



NCEES

Examination: Principles and Practice of Engineering (PE)
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, Paducah		
Major:	Mechanical	PE Examination:	Mechanical: HVAC and Refrigeration

	Institution	ABET Comparator ²
No. Examinees Taking ¹	1	479
No. Examinees Passing	1	361
Percent Examinees Passing	100%	75%

Uncertainty Range for Scaled Score ⁴ ± 1.00
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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
Principles: Basic Engineering Practice	4	9.0	9.8	3.6	0.92	-0.22
Principles: Thermodynamics	4	6.3	10.2	3.5	0.62	-1.11
Principles: Psychrometrics	7	8.7	10.2	2.9	0.85	-0.52
Principles: Heat Transfer	6	10.4	10.6	2.9	0.98	-0.07
Principles: Fluid Mechanics	3	15.0	9.9	4.3	1.52	1.19
Principles: Energy/Mass Balances	4	15.0	10.3	3.6	1.46	1.31
Applications: Heating/Cooling Loads	7	9.8	10.7	3.2	0.92	-0.28
Applications: Equipment and Components	16	11.1	9.1	1.5	1.22	1.33
Applications: Systems and Components	16	11.6	9.4	1.7	1.23	1.29
Applications: Supportive Knowledge	3	7.4	9.8	4.0	0.76	-0.60

- 0 examinees have been removed from this data because they were flagged as a random guesser.
- Comparator includes all examinees from programs accredited by the ABET commission noted.
- 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 <https://ncees.org/education/outcomes-assessment/>.

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

	Institution	ABET Comparator ²
No. Examinees Taking ¹	2	338
No. Examinees Passing	1	230
Percent Examinees Passing	50%	68%

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
Principles: Basic Engineering Practice	5	7.9	9.9	3.2	0.80	-0.63
Principles: Fluid Mechanics	5	12.0	9.5	3.4	1.26	0.74
Principles: Heat Transfer Principles	5	12.5	10.3	3.1	1.21	0.71
Principles: Mass Balance Principles	4	6.8	9.6	3.4	0.71	-0.82
Principles: Thermodynamics	5	8.9	10.0	3.1	0.89	-0.35
Principles: Supportive Knowledge	4	9.0	10.0	3.4	0.90	-0.29
Hydraulic and Fluid Applications: Distribution Systems	8	6.1	9.2	2.2	0.66	-1.41
Hydraulic and Fluid Applications: Hydraulic and Fluid Equipment	13	8.1	9.0	1.7	0.90	-0.53
Energy/Power System Applications: Energy/Power Equipment	7	6.8	9.3	2.5	0.73	-1.00
Energy/Power System Applications: Cooling/Heating	5	9.8	9.8	3.3	1.00	0.00
Energy/Power System Applications: Energy Recovery	5	8.6	10.1	3.5	0.85	-0.43
Energy/Power System Applications: Combined Cycles	4	9.1	9.7	3.8	0.94	-0.16

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