

Bachelor of Applied Science

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Tennessee Credit Mobility & Transfer Convening

BAS Applied Science program with 3 Flexible Workforce-Related Concentrations

- 120 credits total, 32 credits of General Education (complies with SACSCOC)
- Major Core Requirements (7–9 credits): Includes coursework on professionalism, a capstone project or internship experience, and an industry-recognized technical certification or licensure
- Three Concentrations (24-37 credits): Construction Leadership, Manufacturing Supervision, Information Technology
- Electives (42-57 credits): Can be used for transfer credit (ensures compliance with Tennessee Transfer Pathways), double major, or credit for work-based learning
- Intended Cohorts: TCAT Diploma and AAS Degree holders, Traditional 4-year students, Employees of Local Industry, and Adult learners



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Current Status

- Approved by THEC
- SACSCOC Substantive Change Prospectus Approved
- Launch Fall 2026
- MOU's and Articulation Agreements In-Progress

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State Master Plan and UofM Ascend

Aligned

- Early Post-Secondary Opportunities through Dual Enrollment
- Career and Technical Education (CTE) and Work-Based Learning pathways for students in TCATs and AAS programs. Recruiting in local high school CTE programs. Credit for prior learning for work-based learning and technical certifications

Achievable

- Condensed curricula with reduced barriers to entry and flexibility to pair with other majors
- Transfer pathways for new cohorts of students in TCATs and AAS programs.
- Credit for work-based experience and certifications for adult learners. Flexible scheduling and hybrid and online courses. Short courses for upskilling and academic credit in degree programs

Agile

- Co-designed flexible curricula with industry. Emphasis on foundational skills and applications
- Wide range of programs and specializations to match student interest and workforce demand
- Outcomes-focused academics resulting in workforce-ready skills and credentials

Highlights

- Data Driven Approach from jobs data to certifications
- Started by hand, Finished with AI
- Partnerships with SCORE, TCAT, Southwest Tennessee Community College
- Up to 60 transfer credits from Associate of Applied Science (AAS) programs in Community Colleges for foundational technical knowledge through electives
- Existing TCAT-to-AAS articulation agreements at TBR provide transfer pathways for diploma holders
- Additional credit awarded for TCAT content, work-based learning, and technical certifications and licensures through established credit for prior learning processes
- Stackable non-degree credentials of value can enhance incoming credit and employability without a degree

Labor Market and Wage Analysis

Metric	Construction Leadership	Information Technology (CIT)	Information Technology (ITL)	Manufacturing Supervision (MTS)	Manufacturing Supervision (MS)
Primary Target SOC	11-9021 Construction Managers	15-1252 Software Developers, 15-1212 Security Analysts	15-1211 Systems Analysts	51-1011 Production Supervisors → 11-3051 Production Managers	51-1011 Production Supervisors → 11-3051 Production Managers
Median Salary and Range	\$106,980 (\$65K-\$177K)	\$124,910-\$133,080 (\$96K-\$200K+)	\$110,800	\$75,075 → \$121,440 (62% increase)	\$75,075 → \$121,440 (62% increase)
Employment Growth Outlook	9% (Much faster than average)	16-29% (Much faster than average, highest in IT)	Strong sustained demand	4% (Stable demand for managers)	4% (Stable demand for managers)
Credential Advantage	42% of incumbents lack bachelor's degree	Bachelor's required; Professional Core addresses AI-era soft skills gap	Bachelor's required; business-IT hybrid skills in high demand	48% of supervisors have HS only; degree enables manager progression	48% of supervisors have HS only; transferable management skills

