

AAS Engineering Systems Technology
Mechatronic Systems concentration
Program Application Packet

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A.A.S. Engineering Systems Technology, Mechatronics Systems Concentration

About the Program

Chattanooga State Community College and the Volkswagen Group of America Chattanooga Operations have collaborated to develop a premier A.A.S. Engineering Systems Technology with a concentration in Mechatronics Systems degree program at the state-of-the-art Volkswagen academy. The goal of the program is to produce the best-trained, multi-skilled workers in the automotive industry through a unique educational program.

Mechatronics is a step beyond a traditional industrial maintenance program in that multiple disciplines are combined into a systems approach for troubleshooting and resolving problems in an automated manufacturing plant. The Mechatronics Systems concentration curriculum provides students with knowledge and hands-on training in machining, electricity, pneumatics, PLC, robotics, CNC and automation. Five semesters of training are provided in the Volkswagen academy mixed with four paid semesters of on-the-job training in the Volkswagen manufacturing facility. Mechatronics technicians are highly-skilled and valued employees in all industrial setting.

General Program Information

General Program Information

- Students are admitted twice a year (summer and fall terms)
- Application deadlines are: April 30th (summer) and July 15th (fall)
- No previous college classes are required
- Courses are taught during the day (Monday through Friday; 7:45 am to 2:25 pm)
- Cost affordable and paid on-the-job-training (OJT) at the Volkswagen assembly plant
- Financial aid is available
- Twelve students will be selected for each class through a competitive admissions process
- Job offer from Volkswagen upon successful completion of the program

Mechatronics Systems Applicants Must:

- Have a high school diploma or GED
- Be at the college level in reading, writing and mathematics.
- Pass a drug test and a background check (paid by Volkswagen)
- Pass a mechanical assessment test
- Be able to perform the essential functions of the position with or without reasonable accommodations
- Be able to clearly distinguish colors (required for electrical component)
- Interview with the selection committee
- Commit to complete the three year program

Career Opportunities

- Volkswagen skilled Team Member
- Automotive Industrial Technician
- Manufacturing/Industrial Maintenance

Job Expectations

Technicians will most likely work for manufacturing or industrial companies such as Volkswagen and be responsible for preventing and correcting equipment malfunctions. The skills and knowledge gained from mechatronics training could place the technician in a number of specialty jobs related to equipment maintenance or the technician in a number of specialty jobs related to equipment maintenance or the technician may oversee a wide variety of maintenance needs.

Because factories and other facilities cannot afford to have industrial machinery out of service for long periods, mechanics may be on call or assigned to work nights or on weekends. Overtime is common as about 30 percent of employees worked over 40 hours per week, on average, in 2008.

Expected Salary/Earning

Earnings as reported by the U.S. Department of Labor 2010-2011 Occupational Outlook Handbook are as follows: Median hourly wages of industrial machinery mechanics were \$21.23 in May 2010. The middle 50 percent earned between \$16.87 and \$25.82. The lowest 10 percent earned less than \$13.63, and the highest 10 percent earned more than \$31.40.

Frequently Asked Questions

1. What is Mechatronics? The AAS Engineering Systems, Mechatronic Systems concentration provides students with knowledge and hands-on training in machining, electricity, pneumatics, PLC, robotics, CNC and automation. Mechatronic Systems is a step beyond a traditional industrial maintenance program in that multiple disciplines are combined into a systems approach for troubleshooting and resolving problems in an automated manufacturing plant. Mechatronics technicians are highly-skilled and valued employees in all industrial settings.

2. What courses will I take? Students will spend five semesters studying electricity, electronics, machining, welding, mechanics, robotics, automation, and integrated systems, as well as four semesters of on-the-job-training (OJT) at the Volkswagen assembly plant for a total of nine sequential semesters.

3. Where will the program be taught? The AAS Engineering Systems, Mechatronic Systems concentration will be taught at the state-of-the-art Volkswagen Academy.

4. What is the length of the program? Selected students must commit to a three year program which includes five semesters of instruction and four semesters of paid OJT at the Volkswagen assembly plant.

