Dixie State University does not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation, gender identity, age (40 and over), disability status, veteran status, pregnancy, childbirth, or pregnancy-related conditions, citizenship, genetic information, or other bases protected by applicable law in employment, treatment, admission, access to educational programs and activities, or other University benefits or services.

Title VI of the Civil Rights Act of 1964 prohibits discrimination based on race, color or national origin at any program or activity receiving federal financial assistance. Title VI prohibits racial harassment, and such harassment is prohibited in all facets of educational activities at DSU. If you encounter this type of discrimination/harassment, you can speak with the EEO Director or the Director of Student Conduct. Additional information can be found at: https://titleix.dixie.edu/.

Title IX of the Education Amendments of 1972 prohibits sex discrimination against any participant in an educational program or activity that receives federal funds. The act is intended to eliminate sex discrimination and harassment in education. Title IX covers discrimination/harassment/Sexual Violence in programs, admissions, activities, and student and employee sexual misconduct. DSU’s policy against sexual harassment extends not only to employees of the university, but to students and visitors as well. If you encounter sexual harassment or gender-based discrimination (including discrimination or harassment based on pregnancy, pregnancy related conditions, sexual orientation or gender identity), contact the Title IX Coordinator or a Deputy Coordinator. Additional information can be found at: https://titleix.dixie.edu/.
Dear Dixie PREP Student,

Congratulations and welcome to Dixie PREP 2021! As a Dixie PREP student you will be involved in a program that can make a big difference in your life, both academically and personally. We appreciate the commitment you and your family are making for you to attend Dixie PREP this summer, and encourage you to take advantage of this time to explore careers in the fields of science, technology, engineering and mathematics. Work hard to build the skills and knowledge to pursue your dreams for your future.

Succeeding at Dixie PREP takes hard work, dedication, responsibility and accountability. You have been chosen as a Dixie PREP student because your academic accomplishments say you can do it, and do it well. Dixie PREP is worth your time and effort. PREP graduates around the nation have demonstrated outstanding achievement in high school, college and future careers. We are confident that each of you can succeed and extend your reach to a future of limitless possibilities.

Dixie PREP’s committed and well qualified staff is here to assist you. Please communicate with myself or your Program Assistant (PA) about any questions or concerns that you may have during the program. We all want Dixie PREP to be the best program possible.

On behalf of the entire Dixie PREP 2021 staff, welcome!

Sincerely,

[Signature]

Jessica Davis
Director
Dixie State University
Department of Mathematics
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INTRODUCTION

In 1979, Dr. Manuel P. Berriozabál, a professor of mathematics at the University of Texas at San Antonio, founded the Prefreshman Engineering Program, to identify high achieving middle and high school students with the interest and potential to become scientists and engineers. PREP successfully developed into a nationally recognized program known as PREP USA. Following the award-winning curriculum of PREP USA, Dixie State University is introduced Dixie PREP in June 2017, a STEM (science, technology, engineering, and mathematics) based academic enrichment program.

Dixie PREP emphasizes the development of logical reasoning and problem solving skills, as well as the application of this knowledge, through coursework, team projects, class presentations, and examinations. Coupled with a strong academic program, Dixie PREP will provide career awareness speakers from STEM fields and field trips to sites exhibiting work in STEM fields. Dixie PREP’s staff consists of highly qualified professional instructors, Program Assistants (PA), and administrative personnel.

Dixie PREP is an exciting, intellectually demanding program that has high expectations of its participants. The students will need to dedicate themselves to seven weeks of hard work and academically challenging courses. In order to attain the desired level of learning, Dixie PREP students are expected to invest nightly effort on homework assignments and projects. Dixie PREP students’ first priority is to learn!

An orientation is held for students and parents prior to the beginning of Dixie PREP. Topics covered include: Dixie PREP program overview, classroom rules, procedures, expectations, attendance policy, transportation requirements, and lunch guidelines.

Mission Statement

The mission of Dixie PREP is to enhance middle and high school age students’ academic background in science, technology, engineering, and mathematics (STEM) fields to motivate and prepare them for success in STEM fields.

Objectives

- Increase the number of students enrolled in high school STEM courses leading to STEM degrees and careers
- Encourage participants to serve as models and mentors in their respective schools
- Foster student success and engagement in middle schools
- Inspire underrepresented populations to pursue STEM educations and careers
- Provide a mechanism for increased collaboration with schools, government agencies, industry, and community partners
- Increase resources to support the Dixie PREP program (through grants, industry partnerships, etc.)
Contact
Dixie PREP Main Office
435-879-4461
Jessica.davis@dixie.edu

Communication is the key factor to a successful Dixie PREP program. Please communicate any needs, questions, or concerns that you may have.

