



TORO Analysis of Purchasing Managers to Cost Estimators

INPUT SECTION:

Transfer	Title	O*NET	Filters		
From Title:	Purchasing Managers	11-3061.00	Abilities:	Importance Level: 50	Weight: 1
To Title:	Cost Estimators	13-1051.00	Skills:	Importance Level: 69	Weight: 1
Labor Market Area:	Maine Statewide		Knowledge:	Importance Level: 69	Weight: 1

OUTPUT SECTION:

Grand TORQ:		89
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Ability TORQ		Skills TORQ		Knowledge TORQ	
Level	97	Level	81	Level	89

Gaps To Narrow if Possible				Upgrade These Skills				Knowledge to Add			
Ability	Level	Gap	Impt	Skill	Level	Gap	Impt	Knowledge	Level	Gap	Impt
Oral Comprehension	67	8	81	Active Listening	73	17	88	No Knowledge Upgrades Required!			
Information Ordering	60	9	72	Social Perceptiveness	57	12	69				
Written Comprehension	64	7	68	Complex Problem Solving	62	8	71				
Mathematical Reasoning	57	6	68	Writing	66	7	76				
Originality	51	7	53	Management of Personnel Resources	54	6	75				
Inductive Reasoning	59	4	68	Equipment Selection	63	5	72				
Oral Expression	67	3	75	Reading Comprehension	70	4	87				
Number Facility	60	3	56	Mathematics	69	3	82				
Fluency of Ideas	51	3	53	Coordination	71	2	71				
Near Vision	66	2	68								
Deductive Reasoning	60	1	68								

LEVEL and IMPT (IMPORTANCE) refer to the Target Cost Estimators. GAP refers to level difference between Purchasing Managers and Cost Estimators.

ASK ANALYSIS

Ability Level Comparison - Abilities with importance scores over 50

Description	Purchasing Managers	Cost Estimators	Importance
Oral Comprehension	59 	 67	81



Oral Expression	64	67	75
Information Ordering	51	60	72
Written Comprehension	57	64	68
Deductive Reasoning	59	60	68
Inductive Reasoning	55	59	68
Mathematical Reasoning	51	57	68
Near Vision	64	66	68
Speech Recognition	60	48	68
Speech Clarity	53	48	68
Written Expression	57	57	65
Problem Sensitivity	57	50	65
Category Flexibility	53	53	62
Number Facility	57	60	56
Fluency of Ideas	48	51	53
Originality	44	51	53
Selective Attention	41	37	53

Skill Level Comparison - Abilities with importance scores over 69

Description	Purchasing Managers	Cost Estimators	Importance
Active Listening	56	73	88
Reading Comprehension	66	70	87
Mathematics	66	69	82
Time Management	66	65	77
Writing	59	66	76
Management of Personnel Resources	48	54	75
Critical Thinking	70	66	73
Active Learning	70	64	73
Speaking	62	61	72
Equipment Selection	58	63	72
Coordination	69	71	71
Complex Problem Solving	54	62	71
Social Perceptiveness	45	57	69



Knowledge Level Comparison - Knowledge with importance scores over 69

Description	Purchasing Managers	Cost Estimators	Importance
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Experience & Education Comparison

Related Work Experience Comparison			Required Education Level Comparison		
Description	Purchasing Managers	Cost Estimators	Description	Purchasing Managers	Cost Estimators
10+ years	3%	8%	Doctoral	0%	0%
8-10 years	0%	4%	Professional Degree	0%	0%
6-8 years	0%	9%	Post-Masters Cert	0%	0%
4-6 years	75%	4%	Master's Degree	2%	12%
2-4 years	11%	15%	Post-Bachelor Cert	0%	0%
1-2 years	0%	8%	Bachelors	44%	19%
6-12 months	0%	27%	AA or Equiv	46%	8%
3-6 months	9%	11%	Some College	2%	10%
1-3 months	0%	4%	Post-Secondary Certificate	4%	9%
0-1 month	0%	0%	High School Diploma or GED	0%	40%
None	0%	4%	No HSD or GED	0%	0%

Purchasing Managers

Cost Estimators

Most Common Educational/Training Requirement:

Bachelor's or higher degree, plus work experience

Work experience in a related occupation

Job Zone Comparison

4 - Job Zone Four: Considerable Preparation Needed
 A minimum of two to four years of work-related skill, knowledge, or experience is needed for these occupations. For example, an accountant must complete four years of college and work for several years in accounting to be considered qualified.
 Most of these occupations require a four - year bachelor's degree, but some do not.
 Employees in these occupations usually need several years of work-related experience, on-the-job training, and/or vocational training.

