CAREER & TECHNICAL EDUCATION

BRIAR WOODS HIGH SCHOOL
2022-2023
What is Career & Technical Education?

- Business & Information Technology (BIT)
- Family & Consumer Sciences (FACS)
- Marketing Education (Marketing)
- Technology and Engineering Education (TE)
Students are provided opportunities to complement their academic preparation while exploring a variety of careers and learning skills and concepts in the areas of:

- Computer Applications
- Business Law
- Business Management
- Cybersecurity
- App Development
- Business and Marketing

Mrs. Oak  Mrs. Peschka  Mr. Starke  Mrs. Woodward
<table>
<thead>
<tr>
<th>COURSE#</th>
<th>COURSE NAME</th>
<th>CREDIT</th>
<th>GRADE</th>
<th>PREREQUISITES</th>
<th>BRIEF COURSE DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>821000</td>
<td>Introduction to Business &amp; Marketing</td>
<td>1</td>
<td>9-11</td>
<td>none</td>
<td>Project-based Introductory level class covering basic business &amp; marketing</td>
</tr>
<tr>
<td>828001</td>
<td>Computer Information Systems (CIS)</td>
<td>1</td>
<td>9-12</td>
<td>Keyboarding proficiency</td>
<td>Develop professional level skills in Microsoft Office software package</td>
</tr>
<tr>
<td>828002</td>
<td>Advanced Computer Information Systems</td>
<td>1</td>
<td>10-12</td>
<td>Computer Information Systems</td>
<td>Refine skills in Microsoft Office software package</td>
</tr>
<tr>
<td>894101</td>
<td>Introduction to Cybersecurity</td>
<td>1</td>
<td>9-11</td>
<td>None</td>
<td>Explore basic principles of cybersecurity, emerging technologies, threats and protective measures and careers in cyber</td>
</tr>
<tr>
<td>830000</td>
<td>Accounting</td>
<td>1</td>
<td>10-12</td>
<td>CIS or Intro to Business &amp; Marketing (recommended)</td>
<td>Learn fundamental accounting procedures for a service and merchandising business</td>
</tr>
<tr>
<td>835700</td>
<td>Business Law</td>
<td>0.5</td>
<td>11-12</td>
<td>none</td>
<td>Examine the foundations of the U.S. legal system and laws governing society</td>
</tr>
<tr>
<td>836700</td>
<td>Business Management</td>
<td>0.5</td>
<td>11-12</td>
<td>none</td>
<td>Study basic management concepts and leadership styles</td>
</tr>
<tr>
<td>894103</td>
<td>Cybersecurity Operations</td>
<td>1</td>
<td>10-12</td>
<td>Introduction to Cybersecurity</td>
<td>Explore aspects of computer support and network administration</td>
</tr>
<tr>
<td>828601</td>
<td>App Development I H (App Development II H)</td>
<td>1</td>
<td>11-12</td>
<td>Cybersecurity Operations</td>
<td>Explore programming concepts and implement coding procedures using Python</td>
</tr>
<tr>
<td>825000</td>
<td>Personal Finance</td>
<td>.5</td>
<td>10-12</td>
<td>none</td>
<td>Develop financial literacy skills</td>
</tr>
</tbody>
</table>
Future Business Leaders of America—Phi Beta Lambda is a nonprofit education association of students preparing for careers in business and business-related fields. (http://www.fbla-pbl.org)

At Briar Woods, we offer professional, community service, and fundraising activities that prepare students for competition at a local, regional, and national level.

Briar Woods FBLA Activities
- Ice Cream Social
- Service Projects (Comfort Cases & Project Ask)
- Region | State | National Competitions
- Closing Social
Business Industry Certifications

➢ Students in ALL CTE courses will have the opportunity to take the Workplace Readiness Skills industry certification

➢ Students taking Computer Information Systems and Advanced Computer Information Systems will have the opportunity to obtain Microsoft Office Specialist (MOS) certifications in these Microsoft Office applications:
  - Word
  - PowerPoint
  - Excel
  - Access

➢ App Development: IC3 Digital Literacy Global Standard 6 (GS6) Certification

➢ Cybersecurity Operations: CompTIA IT Fundamentals
Family & Consumer Sciences (FACS)

- Facilitate student progress toward a set of unifying goals in the areas of academic achievement, cultural and environmental issues, health and safety, individual and family relations, leadership and workplace ethics, and application of technology.

