Student Name: _____
ID #: _____
School: _____
Graduation Year: _____

STUDENT ATTAINMENT STANDARDS/COURSE RECORD*

ARCHITECTURAL DRAFTING -Option A

		Course Sequence								LEVEL of ATTAINMENT **0** Unattained / Approaching Attainment **1** Attained **2** Exceeded **3** Mastered	DATE of ATTAINMENT (Semester or M/YY)	METHOD of ATTAINMENT **1** Written Test **2** Oral Present'n **3** Project **4** Portfolio **5** Classrm. Observ. **6** Wrkplc. Observ.	TEACHER(S)	ASSESSMENT METHOD
1.0	EXPLORE CAREER PATHWAYS IN DRAFTING AND DESIGN TECHNOLOGY													
2.0	DEMONSTRATE JOB SEARCH SKILLS NEEDED TO OBTAIN A CAREER IN DRAFTING AND DESIGN TECHNOLOGIES													
3.0	DEMONSTRATE APPROPRIATE WORK HABITS FOR SUCCESSFUL EMPLOYMENT IN THE FIELD OF DRAFTING AND DESIGN													
4.0	PARTICIPATE IN LEADERSHIP ACTIVITIES SUCH AS THOSE SUPPORTED BY CAREER AND TECHNICAL STUDENT ORGANIZATION SkillsUSA													
5.0	EXPLORE PRINCIPLES OF INDUSTRIES RELYING ON DRAFTING AND DESIGN TECHNOLOGY													
6.0	EXPLORE LEGAL AND ETHICAL ISSUES IN DESIGN/ENGINEERING INDUSTRIES													
7.0	PRACTICE SAFE AND PRODUCTIVE WORKING PROCEDURES IN DRAFTING AND DESIGN ENVIRONMENTS													
8.0	APPLY PROBLEM SOLVING AND DECISION MAKING PROCESSES TO DRAFTING AND DESIGN RELATED SITUATIONS													
9.0	DEMONSTRATE TECHNOLOGICAL LITERACY FOR DRAFTING AND DESIGN OPERATIONS													
10.0	USE MATHEMATICAL PROCESSES TO SOLVE PROBLEMS IN DRAFTING AND DESIGN TECHNOLOGY													
11.0	INTERPRET SCHEMATICS, BLUEPRINTS, AND TECHNICAL DRAWINGS													
12.0	PRACTICE SKETCHING, DRAWING AND VISUALIZATION SKILLS FOR DRAFTING AND DESIGN													
13.0	DEMONSTRATE BASIC OPERATION OF COMPUTER HARDWARE AND SOFTWARE UTILIZED IN DRAFTING AND DESIGN TECHNOLOGY													
14.0	DEVELOP A PLAN FOR A CAREER IN DRAFTING AND DESIGN													
15.0	PREPARE FOR EMPLOYMENT IN DRAFTING AND DESIGN													
16.0	PARTICIPATE IN WORK-BASED LEARNING EXPERIENCES IN DRAFTING AND DESIGN													
17.0	DEMONSTRATE ORAL COMMUNICATION SKILLS FOR DRAFTING AND DESIGN													
18.0	DEMONSTRATE WRITTEN COMMUNICATION SKILLS FOR DRAFTING AND DESIGN													
19.0	EVALUATE BUSINESS AND FINANCIAL MANAGEMENT PRACTICES NEEDED IN DRAFTING AND DESIGN INDUSTRIES													
20.0	PARTICIPATE IN LEADERSHIP ACTIVITIES SUCH AS THOSE SUPPORTED BY CAREER AND TECHNICAL STUDENT ORGANIZATION SkillsUSA													
21.0	APPLY MATHEMATICAL CONCEPTS TO PROBLEMS IN DRAFTING AND DESIGN													
22.0	APPLY MEASUREMENT AND SCALE CONCEPTS IN DESIGN DRAFTING													
23.0	INTERPRET ENGINEERING DOCUMENTS AND CONTROL DOCUMENTS													
24.0	CREATE TECHNICAL DRAWINGS													
25.0	UTILIZE BASIC COMPUTER CONCEPTS, OPERATIONS AND INFORMATION TECHNOLOGY APPLICATIONS													
26.0	USE A CADD/VDCM (Virtual Design and construction Modeling) SYSTEMS AND PROCEDURES													
									Total Core Competencies=	0	=COUNTIF(L3:L28,">0")			

