

## OUTCOMES BASED LEARNING MATRIX

**Course: WORKING DRAWINGS II with CAD ARCH-122**

**Department: ARCHITECTURAL TECHNOLOGY**

**Course Description:** This course develops elements of a complete set of construction documents. Plans, elevations, sections, details, and schedules are provided with the use of CAD. The practice of scanned images from approved construction documents is implemented to provide changes in the work as practiced in the industry. 3 credits

<b>*COURSE OUTCOMES</b>	<b>OUTCOMES ACTIVITIES</b>	<b>ASSESSMENT TOOLS</b>
1. The student shall have an understanding of the sequence of drawings as practiced today in professional offices to be able organize the drawings by types of engineering	Listen to lecture on the information and sequence of information that should be provided for a contractor to construct a building R,W,CT,TS,QS	Professor evaluation of drawings for layout and dimensions R,W,CT,TS,OC,QS
2. The student shall have an understanding of form and function of construction in response to human requirements for determining dimensions as required by codes.	Listen to lecture on the significance of the building codes as it pertains to the performance of assembly of components R,W,CT,TS,OC,QS	Professor evaluation of drawings as related to lecture for compliance to building codes R,W,CT,TS,OC,QS
3. The student shall be able to provide drawings of metal framing, steel and masonry construction	Listen to lecture on 'light gauge metal framing and method of dimensioning. Reading assignment R,W,CT,TS, OC QS	Professor evaluation of applicable portions of drawings for correct dimensions of metal stud partitions as it pertains to walls doors, windows, openings, sub and total dimensions R,W,CT,TS,OC,QS
4. The student shall be able to provide drawings of masonry construction to include composite walls	Listen to lecture on 'masonry' and the method of dimensioning Read assignment R,W,CT,TS,OC,QS	Professor evaluation of applicable portions of drawings for correct dimensions of masonry walls as it pertains to doors, windows, openings, and sub and total dimensions R,W,CT,TS,OC,QS
5. The student shall be able to provide drawings with a structural 'grid' and	Listen to lecture with samples of the organization of a grid to establish the	Professor evaluation of plans for dimensioning of the grid systems as

dimension with column reference letters and numbers	framework for a building. This is to include reference of the architectural to the structural for coordination. R,W,CT TS OC,QS	derived from and coordinated with the structural drawings R,W,CT,TS,OC,QS
6. The student shall be able to design and layout of stairs, handicap toilet rooms, and spaces.	- Listen to lecture on determining the height of a riser and depth of a tread to coordinate with the building floor-to-floor elevations and for the rise to be within building code compliance. - Reference material and manuals used in lecture and lab to determine the height of a riser and depth of a tread in order to coordinate with the building floor to floor elevations and to comply with the building code R,W,CT,TS,OC,QS	Draw stair plan with dimensions for 'rise' and 'run' R,W,CT,TS,OC,QS
7. The student shall be able to recognize and utilize material indications with symbols from CAD library	- Listen to lecture on library of CAD symbols - Provide samples of material indications. R,CT,W,TS,OC	Professor evaluation of plans, elevations, and sections for implementation of material designations R,W,R, CT.OC.QS
8. Describe the basic structural, architectural, mechanical and electrical systems of a building	Listen to lecture on the coordination of the architect with the different engineering consultants to provide a set of contract documents R,TS	Professor evaluation of drawings as they pertain to coordination of providing ducts chases, meter rooms plan and clearances for mechanical, sprinkler, electrical in the plenum R,W,TS,QS,CT
9. Coordinate the systems of a building	Listen to lecture on the coordination the consultant's requirements that influence changers in the working drawings as the contract documents are refined R,W,CT,TS,OC,QS	Professor evaluation of the applicable plans, elevations, and sections as they pertain to coordination of the contract documents R,W, CT,OC,QS
10. Utilize a computer for AutoCad for setup of 'architectural' units	Listen to lecture of the use of the setup of computer to use 'architectural units'	Professor evaluation of drawings for content and use of architectural units

	R,TS	R,W,TS
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\*Try to express an outcome as an infinitive phrase that concludes this sentence: **At the end of the course, the students should be able to . . .** Finding the line between too general and too specific can be difficult. In an English Composition course, for instance, it is probably too general to say, "The student should be able to write effective essays." It is probably too specific to say, "The student should be able to write an introductory paragraph of at least 50 words, containing an attention-getting device, an announcement of the narrowed topic, and an explicit thesis sentence." Just right might read, "The student will write introductions that gather attention and focus the essay."

\*\*Indicate the Core Competencies that apply to the outcomes activities and assessment tools: Critical Thinking (CT); technology skills (TS); oral communications (OC); quantitative skills (QS); reading (R); writing (w).