4 - Job Zone Four: Considerable Preparation Needed
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Tasks

Purchasing Managers

Core Tasks

Generalized Work Activities:

- Communicating with Supervisors, Peers, or Subordinates - Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
- Making Decisions and Solving Problems - Analyzing information and evaluating results to choose the best solution and solve problems.
- Organizing, Planning, and Prioritizing Work - Developing specific goals and plans to prioritize, organize, and

Cost Estimators

Core Tasks

Generalized Work Activities:

- Communicating with Persons Outside Organization - Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
- Scheduling Work and Activities - Scheduling events, programs, and activities, as well as the work of others.
- Communicating with Supervisors, Peers,



accomplish your work.

- Judging the Qualities of Things, Services, or People - Assessing the value, importance, or quality of things or people.
- Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.

Specific Tasks

Occupation Specific Tasks:

- Administer online purchasing systems.
- Analyze market and delivery systems to assess present and future material availability.
- Arrange for disposal of surplus materials.
- Control purchasing department budgets.
- Develop and implement purchasing and contract management instructions, policies, and procedures.
- Direct and coordinate activities of personnel engaged in buying, selling, and distributing materials, equipment, machinery, and supplies.
- Interview and hire staff, and oversee staff training.
- Locate vendors of materials, equipment or supplies, and interview them to determine product availability and terms of sales.
- Maintain records of goods ordered and received.
- Participate in the development of specifications for equipment, products or substitute materials.
- Prepare and process requisitions and purchase orders for supplies and equipment.
- Prepare bid awards requiring board approval.
- Prepare reports regarding market conditions and merchandise costs.
- Represent companies in negotiating contracts and formulating policies with suppliers.
- Resolve vendor or contractor grievances, and claims against suppliers.
- Review purchase order claims and contracts for conformance to company policy.
- Review, evaluate, and approve specifications for issuing and awarding bids.

Detailed Tasks

Detailed Work Activities:

- analyze market conditions
- analyze market or delivery systems
- assign work to staff or employees
- communicate technical information

or Subordinates - Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.

- Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.
- Establishing and Maintaining Interpersonal Relationships - Developing constructive and cooperative working relationships with others, and maintaining them over time.

Specific Tasks

Occupation Specific Tasks:

- Analyze blueprints and other documentation to prepare time, cost, materials, and labor estimates.
- Assess cost effectiveness of products, projects or services, tracking actual costs relative to bids as the project develops.
- Conduct special studies to develop and establish standard hour and related cost data or to effect cost reduction.
- Confer with engineers, architects, owners, contractors and subcontractors on changes and adjustments to cost estimates.
- Consult with clients, vendors, personnel in other departments or construction foremen to discuss and formulate estimates and resolve issues.
- Establish and maintain tendering process, and conduct negotiations.
- Prepare and maintain a directory of suppliers, contractors and subcontractors.
- Prepare cost and expenditure statements and other necessary documentation at regular intervals for the duration of the project.
- Prepare estimates for use in selecting vendors or subcontractors.
- Prepare estimates used by management for purposes such as planning, organizing, and scheduling work.
- Review material and labor requirements to decide whether it is more cost-effective to produce or purchase components.
- Set up cost monitoring and reporting systems and procedures.
- Visit site and record information about access, drainage and topography, and availability of services such as water and electricity.