Course Sequence _____

Student Name: ____________________________
ID #: _____________
School: __________________________________
Graduation Year: ________

STUDENT ATTAINMENT COMPETENCY/COURSE RECORD*

ARCHITECTURAL DRAFTING -Option A

									LEVEL of ATTAINMENT **0** Unattained / Approaching Attainment **1** Attained **2** Exceeded **3** Mastered	DATE of ATTAINMENT (Semester or M/YY)	METHOD of ATTAINMENT **1** Written Test **2** Oral Present'n **3** Project **4** Portfolio **5** Classrm. Observ. **6** Wrkplc. Observ.	TEACHER(S)	ASSESSMENT METHOD
27. a	DETAIL PROJECTION VIEWS/COMPONENTS												
28. a	EXPLORE ARCHITECTURAL DRAFTING AND DESIGN CONCEPTS AND PROBLEMS												
29. a	DEMONSTRATE DRAFTING AND DESIGN CONCEPTS AS RELATED TO ARCHITECTURAL DESIGN USING CADD SYSTEMS												
30. a	CREATE DRAWINGS OF STRUCTURAL SECTIONS AND DETAILS USING CADD/VDCM SYSTEMS												
31. a	CREATE PICTORIAL DRAWINGS AND MODELS												

Total Pg. 1Competencies=	0	=SUM(L29)
Total Pg. 2 Competencies=	0	=COUNTIF(L37:L41,">0")
Total Competencies=	0	=SUM(L42:L43)
% =	0%	=PRODUCT(L44/A41)

RUBRIC FOR ASSESSMENT OF INDIVIDUAL COMPETENCY ATTAINMENT

School

Teacher

Program Name: _____

LEVEL OF ATTAINMENT (LOCAL DISTRICT PERCENTAGES MAY BE DIFFERENT THAN SAMPLE)				
3	**2**	**1**	**0**	**0**
90% +	**80% +**	**70% +**	**60% +**	**Less than 60%**
MASTERED	EXCEEDED	ATTAINED	APPROACHING ATTAINMENT	UNATTAINED
Student presents a clear, specific understanding of the competency. All notes, assignments, test, workplace records and labs required are completed on time, are extremely well organized and questions are answered accurately. High interest and excitement have lead the student to reach far beyond the requirements. Student has read related materials and has used many sources of information for reports and or experiments. The student has used his/her new knowledge when participating in all oral discussions, assignments and written work. Student makes connections between classroom and workplace. The students' notes, tests, labs, workplace records, debates, CTSO participation, and assignments are of the highest level of achievement above 90%.	Student presents a clear, specific understanding of the competency. High interest and excitement leads the student to an investigation that reaches beyond requirements. All notes, assignments, tests, workplace records and labs required are completed on time, are very well organized and questions are answered accurately. The student has used more resources than required and demonstrates new knowledge both orally and in written work and uses this knowledge in his/her assignments and oral participation. New knowledge is evident when student shows connections between classroom and workplace relationships. Student notes, tests, labs, work place records, CTSO participation, debates and assignments are clearly organized, carefully done, and often go beyond teacher expectations. All tests are beyond the standard level of	Student meets assignment expectations. The student demonstrates new knowledge learned in oral participation and or written tasks. The work is well organized and complete. The student understood the assignments. He/she used the resources required and organized information in all notes, assignments, tests, workplace records, debates and labs. All notes, assignments and labs are complete, carefully done and the student meets just above the minimum requirements and expectations. All tests, workplace records, CTSO participation, assignments and labs meet the standard level of achievement between 70% to 79%.	Student knowledge of the topic is understood, but at minimum level of competency. The assignments, notes and labs are occasionally incomplete and could be organized better. Some resources have been used, but it is not clear what the student understood. Some of the information included by the student was not important to the topic. Student does most of what is required, but nothing more. Some of the work may not be finished. Tasks are not carefully done and the information from the resources is not used. Tests, labs, notes, CTSO participation, and workbased learning results are at a level of achievement between 60% to 69%.	Student knowledge of the subject is not shown. Steps through the process were not followed. Notes, tests, assignments, workbased learning and labs lack neatness, organization, detail and evidence of new knowledge. Work does not meet requirements. Parts are missing. Participation is weak, or student is often not participating. Labs, tests, CTSO participation, and assignments are poorly done and fall well behind the standard level of achievement. Overall, the student has failed to grasp new concepts covered in the competency. The level of achievement is below 60%.

