

Pathways at a Glance Course Guide - Program Changes for 26-27

Agriculture:

While this will be based on student request numbers, we plan to alternate years for Landscape and Floral, and Forestry and Wildlife. Please plan accordingly for student scheduling.

- Floral will be offered in 26-27; Landscape in 27-28
- Forestry will be offered in 26-27; Wildlife in 27-28

Business:

The only pre-requisite for Business Management is now Business Principles. Financial Literacy will now be called "Business Finance"

Computer Science:

We will no longer be offering the Web Design pathway. We will be adding a Cybersecurity pathway. Students interested in this pathway will take Hardware as their first course and can begin as early as 9th grade.

Engineering:

Optional Dual Credit Elective for Civil Engineering, Mechanical Engineering, or Electrical Engineering pathways - DPT 100 Intro to 3d Printing

Family Consumer Sciences:

We will be offering the Teaching and Learning TRACK pathway. Students can begin this pathway in **10th grade** and will be enrolled in 4 Dual Credit courses through ECU. Students will complete the pathway with a paid Apprenticeship in a Jessamine County School (Elementary only at this point). The KY Dual Credit Work Ready Scholarship covers tuition costs for 2 courses per year. More information will be coming.

FACS Essentials is no longer an option for the first course in the Early Childhood pathway.

Relationships - While students in 10th-12th grade can take this course, preference will be given to 12th graders who need the course for pathway completion.

Middle to Late Lifespan - Relationships is no longer a prerequisite for this course and does not have to be taken concurrently.

Electrical: All four pathway courses will be offered. Students should ideally start this pathway in 10th grade to allow for time in their senior year to complete an Apprenticeship. 11th grade students can take the courses and will be able to complete the pathway, but will most likely not have time to complete the Apprenticeship as well. Students completing this pathway will take two Industry Certification exams: the Skilled Trades TRACK Assessment and the OSHA 10. Students who pass both of these will be eligible for up to one year of Apprenticeship credit in the state of Kentucky.

Health Sciences / BioMed:

Healthcare Jumpstart is a collaborative opportunity between JCTC, BCTC, and UK HealthCare. This program serves to accelerate healthcare education. Students will complete pre-requisite college credit courses for the BCTC Nursing or BCTC Allied Health programs during their senior year of high school. In order to enroll in this program students MUST have completed either the Pre-Nursing Pathway , Allied Health Pathway, OR Biomedical Pathway. Students interested in the BCTC Nursing Program must have completed the JCTC Pre-Nursing Pathway or Biomedical Pathway. Students will take these courses at JCTC Central with an online BCTC professor. An in-person lab is also required for BIO 137 and BIO 139. This program will be completed with a cohort approach - students are required to complete all courses and labs listed on this page. Students can select to complete BIO 137 and 139 only, or complete BIO 137, BIO 139, PSY 110, and MAT 150. Courses are eligible for the Kentucky Dual Credit Scholarship or Kentucky Work Ready Dual Credit Scholarship. Students are responsible for paying for textbooks and supplies. See page 24 in the JCTC Course Catalog for more information.

Law Enforcement: We will be offering all four classes in this pathway. Please see page 11 in this document or page 25 in the Course Catalog for course sequence. This is the same as last year.

Pre-Law: Change in Industry Certification

NOCTI is no longer an approved Industry Cert for this pathway. Students will take the LAPSEN Accredited Legal Professionals Exam and/or take 2 Dual Credit Courses for Career Ready Status.

Military Leadership: As a reminder, this pathway is no longer available.

Pathways at a Glance 2025-26



JCTC

ADVANCED MANUFACTURING

Career Pathway	Required Courses	Prerequisites	Elective Courses	Industry Certificates	CTE EOP Assessment
Advanced Manufacturing (Computerized Manufacturing and Machining (CMM) Engineering) 48.0510.00 Automation Engineering (15.0613.00)	- Technology & Innovation (210221) - Advanced Machining Technologies (210135) - Advanced Production Technologies (470913) - Advanced Manufacturing Capstone (470914)	Algebra I or enrolled T&I & Geometry or enrolled Adv. Machining Tech. Adv. Machining & Adv. Production	- Engineering Co-op (210330) - Engineering Internship (210331)	Engineering REC OSHA 10 HAAS Mill Operator	Automation Engineering