Site and Program
Date: June 7 – July 22, 2021, with the exception of July 2-5

Hours of Operation: 9:00 am – 2:00 pm on Monday – Thursday, 9:00 am – 12:00 pm on Friday

Mandatory Meetings
Wednesday, April 28: Parent/Student Orientation
   Year 1: 6:00 pm – 7:00 pm
   Year 2&3: 7:30 pm – 8:30 pm
Thursday, July 22: Closing Celebration 6:30 pm – 8:30 pm

Facilities: All program activities, except for field trips, will be held at Dixie State University’s campus.

Daily Schedule

Monday – Thursday
8:45-9:00 am – Student Drop Off/Roll Call
9:00-9:55 am – Career Awareness
10:00-10:55am – Class 1
11:00-11:55 pm – Class 2
12:00-12:45 pm – Lunch/Study Help
12:50-1:50 pm – Class 3
2:00 pm – Student Pick Up

Friday
8:45-9:00 am – Student Drop Off/Roll Call
9:00-12:00 pm – Field Trip/Activity
12:00 pm– Student Pick Up
CURRICULUM

Year 1

- **Logic and Its Application to Mathematics**: compound statements, truth tables, elementary set theory, Boolean algebra, and switching networks
- **Introduction to Engineering**: introduction to the engineering profession, measurements, simple mechanics, work-energy and engineering design, in-class lab demonstrations of engineering principles, and team designs projects
- **Topics in Problem Solving 1**: learning problem solving strategies using mathematical inquiry, applied mathematical investigation, and algorithm development and generalization

Year 2

- **Algebraic Structures**: number groups, sets and set notation, algebraic proofs, and number systems
- **Introduction to Physics**: Newtonian physics, work-energy, robotics, optics and light (wave and particle), and electricity and magnetism
- **Topics in Problem Solving 2**: learning problem solving strategies using mathematical inquiry, applied mathematical investigation, and algorithm development and generalization

Year 3

- **Technical Writing**: word processing and graphic design software, original research, rhetorical situation and appeals, invention, organization, revision, style, and design
- **Probability and Statistics**: types of data, R, scale of measurements, normal distributions, central tendency, standardization, scatter plots and correlation, contingency, conditional probability, independence, hypothesis testing, t test, and modeling
- **Intro to Computer Science**: block coding, line coding, computer science strategies, applied algorithm development, debugging, real world application of problem solving skills and algorithms

Grading Scale

<table>
<thead>
<tr>
<th>Grade</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90-100</td>
</tr>
<tr>
<td>B</td>
<td>80-89.9</td>
</tr>
<tr>
<td>C</td>
<td>70-79.9</td>
</tr>
</tbody>
</table>
Grading Policy

All homework, quizzes, tests, and other assignments will be assessed to determine the student’s overall grade for each course. **If a student has an overall failing average in all of his/her classes (69.9% or below), that student may not be invited to reapply for Dixie PREP the following year.** Grades will be distributed after the program ends. The Dixie PREP curriculum builds each year, and students who fail a course would already be behind at the start of the following year. For this reason, it is important that all students work hard to study and understand the material and to complete daily homework assignments. Each course has an instructor and a Program Assistant (PA) that are available to help with questions regarding the course material. In addition, the student’s assigned PA will also be available to help students with assignments and coursework.

Turning in Work

All assignments should be turned in on time, as directed by Dixie PREP staff. **Consistent late work will result in a parent meeting and possible dismissal from the program.**

Class Participation

Classroom participation is encouraged. The classroom instructor will determine the level of participation appropriate for each activity. Students should raise their hand if they would like to contribute. Students should always be courteous, and show respect to guest speakers, instructors, PAs, Dixie PREP Staff, and other students in the program.
STUDENT CODE OF CONDUCT

Behavior Guidelines
Dixie PREP is dedicated to providing an excellent summer program for high-achieving 6th, 7th, and 8th grade students. To accomplish this goal, students are expected to follow the Dixie PREP Student Code of Conduct and the Student Code of Conduct from their school district at all times to promote a safe, fun, healthy and respectful environment for all participants. Unacceptable behavior will result in corrective measures and may include a report to the student’s school district and/or removal of the student from the Dixie PREP program.