Definition of Rubric:

"A rubric is a printed set of guidelines that distinguishes performances or products of different quality. A rubric has descriptors that define what to look for at each level of performance. Rubrics also often have indicators providing specific examples or tell-tale signs of things to look for in work."

An everyday example of a rubric can be found on the Kelley Blue Book web site at http://www.kbb.com/. When finding the value of a used car, Kelley uses a rubric that details a car's condition by the categories of Excellent, Good, Fair and Poor as follows:

Text, numbers and percentages in red *italics* are for purposes of clarification only and are NOT a part of the Kelly

KELLY BLUE BOOK RUBRIC

Excellent	Good	Fair	Poor	*Unacceptable*
3	***2***	***1***	***0***	***0***

90% +	***80% +***	***70% +***	***60% +***	***Less than 60%***
MASTERED	*EXCEEDED*	*ATTAINED*	*APPROACHING ATTAINMENT*	*UNATTAINED*
The vehicle looks great, is in excellent mechanical condition and needs no reconditioning. It should pass a smog inspection. The engine compartment should be clean, with no fluid leaks. The paint is glossy and the body and interior are free of any wear or visible defects. There is no rust. The tires are the proper size and match and are new or nearly new. A clean title history is assumed. This is an exceptional vehicle.	The vehicle is free of any major defects. The paint, body and interior have only minor (if any) blemishes, and there are no major mechanical problems. In states where rust is a problem, this should be very minimal, and a deduction should be made to correct it. The tires match and have substantial tread wear left. A clean title history is assumed. A "good" vehicle will need some reconditioning to be sold at retail; however major reconditioning should be deducted from the value. Most recent model cars owned by consumers fall into this category.	The vehicle probably has some mechanical or cosmetic defects, but is still in safe running condition. The paint, body and/or interior need work to be performed by a professional in order to be sold. The tires need to be replaced. There may be some repairable rust damage. The value of cars in this category may vary widely. A clean title history is assumed. Even after significant reconditioning this vehicle may not qualify for the Blue Book Suggested Retail value.	The vehicle has severe mechanical and/or cosmetic defects and may be in questionable running condition. The vehicle may have problems that cannot be readily fixed such as a damaged frame or a rusted-through body. A vehicle with a branded title (salvage, flood, etc.) or unsubstantiated mileage should be considered “poor” because of potential problems and should be independently appraised to determine its value.	*The vehicle is "death on wheels." Under no circumstances should it even be taken for a test drive. Parts may fall off at any time and there is probable danger of explosion. One or more of the quarter panels may be completely fabricated with "Bondo." The title (if there is one) is anything but "clean". None of the 4 tires match though they may be like new, having recently been stolen. There may be a strong odor of marijuana and a rookie cop might easily find traces of cocaine in the trunk. DON'T EVEN THINK*

GANADO HIGH SCHOOL

STANDARDS/COURSE MATRIX

ARCHITECTURAL - DRAFTING II

Including Print Reading & the Elements of Engineering Principles & Construction

ROBERT HOLLIFIELD - Instructor

***This indicates the "technical skill standards" for this program that will be assessed on the end-of-program Drafting and Design Technologies standards assessment.**

