

**AERONAUTICAL AND INDUSTRIAL TECHNOLOGY, CONCENTRATION — INDUSTRIAL ELECTRONICS TECHNOLOGY ACADEMIC MAP: DEGREE BS
(120 CREDIT HOURS)**

This degree map is a semester-by-semester sample course schedule for students majoring in [Aeronautical and Industrial Technology with a concentration in Industrial Electronics Technology](#). The milestones listed to the right of each semester are designed to keep a student on track to graduate in four years. The schedule serves as a general guideline to help build a full schedule each semester. Milestones are courses and special requirements necessary for timely progress to complete a major. When one or more milestones are missed, a student should consult with an academic advisor to determine if another degree path would be more suitable.

The Industrial Electronics Technology Concentration prepares students for positions in business and industry that require a broad technical and management background. It emphasizes the maintenance, operation and management of systems and sub-systems within the industrial and manufacturing sector.

Tennessee State University recognizes that students have diverse learning, life, and professional experiences. The University provides opportunities for students to earn college credit toward the degree through a number of assessment options that evaluate their learning experiences. These paths are grouped under the category “Prior Learning Assessment” (PLA). Various means of earning PLA credit at TSU are the following: Advanced Placement Program, American Council of Education (ACE) Military Credit, College Level Exam Program (CLEP), DSST Credit by Examination Program (includes DANTES Examination), Institutional Course Challenge Exams (Departmental Exams), International Baccalaureate Credit, Other Military Service, Portfolio Assessment. To learn more about PLA contact your academic advisor or the Office of Student Support Services for Adult and Distance Learners at (615) 963-7001 or adultstudentsupport@tnstate.edu.

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 Department Web Address: <http://www.tnstate.edu/ait/industrial.aspx>

Fall Schedule		Milestones
Semester 1	Hrs.	Semester 1
		Lower level courses (1000-2000) must be passed with grade of “C” or better in order to matriculate
UNIV 1000*	1	Minimum Grade of “C” Required
MATH 1710	3	Pre-requisite Course: Must be taken before MATH 1720; Minimum Grade of “C” Required
ENGL 1010	3	Pre-requisite Course: Must be taken before ENGL 1020, HIST 2010+; Minimum Grade of “C” Required
AITT 1001	3	Minimum Grade of “C” Required
HPER/ROTC/BAND**	1	Minimum Grade of “C” Required
HUMANITIES***	3	Minimum Grade of “C” Required
Total Hours	14	

*An Orientation course taken at another University does not meet this requirement. Transfer students with less than 60 credit hours must take UNIV 1000 at TSU.

**Students may choose a one credit hour course in ROTC-AERO ex. AERO 1021, 2011; Marching Band – ex. MUSC 2010 University Marching Band, and/or any Health, Physical Education, & Recreation – ex. HPER 1010, 1011, 1013, 1032.

***Students must take a 3 credit hour course from the list of approved general education Humanities courses: ex. AREN 2310, ART 1010, THTR 1020, MUSC 1010, PHIL 1030, HIST 1000, or RELS 2010. Students must remember not to duplicate a course option from a previous semester. Students must also be sure to not repeat approved general education Humanities courses within the University Honors course sections (ex. ENGL 2310 World Literature and ENGL 2312 Honors World Literature will not satisfy both Humanity electives).

Spring Schedule		Milestones
Semester 2	Hrs.	Semester 2
		Lower level courses (1000-2000) must be passed with grade of “C” or better in order to matriculate
MATH 1720	3	Pre-requisite Course: Must be taken before MATH 1910, PHYS 2010/2011, AITT 2000/2001, AITT 3200, AITT 3480; Minimum Grade of “C” Required
ECON 2010	3	Pre-requisite Course: Must be taken before MGMT 3010; Minimum Grade of “C” Required
ENGL 1020	3	Pre-requisite Course: Must be taken before HIST 2010+; Minimum Grade of “C” Required
CHEM 1110/1111*	4	Minimum Grade of “C” Required
HPER/ROTC/BAND**	1	Minimum Grade of “C” Required
HUMANITIES***	3	Minimum Grade of “C” Required
Total Hours	17	

*Students must have taken either High School Chemistry earning at least a 75% or CHEM 1000/1001 and two years of High School Algebra before enrolling in CHEM 1110/1111.

**Students may choose a one credit hour course in ROTC-AERO ex. AERO 1021, 2011; Marching Band – ex. MUSC 2010 University Marching Band, and/or any Health, Physical Education, & Recreation – ex. HPER 1010, 1011, 1013, 1032.

***Students must take a 3 credit hour course from the list of approved general education Humanities courses: ex. AREN 2310, ART 1010, THTR 1020, MUSC 1010, PHIL 1030, HIST 1000, or RELS 2010. Students must remember not to duplicate a course option from a previous semester. Students must also be sure to not repeat approved general education Humanities courses within the University Honors course sections (ex. ENGL 2310 World Literature and ENGL 2312 Honors World Literature will not satisfy both Humanity electives).

Fall Schedule		Milestones
Semester 3	Hrs.	Semester 3
		Lower level courses (1000-2000) must be passed with grade of "C" or better in order to matriculate
MATH 1910	4	Minimum Grade of "C" Required
PHYS 2010/2011	4	Pre-requisite Course: Must be taken before PHYS 2020/2021; Minimum Grade of "C" Required
AITT 2000/2001	4	Pre-requisite Course: Must be taken before AITT 2200/2201, AITT 3200, 3350/3351; Minimum Grade of "C" Required
ENGL 2110*	3	Minimum Grade of "C" Required
Total Hours	15	

*The department recommends ENGL 2110, however, courses within the range of ENGL 2012 - ENGL 2322 (Sophomore Literature course) will meet this requirement.