**Students must take 4 courses to complete a pathway. There is a cost associated with industry certification exams*

AGRICULTURE

Career Pathway	Required Courses	Prerequisites	Elective Courses	Industry Certificates	CTE EOP Assessment
Agricultural Power, Structural, Technical Systems 01.0201.00	• Principles of Ag* (030715) • Intro to Ag Construction (010241) • Small Power Equipment (010231) • Ag Welding & Structures (010211)	None Principles of Ag Intro to Ag. Const. + Geometry Small Power + Geometry	• Ag Capstone - Advanced Ag Construction (010252) • Ag Ed Co-op (030790) • Ag Ed Internship (030791)	SENSE Level 1 (AWS)	Agricultural Power
Animal Science Systems 01.0901.00	• Principles of Ag* (030715) • Intro to Animal Science (020501) • Small Animal (020503) • Equine Science (020510)	None Principles of Ag Intro to Animal Science Intro to Animal Science	• Ag Capstone - Adv. Animal Science (020552) • Agribiology (030713) • Ag Ed Co-op (030790) • Ag Ed Internship (030791)	Beef Quality Assurance (BQA)	Animal Science
Environmental Science/Natural Resources Systems 03.0101.00	• Principles of Ag* (030715) • Intro to Environmental Science (030609) • Wildlife Resources (030611) • Forestry / Plant & Land (030610)	None Principles of Ag Intro to Env. Science Intro to Env. Science	• Ag Capstone (010121) • Greenhouse Technology (010641) • Ag Ed Co-op (030790) • Ag Ed Internship (030791)		Environmental Science
Plant Science Systems 01.1101.00	• Principles of Ag*(030715) • Intro to Horticulture - Greenhouse (010641) • Floral Design (010621) • Landscape (010631)	None Principles of Ag Principles of Ag Principles of Ag	• Ag Capstone (010121) • Agribiology (030713) • Ag Ed Co-op (030790) • Ag Ed Internship (030791)		Plant Science Systems
Veterinary Assisting 01.0901.00	• Principles of Ag* (030715) • Vet Assisting I (030711) • Vet Assisting II (020511) • Vet Assisting III (020502)	None Principles of Ag Vet Assisting I-C or higher Vet Assisting II-C or higher	• Ag Ed Co-op (030790) • Ag Ed Internship (030791)	NAVTA-Veterinary Assisting Certification	Animal Science

**Students must take 4 courses to complete a pathway. At least 3 must be required courses in that pathway in order to test in Agriculture, one of those three must be Principles of Agriculture. There is a cost associated with industry certification exams.*

BIOMEDICAL SCIENCE - Addition of Dual Credit Classes through BCTC Healthcare Jumpstart

Career Pathway	Required Courses	Prerequisites	Elective Courses	Industry Certificates	CTE EOP Assessment
PLTW Biomedical Science 26.0102.00	- Principles of Biomedical Science (170701) - Human Body Systems (170702) - Medical Interventions (170703) - Biomedical Innovations (170704)	Must be taken in sequence, none taken concurrently except MI and BI with teacher permission MI & BI: 11th/12th only or with teacher permission	- Biomedical Internship (170708) - Healthcare Jumpstart (upon completion of pathway) - BIO 137 (170704x) - BIO 139 (170167x) - PSY 110 - MAT 150	NOCTI-Biomedical Sciences	

**Students must take 4 courses to complete a pathway.*

BUSINESS - Name change from Financial Literacy to “Business Finance”; Prerequisite change for Business Management

Career Pathway	Required Courses	Prerequisites	Elective Courses	Industry Certificates	CTE EOP Assessment
Management 52.0701.00	Required Courses: - Business Principles (060111) - Business Management (060411) Choose 2: - Business Communication (060155) - Business Ethics (060109) Business Finance (formerly Financial Literacy) (080719)	None Business Principles Business Principles Business Principles Bus. Management OR 11 th /12 th -Pathway Completer	- BAS 160 Intro to Business (060197) - BAS 282 Principles of Marketing (081512) - REA 100 Real Estate Principles (90999E) - REA 120 Real Estate Marketing (080715) - Entrepreneurship (080310) - School Store Internship (081411) (Prereq: Entrepreneurship) - Bus Internship (060108) or Co-op (060107) (Prereq: Enrolled in 3rd or 4th Management Pathway course OR be a completer in Management Pathway; 11th or 12th grade AND at least 16 yrs. old)		Business Management