		DRAFTING II
*1.0	EXPLORE CAREER PATHWAYS IN DRAFTING AND DESIGN TECHNOLOGY	
1.1		
1.2		
1.3		
1.4		
*2.0	DEMONSTRATE JOB SEARCH SKILLS NEEDED TO OBTAIN A CAREER IN DRAFTING AND DESIGN TECHNOLOGIES	
2.1		
2.2		
2.3		
*3.0	(Quarter 1 - 2) DEMONSTRATE APPROPRIATE WORK HABITS FOR SUCCESSFUL EMPLOYMENT IN THE FIELD OF DRAFTING AND DESIGN	
3.1	Use drafting and design technology vocabulary in context	X
3.2	Apply basic oral and written communication skills	X
3.3	Contribute to a team effort	X
3.4	Practice leadership skills in achieving a group goal	X
3.5	Plan, organize and implement drafting and design activities	X
*4.0	(Quarter 1-2-3-4) PARTICIPATE IN LEADERSHIP ACTIVITIES SUCH AS THOSE SUPPORTED BY CAREER AND TECHNICAL STUDENT ORGANIZATION SkillsUSA	
4.1	Discuss the roles and responsibilities that leaders and members bring to an organization	X
4.2	Discuss characteristics and importance of an effective team member	X
4.3	Explain characteristics of effective workplace teams	X
4.4	Describe techniques to involve each member of the team	X
4.5	Participate in career development events	X
4.6	Develop and implement a personal and professional growth plan (Evaluate Plan Each Year)	X
4.7	Identify proper business etiquette	X
4.8	Define decision-making techniques and processes	X
4.9	Practice effective meeting management	X
4.10	Demonstrate business etiquette	X
4.11	Practice decision-making processes	X
*5.0	(Quarter 1-2-3-4) EXPLORE PRINCIPLES OF INDUSTRIES RELYING ON DRAFTING AND DESIGN TECHNOLOGY	
5.1	Recognize relationship between trades/professions related to drafting and design to facilitate	X
5.2	Discuss how quality of work affects profitability in drafting and design	X
5.3	Explain the role and major functions of drafting and design in different industries	X
5.4	Analyze current trends in drafting and design	X
5.5	Identify needs and requirements of internal and external customers in drafting and design	X
*6.0	EXPLORE LEGAL AND ETHICAL ISSUES IN DESIGN/ENGINEERING INDUSTRIES	
6.1		
6.2		
6.3		
6.4		
*7.0	(Quarter 1-2-3-4) PRACTICE SAFE AND PRODUCTIVE WORKING PROCEDURES IN DRAFTING	
7.1	Identify responsibilities of professionals in drafting and design technology in creating and maintaining a safe work environment	X
7.2	Explain the importance of the OSHA (Occupational Safety and Health Administration) Standards and HazCom (Hazard Communication Standard)	X
7.3	Apply safety/environmental policies and procedures	X
7.4	Identify security issues related to computer hardware, software and data	X
7.5	Explain issues regarding software copyright, software licensing, and software copying	X
7.6	Practice ergonomically sound working procedures	X
*8.0	(Quarter 1-2-3-4) APPLY PROBLEM SOLVING AND DECISION MAKING PROCESSES TO DRAFTING AND DESIGN RELATED SITUATIONS	
8.1	Apply problem-solving processes	X
8.2	Describe methods of establishing priorities	X
8.3	Solve problems individually and as part of a team	X

8.4	Generate creative ideas using critical thinking skills in solving drafting and design related problems	X
8.5	Evaluate facts, use logic and reason in decision making	X

