



Majors and Descriptions

Submit your application by April 1 at ORANGECONNECTION.org/gpu.

Agribusiness

Session: June 12-14

Ages: 9 to 13

Earn huge profits or go bankrupt based on your decisions! We will learn about key concepts in agribusiness management in a fun, competitive game. Will you be named "Oklahoma's Top Producer of 2024?"

Anticipated Activities:

- Utilize FARRM simulation
- "Oklahoma's Top Producer 2024" competition

Physical Activity Level:

Low level of physical activities

Amazing Insects

Session: June 12-14 & June 26-28 – **Both Sessions**

Ages: 7 to 13

Discover insects and their many cousins up close and personal through the exciting science of entomology! Learn about all sorts of different bugs and their importance to people and the environment. This is an interactive learning adventure for young scientists (of all ages)!

Anticipated Activities:

- Grasshopper dynamite dissection
- Live bug petting zoo
- Insect exploration walk at the Botanic Garden
- Termite hot wheels
- Maggot art
- Stir-fried mealworms for a snack

Physical Activity Level:

High level of physical activity, including walking and swinging a collection net outside in the heat

If you have questions about a major or the application form, please contact Taylor Wood at 405.744.1544 or taylor.l.chapman@okstate.edu.

Submit your application by March 31 at ORANGECONNECTION.org/gpu.

Anthropometry and Ergonomics

Session: June 12-14

Ages: 7 to 13

Anthropometry is the study of measurements and proportions of the human body, and this exciting major will allow you to explore this scientific world! We will use anthropometry and other exciting tools to come up with a design concept using ergonomic principles. Don't miss your chance to take measurements of your body using our 3D body scanner!

Anticipated Activities:

- Taking human body measurements using a 3D scanner
- Identifying challenges that older adults face and creating a fishbone diagram with causes and sub-causes
- Proposing ergonomics solutions

Physical Activity Level:

Low level of physical activity

Architectural Engineering

Session: June 26-28

Ages: 9 to 13

Architectural Engineering is both a science and an art. The design of building systems requires knowledge in science, technology, engineering, mathematics (STEM) and architecture (STEAM). Learn about the various systems that make buildings stand up and provide comfort to the people inside them. Investigate the behavior of materials used in the construction of building structures. The class will design, build and test their own structural members.

Anticipated Activities:

- Interactive kid structures
- Work with concrete molds
- Design and test your own structures

Physical Activity Level:

Medium level of physical activity, mostly indoors and seated activities, kids will engage in active lessons

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Architecture

Session: June 12-14

Ages: 9 to 13

We experience the art of architecture every day, with buildings all around us affecting the ways we live, work and play. Learn some of the basic design principles and structural systems evident in great architecture, and the role and responsibility of the architect in contemporary society. The class will design and build a scale model of a city, appropriately named "Petesburgh!"

Anticipated Activities:

- Drawing
- Planning a city
- Learning design and structural principles

Physical Activity Level:

Medium level of physical activity, with some walking

Become an OSU Extension Educator!

Session: June 26-28

Ages: 7-13

What does an Extension Educator do? We deliver research-based educational programs to all 77 counties in Oklahoma, and we make it fun to learn! Get hands-on experience of what it's like to be a part of improving the lives of Oklahomans for over 100 years with activities like using STEM technology, create barn quilts to promote agritourism and cultural heritage.

Anticipated Activities:

- Make homemade jam using STEM technology
- Design and paint a barn quilt
- STEM science fun

Physical Activity Level:

High level of physical activity, including walking outdoors in the heat, standing and gentle stretching

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Broadcasting

Session: June 12-14

Ages: 9 to 13

From editing to reporting, this major will teach you all about the world of broadcast journalism! Participants will record feature stories about prominent OSU landmarks, edit those stories and then appear on set to record all the stories into a newscast.

Anticipated Activities:

- Record your story narrative
- Editing audio and videos into the story
- Sit at the anchor desk to introduce your story

Physical Activity Level:

Low level of physical activity

Chemistry FUNdamentals

Session: June 12-14

Ages: 7 to 13

Chemistry is everywhere, in our bodies, the environment, in outer space! Join us to learn some of the fundamentals of chemistry - what the periodic table is and why all chemists use it, how to make molecules and learn the language and lingo of chemistry. We will do hands on experiments to get more information about our world and the stuff in it.