- Briar Woods High School FACS Teachers:
  - Diane Breinig
  - Maryanne Valleau
<table>
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<tbody>
<tr>
<td>844003</td>
<td>Introduction to Early Childhood</td>
<td>1</td>
<td>9-12</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>844001</td>
<td>Early Childhood Education I</td>
<td>2</td>
<td>10-12</td>
<td>Recommended: Human Development</td>
<td></td>
</tr>
<tr>
<td>845002</td>
<td>Early Childhood Education II</td>
<td>2</td>
<td>11-12</td>
<td>Early Childhood Education I</td>
<td></td>
</tr>
<tr>
<td>875101</td>
<td>Introduction to Culinary Arts</td>
<td>1</td>
<td>9-11</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>845700</td>
<td>Gourmet Foods</td>
<td>0.5</td>
<td>9-12</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>845100</td>
<td>Gourmet Foods</td>
<td>1</td>
<td>9-12</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>840700</td>
<td>Independent Living</td>
<td>0.5</td>
<td>9-12</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>846700</td>
<td>Fashion Design and Merchandise</td>
<td>0.5</td>
<td>9-12</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>840002</td>
<td>Teacher Cadet 1 DE</td>
<td>1</td>
<td>11-12</td>
<td>2.7 GPA, application process, essay, teacher recommendations (3)</td>
<td></td>
</tr>
<tr>
<td>840006</td>
<td>Teacher Cadet 2 DE</td>
<td>1</td>
<td>11-12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
FACS: Preschool at The Woods

The ABC’s of Early Childhood Education - Intro to ECE, ECE I & II

Amazing Beginning Curiosity

Contact Ms. Breinig: diane.breinig@lcps.org
FACS Co-Curricular Organization: FCCLA
FACS Co-Curricular Organization: Educators Rising

Educators Rising:
Educators Rising provides middle and high school students with opportunities to explore teaching as a career option. It helps students gain a realistic understanding of the nature of education and the role of the teacher.

What Educators Rising can do for you:
- Raise Awareness — Promote excellence — Enhance Leadership Skills
- Build Self-Confidence — Become a Role Model
FACS Industry Certifications

- Early Childhood II National Certification AAFCS & Para Pro
- Education Fundamentals (Teachers for Tomorrow) AAFCS & Praxis Core
- Workplace Readiness Skills (all courses)
Marketing Education

★ Introduction to Business & Marketing
★ Sports & Entertainment Marketing
★ Travel, Tourism, Destination Marketing
★ Project Management
★ Marketing 1 (Non Co-Op/Co-Op)
★ Advanced Marketing (Non Co-Op/Co-Op)

Field Trips * Fun * Project-Based Learning

BWHS Marketing Teachers:
Renae Sterling & Heather VanDyke & Meredith Young
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<td>Intro. to Business &amp; Marketing</td>
<td>1</td>
<td>9-11</td>
<td>None</td>
<td>Project-based Introductory level class covering basic Business &amp; Marketing</td>
</tr>
<tr>
<td>821100</td>
<td>Sports &amp; Entertainment Marketing</td>
<td>1</td>
<td>10-12</td>
<td>Intro. to Business &amp; Marketing <em>(recc)</em></td>
<td>Project-based Marketing Course focused on Sports &amp; Entertainment Industry (Fantasy Football utilized in class)</td>
</tr>
<tr>
<td>822500</td>
<td>Travel, Tourism, and Destination Marketing</td>
<td>1</td>
<td>11-12</td>
<td>Introduction to Business &amp; Marketing <em>(recc)</em></td>
<td>Project-based Marketing Course focused on Travel &amp; Tourism Industry (Virtual Business – Hotel program utilized in class)</td>
</tr>
<tr>
<td>827000</td>
<td>Project Management</td>
<td>1</td>
<td>11-12</td>
<td>None</td>
<td>Project-based course that allows students to develop leadership skills and learn concepts such as project management, communication, and team building.</td>
</tr>
<tr>
<td>822100</td>
<td>Marketing Non Co-Op</td>
<td>1</td>
<td>10-12</td>
<td>None</td>
<td>Project-based Marketing Course focused on General Marketing concepts (Career, Product Development, Selling)</td>
</tr>
<tr>
<td>822000</td>
<td>Marketing Co-Op</td>
<td>2</td>
<td>11-12</td>
<td>Screening Conference with Renae Sterling <em>(Marketing Teacher)</em></td>
<td>Same course material as Marketing Non Co-Op with the extra course credit for those students working outside of school</td>
</tr>
<tr>
<td>823100</td>
<td>Advanced Marketing Non Co-Op</td>
<td>1</td>
<td>12</td>
<td>Marketing Non Co-Op OR Marketing Co-Op</td>
<td>Project-based Advanced Marketing course which focuses on business management, human resources, operations and sales. The School Store, The Falcons’ Nest, acts as the learning lab.</td>
</tr>
<tr>
<td>823000</td>
<td>Advanced Marketing Co-Op</td>
<td>2</td>
<td>12</td>
<td>Marketing Non Co-Op OR Marketing Co-Op</td>
<td>Same course material as Advanced Marketing Non Co-Op with extra course credit for those students working outside of school</td>
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</table>
What Is Marketing Co-Op?

