ARCHITECTURAL TECHNOLOGY

AAS: Architectural Technology   65-68

Competencies:
General Education Competencies:
I.   Communicate Effectively
    1.   Read and listen with comprehension.
    2.   Speak and write clearly using standard English.
    3.   Interact cooperatively with others using both verbal and non-verbal means.
    4.   Demonstrate information processing through basic computer skills.
II.   Think Critically
    1.   Make connections in learning across the disciplines and draw logical conclusions.
    2.   Demonstrate problem solving through interpreting, analyzing, summarizing, and/or integrating a variety of materials.
    3.   Use mathematics to organize, analyze, and synthesize data to solve a problem.
III.   Learn Independently
    1.   Use appropriate search strategies and resources to find, evaluate, and use information.
    2.   Make choices based upon awareness of ethics and differing perspectives/ideas.
    3.   Apply learning in academic, personal, and public situations.
    4.   Think creatively to develop new ideas, processes, or products.
IV.   Examine Relationships in Diverse and Complex Environments
    1.   Recognize the relationship of the individual to human heritage and culture.
    2.   Demonstrate an awareness of the relationship of the individual to the biological and physical environment.
    3.   Develop an awareness of self as an individual member of a multicultural global community.

Technical Competencies/Outcomes:
Upon completion of the program, the graduate can:
1. Use algebra, geometry and trigonometry to solve problems related to architectural technology.
2. Identify the specific area of architectural work in which employment is desired and understand the appropriate skills needed.
3. Describe environmental constraints that effect the built environment.
4. Use vocabulary associated with construction.
5. Recognize and apply the appropriate symbols used in construction documents.
6. Describe the five typical phases of a construction project.
7. Summarize a variety of standard documents published by the American Institute of Architects.
8. Discuss the primary roles of architects, architectural technicians, owners, contractors and regulatory agencies.
9. Produce construction documents for residential and commercial structures utilizing hand drafting and current computer-aided drafting technology.
10. Recognize acceptable construction techniques.
11. Choose and evaluate appropriate mechanical and electrical systems for buildings.
12. Perform calculations associated with basic structural, mechanical and electrical systems.
13. Employ current building materials and methods of construction into drawings and specifications.
14. Employ structural, mechanical and electrical systems into drawings and specifications.
15. Apply the results of research of a variety of information sources to building designs.
16. Evaluate the appropriateness of certain building materials for specific construction assemblies.
17. Analyze the performance of materials and assemblies for building construction using drawings, specifications, & site visits.
18. Describe construction processes and how specific working drawings relate to these processes.
19. Communicate the methods by which building members are connected through drawings and model construction.

20. Compose graphically functional, logical, and economical construction details for a variety of construction types.
21. Employ building codes including inspection and enforcement procedures into assignments and projects.
22. Discuss planning and zoning principles and apply them to the project design process.
23. Describe the development of architecture as it is related to world culture and functional human needs.
24. Discuss the implications of the professional, business, and legal aspects of architecture.
25. Perform assigned duties as a member of a building design team.
26. Apply architectural historical concepts and theories to building designs.
27. Analyze architecture utilizing aesthetic principles and conceptual building organizations.
28. Apply problem solving skills to a variety of design and construction related issues.
29. Analyze and transform a complex building program into a competent design.