5. Where will I spend the on-the-job-training (OJT) semesters? The four OJT semesters will be spent in the Volkswagen plant.

6. What kind of credentials will I receive? Students will receive an Associate of Applied Science in Systems Engineering Technology with a concentration in Mechatronics Systems and an Industrial Mechatronics certification from Volkswagen Chattanooga.

- 7. What kinds of jobs are available for Mechatronics Technicians?** Graduates of the program may be offered employment within the Volkswagen facility (production and maintenance); however graduates will be qualified to work in any manufacturing production facility (automotive and non-automotive) that emphasizes lean production methods.
- 8. Will I receive pay during the OJT semesters?** Yes, all participants will receive an hourly starting wage of \$10 per hour for the 450 clock hours of attendance during the first OJT semester; however, the hourly pay will increase throughout the OJT semesters.
- 9. Do I register as a student during the OJT semesters?** Yes, continuous registration for all nine is required to maintain student status and financial aid.
- 10. How much will the program cost?** The cost of the program will vary by semester. Students will pay the same tuition and fees as normal Chattanooga State Community College students and it is based on semester hour.
- 11. Is financial aid available?** Yes. Students are eligible for Tennessee Hope Scholarship, Federal Pell Grant and student loans. Students must complete a Free Application for Federal Student Assistance (FAFSA) online to qualify for the financial aid.
- 12. How do I apply for admission?** The twelve students for the summer and fall classes will be selected through a competitive application and interview process. The deadline for submitting BOTH applications (Chattanooga State and Mechatronic Systems) is April 30 for summer class and July 15 for fall class.
- 13. Am I guaranteed a spot in the program if I enroll in Chattanooga State Community College?** No. While students may be admitted to the College, there is a competitive process to be admitted to the program.

Enrollment

Course Schedule

Students may apply for admission for the summer semester cohort or fall semester cohort. Twelve students will be selected through a competitive admissions process and the program requires a special admissions application.

- Full-time classes which are taught at the Volkswagen Academy
- Day class only
- Enrolment is limited to 12 students in each class

Full-Time Program Schedule for Classes

During every semester of classwork, the students are expected to attend classes from 7:45 am – 2:30 pm Monday through Friday.

First Semester	Second Semester	Third Semester
ET 112 - Industrial Mathematics	MN 114 - Electrical Fundamentals	On-the-Job-Training
MN 116 - Industrial Safety	MN 140 - Digital Logic	
MD 184 - Manufacturing Processes	PHYS 1030 - Concepts of Physics	
MD 104 - Blueprint Reading and Analysis	MATH 1710 - Pre-Calculus I	
Fourth Semester	Fifth Semester	Sixth Semester
MD 226 - Fluid Power	On-the-Job-Training	MN 111 - Industrial Equipment
DD 114 -CAD Engineering Drawing I		ET 115 - Computers for Engineering Tech
ENGL 1010 - Composition I		ENGL 2710 - Technical Reports
MN 260 - PLC		MD 294 - Automated Manufacturing
Seventh Semester	Eighth Semester	Ninth Semester
On-the-Job-Training	MN 226 - Applied Electricity & Motor Control	On-the-Job-Training
	WELD 1060 - Welding Principle	
	Humanities/Fine Arts Elective	
	Social/Behavioral Science Elective	

Steps to Apply

Step 1: Attend an Information Session

Information Sessions are held weekly at the Volkswagen Academy.

Day: Thursdays
 Time: 5:30
 Location: VW-830 (Volkswagen Academy)
 RSVP: 423-697-2601 or 423-697-2496

Step 2: Apply for admission – Parts A & B

Note: APPLICANTS MUST SUBMIT **TWO (2) APPLICATIONS** AS SHOWN IN PARTS A AND B. Steps 1, 2, & 3 must be completed and submitted by April 1st for the summer class or July 15 for the fall class.

Part A: Apply to the College.

- This must be completed online (www.chattanoogastate.edu/admissions/apply/).
- Request official transcripts (high school and/or college) be sent to the Records office at Chattanooga State.
- Fill out, print, and submit the following health forms
- Certificate of Immunization (<http://www.chattanoogastate.edu/admissions/apply/>)
- Provide proof of two doses of Varicella (Chicken Pox) vaccine
- List Major as ETEC-MAN (Manufacturing Engineering)

Part B: Apply to the program.