At Dixie PREP student will:

General
- Wear appropriate clothing to Dixie PREP each day (see Dress Code)
- Participate in all activities, including class work, projects, and homework assignments
- Be on time each day and ready to participate
- Be a positive influence on those around them

Respect
- Be respectful and cooperative and contribute positively to the experience of fellow students
- Be careful that my actions, behavior, and language do not hurt other students’ feelings or hurt them physically in any way, intentionally or accidentally
- Show respect to all Dixie PREP staff and cooperate fully with their instructions and directions.
- Respect the values and beliefs of others
- Never discriminate or harass anyone based on race, national origin, color, religion, disability, sex/gender, sexual orientation, gender identity, or any other protected class

Personal Space and Property
- Be respectful of all Dixie campus and Dixie PREP property, equipment, and supplies
- Never mark, deface, or destroy Dixie PREP materials or the personal property of others

Safety
- Be aware of my surroundings at all times
- Pay attention to instructions and directions given by my leaders
- Stay with my assigned group and PA at all times
- Immediately notify the PA of any safety risk observed
- Immediately report violations of the Student Code of Conduct to the PA

Dress Code
- Students should always be clean and neat in appearance
- Clothing that is distracting in appearance must be avoided.
- Clothing that contains vulgar words, profane or obscene slogans and pictures, gang affiliations, or advertisements for alcohol, tobacco, and drugs are not permitted
- Students who violate the dress code may be asked to call their parents to pick them up early. Repeated violations may result in dismissal from Dixie PREP.
Unacceptable Behavior

Disciplinary action may be taken as a result of any behavior that violates the Student Code of Conduct, is disruptive, or violates the rights of others. The following are examples of unacceptable behavior (not an exhaustive list) and are subject to disciplinary action at Dixie PREP. The listed behaviors may result in immediate dismissal from the program and may not necessarily result in the corrective measures outlined in the next section.

<table>
<thead>
<tr>
<th>Name calling</th>
<th>Bullying</th>
<th>Stealing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criminal Activity</td>
<td>Threatening</td>
<td>Fighting</td>
</tr>
<tr>
<td>Taunting/ridiculing</td>
<td>Hitting/kicking</td>
<td>Damaging property</td>
</tr>
<tr>
<td>Inappropriate gesturing</td>
<td>Shoving/pushing</td>
<td>Inappropriate touching</td>
</tr>
<tr>
<td>Demeaning comments/gossiping</td>
<td>Inappropriate language</td>
<td>Discrimination/Harassment</td>
</tr>
<tr>
<td>Accessing inappropriate electronic content</td>
<td>Sexual Harassment based on protected class</td>
<td>Failure to stay with assigned group during the program</td>
</tr>
</tbody>
</table>

Be aware that defiant and/or disrespectful behavior toward any Dixie PREP staff member or authority figure will not be tolerated and may result in corrective measures.

I understand the corrective measures and discipline process listed on pages 8-9 and know that I can be dismissed from the program should I violate the standards of conduct and Dixie PREP requirements.

Corrective Measures and Discipline

Discipline should not be confused with punishment. The goal of discipline is a self-regulated individual with mature attitudes and socially acceptable standards of conduct.

Corrective measures used will depend upon the nature of the behavior, the frequency, and the degree to which the student is willing to correct undesirable behavior.

Disciplinary actions will normally begin at a minimal level and then proceed to more serious levels with the exception of serious violations of the Student Code of Conduct (see examples of unacceptable behavior above).

Unacceptable behavior will result in corrective measures and may include a report to the student’s school district.

Corrective measures may include:
1. A verbal warning upon the first offense.
2. A second verbal warning will result in a written warning and parents will receive notification.
3. After two written warnings, a student and parent meeting with the Project Coordinator and/or the Program Director will be scheduled.
4. A written warning that happens after a parent meeting may result in the student’s dismissal from Dixie PREP.

Dixie PREP reserves the right to dismiss students from the program as needed, without following the above corrective action steps, to ensure a safe and respectful educational environment.

**Dismissal Appeal Process**

The following is the process for appeal of dismissals:

- Because daily attendance is necessary for academic success, student appeals must submit written appeal within 24-48 hours from the notice of dismissal from the program.
- The student must send an email to Dr. Jesse Hicks, Dixie PREP Appeals Chair, jesse.hicks@dixie.edu
- In this email the student must clearly explain
  - Why he/she is appealing his/her dismissal
  - Why he/she believes he/she should be readmitted
  - Address what he/she intends to do to change the behavior that merited dismissal

The information provided in this email will be considered by Dr. Hicks, who will make a decision and notify the student and parent/guardian of their decision within 48 hours of receipt of the appeal email. One of the natural consequences for the student will be missing study-groups, classes, and any other important events during the time for which he/she is expelled and during the appeal process. If the appeal is denied and discipline sustained, no special consideration will be given for make-up work during this time.
HEALTH AND SAFETY

Communicable Diseases
For the health of all our participants, parents are required to notify the Dixie PREP Main Office 435-879-4461 of all communicable diseases your child may have contracted (e.g., chicken pox, head lice, pink eye). Specific information will be kept confidential; however, Dixie PREP must notify all participants of the situation.