**Students must take 4 courses to complete a pathway. There is a cost associated with industry certification exams.*

MARKETING

Career Pathway	Required Courses	Prerequisites	Elective Courses	Industry Certificates	CTE EOP Assessment
Marketing 52.1401.01	- Principles of Marketing (080716) - Advanced Marketing (080717) Choose 2: - Advertising & Promotion (081511) - Fashion Marketing (080111) - Sports & Event Marketing (081121) - Social Media Marketing (081310) - Travel & Tourism Marketing (080911) - Entrepreneurship (080310)	None Principles of Marketing Principles of Marketing Principles of Marketing Principles of Marketing Principles of Marketing Principles of Marketing Advanced Marketing	- BAS 160 Intro to Business (060197) - BAS 282 Principles of Marketing (081512) - REA 100 Real Estate Principles (90999E) - REA 120 Real Estate Marketing (080715) - Entrepreneurship (080310) - School Store Internship (081411) (Prereq: Entrepreneurship) - Marketing Internship (080708) or Co-op (060107) (Prereq: Enrolled in 3rd or 4th Marketing Pathway course OR be a completer in Business/Marketing Pathway; 11th or 12th grade AND at least 16 yrs. old)		Marketing

COMPUTER SCIENCE - Web Design Pathway eliminated; Digital Design and Game/Graphics merged with Programming; Cybersecurity Pathway added

Career Pathway	Required Courses	Prerequisites	Elective Courses	Industry Certificates	CTE EOP Assessment
Cybersecurity 14.0902.00	- Hardware (110110) - Cybersecurity I (110224) - Cybersecurity II (110230) - Cybersecurity III (110912)	None Hardware Cybersecurity I Cybersecurity II	Computer Science Internship (110919) Computer Science Co-op (110918)	CompTIA A+	None
Digital Design & Game Development (Graphics Focus) 36.0113.00	- Intro to Game Design & Programming (113605) - Graphics & Game Design II (113601) - Graphics & Game Design III (113603) - Graphics & Game Design IV (113602)	None Intro to Game & Prog or conc. Intro & Graphics II Intro & Graphics III	Programming & Game Design II Programming & Game Design III Programming & Game Design IV (Substitution for the same numbered course preferred) Computer Science Internship (110919) Computer Science Co-op (110918)	2 of the following: -Unity User:Artist -Unity User:Programmer -Adobe Cert:Photoshop	Digital Design & Game Development
Information Support & Services 47.0104.01	- Hardware (110110) - Software (110101) - Help Desk I (110102) - Help Desk II (110302)	None Comp. Hardware Maint. Comp. Hardware & Software Comp. Hardware & Software & Help Desk I	Computer Science Internship (110919) Computer Science Co-op (110918)	2 of the following: -IC3 G5 Level 1 -IC3 G5 Level 2	Information Support & Services

**Students must take 4 courses to complete a pathway. There is a cost associated with some industry certification exams.*

CONSTRUCTION - STUDENTS MUST BE IN AT LEAST 10TH GRADE TO ENROLL IN THESE COURSES

Career Pathway	Required Courses	Prerequisites	Elective Courses	Industry Certificates	CTE EOP Assessment
Electrical Technician Pre-Apprenticeship (TRACK) 46.0302.99	• Circuits I (460316) • Electrical Construction I (460312) • Electrical Construction II (460313) • Circuits II (460319)	None Circuits I Circuits II Electrical Cons. II	Co-op (Electrical) (460345) Electrical Motor Controls (460331)	- Skilled Trades TRACK Electrical Assessment AND - OSHA 10	None