Detailed Tasks

Detailed Work Activities:

- advise clients on financial matters
- analyze budgets
- analyze financial data
- analyze technical data, designs, or



- conduct market research
- conduct or attend staff meetings
- develop purchasing policies or procedures
- develop records management system
- direct and coordinate activities of workers or staff
- fill out purchase requisitions
- inspect merchandise to determine value
- locate sources of supply for purchasing
- maintain administrative services procedures manual
- maintain records, reports, or files
- manage inventories or supplies
- monitor consumer or marketing trends
- negotiate business contracts
- order or purchase supplies, materials, or equipment
- oversee execution of organizational or program policies
- purchase office equipment or furniture
- recommend purchase or repair of furnishings or equipment
- use appraisal techniques in purchasing
- use cost benefit analysis techniques
- use inventory control procedures
- use knowledge of sales contracts
- use negotiation techniques

Technology - Examples

Calendar and scheduling software

- Scheduling software

Charting software

- Microsoft Office Visio

Data base management system software

- Oracle DBMS

Data base reporting software

- Business Objects Crystal Reports

Data base user interface and query software

- Corel Paradox
- Database software
- Microsoft Access

Electronic mail software

- IBM Lotus Notes
- Microsoft Outlook

Enterprise resource planning ERP software

- Bowen & Groves MI ERP
- Enterprise resource planning ERP software

preliminary specifications

- bid engineering, construction or extraction projects
- compile data for financial reports
- compute cost estimates of construction or engineering projects
- compute financial data
- confer with vendors
- convert design specifications to cost estimates
- estimate cost for engineering projects
- estimate materials or labor requirements
- estimate production costs
- estimate time needed for project
- estimate time or cost for installation, repair, or construction projects
- evaluate material specifications
- identify supplier with best bid
- interpret maps for architecture, construction, or engineering project
- monitor operational budget
- negotiate business contracts
- prepare cost estimates
- prepare financial reports
- prepare periodic reports comparing budgeted costs to actual costs
- read blueprints
- read specifications
- understand construction specifications
- understand engineering data or reports
- understand technical operating, service or repair manuals
- use computers to enter, access and retrieve financial data
- use cost benefit analysis techniques
- use spreadsheet software
- use statistical cost estimation methods

Technology - Examples

Accounting software

- Choice Job Cost
- Cost accounting software
- CPR International GeneralCOST Estimator
- Intuit QuickBooks
- National Job Cost software

Analytical or scientific software

- Construction Management Software ProEst
- QSM SLIM
- Resources Calculations Incorporated SoftCost



• Epicor Vantage ERP
• Lawson M3 Supply Chain Management software
• Oracle JD Edwards EnterpriseOne
• Oracle PeopleSoft
• SAP software
Financial analysis software
• Oracle PeopleSoft Enterprise Financial Management Solutions
Internet browser software
• Web browser software
Inventory management software
• Inventory management software
Materials requirements planning logistics and supply chain software
• Material requirement planning MRP software
Office suite software
• Microsoft Office
Point of sale POS software
• Point of sale POS software
Presentation software
• Microsoft PowerPoint
Procurement software
• Ariba Spend Management Suite
• Automated purchase order software
• Bottomline Technologies Bottomline Sprinter Purchasing Manager
• Purchasing software
• PurchasingNet eProcurement
Project management software
• Microsoft Project
• Primavera Systems SureTrak Project Manager
Spreadsheet software
• Microsoft Excel
• Spreadsheet software
Word processing software
• Microsoft Word
• Word processing software
Tools - Examples

• WinEstimator WinEst
Data base reporting software
• Business Objects Crystal Reports
• Software AG software
Electronic mail software
• Microsoft Outlook
Financial analysis software
• Cost estimation software
• CPR International Visual Estimator
• IBM Costimator
• Softstar Costar COCOMO II
Project management software
• Assured Software JPP
• Galorath SEER-SEM
• Sage Software Sage Master Builder
• Xactware Xactimate
Spreadsheet software
• Apple AppleWorks
• Corel QuattroPro
• IBM Lotus 1-2-3
• Microsoft Excel
• Spreadsheet software
Word processing software
• Microsoft Word
Tools - Examples
• Desktop computers
• Notebook computers
• Personal computers
• Personal digital assistants PDA
• Scanners
• Tablet computers