COVID-19
Regulations and restrictions regarding safety measures, sanitation, and social distancing are ever evolving. We are unsure what they will look like by the beginning of our program, but we will follow all health and safety guidelines put given by the State of Utah and our local health department. More information will be given at orientation.

Medication
The legal issues involved with students taking prescribed medication while at Dixie PREP prevent Dixie PREP staff from storing or distributing medications (including EpiPens). Please make arrangements for the student to schedule taking their medication before or after attending Dixie PREP. If your child requires medication during the program hours, please make arrangements with the staff so you can come and personally administer the medication to your child.

Special Nutrition Needs and Allergies
Please make sure that students are aware of their individual nutrition needs and allergies. Parents should inform Dixie PREP staff if needs are serious, or the student needs dietary accommodations for any Dixie PREP-provided food. These needs can be printed on the back of the student’s name badge if you request such an accommodation.

Sick Students
Students who arrive sick or begin to feel sick at any time during Dixie PREP will be asked to sit in the office under the watch of the Dixie PREP Administrator until parents are able to pick up the student. Parents will be notified of their child’s condition.

First Aid/911
If a student is injured in any way while attending Dixie PREP, an incident report will be filled out and parents notified. In the event of a serious injury, 911 will be called, first aid will be administered, and parents will be notified immediately. Dixie PREP will not transport any student in a personal vehicle and will call an ambulance in the event of an emergency. Dixie PREP is not responsible for medical costs including hospital bills, ambulance fees, etc. related to injuries requiring special medical attention.
Student Supervision

Under no condition will students be allowed to wander off on their own on Dixie State campus during Dixie PREP program hours. Once the student is checked in to the program each day, he/she will be required to stay with the group to which he/she is assigned. Leaving the assigned group may result in dismissal from the program. If the student is considered missing, Dixie PREP staff will notify parents to come to campus to assist in the search of the missing student. Campus police will be notified, and an incident report will be written and filed by DSU campus personnel.
ATTENDANCE AND TRANSPORTATION

Attendance

Students must be on time for daily roll call by 9:00 am each morning and must attend each class and remain in attendance for the entire class period. A total of three late days or early releases constitutes one absence. Attendance is necessary for successful completion of the program. Four absences will result in possible dismissal from the program. See our attendance policy below:

Dixie PREP Attendance Policy

Procedure- If the student incurs five or more absences, the student will be dismissed from the Dixie PREP. They may appeal if desired. If appealed, the student or their legal guardian must send an email to the Dixie PREP Program Director, Jessica Davis at Jessica.davis@dixie.edu, within 24 hours of the fifth absence. A council of DSU staff has reviewed a number of reasons for absences and has deemed them excused or unexcused. If the absence does not fit into one of these categories, the council will meet again to discuss the absence. If the absence is excused, the student and parent will be asked to email the program coordinator a student action plan that lays out how the student will get caught up.

- “Case by Case” situations will be deemed excused if the student has shown a history of, and is currently achieving, good grades (B or higher), good attendance, and good behavior (no written warnings).

List of Potential Absences

1. Nonacademic Camps

<table>
<thead>
<tr>
<th>Reason</th>
<th>Excused or Unexcused</th>
<th>Additional Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sport Tournaments, Religious Camps, and other Non-Academic Camps</td>
<td>Unexcused</td>
<td></td>
</tr>
</tbody>
</table>

2. Health

<table>
<thead>
<tr>
<th>Reason</th>
<th>Excused or Unexcused</th>
<th>Additional Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>One-Time Injury</td>
<td>Excused</td>
<td>Broken bones, etc. (Includes Dr. appointments)</td>
</tr>
<tr>
<td>Long-Term Condition</td>
<td>Excused</td>
<td>Diabetes, Cancer, etc. (Includes Dr. appointments)</td>
</tr>
<tr>
<td>Illness</td>
<td>Excused- with note (Parent or Doctor)</td>
<td>Cold, Flu, etc. (Includes Dr. appointments)</td>
</tr>
</tbody>
</table>

3. Academic Camps

<table>
<thead>
<tr>
<th>Reason</th>
<th>Excused or Unexcused</th>
<th>Additional Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Competition related to STEM</td>
<td>Excused</td>
<td>Robotics competition, etc.</td>
</tr>
</tbody>
</table>
| Other academic camps (Language, Student Government, Leadership, History, etc.) | Case by Case | “Case by Case” situations will be deemed excused if the student has shown a history of, and is
currently achieving, good grades (B or higher), good attendance, and good behavior (no written warnings). Approval of “excused” designation should happen prior to missing PREP days.