ENGINEERING - DUAL CREDIT ELECTIVE ADDED TO ALL PATHWAYS

Career Pathway	Required Courses	Prerequisites	Elective Courses	Industry Certificates	CTE EOP Assessment
Civil Engineering 14.0801.00	- Technology & Innovation (210221) - Principles of Engineering (210222) - Civil Engineering & Architectural Design (210223) - Engineering Capstone (210110)	Algebra I or enrolled T&I plus Geometry or enrolled T&I AND POE plus Alg. II or enrolled T&I, POE and CEA	- Engineering Co-op (210330) - Engineering Internship (210331) - DPT 100 Into to 3d Printing		Civil Engineering
Electrical/Electronics Engineering 14.1001.00	- Technology & Innovation (210221) - Principles of Engineering (210222) - Digital Electronics (210232) - Engineering Capstone (210110)	Algebra I or enrolled T&I plus Geometry or enrolled T&I AND POE plus Alg.II or enrolled T&I, POE, and DE	- Engineering Co-op (210330) - Engineering Internship (210331) - DPT 100 Into to 3d Printing		Electrical & Electronics Engineering
Mechanical Engineering 14.3501.00	- Technology & Innovation (210221) - Principles of Engineering (210222) - Mechanical Engineering (210118) - Digital Electronics (210232) OR - Engineering Capstone (210110)	Algebra I or enrolled T&I plus Geometry or enrolled T&I AND POE plus Alg.II or enrolled T&I AND POE plus Alg.II or enrolled T&I, POE, and AAM	- Engineering Co-op (210330) - Engineering Internship (210331) - DPT 100 Into to 3d Printing		Mechanical Engineering

**Students must take 4 courses to complete a pathway. In Engineering, Introduction to Engineering and Principles of Engineering must be 2 of the 4. There is a cost associated with industry certification exams.*

FAMILY AND CONSUMER SCIENCES - New Pathway - Teaching and Learning TRACK

Career Pathway	Required Courses	Prerequisites	Elective Courses	Industry Certificates	CTE EOP Assessment
Consumer & Family Services* 19.0403.00	Required Courses: - FCS Essentials (200113) - Relationships (200171) - Middle to Late Lifespan Dev. (200226) Choose 1: - Foods & Nutrition (200441) - OR Parenting (200173) *Parental approval needed to participate in pathway (see SB 150)	None FCS Essentials + Foods OR Parenting Relationships or Concurrent & 11th/12th only None None	- Foods & Nutrition or Parenting - Consumer & Family Services Co-op (200191) - Consumer & Family Services Internship (200192)		Consumer & Family Services
Culinary & Food Services 12.0500.00	- Foods & Nutrition (200441) - Advanced Foods & Nutrition (200442) - Culinary Arts I (200411) - Culinary Arts II (200412)	None Foods Foods and Adv. Foods +10 th grade or higher Culinary I + 10 th grade or higher	- Culinary Co-op (200409) - Culinary Internship (200478)	ServSafe Manager Pre-Start	Culinary & Food Service
Early Childhood Education* 13.1210.00	- Parenting (200173) - Early Lifespan Dev. (200223) - Child Development Services I (200261) - Child Development Services II (200262) *Parental approval needed to participate in pathway (see SB 150)	None None None Early Lifespan Dev. Early Lifespan & Child Dev. I	- ECE-Work Based Learning (Teacher Approval Only-Prereqs: Early Lifespan, Child Dev. I, Child Dev. II) - Early Childhood Co-op (200210) - Early Childhood Internship (200201)	Commonwealth Childcare Credential (CCCC) Early Care Orientation Cert. Abusive Head Trauma Child Development Associate (CDA)	Early Childhood Education
Fashion & Interior Design 50.0407.00	Required Courses: - FCS Essentials (200113) - Fashion & Interior Design I (200821) - Fashion & Interior Design II (200825) - Fashion & Interior Design III (200826)	None FCS Essentials Fashion I Fashion II 12 th Grade	- Fashion Co-op (200810) (Teacher Approval Only) - Fashion Internship (200801) (Teacher Approval Only)		Fashion & Interior Design
Teaching and Learning TRACK 13.0101.99 In partnership with EKU	Required Courses: - EDF 203 – Philosophical & Historical Foundations of Education - CED 100 – Clinical I: Introduction to the Education Profession - EDC 106 – Culturally Responsive Perspectives - EDF 204 – Emerging Instructional Technologies	None Taken concurrently with CED 100	- Relationships (200171) - Fundamentals of Teaching Co-op (200291) - Fundamentals of Teaching Internship (200292)	AAFCS Pre-PAC Education Fundamentals	

****Students must take 4 courses to complete a pathway. At least 3 must be required courses. There is a cost associated with some industry certification exams.***

