems & Materials: Applications	3	33.3	66.5	0.8
Hydraulic & Fluids: Principles	3	100.0	76.5	0.8
Hydraulic & Fluids: Applications	4	75.0	60.5	1.1
Energy & Power Systems: Principles	3	66.7	70.1	0.9
Energy & Power Systems: Applications	3	100.0	70.5	1.0
HVAC & Refrigeration: Principles	4	75.0	72.7	1.0
HVAC & Refrigeration: Applications	3	100.0	64.9	0.9
Principles: Statics (free-body diagrams)	6	16.7	62.2	1.4
Principles: Kinematics (linear & rotational motion)	2	0.0	62.5	0.7
Principles: Dynamics (particle & rigid body)	5	40.0	54.4	1.2
Principles: Materials Properties (physical)	5	100.0	71.2	1.1
Principles: Strength of Materials (stress & strain)	6	66.7	58.8	1.4
Applications: Mechanical Components	4	100.0	67.2	1.0
Applications: Joints & Fasteners	4	25.0	49.0	1.0
Applications: Vibration & Dynamic Analysis	4	50.0	36.2	1.0
Applications: Materials & Process	4	100.0	47.4	1.0

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2. Comparator includes all examinees from programs accredited by the ABET commission noted.
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Name of Institution:	**University of Kentucky, Paducah**
Major: **Mechanical**	PE Examination: **Mechanical-Thermal and Fluids Systems**

	Institution	ABET Comparator [2]
No. Examinees Taking [1]	1	363
No. Examinees Passing	1	275
Percent Examinees Passing	100%	76%

	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	83.3	70.7	2.0
Mechanical Systems & Materials: Principles	5	100.0	69.3	1.1
Mechanical Systems & Materials: Applications	3	66.7	63.8	0.8
Hydraulic & Fluids: Principles	3	100.0	83.2	0.7
Hydraulic & Fluids: Applications	4	100.0	65.8	1.1
Energy & Power Systems: Principles	3	100.0	76.8	0.8
Energy & Power Systems: Applications	3	100.0	83.4	0.8
HVAC & Refrigeration: Principles	4	100.0	81.3	1.0
HVAC & Refrigeration: Applications	3	100.0	73.7	0.9
Principles: Materials Properties (density)	2	100.0	74.4	0.6
Principles: Fluid Mechanics	4	100.0	72.5	0.9
Principles: Heat Transfer Principles (convection)	4	25.0	50.6	1.1
Principles: Mass Balance Principles (evaporation)	3	0.0	45.8	1.0
Principles: Thermodynamics	4	75.0	60.0	1.1
Principles: Related Principles	1	100.0	80.2	0.4
Applications: Equipment	7	85.7	72.5	1.6
Applications: Systems	13	76.9	66.3	2.2
Applications: Codes & Standards	2	50.0	85.3	0.6

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