CIP Code Mapping

STCC AAS Program	CIP Code	Alignment Rationale	BPS – Info. Technology (CIP 11.xxxx)	BPS – Mfg. Supervision (CIP 15.0613)	BPS – Construction Leadership (CIP 15.1001)	BPS – Org. Leadership (CIP 52.0201)	BSET – Engineering Technology (CIP 15.xxxx)	Notes
TECHNOLOGIES PROGRAMS								
Architectural Design Technology – Architectural Design, A.A.S.	15.1201	Architectural/construction drafting and design; construction leadership pathway.			•		●	
Automotive Service Technology, A.A.S.	47.0604	Transportation technology; limited BSET overlap.					●	
Computer Engineering Technology, A.A.S.	15.0301	Hardware/systems engineering; dual alignment IT and BSET.	•				•	
Computer Information Technology – Cyber Defense, A.A.S.	11.1003	Cybersecurity; direct IT alignment. CIP 11.1003.	•					
Computer Information Technology – Networking, A.A.S.	11.0901	Network infrastructure; direct IT alignment. CIP 11.0901.	•					
Computer Information Technology – Programming, A.A.S.	11.0201	Software development; direct IT alignment. CIP 11.0201.	•					
Computer Information Technology – Systems Admin. & Mgmt, A.A.S.	11.1001	Systems/IT operations management; direct IT alignment.	•					
Electrical Engineering Technology, A.A.S.	15.0303	Electrical systems technology; BSET primary, Mfg. Supervision secondary.		●			•	
Electrical Engineering Technology – Electrical Design, A.A.S.	15.0303	Electrical design; construction applications and BSET pathway.		●	●		•	
General Technology – Technology Emphasis, A.A.S.	15.0000	Broad technology; maps across Mfg. Supervision and BSET.		●			•	
Mechatronics Technology, A.A.S.	15.0406	Electro-mechanical systems; Manufacturing Supervision and BSET.		•			•	
Mechanical Engineering Technology – Manufacturing, A.A.S.	15.0613	Manufacturing technology; direct CIP match with BPS Mfg. Supervision.		•			•	
Mechanical Engineering Technology – Mechanical Design, A.A.S.	15.0805	Mechanical systems design; BSET primary, Mfg. Supervision secondary.		●			•	

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Occupational Specialization Electives in Action

AAS Program	Institution	AAS Total Cr	Field 1: Manufacturing Technology Supervision (30 cr concentration 49 cr elective max)				Field 2: Management Services (24 cr concentration 55 cr elective max)			
			Gen Ed	Direct	Occ Spec	OSE Max	Gen Ed	Direct	Occ Spec	OSE Max
STCC Applied Technology Programs										
CET ▶ UPDATED	STCC	61	16	12	33	49	16	12	33	55
EET ▶ UPDATED	STCC	61	16	12	33	49	16	12	33	55
EET-ED ▶ UPDATED	STCC	61	16	12	33	49	16	12	33	55
MET-MFGC ▶ UPDATED	STCC	64	16	9	39	49	16	9	39	55
MET-MDC ▶ UPDATED	STCC	64	16	9	39	49	16	9	39	55
MECH ▶ UPDATED	STCC	60	16	10	34	49	16	10	34	55
STCC General Technology Program										
GT-TE	STCC	60	12	0	48	49	12	0	48	55
JSCC Program										
EST	JSCC	61	13	3	45	49	13	3	45	55

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Direct Transfer into BAS Manufacturing Supervision

AAS Course #	AAS Course Title	BAS Course #	BAS Course Title
EETC 1311	Electrical Circuits I	TECH 1811	Electronic Circuit Technology
EETC 1313	DC Circuits	TECH 1811	Electronic Circuit Technology
MECH 1310	Electrical Components	TECH 1811	Electronic Circuit Technology
ENST 1311	Computer Aided Design I	TECH 1521	Graphics and Descriptive Geometry
ENST 1340	Machine Tool Technology	TECH 1711	Manufacturing Processes I
EETC 1314	AC Circuits	TECH 2822	Circuit Analysis
EETC 1321	Electronics I	TECH 2821	Solid-State Technology
EETC 1331	Digital Fundamentals	TECH 3232	Digital Technology
MECH 2320	Motor Control	TECH 3841	Electrical Power and Motor Control
MECH 2440	Process Control Technologies	TECH 3821	Industrial Electronics
METC 2320	Mechanical Systems Design	TECH 3573	Dynamics/Design Automation

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TCAT to BAS



BAS will honor TCAT to AAS articulation agreement for direct transfer of credit.