<table>
<thead>
<tr>
<th>Reason</th>
<th>Excused or Unexcused</th>
<th>Additional Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Vacation</td>
<td>Unexcused</td>
<td></td>
</tr>
<tr>
<td>Family Death</td>
<td>Excused</td>
<td></td>
</tr>
<tr>
<td>Recent Divorce</td>
<td>Excused</td>
<td></td>
</tr>
<tr>
<td>Family Event</td>
<td>Unexcused</td>
<td>Wedding, birthday party, etc.</td>
</tr>
<tr>
<td>Family Medical emergency</td>
<td>Excused</td>
<td>Birth, etc.</td>
</tr>
</tbody>
</table>

4. Family

Transportation

Each student is responsible for his/her own transportation to and from Dixie PREP each day. The parent or guardian will drop off the student from 8:45-9:00 am and pick them up at 2:00 pm. Permission may be granted for students to walk, ride bikes, or be driven by someone other than the parent/guardian. Staff members will be at the drop off/pick up location to meet the students each morning and stay with the students in the afternoon until 2:15 pm. There will be no supervision prior to 8:45 am or after 2:15 pm.

Late Drop Off

A staff member will wait at the drop-off location each morning until 9:00 am. If a student is dropped off after this time, it is the parent’s responsibility to bring the student to the on-campus Dixie PREP office (SNOW 134) and personally check the student in with the staff administrator. **Three late drop-offs will require a parent meeting and will be documented as one absence.**

Late Pick Up

Any student that is left waiting on parents/guardians after 2:15 pm will be taken to the on-campus Dixie PREP office (SNOW 134). The parent/guardian will have to park and come to the office to pick up their child. **Three late pick-ups will require a parent meeting and will be documented as one absence.** Dixie PREP does not have the funds to provide staff for after-program care for the students.

Roll Call

Roll call will be taken at the drop-off area between 8:45-9:00 am. When students arrive they will check-in with their assigned staff member. Students will be escorted by the staff to their first class at 9:00 am each morning.
OTHER INFORMATION

Daily Suggested Supplies
Notebook and writing utensils: All other supplies will be provided.
Sunscreen: Students will be outside periodically.
Water Bottle: Bathroom and water fountain breaks will be provided every hour between classes. Students are encouraged to bring a labeled water bottle.

Name Badges
Each student will be given his/her name badge every day at roll call. Name badges are to be worn the entire day while on campus and returned to the student’s PA at dismissal time.

Bathroom Usage
Students will have 5 minutes between classes for bathroom usage. If a Dixie PREP student needs to use the bathroom at any other time, he/she must be accompanied by a PA.

Cell Phones
Students may bring a cell phone for emergency use only. Phones may only be checked during break periods. If phones are accessed during instruction times, the student will be relocated to the front of the class until the end of that class. Dixie PREP students are encouraged to exercise professional behavior while engaged in this class program.

Lunch Time Procedures
Dixie PREP students will have a 45-minute lunch break/study period each day. During lunch, each group will be accompanied by their Program Assistant. Dixie PREP students will not be allowed to leave the designated eating area during lunch. Students must bring their own lunch each day and refrigeration is not provided. Students will eat lunch with their cohort.

Field Trip/Special Events Schedule
Field trips and special events will be held on Fridays. Parents will receive a notification early in the week regarding field trip details. Students should still be dropped off and picked up at the normal times unless notified otherwise. Students are required to wear their Dixie PREP T-shirts on field trip or activity days. Students who do not wear their shirt or who are otherwise disinclined to attend the field trip or activity may elect to skip the Friday fieldtrip, but their absence will count towards their absence total.

Computer Use
Depending on the course curriculum, students may be using Dixie computer labs to complete course materials. If needed, each Dixie PREP student will be issued a temporary Dixie log in and password. All of the
computers have appropriate firewalls installed, and students will be closely monitored by Dixie PREP staff during computer lab sessions. Accessing inappropriate content, as defined by the student’s school district, will result in corrective measures and may include a report to the student’s school district.