★ Earn 2 credits
★ Students work outside of school
  ○ Marketing related job (Grocery Store, Restaurant, Fitness, Movie Theatre, Retail, etc.)
★ Students work 280 hours during the school year
  ○ Counting Hours begin July 1 – June 30
★ Combine classroom instruction with supervised on the-job training in a local marketing business
★ Quarterly evaluation on the job performance
★ No previous marketing courses required
★ Grades: 11 and 12
★ Email Ms. Sterling with questions and/or pre-screening conference (renae.sterling@lcps.org)
Co-Curricular Marketing Organization

★ **DECA** prepares emerging leaders and entrepreneurs in marketing, finance, hospitality and management in high schools and colleges around the globe.

★ **DECA** members become:
  ○ Academically prepared
  ○ Community oriented
  ○ Professionally responsible
  ○ Experienced leaders

Virginia DECA 2021-2022

Maximize Your Momentum oDECA

FiRED UP
Marketing - School Based Enterprise

The Falcons’ Nest

(Open every school day 8:40 – 9:10 AM)

★ Gold Certified School-Based Enterprise
★ Open mornings and special occasions
★ Operated by Marketing students
Marketing Industry Certifications

- NRF – Customer Service & Sales
- NRF – Business of Retail Operations & Profit Examination
- Workplace Readiness Skills (all courses)

The NRF’s mission is to advance the interests of the retail industry through advocacy, communications and education.
We Are ... Marketing!

★ We Are – Project-Based Learning

★ We Are – FUN!

★ We Are – Always Open
  ○ Room 403/405

★ We Are – The School Store

★ We Are – DECA
The STEM program at Briar Woods provides hands-on experiences that lead to the development of technology literacy and competency.

Available courses prepare students for technical & professional higher education programs in the areas of STEM including: Engineering, Aerospace or Architecture as well as various valuable trade skills.

Briar Woods STEM Teachers:

PREPARE FOR IN-DEMAND TECHNOLOGY CAREERS NOW!

Erik Kittelson

Jim Scott
Technology and Engineering Education

➢ Students interested in Construction, Product Development, or Inventions/Making should consider Production courses:
   ○ Materials and Processes, Manufacturing I & II, & Production Systems.

➢ Students interested in 3D Engineering Design & Architecture should consider CAD courses:
   ○ Technical Drawing, Engineering & Architectural Design, & Advanced Drawing

➢ Students interested in Practical Technology and Engineering consider:
   ○ Intro to Engineering Design (Honors), Principles of Engineering (Honors), Civil and Architectural Engineering.

➢ Students interested in Aeronautics and Space should consider:
   ○ Aerospace I & Aerospace II
## Technology/Engineering Course Offerings