***9.0 (Quarter 1-2-3-4) DEMONSTRATE TECHNOLOGICAL LITERACY FOR DRAFTING AND DESIGN OPERATIONS**

9.1	Examine the uses of technology in the drafting and design fields	X
9.2	Demonstrate basic usage of computers (input, storage, output)	X
9.3	Access information electronically (i.e. Internet, CD-ROM, memory stick)	X
9.4	Apply file and disk management techniques	X
9.5	Import text and graphics from other software programs	X
9.6	Export text and graphic information in different formats to other software programs	X

***10.0 (Quarter 1-2-3-4) USE MATHEMATICAL PROCESSES TO SOLVE PROBLEMS IN DRAFTING AND DESIGN TECHNOLOGY**

10.1	Identify and use common measurement tools used in drafting and design technology and their functio	X
10.2	fields	X
10.3	Perform mathematical calculations in the context of drafting and design related problems	X
10.4	Recognize and use metric units of length, weight, volume and/or temperature in mathematical proble	X
10.5	Recognize and use imperial units of length, weight, volume and/or temperature in mathematical probl	X
10.6	Use technology in the solution of math-related problems	X

***11.0 (Quarter 2-3-4) INTERPRET SCHEMATICS, BLUEPRINTS, AND TECHNICAL DRAWINGS**

11.1	Interpret dimensions, symbols, legends, scales, and directions/orientations	X
11.2	drawings	X
11.3	Analyze schematics, blueprints, and technical drawings for clarity, completeness and accuracy	X
11.4	Recognize cross referencing on technical drawings	X

***12.0 (Quarter 2-3-4) PRACTICE SKETCHING, DRAWING AND VISUALIZATION SKILLS FOR DRAFTING AND DESIGN**

12.1	Identify and analyze composition elements	X
12.2	Employ common types of drafting media and surfaces in traditional or digital form	X
12.3	Illustrate the basic elements and principles of drafting and design using traditional or digital media	X
12.4	Identify basic design methods like Golden Mean, Cheng, or Greek Styles	X

***13.0 (Quarter 2-3-4) DEMONSTRATE BASIC OPERATION OF COMPUTER HARDWARE AND SOFTWARE UTILIZED IN DRAFTING AND DESIGN TECHNOLOGY**

13.1	Identify computer hardware associated with drafting and design technology	X
13.2	Apply basic commands of CAD software	X
13.3	Store and retrieve data for CAD software	X
13.4	Demonstrate the operation of hardware items that support data output from CAD application software (e.g., printer, projector, etc.)	X
13.5	Output 2D plotted drawings	X

14.0 DEVELOP A PLAN FOR A CAREER IN DRAFTING AND DESIGN

14.1	Investigate the variety of drafting and design career options in design, engineering and manufacturin	X
14.2	Develop career goals based on interests, aptitudes, and research	X
14.3	Manage personal and career goals	X
14.4	Describe factors that contribute to job satisfaction and success	X

15.0 PREPARE FOR EMPLOYMENT IN DRAFTING AND DESIGN

15.1	Develop a resume	X
15.2	Develop an electronic/scannable format resume	X
15.3	Create a drafting/design portfolio with industry-specific work samples	X
15.4	Complete job application process, including electronic applications	X
15.5	Demonstrate interviewing skills, including pre-interview preparation and post-interview follow-up	X
15.6	Research a drafting and design organization as a potential employee	X

16.0 (Quarter 1-2-3-4) PARTICIPATE IN WORK-BASED LEARNING EXPERIENCES IN DRAFTING AND

16.1	Use technology appropriate for the job	X
16.2	Demonstrate positive work behaviors	X
16.3	Demonstrate safe and healthy work behaviors	X
16.4	Recognize and adapt to changes in the workplace	X
16.5	Participate in a variety of work-based experiences, paid or non-paid, in drafting and design	X

17.0 (Quarter 1-2-3-4) DEMONSTRATE ORAL COMMUNICATION SKILLS FOR DRAFTING AND DESIGN

17.1	Conduct formal/informal research to collect appropriate topical information and data	X
17.2	Use questioning techniques to obtain needed information from audience	X
17.3	Interpret oral and nonverbal communications of audience	X
17.4	Demonstrate active listening during communications	X
17.5	Demonstrate appropriate technologies for a formal presentation	X
17.6	Deliver presentation incorporating both appropriate verbal and nonverbal communication techniques	X