Credit for Prior Learning for Approved Certifications



Up to 30 credit hours of Occupational Specialization Electives



Maximum of 30 credit hours from all sources



Diploma Holders

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BPS – Manufacturing Supervision

CIP 15.0613 | TCAT Program Alignment

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Programs

TCAT Program	CIP	▲
Advanced Manufacturing Production Technology	15.0613	●
Advanced Manufacturing Technician Certification	15.0613	●
Advanced Manufacturing Technology	15.0613	●
Automation, Process, and Production Systems	15.0406	●
CNC Machining Technology	15.0613	●
CNC Manufacturing	15.0613	●
Electro-Mechanical Technology	15.0406	●
Industrial Electrical Maintenance – Mechatronics	15.0406	●
Industrial Maintenance	15.0613	●
Industrial Maintenance and Electrical Systems	15.0406	●
Industrial Maintenance Automation	15.0406	●
Industrial Maintenance/Mechatronics	15.0406	●
Industrial Maintenance Technology	15.0613	●

TCAT Program	CIP	▲
Machine Tool Technology	15.0613	●
Manufacturing Technology	15.0613	●
Mechanical Maintenance Electrical and Instrumentation	15.0406	●
Mechatronics / Mechatronics Multicraft Technology	15.0406	●
Production and Logistics Technology	15.0613	●
Tool and Die Machining	15.0613	●
Advanced Manufacturing Education	15.0613	🕒
Computer Electronics	15.0303	🕒
Electronic Systems	15.0303	🕒
Electronics Technology	15.0303	🕒
Engineering Systems Technology	15.0000	🕒
Millwright Skills	49.0205	🕒
Welding Technology	48.0508	🕒

● **Primary Alignment** — Direct CIP code match; strong transfer pathway 🕒 **Secondary Alignment** — Related CIP cluster; partial transfer pathway

Moore Tech → Polytechnic @ UofM | BAS Transfer Credit Summary

Moore Tech program	Credential	BAS concentration	Gen Ed credits	MT technical credits	Occ. Spec. (2/3)	Occ. Spec. (full)	Total BAS (2/3)	Total BAS (full)
Construction Leadership pathway								
Air Conditioning, Refrigeration & Heating	ACRH-ASSOC	Construction Leadership	15	72	48	72	63	87
Property Maintenance Advanced	PMADV-AAT	Construction Leadership	15	72	48	72	63	87
Manufacturing Supervision pathway								
Automotive Service Technology	AUTO-ASSOC	Manufacturing Supervision	15	72	48	72	63	87
Industrial Electricity / Plant Maintenance	IEPM-AAT	Manufacturing Supervision	15	72	48	72	63	87
Machine Shop / Machining Technology	MACH-ASSOC	Manufacturing Supervision	15	72	48	72	63	87
Welding Advanced	WLDADV-AAT	Manufacturing Supervision	15	72	48	72	63	87

Enrollment and Financial Projections

Projected Enrollment and Graduates				
Year	Academic Year	Projected Total Fall Enrollment	Projected Attrition	Projected Graduates
1	2026-2027	100	21	15
2	2027-2028	105	22	18
3	2028-2029	110	23	20
4	2029-2030	115	24	22
5	2030-2031	120	25	25

Planning		Year 2	Year 3	Year 4	Year 5
Projected Expenditures (One-Time and Recurring)					
\$716,494	\$570,339	\$586,999	\$604,159	\$621,834	\$640,039
Projected Revenue (Tuition/Fees)					
0	\$1,187,800	\$1,247,190	\$1,306,580	\$1,365,970	\$1,425,360



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Stackable Credentials of Value

- 86% of employers say non-degree certificates are valuable indicators of job readiness.
- Job-relevant non-degree credentials are associated with measurable wage gains, including a 3.8% premium for the first credential.
- Non-degree credentials are also linked to higher employment rates, with studies showing a 5% to 15% increase in likelihood of employment.

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How non-degree credentials work in the BAS

- Students who matriculate with certifications through workplace receive academic credit for prior learning.
- Stackable credentials embedded in BAS Curricula (MS Office, Python Programming, ...)
- BAS has a requirement for a capstone non-degree credential
 - This might be satisfied by credit for prior learning
 - Embedded in the BAS Program – Project Management, Cybersecurity, Applied AI
 - Micro-credentials, Badges, Certificates from our courses
- Durable Skills
- Goal is to make students more competitive in job market.

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SCORE: Top qualifications

- In Lightcast data, the term qualifications refers to the certifications decided on by a third-party entity (school, government, industry, etc.) that acknowledges a body of skills and abilities (e.g., MBA, security clearance, etc.).
- For example, a job posting for a software developer may state the qualifications for the position include a relevant bachelor's degree from an accredited university and a salesforce certification.