<table>
<thead>
<tr>
<th>COURSE#</th>
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</thead>
<tbody>
<tr>
<td>810000</td>
<td>Aerospace Science I</td>
<td>1</td>
<td>10-12</td>
<td>None</td>
<td>Introductory course that covers the basics of flight, space exploration, and their supporting technology. Lots of hands-on projects</td>
</tr>
<tr>
<td>810500</td>
<td>Aerospace Science II</td>
<td>1</td>
<td>11-12</td>
<td>Aerospace Science 1</td>
<td>Level-II Course. Increase your knowledge in areas such as drones, airport infrastructure, and living and working in space. Hands on Projects</td>
</tr>
<tr>
<td>853000</td>
<td>Technical Drawing &amp; Design</td>
<td>1</td>
<td>9-12</td>
<td>None</td>
<td>Introductory course that focuses on the basic language of Technical Design and use of digital design software titles.</td>
</tr>
<tr>
<td>853500</td>
<td>Engineering Drawing &amp; Design</td>
<td>1</td>
<td>10-12</td>
<td>Technical Drawing &amp; Design</td>
<td>Increase student understanding of the 3-dimensional design process. Create virtual models and assemblies to solve design and development problems.</td>
</tr>
<tr>
<td>854500</td>
<td>Advanced Drawing &amp; Design</td>
<td>1</td>
<td>11-12</td>
<td>Architectural Drawing &amp; Design or Engineering Drawing &amp; Design</td>
<td>Level III course where students apply the design process, independently and collaboratively, so they can design solutions real world architecture and engineering design challenges.</td>
</tr>
<tr>
<td>842100</td>
<td>Technology of Robotic Design</td>
<td>1</td>
<td>9-12</td>
<td>None</td>
<td>Prior coding experience recommended. Study computers and microprocessor through the application of robotic mechanisms and challenges. (Hands on Class)</td>
</tr>
<tr>
<td>COURSE#</td>
<td>COURSE NAME</td>
<td>CREDIT</td>
<td>GRADE</td>
<td>PREREQUISITES</td>
<td>BRIEF COURSE DESCRIPTION</td>
</tr>
<tr>
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</tr>
<tr>
<td>852000</td>
<td>Materials &amp; Processes</td>
<td>1</td>
<td>9-12</td>
<td>none</td>
<td>Introductory “maker” course. Learn the basics of how to make/build. Lots of hands-on projects!</td>
</tr>
<tr>
<td>852400</td>
<td>Manufacturing Systems I</td>
<td>1</td>
<td>10-12</td>
<td>Materials &amp; Processes</td>
<td>Level-II “maker” course. Increase your ability to create and build. Lots of hands-on projects!</td>
</tr>
<tr>
<td>852800</td>
<td>Manufacturing Systems II</td>
<td>1</td>
<td>11-12</td>
<td>Manufacturing Systems 1</td>
<td>Advanced “maker” course. Take your skills to the next level. Lots of hands-on projects!</td>
</tr>
<tr>
<td>851000</td>
<td>Production Systems</td>
<td>1</td>
<td>12</td>
<td>Manufacturing Systems 2</td>
<td>Senior design/maker course. Prepare for careers in product development and production management.</td>
</tr>
<tr>
<td>898400</td>
<td>PLTW Intro to Engineering Design</td>
<td>1</td>
<td>9-11</td>
<td>None</td>
<td>Honors level Engineering skill development. Apply Engineering Design Process thru hands-on projects.</td>
</tr>
<tr>
<td>898800</td>
<td>PLTW Principles of Engineering Design</td>
<td>1</td>
<td>10-12</td>
<td>PLTW Introduction to Engineering Design</td>
<td>Honors level Engineering. Apply physical/mechanical concepts with practical hands-on projects!</td>
</tr>
<tr>
<td>NEW</td>
<td>PLTW Civil Engineering and Architecture (Honors)</td>
<td>1</td>
<td>11-12</td>
<td>PLTW Principles of Engineering Design</td>
<td>Honors Level Engineering and Architecture Course. Learn the concepts of building design and construction. Students analyze, design and build electronic and physical models of civil and residential structures.</td>
</tr>
</tbody>
</table>
Technology Student Association

- **TSA**: Prepares students by offering leadership opportunities in technology, innovation, design, and engineering.

- **TSA students**:
  - Apply and integrate science, technology, engineering, and math concepts.
  - Gain leadership and problem solving skills that can be used in college and the workforce.
  - Compete in Regional, State, and National competitions
    - Video game design
    - Robotics and automation
    - Engineering design
    - System control
Tech Ed Industry Certification

- Autodesk Certified User Exam
  - CAD students have the opportunity to complete entry level industry certifications within each course
  - Autodesk AutoCAD User Certification
  - Autodesk Inventor User Certification
  - Autodesk Revit Architecture User Certification
Celebrate Today, Own Tomorrow!

Sign up for a CTE Course Today!

Questions? Reach out to any CTE Teacher via email for answers

Briar Woods CTE Website