HEALTH SCIENCES - Addition of Dual Credit Classes through BCTC Healthcare Jumpstart

Career Pathway	Required Courses	Prerequisites	Elective Courses	Industry Certificates	CTE EOP Assessment
Allied Health* 51.0000.01	- Principles of Health Science (170111) - Body Structures (170167) - Medical Terminology (170131) - AHS 115 Medical Terminology (Dual Credit) (170131x) - Emergency Procedures (170141) - CPR 100 Emergency Procedures (Dual Credit) (170141x) *Parental approval needed to participate in pathway (see SB 150)	None None POHS & Body Structures POHS & Body Structures POHS & Body Structures POHS & Body Structures	- Allied Health Internship - BIO 137 - BIO 139	NOCTI-Healthcare Core	
Pre-Nursing* 51.2699.01	- Principles of Health Science (170111) - Body Structures (170167) - Medical Terminology (170131) - AHS 115 Medical Terminology (Dual Credit) (170131x) - Emergency Procedures (170141) - CPR 100 Emergency Procedures (Dual Credit) (170141x) - Medicaid Nurse Aide (170631) - NAA 100 Medicaid Nurse Aid (Dual Credit) (170631x) *Parental approval needed to participate in pathway (see SB 150)	None None POHS & Body Structures POHS & Body Structures POHS & Body Structures POHS & Body Structures Medical Terminology, AND Emergency Proc.	- Allied Health Internship (170550) - Nursing Co-op (170601) - Phlebotomy Internship (170570) - Healthcare Jumpstart (upon completion of pathway) - BIO 137 (170704x) - BIO 139 (170167x) - PSY 110 - MAT 150	NOCTI-Healthcare Core State Registered Nurse Aide	
Phlebotomy Technician* 51.1009.01	- Principles of Health Science (170111) - Body Structures (170167) - Medical Terminology (170131) - AHS 115 Medical Terminology (Dual Credit) (170131x) - Emergency Procedures (170141) - CPR 100 Emergency Procedures (Dual Credit) (170141x) - Phlebotomy (170567) - PHB 100 Phlebotomy (Dual Credit) (170567x) *Parental approval needed to participate in pathway (see SB 150)	None None POHS & Body Structures POHS & Body Structures POHS & Body Structures POHS & Body Structures Emergency Procedures AND Medical Terminology	- Allied Health Internship (170550) - Pre-Nursing Co-op (170601)	NOCTI - Healthcare Core Certified Phlebotomy Technician	

****Students must take 4 courses to complete a pathway. At least 3 must be required courses. There is a cost associated with industry cert. exams.***

LAW & PUBLIC SERVICES - New Industry Certifications for Pre-Law and Law Enforcement.

Career Pathway	Required Courses	Prerequisites	Elective Courses	Industry Certificates	CTE EOP Assessment
Pre-Law 22.0001.00	1st and 2nd Courses (in any order) • Introduction to Law (461051) • Criminal Law (461020) 3rd and 4th Courses (in any order) • Upper Law 1 - BCTC CRJ 100 (Dual Credit) (461019) • Upper Law 2 - BCTC CRJ 204 (Dual Credit)(461025) AND / OR • Advanced Law I (461019x) (Teacher permission required) • Advanced Law II (461025x) (Teacher permission required) <i>*Adv Law I and II must be taken during the same school year.</i>	None None 10th - 12th grade; GPA of 2.5; Intro to Law AND Criminal Law <i>Same prerequisites as CRJ 100</i> 10th-12th grade; Intro to Law, Criminal Law, & Teacher Permission	• Pre-Law Internship (461095) - pathway completion, industry certification, and teacher permission required • Pre-Law Co-op (461097) - pathway completion, industry certification, and teacher permission required	LAPSEN Accredited Legal Professionals (ALP)	
Fire Science 43.0203.00	• Basic Firefighting I / Intro to Patient Care (461032) • Basic Firefighting II / Hazardous Material Awareness (461034) • Basic Firefighting III / Hazardous Material Operations (461031) • Basic Firefighting IV (461036)	None Basic Firefighting I and 10th, 11th, or 12th grade Basic Firefighting II and 10th, 11th, 12th grade Basic Firefighting III and 11th or 12th grade	• Emergency Medical Responder (461024) (PreReq: Fire IV and Teacher Approval; 11th or 12th grade) • Advanced Firefighting (461069) (PreReq: Fire IV and Teacher Approval; 11th or 12th grade) • Fire Science Co-op (461063)	NIMS-100, NIMS-200, Nims-700, NIMS-800 BLS (Basic Life Support) SLTB (Stop Life Threatening Bleeding) OSHA 10 (Industrial) Kentucky Fire Service Apprentice 1 Certification (100 Hours)	