Anticipated Activities:

- Make a chemical reaction happen with household items you can try again at home
- A density trick to amaze your relatives
- Make a weather testing flower

Physical Activity Level:

Low level of physical activity

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Computer Science

Session: June 12-14

Ages: 7 to 13

Investigate the world of programming! Participants will get the chance to build and play their own computer game. How many points do you think will you be able to earn? Plus, join us to learn about electronic circuits and try to build even bigger circuits!

Anticipated Activities:

- Build your own video game and play with your grandparents
- Build electric circuits to make things work
- Program your own object to make it move around the room

Physical Activity Level:

Low level of physical activity

Discover Chinese Culture – NEW IN 2024!

Session: June 12-14

Ages: 7 to 13

Let's explore the richness of Chinese culture! Discover traditions, language, and art through engaging activities and expert guidance. An unforgettable journey awaits!

Anticipated Activities:

- Use Lego blocks to visualize and learn basic strokes and structure of Chinese characters
- Learn the Chinese Zodiac system by making a kite
- Get introduced to the captivating Beijing Opera and its diverse artistic elements
- Create your own Chinese New Year lantern
- Explore different strategies for creating lines and curves with an ink brush by painting a panda

Physical Activity Level:

Low level of physical activity

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Exploring the Modern Academic Library

Session: June 12-14

Ages: 10 to 13

Come see the fun, exciting and dynamic environment of a modern academic library! It's so much more than old books and rows of card catalogs! Today's modern academic libraries, such as Edmon Low Library, are fun and exciting places filled with new technology, exciting research projects, recording studios and even coffee shops.

Anticipated Activities:

- Experience 3D printing and other creation technologies
- Record a professional-quality interview
- Learn about maps, free textbooks and artificial intelligence tools

Physical Activity Level:

Medium level of physical activity, including walking and standing

Graphs in the Real World – NEW IN 2024!

Session: June 26-28

Ages: 10 to 13

Many real world problems can be modeled by graphs! Imagine you want to connect three utilities to three houses. Is it possible to do this without one line going over another? Graphs are everywhere in modeling problems like this, and even the simplest graphs lead to some very interesting questions! We'll define these objects and play around with lots of interesting examples.

Anticipated Activities:

- Use graphs to study interesting, real-world problems
- Coloring maps
- Counting handshakes

Physical Activity Level:

Low level of physical activity

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Hands-On Horticulture

Session: June 12-14

Ages: 7 to 13

Plants are COOL! Discover the world of horticulture by taking a deep-dive into it! Learn about different plants and what they do all day. We will do a lot of hands-on activities and take tours of our facilities. Be prepared to learn to love plants!

Anticipated Activities:

- Design and create a gnome garden
- Tour the Greenhouse Learning Center and OSU Botanic Garden
- Simulate a season of being a plant and learn what plants need to grow and thrive

Physical Activity Level:

High level of activities, including walking outside and exposure to heat

Landscape Design & Outdoor Sketching

Session: June 26-28

Ages: 8 to 13

Have you ever been curious about which profession is responsible for designing a park, plaza, residential yard, streetscape and other outdoor places? This landscape architecture course will take the students on a two-day journey to be a professional landscape architect. The students will follow the instructor's demonstration to design a dream residential landscape of an estate. They will also have an opportunity to visit The Botanic Gardens at OSU and do outdoor sketches. They will have a crash course about landscape drawing techniques following the instructor's hands-on teaching approach. Students will be able to take home their beautiful designed drawings and landscape sketches.

Anticipated Activities:

- Designing a dream residential landscape
- Sketching outdoors in the Botanic Garden

Physical Activity Level:

High level of physical activity, including walking and outdoor heat exposure

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Microbiology

Session: June 12-14 & June 26-28 – **BOTH SESSIONS**

Ages: 7-13

Discover the diversity of microorganisms through the science of microbiology! Collect, grow, and describe bacteria while learning the lingo and techniques in a lab. Explore the many microorganisms living both in the environment and inside animals. This is a fun and hands-on way to get young scientists interested in microbiology!

