

ASU Prep program turns students into statisticians through the power of sports

By Marshall Terrill , ASU News

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Ask a high school kid if they want to attend a statistics class, and they might give you a blank stare or just laugh.

Ask them if they want to go to a professional baseball game and their response will likely be decidedly different.

A new [ASU Preparatory Academy](#) program cleverly marries the two topics in a way that makes them fun and engaging, as well as useful and motivating to learners from all backgrounds — especially those from underserved communities.

“Data analytics applies to almost anything, and what we’re trying to do is make the subject fun and interesting to students,” said Javier Melendez, a physics and math teacher at [ASU Prep Phoenix](#) who mentors¹ the Sun Devil Sports Analytics Scholars. “The quantitative sciences can open doors to careers they might not have otherwise imagined.”

The Arizona Diamondbacks and faculty from Arizona State University’s [W. P. Carey School of Business](#) and [Sandra Day O’Connor College of Law](#) have teamed up with ASU Prep to offer this program to its high school students to work on real-world projects tied to baseball and other sports.

The program is the brainchild of [Don Gibson](#), who has spent the past five years getting it off the ground.

“The Sun Devil Sports Analytics Scholars program is intended to stimulate learning among grade school, middle school and high school students by infusing sports content into their regular curriculum,” said Gibson, professor of practice in ASU’s [Allan "Bud" Selig Sports Law and](#)

[Business program](#) and director of the program. “Its principal focus is to introduce the study of analytics (and the career possibilities) to females, minorities and people from disadvantaged backgrounds who are greatly underrepresented in this specialty, whether in sports or other industries.”

Gibson said he first introduced the concept in 2020 to other school districts in the Valley. However, he said he couldn’t find any buy-in or support from teachers or administrators.

“Our efforts led us to ASU Prep, which happened to be sitting in our backyard,” Gibson said. “We found the perfect combination of interest at the leadership and faculty levels, and now we’ve found interest at the student level.”

Melendez is currently leading 15 students in grades 10–12 to attend fun, interactive sessions every Friday for two hours. Together, they analyze sports data with guidance from ASU professors who are helping the Arizona Diamondbacks improve their business operations.

“At ASU, we believe learning is a lifelong commitment, and sparking a love for learning is at the heart of what we do. Too often, students see math — and its applications — as abstract concepts with little relevance to their daily lives. But in the business school and its [sports business program](#), we shift the context of these ideas to sports and sports business, making the numbers come alive,” said [Daniel McIntosh](#), an associate teaching professor in the Department of Marketing at the W. P. Carey School of Business and a faculty mentor of the program.

On Feb. 21, the analytics scholars commenced work on developing a new survey to help the Diamondbacks market their product to a younger demographic to draw younger fans to Chase Field and develop a lifetime engagement with the game.

The class also visited the ballpark a few weeks prior on a field trip to get a behind-the-scenes look at their operations and how to better serve the team with their survey.

“I’ve been there before for concerts but did not realize how many food vendors were there and the cool new shopping areas where you grab something and pay on your phone,” said Noelia Morales, a 17-year-old junior at ASU Prep. “A lot of companies there have already adapted to how they sell food and other items.”

Morales said before she entered the program, she was considering a marketing major. Now she’s rethinking this.

“I find analytics interesting because you don’t really need to understand math,” Morales said. “You just need to understand what the data is telling you.”

Keshav Joshi, a 16 ASU prep junior, said the data is telling him that people need to be motivated to plunk down their cash.

“Data can help us understand what goes through a consumer’s mind when they attend a game,” Joshi said. “Who are they motivated to see? What are they motivated to buy? What kind of food do they like? What draws them to the stadium? All this information is important to understand consumer behavior.”

Naioby Sarabia said she was touched by how baseball can bring families together.

“I’m originally from Mexico, and we value family activities and being together,” said Sarabia, a 17-year-old ASU Prep junior. “When we visited Chase Field, I saw a playground and a lot of places that offered activities, and I said to myself, ‘I could do this with my sister or mom.’ So if the Diamondbacks can attract families, they can feel more engaged with each other.”

Jayden Morales, 16-year-old ASU Prep junior, said the visit to Chase Field was an “eye-opening” experience for him and was a good introduction to the corporate world.

“I’d never seen anything like it,” he said. “We were able to talk to individuals who are running the Diamondbacks and get insider information and how they work with third-party websites. This has opened my eyes and makes me think I could pursue this as a career.”

Morales said he has plenty of ideas on how the Diamondbacks can market to Gen Z.

“Gen Z is mainly on TikTok, Instagram and YouTube,” Morales said. “I’ve actually looked at the Diamondbacks page and how they can incorporate those platforms and get more views. I’m guessing the more views they get, the more people will come and watch the games.”

Ryan Goodwin said the biggest surprise to him about the program is how much thought must go into each survey question to achieve the desired result.

“Surveys must have a lot of detail to draw out information,” said Goodwin, a 17-year-old ASU Prep junior. “What we’re discovering is that theme nights are big with young people. We also know that fireworks are popular. The Diamondbacks must have a draw in addition to baseball to bring people to a game.”

Melendez said once the scholars finish and employ their survey, they will present their findings to the team in May.

“They’ll try and come up with some conclusions on the operations and make a few recommendations that might be profitable to the organization,” Melendez said. “So far, it’s been a fun experience and motivates them to consider this as a career option.”

That certainly rings true for McIntosh, who sees the program as a game-changer.

"This program isn't just about making math — or what we call analytics — fun; it's about equipping students with the analytical skills that drive decisions in professional sports and beyond," he said. "By working on real-world projects like those with the Diamondbacks, these students are gaining hands-on experience that puts them on a path toward future success in college, careers and the modern data-driven economy."

This story originally appeared on [ASU News](#).

¹ Kelvin Wong, a clinical associate professor in the economics department within the W. P. Carey School of Business, is also a faculty mentor for the Sun Devil Sports Analytics Scholars.

Main image



Physics and math teacher Javier Melendez guides the ASU Preparatory Academy's Sun Devil Sports Analytics Scholars on a survey promoting Arizona Diamondbacks events on Friday, Feb.

21. Two groups of students are developing digital surveys that will be distributed to either students in grades 6–12 or adults. This program was created by ASU professors in marketing, economics and law with guidance from Melendez to provide students with valuable real-world experience in research and marketing. Photo by Charlie Leight/ASU News

Text image(s)



From left: Maribel Solis, Naioby Sarabia and Isabella Villalobos, students in the ASU Prep Sun Devil Sports Analytics Scholars program, talk about wording on a question for a survey promoting Arizona Diamondbacks events. Photo by Charlie Leight/ASU News



David Quinonez (left) and Aldo Escareno, high school students at ASU Prep Phoenix, discuss an assignment for the Sun Devil Sports Analytics Scholars program. Together, they analyze sports data with guidance from ASU professors who are helping the Arizona Diamondbacks improve their business operations. Photo by Charlie Leight/ASU News