Unmanned Aircraft Systems (Land Surveying Emphasis)

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Delivery Methods
- Face-to-Face: Wahpeton
- Online: Some classes

The Unmanned Aircraft Systems Associates of Applied Science (AAS) degree program is designed to prepare students with the knowledge and ability to use various types of unmanned aircraft systems. In a commercial environment, preflight planning, how to pilot UAS and collect data using various types of sensors, process the data, analyze, and understand the data related to a specific discipline. Students will utilize high resolution cameras, thermal imaging sensors, LiDAR, and other sensors for collecting various types of data and then learning to process and analyze that data.

The Land Surveying Emphasis will prepare students for work as surveying technicians in construction related industries with the ability to utilize drone technology. The AAS degree will broaden the students understanding of UAS as it applies to Land Surveying and will provide them with enough Land Surveying credits to pursue Professional Land Surveying Licensure in North Dakota or transfer on to a four-year college or university in related fields such as land surveying.

In addition, students take courses in communications, human relations, computers and technical mathematics, which will help provide them with the skills to advance in their careers.

Upon graduation, students can be employed with state, county, and city engineering offices as well as private engineering firms, land surveyors, contractors, and drone service providers.

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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 Seth Simonson, at 701-671-2345.

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 Unmanned Aircraft Systems with an emphasis in Land Surveying.

Course Code | Course Title | Credits
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AST 103 | Autonomous Sensing Systems | 2
CAD 120 | Introduction to AutoCAD | 3
CT 111 | Civil Plans and Specifications | 2
CT 113 | Introduction to Civil Design Applications | 3
CT 121 | Surveying I | 4
CT 122 | Surveying II | 4
CT 221 | Surveying III | 4
CT 222 | Surveying IV | 4
CT 223 | Boundary Control and Legal Principles | 3
CT 224 | Research and Analysis | 3
RAMT 101 | Applied DC Theory | 4
UAS 111 | Introduction to UAS | 2
UAS 112 | Unmanned Aircraft Systems Certification | 2
UAS 121 | Data Collection I | 2
UAS 122 | Photography and Videography | 2
UAS 132 | Advanced Flight I | 2
UAS 221 | Data Collection II | 2
UAS 222 | Data Collection III | 2
UAS 223 | UAS Capstone Project | 2
UAS 232 | Advanced Flight II | 2

Related/General Education Courses
COMM 110 | Fundamentals of Public Speaking | 3
ENGL 110 | College Composition I | 3
MATH 130 | Technical Mathematics | 2
MATH 132 | Technical Algebra I | 2
MATH 136 | Technical Trigonometry | 2
FYE 101 | Science of Success | 1
HPER 210 | First Aid and CPR (Professional/Community) | 2

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

Total Required Credit | 73

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