Top Qualifications

Qualification	Postings with Qualification
Valid Driver's License	4,399
Project Management Professional Certification	1,420
Security Clearance	474
Master Of Business Administration (MBA)	462
Secret Clearance	436
HVAC Certification	420
30-Hour OSHA General Industry Card	416
Cardiopulmonary Resuscitation (CPR) Certification	377
Certified Safety Professional	368
Certified Information Systems Security Professional	337
First Aid Certification	327
Public Trust Clearance	297
CompTIA Security+	291

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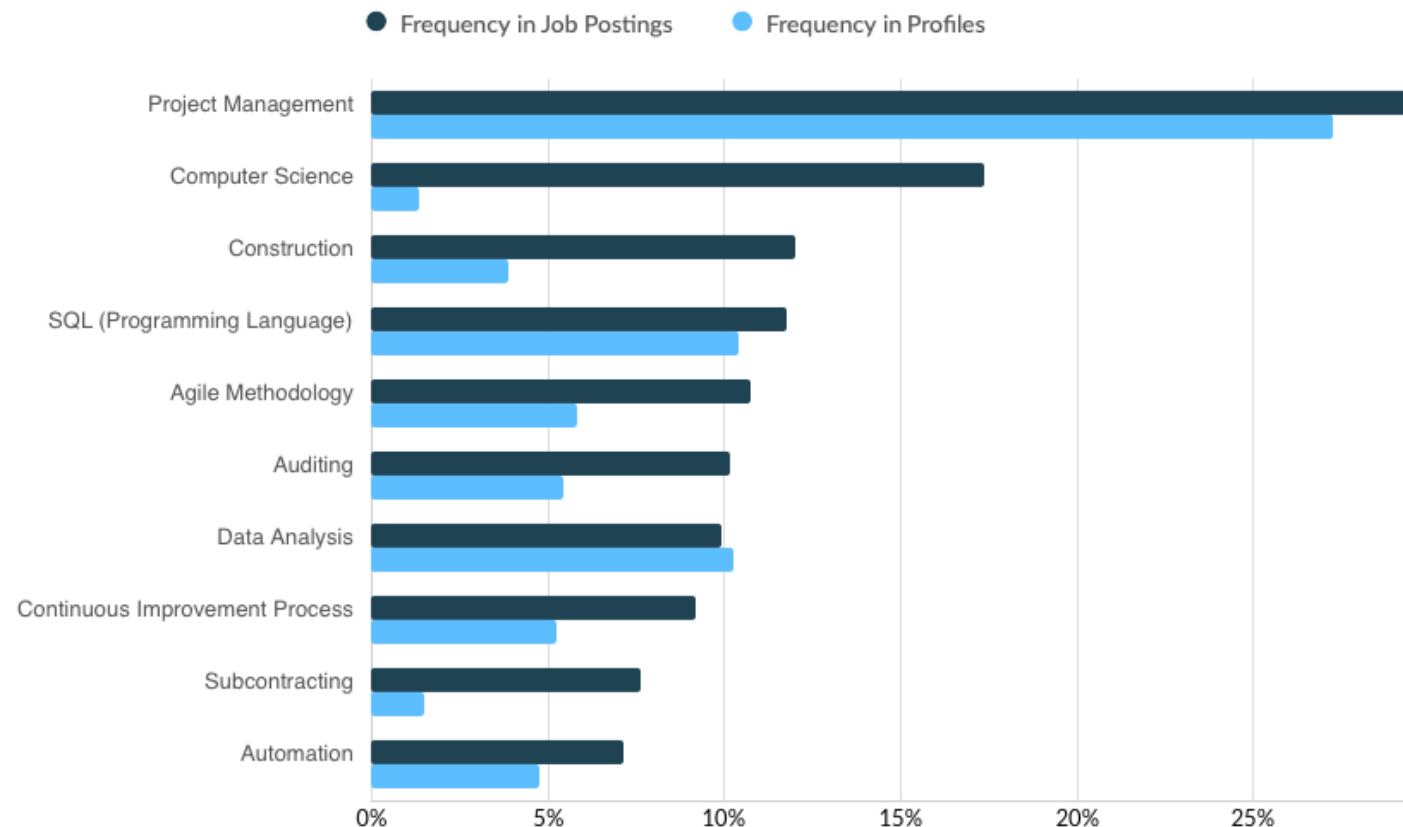


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SCORE: Specialized skills relevant to target occupations.



