PACING GUIDE

COURSE: Computer Aided Architecture **GRADE(S): 11th- 12th**

MONTH	UNIT	STANDARDS/SKILLS	ASSESSMENTS What evidence (formative/summative) is utilized to establish that the content, standards, & skills have been mastered?	CONTENT Topics being covered? What do students need to know? (*nouns*)	ACTIVITIES w/Integration of Technology & Career Ready Practices
	1A	ARCH.9-12.9.4.12.B.1 ARCH.9-12.9.4.12.B.2 ARCH.9-12.9.4.12.B.3 ARCH.9-12.9.4.12.B.4 ARCH.9-12.9.4.12.B.5 ARCH.9-12.9.4.12.B.7 ARCH.9-12.9.4.12.B.8 ARCH.9-12.9.4.12.B.9	Class Projects/ Peer grading/ Teacher 1. List 8 site features that may be found on a topographical drawing of the site. 2. List 12 factors, with respect to tote design and location of a house, that should be considered when planning a residential structure. 3. What determines whether or not a house is functional? 4. Why should one plan a house using standard (modular) sizes? 5. List the drawings which are ordinarily included in a set of residential plans.	**CAA-Unit-Plan-1A-Curriculum-Primary Residential Design Considerations** Most people have a "dream home" in the back of their mind that they hope to build someday. However, few people think beyond the house itself and look at the site location and characteristics, community attributes, zoning restrictions, family lifestyle, and quality of living. These considerations, in many instances are just as important as the size and room arrangement of the house.	Computers, AutoCAD Software
	1B	ARCH.9-12.9.4.12.B.1 ARCH.9-12.9.4.12.B.2 ARCH.9-12.9.4.12.B.3 ARCH.9-12.9.4.12.B.4 ARCH.9-12.9.4.12.B.5 ARCH.9-12.9.4.12.B.7 ARCH.9-12.9.4.12.B.8 ARCH.9-12.9.4.12.B.9	Class Projects/ Peer grading ● What are some specialty doors used for closets? Why? ● What are the 3 main areas of a residential dwelling? ● What is the closet space requirement for each individual bedroom? ● What is the minimum distance from the center of a toilet to the nearest wall? ● What is the minimum size of a bedroom? ● What is the recommended minimum size for a bathroom?	**CAA-Unit-Plan-1B-Curriculum-Planning the Sleeping Area** A residential structure can be divided into three basic areas: the sleeping area, living area, and service area. These three basic areas are generally divided into rooms. Rooms provide privacy and help to separate and contain various activities. A house designer must understand the purpose for each room if a functional plan is to be developed. Bedroom design is directly related to furniture size and arrangement. Therefore, as part of this assignment, it is necessary you understand bedroom furniture types and	

			● What special electrical requirements are needed for bathrooms? Why? ● Where should the sleeping area of a home be placed? Why? ● Why do bathrooms that are handicap accessible need to be larger? ● Why do closet rods for the handicapped need to be located closer to the floor?	sizes. You will be using this data to create your bedroom design.	
	1C	ARCH.9-12.9.4.12.B.1 ARCH.9-12.9.4.12.B.2 ARCH.9-12.9.4.12.B.3 ARCH.9-12.9.4.12.B.4 ARCH.9-12.9.4.12.B.5 ARCH.9-12.9.4.12.B.7 ARCH.9-12.9.4.12.B.8 ARCH.9-12.9.4.12.B.9	Class Projects/ Peer grading • Can you name at least one example of a special purpose room? • The living area should account for how much space in the entire house? • What are some of the rooms associated with a home's living area? • What are the 3 basic types of entryways? • What are the 3 main areas of a residential dwelling? • What is the FHA minimum width for hallways? • What is the best location for a dining room? Why? • What is the most efficient placement of an interior door? What direction should it swing? • What is the purpose of a foyer? What must it provide? • What is the size of a typical main entry door? How does this compare to interior doors? • What is the standard door height? • Why is it essential to keep a living room at grade level for handicapped persons?	**CAA-Unit-Plan-1C-Curriculum-Planning the Living Area** The living area is the part of the house that most friends and guests see. This is the area that usually becomes the showplace. Comprising roughly one-third of the house, the living area serves a variety of functions. It is the location for family get-togethers and dining. It is the location for family get-togethers and dining. It is also the area for recreation, entertaining and just relaxing. A residential structure can be divided into 3 basic areas: Sleeping, Living and Service. The Living area can include: living room, dining room, foyer and family room. The Living area should comprise roughly 1/3 of the house. Placing a living room at grade level allows handicapped persons to pass more easily from one area to another. Dining rooms should be placed adjacent to the kitchen and living room.	Computers, AutoCAD Software
	1D	ARCH.9-12.9.4.12.B.1	A residential structure can be divided into 3 basic areas: Sleeping, Living and Service.	**CAA-Unit-Plan-1D-Curriculum-Planning the Service Area**	Computers, AutoCAD Software