Submit an A.A.S. Engineering Systems Technology, Mechatronics Systems Concentration program application to:

Amanda Bennett
 Engineering Technology Division
 4501 Amnicola Highway
 Chattanooga, TN 37406.

PROGRAM APPLICATION WILL NOT BE CONSIDERED UNTIL APPLICANT IS FULLY ADMITTED TO THE COLLEGE AT COLLEGE LEVEL.

Step 3: Apply for financial aid.

All prospective students are encouraged to apply for financial aid as there are many grants and student loans available to students. Please remember that student loans must be repaid. To apply for financial aid, students must complete a FAFSA form at www.fafsa.gov. Chattanooga State’s code is: 003398. Below is a list of potential sources of financial aid.

Program Name	Eligible	Amount
TN Hope Scholarship	Yes	Up to \$2000 per year
Federal Pell Grant	Yes	Up to \$5350 per year
Federal Student Loans	Yes	Varies
Chattanooga State Foundation Scholarships	Yes	Varies

Step 4: Take the COMPASS Diagnostic test.

Prospective Mechatronic Systems applicants must be at college level in Reading, Writing and Mathematics. To demonstrate proficiency in these areas, applicants must provide a current (within the past three years) ACT scores, SAT Scores or take the college COMPASS test. Minimum scores needed for each of these tests are listed below.

Area	ACT	SAT	COMPASS
Reading	19	460	83
English	18	450	77
Mathematics	19	460	38

Students who have attended college before may submit a college transcript that shows a passing grade of “C” or better in a mathematics course and a course that requires reading/writing (history, psychology, sociology, etc.) Chattanooga State offers the Residual ACT test and the COMPASS test for students who need to take either one for admission.

Step 5: Interview with the Mechatronics Systems Admissions Committee and complete a Mechanical Aptitude Test.

Students who meet the admissions criteria will be contacted to schedule an interview with the Mechatronics Systems Admissions Committee and complete a mechanical aptitude test on a date to be determined.

Step 6: Submit a drug test and background check.

After interview, selected students must complete a drug test and a background check (paid by Volkswagen) as final steps in the admissions process. Applicants who do not pass a drug test and background check will not be admitted to the program.

Step 7: See an academic advisor in the Engineering Technology Division and pre-register for class.

Applicants selected for the Mechatronics Systems concentration need to meet with an advisor in the Engineering Technology Division and register for classes using your A# and password which are provided by Chattanooga State by logging into TigerWeb (www.tigerweb.chattanoogastate.edu).

Pay your tuition and fees by the registration deadline to avoid having your classes automatically dropped.

Confirm your classes to avoid having your classes automatically dropped. Non-financial aid students’ classes are automatically confirmed once tuition and fees are paid. However, financial aid students must log into TigerWeb and confirm classes by the registration deadline.

For more assistance, please call 423-582-3021.

Step 8: Obtain credentials.

- All Chattanooga State students are required to have a Student ID and display a Parking Permit in their vehicle.
 - o Student IDs are located in the Health and Fitness Building (gym) Room 104
 - o Parking Permits are located in the Bursar’s Office in the Student Services Building, Room 140.

Costs

Tuition

Tuition is calculated based on number of hours a student is taking per semester.

Tools

All of the tools required for the program will be provided by Volkswagen of North America Chattanooga Operations, LLC, and will remain the property of the training facility. All safety equipment and team wear will be supplied for the students as well. After Year 1, students will receive a \$200 credit to purchase team wear.

Books

All books are supplied by Volkswagen Group of America Chattanooga Operations, LLC. and will remain the property of the training facility.

In Conclusion

- Students will need to contact an advisor to schedule an interview when the application process is completed.
- For program requirements, see the current catalog.