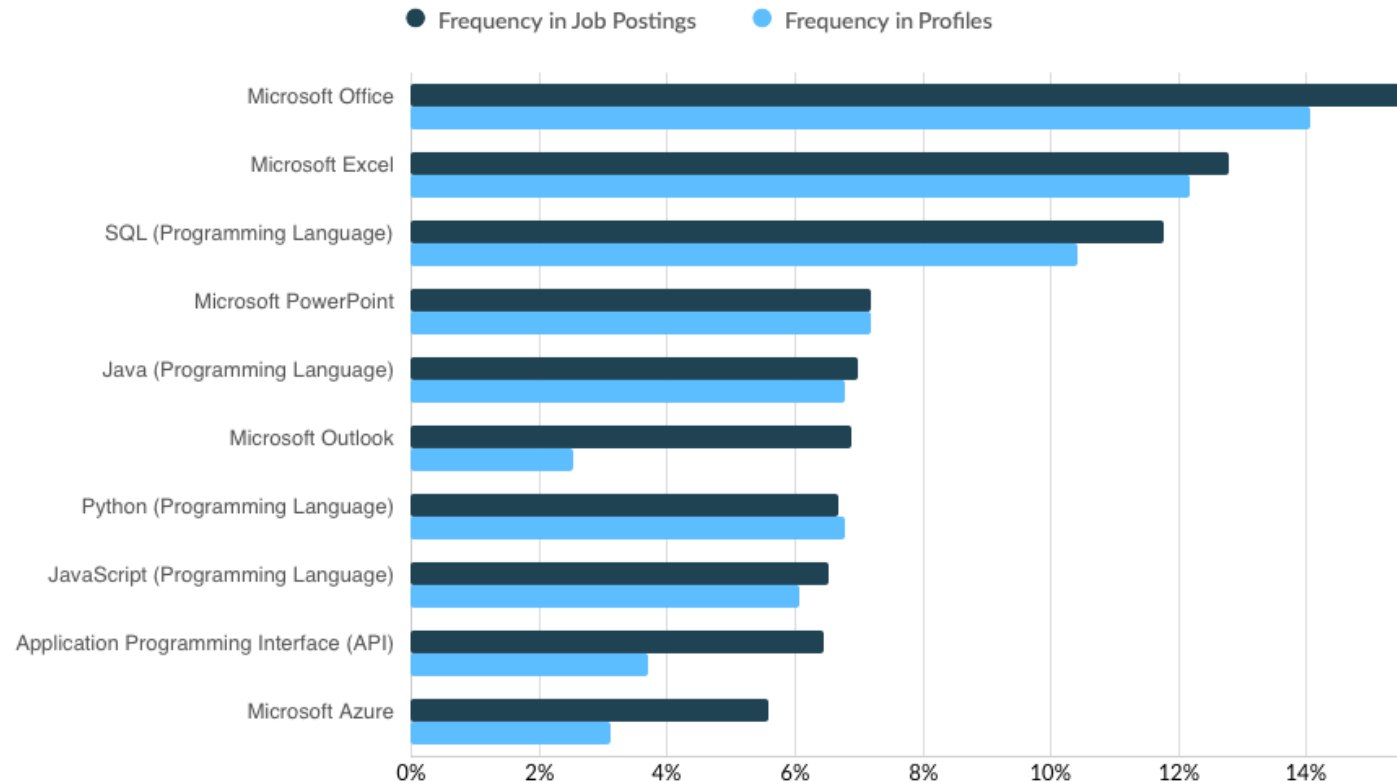
Top Specialized Skills



Frequency in profiles represents the frequency in which skills appeared in resumes applying to relevant roles.

SCORE: Software skills relevant to target occupations.

Top Software Skills



Frequency in profiles represents the frequency in which skills appeared in resumes applying to relevant roles.

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Discussion

- How would the flexibility of Occupational Electives impact your programs?
- Are there opportunities for new or expanded BAS programs at your institutions?
- What non-degree credentials or certifications are important for your students and your industry partners?
- How can you leverage AI tools to accelerate creation of new programs, credit mobility, and access?

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