18.0 (Quarter 1-2-3-4) DEMONSTRATE WRITTEN COMMUNICATION SKILLS FOR DRAFTING AND DESIGN

18.1	Conduct formal/informal research to collect appropriate topical information and data	X
18.2	Organize information and develop an outline	X
18.3	Write business communication documents using appropriate format for the situation	X
18.4	Using appropriate technology, prepare draft document using established rules for grammar, spelling and sentence construction	X

19.0 (Quarter 1 - 2) EVALUATE BUSINESS AND FINANCIAL MANAGEMENT PRACTICES NEEDED IN DRAFTING AND DESIGN INDUSTR

19.1	Review bidding and billing structures used by drafting and design firms	X
19.2	Review a budget for a design project	X
19.3	Develop time and production schedules for a project	X
19.4	Describe the impact of rework, excessive labor costs, scope creep, and lack of teamwork on a project budget	X

20.0 (Quarter 1-2-3-4) PARTICIPATE IN LEADERSHIP ACTIVITIES SUCH AS THOSE SUPPORTED BY CAREER AND TECHNICAL STUDENT ORGANIZATION SkillsUSA

20.1	Determine the roles and responsibilities that leaders and members bring to an organization	X
20.2	Describe how personal characteristics affect leadership ability	X
20.3	Compare/contrast leadership and management styles	X
20.4	Evaluate characteristics of effective teams	X
20.5	Describe how cultural/ethnic differences affect interpersonal interactions/communications within a gr	X
20.6	Evaluate characteristics of an effective team player	X
20.7	Practice techniques to involve each member of the team	X
20.8	Demonstrate team work	X
20.9	Practice effective meeting management	X
20.10	Demonstrate business etiquette	X
20.11	Practice decision-making processes	X

21.0 (Quarter 1-2-3-4) APPLY MATHEMATICAL CONCEPTS TO PROBLEMS IN DRAFTING AND DESIGN

21.1	Apply basic mathematical skills to drafting and design operations	X
21.2	Apply mathematical calculations involving practical geometry and trigonometry	X
21.3	Calculate and evaluate geometric figures	X
21.4	Create geometric constructions utilizing technical sketching techniques	X
21.5	Determine/select appropriate dimensioning systems (e.g., decimal, metric)	X

***22.0 (Quarter 1-2-3-4) APPLY MEASUREMENT AND SCALE CONCEPTS IN DESIGN DRAFTING**

22.1	Identify types of measurement used in drafting and design	X
22.2	Select proper measurement tools	X
22.3	Perform measurements with hand held instruments	X
22.4	Determine and apply appropriate scale	X
22.5	Transcribe illustrations accurately	X

***23.0 (Quarter 1-2-3-4) INTERPRET ENGINEERING DOCUMENTS AND CONTROL DOCUMENTS**

23.1	Interpret dimensions, symbols, legends, scales, and directions/orientations	X
23.2	Analyze how content and information are communicated in schematics, blueprints, and technical drawings	X
23.3	Analyze schematics, blueprints, and technical drawings for clarity, completeness, and accuracy	X
23.4	Recognize cross-referencing on technical drawings	X
23.5	Identify and describe basic types of drawings	X
23.6	Locate and interpret information on specific documents	X
23.7	Check prints for dimensional accuracy, completeness, and note detail	X
23.8	Compare schematics to dimensional drawings	X
23.9	Verify drawing elements	X
23.10	Identify conflicting data	X