- 10-key calculators
- Desktop computers
- Personal computers

Labor Market Comparison

Description	Purchasing Managers	Cost Estimators	Difference
Median Wage	\$ 72,560	\$ 44,990	\$(27,570)
10th Percentile Wage	\$ 46,340	\$ 30,880	\$(15,460)
25th Percentile Wage	N/A	N/A	N/A
75th Percentile Wage	\$ 88,750	\$ 58,820	\$(29,930)
90th Percentile Wage	\$105,800	\$ 76,320	\$(29,480)
Mean Wage	\$ 74,700	\$ 49,830	\$(24,870)
Total Employment - 2007	330	750	420
Employment Base - 2006	343	751	408
Projected Employment - 2016	349	853	504
Projected Job Growth - 2006-2016	1.8 %	13.6 %	11.8 %
Projected Annual Openings - 2006-2016	11	25	14

National Job Posting Trends

Trend for Purchasing Managers

Trend for Cost Estimators

Job Trends from Indeed.com

— Purchasing Manager — Cost Estimator



Data from [Indeed](http://Indeed.com)



Recommended Programs

Materials Engineering

Materials Engineering. A program that prepares individuals to apply mathematical and materials science principles to the design, development and operational evaluation of materials and related processes used in manufacturing in a wide variety of settings; the synthesis of new industrial materials, including marrying and bonding composites; analysis of materials requirements and specifications; and related problems of system design dependent on materials factors.

No schools available for the program

Mechanical Engineering

Mechanical Engineering. A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of physical systems used in manufacturing and end-product systems used for specific uses, including machine tools, jigs and other manufacturing equipment; stationary power units and appliances; engines; self-propelled vehicles; housings and containers; hydraulic and electric systems for controlling movement; and the integration of computers and remote control with operating systems.

Institution	Address	City	URL
University of Maine		Orono	www.umaine.edu/
University of Maine		Orono	www.umaine.edu/
University of Maine		Orono	www.umaine.edu/
University of Maine		Orono	www.umaine.edu/

Construction Engineering

Construction Engineering. A program that prepares individuals to apply scientific, mathematical, and management principles to the planning, design, and building of facilities and structures. Includes instruction in civil engineering, structural principles, site analysis, computer-assisted design, geology, evaluation and testing, materials, contracting, project management, graphic communications, and applicable laws and regulations.

No schools available for the program

Manufacturing Engineering

Manufacturing Engineering. A program that prepares individuals to apply scientific and mathematical principles to the design, development, and implementation of manufacturing systems. Includes instruction in materials science and engineering, manufacturing processes, process engineering, assembly and product engineering, manufacturing systems design, and manufacturing competitiveness.

No schools available for the program

Construction Engineering Technology/Technician

Construction Engineering Technology/Technician. A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers, engineering contractors and other professionals engaged in the construction of buildings and related structures. Includes instruction in basic structural engineering principles and construction techniques, building site inspection, site supervision, construction personnel supervision, plan and specification interpretation, supply logistics and procurement, applicable building codes, and report preparation.

Institution	Address	City	URL
Central Maine Community College	1250 Turner St	Auburn	www.cmcc.edu
Central Maine Community College	1250 Turner St	Auburn	www.cmcc.edu
Eastern Maine Community College	354 Hogan Rd	Bangor	www.emcc.edu
Eastern Maine Community College	354 Hogan Rd	Bangor	www.emcc.edu
Eastern Maine Community College	354 Hogan Rd	Bangor	www.emcc.edu

Business/Commerce, General



Business/Commerce, General. A program that focuses on the general study of business, including the processes of interchanging goods and services (buying, selling and producing), business organization, and accounting as used in profit-making and nonprofit public and private institutions and agencies. The programs may prepare individuals to apply business principles and techniques in various occupational settings.

