Architectural Modeling and Design Technology

The Architectural Modeling and Design Technology program is designed to prepare students for work as technicians in construction-related industries, allowing graduates to work in a broad range of jobs, such as drafting, revit modeling, estimating, sales, construction management and project coordination. General contractors, subcontractors, home builders, architectural and engineering firms, material suppliers, steel fabricators, manufacturers and building centers all have specific areas of employment for graduates of this program.

Students are provided with classroom and laboratory experiences emphasizing computer-aided drafting (CAD) and Building Information Modeling (BIM) utilizing AutoDesk Revit software for residential and commercial buildings, estimating, structural design, mechanical and electrical systems for buildings, presentation techniques and remodeling. Students will take courses in communications, technical mathematics and business, which will provide them with career-advancing skills.

While students are fully employable upon completion of this program, some may wish to return for an additional year and earn a second major in Construction Management Technology. This program also provides transfer options to four-year colleges and universities in related fields.

Green and/or sustainable construction is specifically covered in multiple courses. Leadership in Energy and Environmental Design (LEED) certification is covered extensively. Green/sustainable construction is also discussed across the rest of the curriculum.

NOTE: This program requires a ZBOOK 15 Laptop or equivalent. Please refer to the NDSCS website for specifications. The cost will be approximately $2100.00 if purchased through NDSCS. For further information, call Randy Stach, department chair, at 701-671-2116.

Admission Requirements* The applicants must be high school graduates or equivalent. Students considered for acceptance must complete all admission requirements.

Please Note: Students are placed into English, math and reading courses based on ACT, ACCUPLACER or other nationally recognized tests. Please see www.NDSCS.edu/current-students/student-success/test-center for the NDSCS Course Placement Policy and testing information. Students may be on an extended plan of study pending their course placement.

*Program Admission Requirements are subject to revision. Please check the department or program website under Program Admission Requirements for current information.

Award Upon successful completion of the required courses, students will be awarded an Associate in Applied Science degree in Architectural Modeling and Design Technology.

Course Code | Course Title | Credits
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ARCT 101 | Architectural Modeling I | 3
ARCT 102 | Architectural Modeling II | 3
ARCT 110 | Graphic Communications | 3
ARCT 121 | Revit Architecture | 2
ARCT 122 | Structural Modeling | 2
ARCT 131 | Construction Methods and Materials I | 3
ARCT 144 | Construction Estimating I | 3
ARCT 152 | MEP Modeling | 2
ARCT 162 | Construction Experience | 1
ARCT 201 | Architectural Modeling III | 4
ARCT 202 | Architectural Modeling IV | 4
ARCT 212 | Architectural Presentations | 2
ARCT 214 | Architectural Portfolio | 1
ARCT 221 | Structural Detailing | 3
ARCT 223 | Renovation and Design | 3
ARCT 231 | Construction Methods and Materials II | 3
ARCT 120 | AutoCAD for Architecture | 2
ARCT 121 | AutoCAD for Architecture | 2
UAS 111 | Introduction to UAS (2) | 2
UAS 112 | Unmanned Aircraft Systems Certification (2) | 2

Business/Technical Elective (choose one/2 credit minimum)
- BADM 240 Sales (3)
- BUSN 120 Fundamentals of Business (3)
- CMT 165 Residential and Project Experience (1)
- CMT 251 Construction Documents and Specifications (3)
- CMT 253 Construction Scheduling (3)
- CMT 285 Residential Project Experience (1)
- ENGL 110 College Composition I | 3
- ENGL 105 Technical Communications | 3
- ENGL 120 College Composition II | 3
- ENGL 125 Introduction to Professional Writing | 3
- COMM 110 Fundamentals of Public Speaking | 3
- MATH 130 Technical Mathematics | 2
- MATH 132 Technical Algebra I | 2
- MATH 136 Technical Trigonometry | 2
- WELL 250 Wellness Elective(s) | 2
- FYE 101 Science of Success | 1

Social and Behavioral Sciences, Humanities, History and/or Computer Electives | 4
Recommended:
- CSCI 116 – Business Use of Computers – 3 cr
- PSYC 100 – Human Relations in Organizations – 2 cr

Total Required Credits 70

Revised: May 2022