*24.0	CREATE TECHNICAL DRAWINGS	
24.1		
24.2		
24.3		
24.4		
24.5		
24.6		
24.7		
24.8		

***25.0 (Quarter 1-2-3-4) UTILIZE BASIC COMPUTER CONCEPTS, OPERATIONS AND INFORMATION TECHNOLOGY APPLICATIONS**

25.1	Use computer hardware and input/output devices for drafting/design problems	X
25.2	Apply basic commands of operating system software	X
25.3	Apply file and disk management techniques	X
25.4	Import and export data files using different formats (dxf, dxb, Tiff, gif, pcx, eps, spd, or other formats as required)	X
25.5	Prepare files for electronic transfer	X

25.6	Access and use the Internet for file transfer	X
25.7	Access and use a computer network for file management and transfer	X

*26.0 PROCEDURES

26.1	Explore and determine applicability of CADD/VDCM systems to the project	X
26.2	Analyze drawings using CADD/VDCM software functions/commands	X
26.3	Use CADD/VDCM software commands to set up drawing scale, format, dimensioning, etc.	X
26.4	Apply layers/visible items, colors, line types, editing commands, and grouping techniques	X
26.5	Control entity properties	X
26.6	Incorporate standard parts, symbol libraries, and/or templates	X
26.7	Control viewing commands	X
26.8	Create and manipulate views by modifying coordinate system settings	X
26.9	Minimize a drawing file for storage and transmission	X

*27.a (Quarter 1-2-3-4) DETAIL PROJECTION VIEWS/COMPONENTS

27.1a	Determine the appropriate views for projection (i.e., plan, top, front, etc.)	X
27.2a	Identify, create and place appropriate views for orthographic projections	X
27.3a	Identify, create and place appropriate auxiliary views to determine true size, shape, and location of non-orthogonal features	X
27.4a	Identify, create and place appropriate section views	X
27.5a	Construct full, half and offset section of an object	X
27.6a	Utilize various material hatch patterns in section views	X

*28.a (Quarter 1-2-3-4) EXPLORE ARCHITECTURAL DRAFTING AND DESIGN CONCEPTS AND PROBLEMS

28.1a	Use architectural terminology in context	X
28.2a	Interpret legal land descriptions and draft finished site plan	X
28.3a	Read and interpret architectural blueprints	X
28.4a	Read plat maps	X
28.5a	Apply architectural symbols to a drawing	X
28.6a	Use industry-standard application software for architectural drafting to solve a problem	X

*29.a (Quarter 1-2-3-4) DEMONSTRATE DRAFTING AND DESIGN CONCEPTS AS RELATED TO ARCHITECTURAL DESIGN USING CADD SYSTEMS

29.1a	Draft a floor plan from preliminary sketch	X
29.2a	Draft a foundation/basement foundation plan	X
29.3a	Draft a roof plan	X
29.4a	Draft an electrical plan locating receptacle, switch, and lighting outlets	X
29.5a	Draft a plumbing plan showing drain vent system	X
29.6a	Draft an HVAC plan locating HVAC diffusers, outlets, equipment	X
29.7a	Draft a reflected ceiling plan combining elements of electrical and HVAC plans	X
29.8a	Draft, locate and label fasteners on production, assembly drawings and parts lists	X
29.9a	Prepare and draft a window and door schedule	X
29.10a	Apply appropriate dimensions with annotations	X
29.11a	Develop a set of working drawings for a residential or small commercial structure	X
29.12a	Draft cabinet elevations	X
29.13a	Prepare bill of materials for drawings	X

*30.a (Quarter 1-2-3-4) CREATE DRAWINGS OF STRUCTURAL SECTIONS AND DETAILS USING CAD /

30.1a	Draft structure shapes and details	X
30.2a	Draft longitudinal and/or cross sections and details	X
30.3a	Draft wall sections and details	X
30.4a	Draft a stairway section	X
30.5a	Draft cabinet elevations	X

*31.a (Quarter 1-2-3-4) CREATE PICTORIAL DRAWINGS AND MODELS

31.1a	Identify and create isometric drawings using both manual and electronic techniques	X
31.2a	techniques	X
31.2a	Identify and render materials	X