

DACUM Research Chart for CADD Technician

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Duties		Tasks				
A	Perform Project Research	A-1 Gather reference documents & drawings (e.g., structural, civil, mechanical, architectural)		A-2 Collect preliminary surface data (C)	A-3 Research land ownership (C)	A-4 Review project scope
		B-1 Create project file/folder	B-2 Consult with project team	B-3 Coordinate with survey department (C)	B-4 Assign project responsibilities	B-5 Define drawing requirements
B	Perform Project Setup	C-1 Determine sequence of drawings	C-2 Create basesheet/layout	C-3 Determine drawing units & scale	C-4 Convert external files (e.g., images, models)	C-5 Create 3-D models
		C-12 Create first draft of drawings	C-13 Create drawing dimensions	C-14 Add notes & annotations to drawings	C-15 Create drawing bill of materials	C-16 Print (plot) drawing files
C	Create Drawings (Plans)	D-1 Review drawings with project team	D-2 Check drawings for design issues	D-3 Check drawings for quality (e.g., appearance, legibility)	D-4 Specify drawing changes (e.g., redlines, markup)	D-5 Obtain owner approval of drawings
		E-1 Implement project changes based upon external/internal review	E-2 Print final drawings	E-3 Create drawing log	E-4 Create transmittal form	
D	Coordinate Project Review	F-1 Monitor project schedule/progress	F-2 Respond to vendors/contractors phone calls	F-3 Determine project issues	F-4 Conduct job-site review	F-5 Resolve project issues (e.g., drawing, revisions)
		G-1 Create as-built drawings	G-2 Obtain approval of project officials (e.g., stamp, signature)	G-3 Assist with project cost/time analysis	G-4 Finalize closeout project documents	G-5 File project documents
E	Create Final Construction Drawings (Plans)	H-1 Perform software upgrades	H-2 Assist with CADD library maintenance	H-3 Assist with CADD standards manual maintenance	H-4 Create calculation programs	H-5 Request drafting equipment & supplies
		I-1 Read professional literature	I-2 Participate in internal training (e.g., procedures, software, safety)	I-3 Network with professionals	I-4 Participate in external training (e.g., seminars, online courses, workshops)	
F	Assist with Project Management					
G	Finalize Construction Project					
H	Perform Administrative Tasks					
I	Participate in Job-Related Training					

A-5 Review project specifications & addendums	A-6 Review standard codes (e.g., building, zoning)	A-7 Coordinate with project team	A-8 Request additional project information (RFI)	A-9 Define project schedule		
B-6 Set up drawing layout information						
C-6 Design member connections (e.g., rails, stairs) (S)	C-7 Create 3-D models with parametric software (M)	C-8 Compile survey data (import/export) (C)	C-9 Create required layouts & details (e.g., utility layout)	C-10 Create required layouts & details (e.g., model/paperspace, viewports) (A)	C-11 Overlay outside drawings	
D-6 Verify proposed drawing changes	D-7 Obtain preliminary plat approval from local government (C)	D-8 Adjust project schedule				
E-5 Create closeout documents (e.g., CNC, purchasing, specifications, work order)		E-6 Obtain final plat approval from local government (e.g., recordations) (C)				
H-6 Maintain personal/job time card	H-7 Create marketing graphics	H-8 Process electronic communication (e.g., fax, email, .pdf)	H-9 Participate in personal performance review		A = Architectural C = Civil M = Mechanical S = Structural	
I-5 Provide on-the-job training to colleagues	I-6 Provide employee technical assistance					

General Knowledge and Skills

Industry drafting standards
ANSI drafting standards
Company standards
Detailing standards
USGS standards
Mathematics
Interpersonal skills
Construction terminology
Communication skills
Sketching & drafting
Electronic communication
Read & comprehend blueprints
Computer literacy: word processing & spreadsheets
Certification requirements
City/county laws & regulation

Tools, Equipment, Supplies and Materials

Calculator
Computer
Basic office supplies
Level
Survey equipment
Measuring tools
GPS/GIS
Printer
Plotter
Fax
Scanner
Telephone
Filing cabinets
Mylar
Reference books
Code books
Disks & CDs
Software: Excel
MS Office
SDS/2
AutoCAD: 3-D Civil
Land Development
Map
Solidworks (parametric solid modeling)

Worker Behaviors

Team player
Flexible
Work unsupervised
Attentive to detail
Appropriate language
Appropriate dress
Personable
Dedicated
Willing to ask questions
Common sense
Willing to change
Respectful enthusiastic learner
Energetic
Good hygiene

Confident
Honest
Positive
Efficient
Motivated
Punctual
Thorough
Resourceful
Trustworthy

Future Trends and Concerns

Lack of qualified workers
Changes in software
Low wages, graduates leave
Industry relevant curriculum
More continuing education after work hours
Online classes
Changing technology
Focus on 3-D design & modeling
Changing government regulations

Acronyms

AISC American Institute of Steel Construction
ALTA American Land Title Association
ANSI American National Standards Institute
ASME formerly American Society of Mechanical Engineers
AWS American Welding Society
CADD Computer-Assisted Drafting Design
CNC Computer Numeric Control
DEM Digital Elevation Model
GD&T Geometric Dimensioning & Tolerancing
GIS Geographical Information System
GPS Global Positioning System
MRP Manufacturing Resource Planning
RFI Request For Information
TINS Triangular Irregular Network
USGS United States Geologic Survey