Contact Information

Ralph Gwaltney

Coordinator, Mechatronics

Email: ralph.gwaltney@chattanoogastate.edu

Office Phone: 423-582-3061

Amanda Bennett

Outreach & Advising Specialist

Email: amanda.bennett@chattanoogastate.edu

Office Phone: 423-697-2496

Application Form

Note: Before submitting your application form, refer to the admissions checklist in the previous pages to ensure you have successfully completed the application process. The application deadline for admission to the summer class is April 30th and the application deadline for admission to the fall class is July 15. Submit this application to Amanda Bennett in the Engineering Technology Division. **DO NOT SEND ANY MONEY** with this application.

Also, make sure a separate college admissions application is submitted (\$15 fee) tho the college, admissions testing is completed (if necessary) and request that all official transcripts (high school/GED/College) be sent to records office.

Minimum Requirements

- Have a high school diploma or GED
- Be fully admitted tot he College as ETEC-Man major
- Be at the college level in reading, writing and mathematics based on placement scores
- Pass a drug test and background check (paid by Volkswagen)
- Pass the Volkswagen mechanical aptitude test
- Be able to perform the essential functions of the position with or without reasonable accommodations
- Be able to clearly distinguish colors (required for electrical component)
- Interview with the selection committee
- Commit to complete the three year program

Personal Data:

I am applying for admission to the Summer Class Fall Class

Date: _____ Social Security Number: _____

First: _____ Middle: _____ Last: _____ Maiden: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Home Number _____ Work Number _____ Cell Number _____

email _____

In case of emergency please notify: _____

Home Number _____ Work Number _____ Cell Number _____

Education:

Name of High School: _____ Year of Graduation: _____

Address: _____

City: _____ State: _____ Zip Code: _____

GED Year Completed: _____ GED Score: _____

Are you currently enrolled at a college? Yes No If YES, where? _____

Previous Colleges Attended:

College Name	Address	Dates Attended	Degree Earned

Military Service:

Branch of Service: _____ Where: _____ When: _____

Schooling (if applicable), type and ranking in school:

Are you eligible to receive GI Benefits? Yes No

If YES, are you eligible for: Montgomery GI Bill

Post 9/11 Benefits

Employment Record: (start with most recent)

Employer	Address	Dates	Position	Reason for leaving

Have you ever: worked for Volkswagen? If so, when? _____

applied for work with Volkswagen? If so, when? _____

taken the Volkswagen assessment test? If so, when? _____

Lottery Scholarship Information:

Have you ever received a Tennessee Lottery Scholarship? No

Yes, check all that apply HOPE Wilder-Naifeh Technical Skills Grant

References:

Name	Address	Phone	Email	How long known?	Relationship

Legal Information:

Have you ever been convicted of a crime other than a minor traffic violation? Yes No

If yes, date (s): _____

Describe:

Drug Testing and Background Check Policy:

Students accepted into the AAS Engineering Systems Technology, Mechatronic Systems concentration must pass a drug test and a background check (paid by Volkswagen). It shall be the student's responsibility to comply with instructions provided by Volkswagen regarding the drug and background screening process. Students whose drug test is positive and /or whose background check is not acceptable will not be eligible to enroll in the program. Additionally, participants will be required to submit a random drug test during their enrollment in the program.

Certificate of Application:

I affirm, agree, and/or understand that all statements on this form are true and accurate; any misrepresentation or omission of material facts may result in my expulsion from the Mechatronic Systems Program. I hereby authorize Chattanooga State or other appropriate state investigative agencies to make all necessary investigations concerning me, my work habits, character, or my action in any transaction. I further authorize and request each former employer, person given as a reference, educational institution, or organization to provide all information that may be sought in connection with this application.

I also understand it is my responsibility to read the program information packet and follow the admission checklist in order to successfully complete the program admissions process. I should submit all application forms and transcripts together and follow-up to make sure my file is complete with all program forms, transcripts, etc. before the program deadline date. Additionally, I also understand it is my responsibility to notify the Engineering Technology Division of any changes (address, name change, etc.) so my program file will remain up-to-date.

Print or Type Name: _____ Signature: _____ Date: _____

Complete and return the Mechatronics Application to:

Chattanooga State Community College
Amanda Bennett
Engineering Technology Division
4501 Amnicola Highway
Chattanooga, TN 37406