Anticipated Activities:

- Collect and grow environmental microbes
- Stain a bacterial sample and view using a microscope
- Build models of microorganisms

Physical Activity Level:

Medium level of physical activity, including outdoor heat exposure, standing and walking

Molecular World Building

Session: June 26-28

Ages: 7 to 13

Our whole world is made up of molecules. With the help of models, computers and 3D printers, we'll make the molecular world come alive right in front of you! Learn about molecular shapes and interactions as you design your own molecules and build your own molecular world. You'll uncover how tiny molecules give rise to big materials all around us!

Anticipated Activities:

- Design personalized molecules using 3D-printed model kits
- Fabrication of molecules on computers
- Perform experiments in molecular packing using molecular model analogs
- Experiment with molecular interactions and molecular assembly
- Visualize, animate and interact with both virtual and physical molecular worlds

Physical Activity Level:

Low level of physical activity

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Oklahoma Geology

Session: June 26-28

Ages: 7 to 13

Learn about Oklahoma's exciting geologic past and processes affecting us today. Walk through geologic time and learn about mountain formation, sediment accumulation, and cave formation. Learn about fossils, minerals and rocks, and products made from petroleum. Peer beneath the surface of the Earth and learn about the geology behind earthquakes.

Anticipated Activities:

- Investigating properties of rocks, minerals, water and sediments
- A walk through geologic time in Oklahoma
- Hands-on activities investigating rocks, minerals and dinosaurs

Physical Activity Level:

High level of physical activity, walking/standing outside for a couple of hours, jumping up and down (optional), swinging a heavy hammer (optional)

Sports Marketing

Session: June 26-28

Ages: 7 to 13

You're the new owner of a professional sports team – what do you do now? As a new sports marketer, you'll learn about promoting professional and college teams as well as how traditional products and services are marketed via sports. The class will examine the Dos and Don'ts of branding (logos, uniforms, merchandise) plus advertising, game day promotions, ticketing and trends such as social media.

Anticipated Activities:

- Conceive and design fictional team logos and uniforms (illustrated by students)
- Facility tours (if possible)
- Try on real collegiate uniforms

Physical Activity Level:

Low level of physical activity, additional walking and stairs will be added if the facility tours take place

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Talk to Me!

Session: June 26-28

Ages: 7 to 13

Have you ever wondered about how you learned to talk? What about why you have ear wax? Come join us as we learn about communication disorders and have fun while doing it! You will learn how to protect your hearing, how language develops and what happens when communication breaks down.

Anticipated Activities:

- Learn the OSU alma mater in American Sign Language
- Make ear wax
- Discover ways to communicate without talking

Physical Activity Level:

Low level of physical activity

Virtual Reality and Design

Session: June 12-14

Ages: 7 to 13

Don't miss your chance to virtually explore a building that you designed! This exciting major will focus on the importance of design and construction. We will specifically look at how to use Sketchup, a simple and free 3D modeling software, and how it can be helpful design projects. We will explore things like color and material and how they can be used in the design of a small space. We will also learn and look at how to use virtual reality to simulate the space we designed. Then we will learn about augmented reality and how we can use it with Sketchup. Finally, we will look at what 3D printing is and how the same model that we designed can be 3D printed using a 3D printer.

Anticipated Activities:

- Design a small space
- Use virtual reality to walk inside your building
- 3D-print your house
- Use augmented reality to make your designs come to life

Physical Activity Level:

Low level of physical activity

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Rank your majors starting with “1” as your top pick. Each family group should have separate rankings. Rank a major “0” if you can’t attend the session, don’t qualify for the age requirement or are unwilling to attend the major even if it’s the only one available.

SESSION ONE – JUNE 12-14	AGES	MY RANKING
Agribusiness	9-13	
Amazing Insects	7-13	
Anthropometry and Ergonomics	7-13	
Architecture	9-13	
Broadcasting	9-13	
Chemistry FUNdamentals	7-13	
Computer Science	7-13	
Discover Chinese Culture	7-13	
Exploring the Modern Academic Library	10-13	
Hands-On Horticulture	7-13	
Microbiology	7-13	
Virtual Reality and Design	7-13	
SESSION TWO – JUNE 26-28	AGES	MY RANKING
Amazing Insects	7-13	
Architectural Engineering	9-13	
Become an OSU Extension Educator	7-13	
Graphs in the Real World	10-13	
Landscape Design and Outdoor Sketching	8-13	
Microbiology	7-13	
Molecular World Building	7-13	
Oklahoma Geology	7-13	
Sports Marketing	7-13	
Talk to Me!	7-13	

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