Institution	Address	City	URL
Beal College	99 Farm Road	Bangor	bealcollege.edu
University of Maine at Farmington	224 Main St	Farmington	www.umf.maine.edu
University of Maine at Fort Kent	23 University Drive	Fort Kent	www.umfk.maine.edu
University of Maine at Presque Isle	181 Main St	Presque Isle	www.umpi.maine.edu
University of Maine at Presque Isle	181 Main St	Presque Isle	www.umpi.maine.edu
Thomas College	180 W River Rd	Waterville	www.thomas.edu

Business Administration and Management, General

Business Administration and Management, General. A program that generally prepares individuals to plan, organize, direct, and control the functions and processes of a firm or organization. Includes instruction in management theory, human resources management and behavior, accounting and other quantitative methods, purchasing and logistics, organization and production, marketing, and business decision-making.

Institution	Address	City	URL
Central Maine Community College	1250 Turner St	Auburn	www.cmcc.edu
Central Maine Community College	1250 Turner St	Auburn	www.cmcc.edu
University of Maine at Augusta	46 University Dr	Augusta	www.uma.maine.edu/
University of Maine at Augusta	46 University Dr	Augusta	www.uma.maine.edu/
Eastern Maine Community College	354 Hogan Rd	Bangor	www.emcc.edu
Husson College	One College Circle	Bangor	www.husson.edu
Husson College	One College Circle	Bangor	www.husson.edu
Husson College	One College Circle	Bangor	www.husson.edu
Beal College	99 Farm Road	Bangor	bealcollege.edu
University of New England	11 Hills Beach Rd	Biddeford	WWW.UNE.EDU
Washington County Community College	One College Drive	Calais	www.wccc.me.edu
University of Maine at Machias	9 O'Brien Ave	Machias	www.umm.maine.edu
University of Maine		Orono	www.umaine.edu/
University of Maine		Orono	www.umaine.edu/
University of Maine		Orono	www.umaine.edu/
Andover College	901 Washington Ave	Portland	WWW.ANDOVERCOLLEGE.edu
University of Southern Maine	96 Falmouth St	Portland	www.usm.maine.edu
University of Southern Maine	96 Falmouth St	Portland	www.usm.maine.edu
University of Southern Maine	96 Falmouth St	Portland	www.usm.maine.edu
University of Southern Maine	96 Falmouth St	Portland	www.usm.maine.edu
Northern Maine Community College	33 Edgemont Dr	Presque Isle	www.nmcc.edu



Southern Maine Community College	2 Fort Road	South Portland	www.smccME.edu
Southern Maine Community College	2 Fort Road	South Portland	www.smccME.edu
Saint Josephs College	278 Whites Bridge Rd	Standish	www.sjcme.edu
Saint Josephs College	278 Whites Bridge Rd	Standish	www.sjcme.edu
Saint Josephs College	278 Whites Bridge Rd	Standish	www.sjcme.edu
Thomas College	180 W River Rd	Waterville	www.thomas.edu
Thomas College	180 W River Rd	Waterville	www.thomas.edu
Thomas College	180 W River Rd	Waterville	www.thomas.edu
York County Community College	112 College Drive	Wells	www.yccc.edu

Purchasing, Procurement and Contracts Management

Purchasing, Procurement/Acquisitions and Contracts Management. A program that prepares individuals to manage and/or administer the processes by which a firm or organization contracts for goods and services to support its operations, as well as contracts it to sell to other firms or organizations. Includes instruction in contract law, negotiations, buying procedures, government contracting, cost and price analysis, vendor relations, contract administration, auditing and inspection, relations with other firm departments, and applications to special areas such as high-technology systems, international purchasing, and construction.