		ARCH.9-12.9.4.12.B.2 ARCH.9-12.9.4.12.B.3 ARCH.9-12.9.4.12.B.4 ARCH.9-12.9.4.12.B.5 ARCH.9-12.9.4.12.B.7 ARCH.9-12.9.4.12.B.8 ARCH.9-12.9.4.12.B.9	The Service area can include: kitchen, clothing care, garage, utility and storage. A handicapped accessible kitchen should allow for lower work areas, easily accessed sinks and cooking units and proper space for wheelchairs. A work triangle is used to determine the efficiency of a kitchen layout and measures the linear distance between the range, refrigerator and sink. The work triangle distance for a practical kitchen should not exceed 22'. There are six basic kitchen styles/layouts. Clothes care area should provide for: washing, drying, pressing, folding and storing of clothes. A minimum 2 car garage should measure 20' x 20'.	The service area supplements the living and sleeping areas of the house. It supplies equipment and space for maintenance, storage, and service. The service area includes the kitchen, clothes care center, garage or carport, utility, and storage. Due to its varied functions, design of the service area requires careful planning.	
	1E	ARCH.9-12.9.4.12.B.1 ARCH.9-12.9.4.12.B.2 ARCH.9-12.9.4.12.B.3 ARCH.9-12.9.4.12.B.4 ARCH.9-12.9.4.12.B.5 ARCH.9-12.9.4.12.B.7 ARCH.9-12.9.4.12.B.8 ARCH.9-12.9.4.12.B.9	● Which type of fire extinguisher should be used on a grease fire? ● List three steps to reduce radon accumulation in basements and slab on grade construction. ● What may help prevent a fire in your home? ● Identify two locations in the home where a smoke detector should be installed Which of the following may help prevent a fire in your home? ○ a) Have your heating system inspected yearly.	**CAA-Unit-Plan-1E-Curricullum-Designing for Health and Safety** The home is generally not a safe place. Experts say that more injuries occur in the home than anywhere else. Therefore, an intensive effort should be made to design structures that are safe for the occupants. Granted, the model building codes are most concerned with creating a safe structure. However, this chapter focuses on certain areas that deserve special consideration beyond structural integrity. The areas discussed in this chapter include smoke and fire detection, carbon monoxide (CO) detention, radon detection and mitigation, moisture and mold problems, weather- and nature-related safety, and general home safety.	Computers, AutoCAD Software

			○ b) Store flammable liquids in approved containers. ○ c) Do not overload electrical circuits. ○ d) All of the above are correct. ● Identify two locations in the home where a smoke detector should be installed. ● When considering fire safety, every occupied room must have at least ___ means of exit. ● Which type of fire extinguisher should be used on a grease fire? ○ a) Class A. ○ b) Class B. ○ c) Class C. ○ d) Class X. ● ___ is an odorless, tasteless, invisible, potentially deadly gas that is produced wherever there is incomplete combustion. ● ____is a gas produced by the natural decay of uranium found in the soil, rock and water. ● List three steps that can reduce radon accumulation in basements and slab-on-grade construction. ● List four conditions that indicate excessive moisture in the home. ● Which of the following is not generally a source of water vapor in the structure? ○ a) Wet plaster. ○ b) Wet basements. ○ c) Leaks ○ d) Drippy outside hose bib. ● The way to control indoor mold growth is to control _____.	Understanding of recent codes regarding creating a safe structure: 1. Understanding smoke and fire detection 2. Understanding carbon monoxide (CO) detention 3. Understanding radon detection and mitigation 4. Understanding moisture and mold problems	

			● The most common health problems caused by indoor ___ produce allergy type symptoms.		