Law Enforcement Services 43.0107.00	- Foundations of Justice & Public Safety (461044) - Law Enforcement (461045) - Criminal Investigation (461043) - Basic Telecommunications (461011)			FEMA certification series through NIMS (National Incident Management System) IS-100, IS-200, IS-700, and IS-800 State-Approved Basic Life Support (BLS) Certificate Stop the Bleed LAPSEN Law Enforcement	
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**Students must take 4 courses to complete a pathway. At least 3 must be required courses. There is a cost associated with industry certification exams.*

TRANSPORTATION

Career Pathway	Required Courses	Prerequisites	Elective Courses	Industry Certificates	CTE EOP Assessment
Diesel Technology 47.0605.07 *Available to 10th-12th graders beginning 24-25	Year One: - Diesel Medium/Heavy Duty Truck Inspection, Maintenance, and Minor Repair (IMMR) Sections A-D (470450, 470451, 470452, 470453) Year Two: - Diesel Medium/Heavy Truck Service Technology (TST) Sections A-D (470460, 470461, 470462, 470463)	None Successful Completion of all Year One Courses	- Diesel Internship (470445) - Diesel Co-op (470442)	ASE Entry Level Certification	

**Students must take 4 courses to complete a pathway. At least 3 must be required courses. There is a cost associated with industry certification exams.*

WORK BASED LEARNING FAQ - Non-CTE Work Experience (Work Block), Co-op, Internships

[Work Based Learning Resources & Guidance Documents](#)

[Jessamine County Work Based Learning Guide](#)

1. What is the difference between internship and co-op?

Non-CTE COOP (Work Block)	Internship	Coop
• Paid	• Paid / Unpaid	• Paid
• Not Pathway Related	• CTE Pathway Related	• CTE Pathway Related
• One semester or longer.	• One semester or less	• One semester or longer
• Student engages in independent work.	• Work is closely supervised by the employer.	• Student engages in independent work
• Pathway completion is not required.	• Pathway completion is not required.	• Pathway completion or enrollment in the final course is required.
• The student provides service to the employer.	• The student provides service to the employer.	• The student provides service to the employer.

2. What age do students need to be to be in internship and/or co-op?

Student needs to be a pathway completer, or enrolled in the final course in the pathway concurrently. Must be in 11th or 12th grade and at least 16 years of age.

3. What are the hour requirements for internship and/ or co-op?

Minimum Hours Worked

Amount of Student is Enrolled / Away from School	# of time student MUST work
1 Period	10 Hours (minimum) per week
2 Periods	10 Hours plus per week
3 Periods	15 Hours plus per week

4. What are the time of day requirements for work block/ internship? (i.e. what if a student only works on the weekends? Does that mean they need to be scheduled for a full schedule?)

Credit for Co-op, Internship, and Work Block is awarded based on time spent on the job during school hours. The majority of hours worked by the student need to occur during the periods they are scheduled for the WBL experience. If a student is only working a job on the weekends, they should not be enrolled in a WBL experience that allows them to leave campus.

5. Can students do unpaid internships?

Yes, internships can be unpaid experiences. Students enrolled in internships need to have placements that align with their CTE pathway.

6. How do Co-ops and Internships differ when it comes to Credit Counts and KEES eligibility?

Pursuant to KRS 164.7874 and Kentucky Administrative Regulation 11 KAR 15:090, a student must complete the KEES curriculum, which consists of a minimum of five (5) courses of study, in order to be eligible for a KEES GPA calculation. For COOP credits that are aligned to a CTE pathway and approved by the KDE OCTE, the course may count credit for credit, in terms of the KEES GPA calculation.

For all other work-based learning credits (internships, shadowing, mentoring), including non-CTE aligned coops, the course may only count toward one (1) of the five (5) credits required for a KEES GPA calculation.