No schools available for the program

Maine Statewide Promotion Opportunities for Purchasing Managers

O*NET Code	Title	Grand TORQ	Job Zone	Employment	Median Wage	Difference	Growth	Annual Job Openings
11-3061.00	Purchasing Managers	100	4	330	\$72,560.00	\$0.00	2%	11
11-3051.00	Industrial Production Managers	88	4	690	\$72,560.00	\$0.00	-12%	24
11-1021.00	General and Operations Managers	88	4	8,490	\$77,050.00	\$4,490.00	-5%	209
13-2052.00	Personal Financial Advisors	86	3	360	\$94,100.00	\$21,540.00	10%	13
11-2022.00	Sales Managers	86	4	1,310	\$72,720.00	\$160.00	3%	32
11-3021.00	Computer and Information Systems Managers	85	5	870	\$83,130.00	\$10,570.00	8%	21
11-1011.00	Chief Executives	83	5	750	\$102,290.00	\$29,730.00	-6%	25
11-2021.00	Marketing Managers	81	4	570	\$74,560.00	\$2,000.00	7%	17
25-1063.00	Economics Teachers, Postsecondary	81	5	80	\$73,830.00	\$1,270.00	11%	2
23-1011.00	Lawyers	81	5	1,910	\$80,120.00	\$7,560.00	6%	73



11-9041.00	Engineering Managers	79	5	720	\$91,030.00	\$18,470.00	-2%	14
11-9121.00	Natural Sciences Managers	78	5	180	\$79,810.00	\$7,250.00	8%	5
23-1023.00	Judges, Magistrate Judges, and Magistrates	77	5	80	\$115,160.00	\$42,600.00	1%	2
29-1051.00	Pharmacists	76	5	1,190	\$112,550.00	\$39,990.00	22%	46
17-2072.00	Electronics Engineers, Except Computer	75	4	210	\$76,420.00	\$3,860.00	-26%	4

Top Industries for Cost Estimators

Industry	NAICS	% in Industry	Employment	Projected Employment	% Change
Nonresidential building construction	236200	9.42%	20,828	25,214	21.06%
Residential building construction	236100	8.88%	19,639	23,893	21.66%
Plumbing, heating, and air-conditioning contractors	238220	7.50%	16,592	20,243	22.00%
Electrical contractors	238210	7.22%	15,964	18,085	13.29%
Other specialty trade contractors	238900	5.27%	11,641	13,900	19.41%
Automotive body, paint, interior, and glass repair	811120	3.78%	8,358	10,543	26.14%
Drywall and insulation contractors	238310	3.11%	6,882	7,931	15.24%
Printing and related support activities	323100	2.68%	5,921	5,068	-14.40%
Architectural and structural metals manufacturing	332300	2.56%	5,662	6,533	15.39%
Roofing contractors	238160	2.41%	5,338	6,735	26.16%
Highway, street, and bridge construction	237300	2.38%	5,266	6,125	16.32%
Painting and wall covering contractors	238320	2.03%	4,489	5,397	20.22%
Building material and supplies dealers	444100	1.92%	4,252	5,870	38.06%
Automobile dealers	441100	1.49%	3,290	4,032	22.56%
Poured concrete foundation and structure contractors	238110	1.46%	3,228	3,932	21.79%

Top Industries for Purchasing Managers

Industry	NAICS	% in Industry	Employment	Projected Employment	% Change
Management of companies and enterprises	551100	11.78%	8,188	9,439	15.28%
Federal government, excluding postal service	919999	4.94%	3,433	2,921	-14.92%



Local government, excluding education and hospitals	939300	3.37%	2,346	2,372	1.10%
Self-employed workers, primary job	000601	2.75%	1,910	2,034	6.54%
Navigational, measuring, electromedical, and control instruments manufacturing	334500	2.55%	1,773	1,697	-4.26%
Aerospace product and parts manufacturing	336400	2.50%	1,739	1,772	1.84%
General medical and surgical hospitals, public and private	622100	2.12%	1,471	1,628	10.71%
Research and development in the physical, engineering, and life sciences	541710	1.92%	1,333	1,423	6.69%
Grocery and related product wholesalers	424400	1.92%	1,336	1,460	9.35%
Semiconductor and other electronic component manufacturing	334400	1.91%	1,328	1,161	-12.59%
Motor vehicle parts manufacturing	336300	1.58%	1,095	785	-28.35%
Professional and commercial equipment and supplies merchant wholesalers	423400	1.45%	1,009	1,059	4.91%
Residential building construction	236100	1.32%	916	1,031	12.61%
Plastics product manufacturing	326100	1.22%	849	900	6.00%
Electrical and electronic goods merchant wholesalers	423600	1.20%	837	986	17.90%