Spring Schedule		Milestones
Semester 4	Hrs.	Semester 4
		Lower level courses (1000-2000) must be passed with grade of "C" or better in order to matriculate
PHYS 2020/2021	4	Minimum Grade of "C" Required
HIST 2010*	3	Minimum Grade of "C" Required
COMM 2200	3	Minimum Grade of "C" Required
PSYC 2010	3	Minimum Grade of "C" Required
AITT 2200/2201	4	Pre-requisite Course: Must be taken before AITT 3310/3311, AITT 4040; Minimum Grade of "C" Required
Total Hours	17	

*The Department recommends HIST 2010, however, HIST 2030, HIST 2060, HIST 2070 or HIST 2700 satisfy this requirement.

Fall Schedule		Milestones
Semester 5	Hrs.	Semester 5
		Lower level courses (1000-2000) must be passed with grade of "C" or better in order to matriculate
HIST 2020**	3	
AITT 3310/3311	4	Pre-requisite Course: Must be taken before AITT 3320/3321
AITT 3350/3351	4	Pre-requisite Course: Must be taken before AITT 4800
AITT 3200	3	
Total Hours	14	

**The Department recommends HIST 2020; however, HIST 2030, HIST 2060, HIST 2070 or HIST 2700 satisfy this requirement.

Spring Schedule		Milestones
Semester 6	Hrs.	Semester 6
		Lower level courses (1000-2000) must be passed with grade of "C" or better in order to matriculate
AITT 3320/3321	4	Pre-requisite Course: Must be taken before AITT 4170
AITT 3480	3	
MGMT 3010	3	Pre-requisite Course: Must be taken before MGMT 4050, MGMT 4070
ENGL 3105	3	Pre-requisite Course: Must be taken before ENGR 4500
Total Hours	13	

Fall Schedule		Milestones
Semester 7	Hrs.	Semester 7
AITT 3110	3	
AITT 4040	3	
COMP 3000	3	Permissible substitution: AITT 4300
ENGR 4500*	1	Pre-requisite Course: Must be taken before ENGR 4510
ENGR 4900*	1	
MGMT 4050	3	
Total Hours	14	

*Must be a graduating senior to enroll in these courses: ENGR 4500 and ENGR 4900.

Spring Schedule		Milestones
Semester 8	Hrs.	Semester 8
		Take Senior Exit Exam and Apply for Graduation
AITT 4800	3	
ENGR 4510*	1	
AITT 4170	3	
MGMT 4070	3	
3000-4000 TECH/NON-TECH ELECTIVE**	6	
Total Hours	16	

*Must be a graduating senior to enroll in this course: ENGR 4510.

**Any Technical or Non-Technical course elective(s) may be chosen from the 3000-4000 (junior-senior level) course(s) to total 6 credit hours being offered within the schedule of course listings from Tennessee State University; these courses may include: ex. AITT 3741, AITT 3700, and/or AITT 4400. Upper level substitutions may be used from outside institutions (Minimum transfer grade of "C" required for substitutions).

Employment Information:

Students with this degree are equipped to enter the employment sector that requires a degree of manual and technical skills (psychomotor) that today's highly competitive industrial technology sector demands. Technologists do not necessarily design but are equipped to manage and maintain those systems and subsystems and work in concert with Industrial engineers.

Representative Job Titles Related to this Major:

Systems Operation Technician, Industrial Engineer, Management/Technical Engineer, Industrial Production Manager, Cost Estimator, Sales Manager, Industrial Technologist, Logistics Engineer, Aeronautical Engineer, Controls and Hardware Design Engineer, Manufacturing Engineer, AutoCAD Designer, Quality Control Engineer

Representative Employers:

Saint-Gobain Glass, General Motors, Nissan North America, Raytheon Electronic & Missile Systems, Lockheed Martin Advanced Technical Center, The Boeing Company, John Deere, Triumph Group Inc., Knoxville Utilities, Piedmont Natural Gas, Manufacturing Industries, Engineering Firms, Industrial Design Consulting Firms, Construction Companies, Government Agencies, Hospitals, Retail Organizations, Public Utility Companies, Pharmaceutical Companies, Industrial Sales Companies

International study is available for all TSU students and may include opportunities for internships or taking course work towards various minors. International study may have an impact on the academic map; therefore, it is important to consult with the academic advisor for this major before participating in an international Program opportunity. Students interested in study abroad opportunities should contact the Office of International Programs and consult with their academic advisor.

Launch My Career Tennessee

To better assist you in making decisions about the career for which you are preparing, a link to the website, Launch My Career Tennessee has been provided for you to explore. The tools on the site will give you a wealth of information concerning your degree choice and possible career pathways. For example, the site will allow you to determine the return on the investment you are making in your education by estimating expected earnings over the course of your career. Begin charting your course by clicking on the link below.

<http://launchmycareertn.org/>

This map is not intended to be a contract; either expressed or implied, between the University and the students, but represents a flexible program of the current curriculum which may be altered from time to time to carry out the academic objectives of the University. TSU specifically reserves the right to change, delete or add to any MAP at any time within the student's period of study at the University.