

# **CORE HUB**

Creative • Operations • Reality Engine

Bishop Diego High School

# CORE HUB

Future-Ready Learning in Action

# Executive Summary

- The CORE Hub is Bishop Diego's bold response to the AI-native economy
- A 3-zone production studio teaching Virtual Production, AI/ML, XR, and Digital Entrepreneurship
- An LED Virtual Production Wall as the centerpiece - cutting-edge technology used in Hollywood
- Students gain hands-on experience with industry-standard tools and workflows
- Prepares students for high-growth careers in tech, media, and creative industries
- Makes Bishop Diego the premier Catholic high school for future-ready education

# Why Now? The Strategic Imperative

- AI & Automation: Traditional jobs are being transformed - students need new skills
- The Creator Economy: Content creation, digital marketing, and virtual production are booming
- Competitive Advantage: Differentiate BDHS in Santa Barbara's competitive education market
- Future-Proof Curriculum: Prepare students for careers that don't yet exist
- Industry Demand: Tech and media companies desperately need skilled talent
- Mission Alignment: Integrates faith-based values with cutting-edge innovation

# Five 4-Year Learning Tracks

- 1. AI & Data Science - Build and question AI models with ethical frameworks
- 2. Interactive Experience & UI/UX - Design human-centered digital experiences
- 3. Virtual Production & Storytelling - Master LED wall cinematography
- 4. Digital Entrepreneurship & Marketing - Launch real companies and brands
- 5. Immersive World-Building & XR - Create 3D worlds for VR, AR, and LED walls

Each track culminates in a professional portfolio capstone project

# AI & Data Science

Cultivate dual mastery of building AI models and the human-centric thinking to question them

## CAREER PATHS:

- AI/ML Specialist
- Data Scientist
- AI Prompt Engineer
- AI Ethicist

## PROGRAM HIGHLIGHTS:

- Python & Machine Learning
- Neural Networks
- Data Ethics
- Portfolio Capstone

# Interactive Experience & UI/UX

Master human-computer interaction, blending empathy, psychology, visual design, and logic

## CAREER PATHS:

- UX/UI Designer
- Immersive Experience Designer
- Creative Technologist

## PROGRAM HIGHLIGHTS:

- Design Thinking
- User Research
- Prototyping
- Interactive Design

# Virtual Production & Storytelling

Master next-generation storytelling with LED wall virtual production and real-time rendering

## CAREER PATHS:

- Virtual Production Specialist
- Video Producer
- Content Creator
- Audio Engineer

## PROGRAM HIGHLIGHTS:

- Virtual Cinematography
- LED Wall Production
- Unreal Engine
- Audio Production

# Digital Entrepreneurship & Marketing

Learn to build brands, analyze data, find audiences, and create companies in the digital economy

## CAREER PATHS:

- Digital Marketing Strategist
- SEO Specialist
- Social Media Manager
- Founder

## PROGRAM HIGHLIGHTS:

- Digital Marketing
- SEO & Analytics
- Brand Building
- Startup Creation

# Immersive World-Building & XR

Fuse art and code to build 3D interactive worlds for LED walls, VR headsets, and beyond

## CAREER PATHS:

- XR Developer
- VR/AR Designer
- 3D Modeler
- Game Developer

## PROGRAM HIGHLIGHTS:

- Unity & Unreal
- 3D Modeling
- VR/AR Development
- Interactive Experiences

# 4-Year Curriculum Structure

**9th Grade:** Foundations of Media & Technology

**10th Grade:** Track Selection & Core Skills

**11th Grade:** Advanced Specialization

**12th Grade:** Capstone Portfolio Project

# The 3-Zone Facility

## Zone 1: Virtual Production Studio (THE CORE)

LED Virtual Production Wall for in-camera VFX • Professional camera, lighting & audio equipment

## Zone 2: Deep Tech Lab (THE ENGINE)

High-performance computing for AI & 3D development • VR/AR testing stations

## Zone 3: Collab & Design Studio (THE HUB)

Wall-to-wall whiteboards for design thinking • Flexible furniture for collaboration

*Studio-first design: flexible, reconfigurable, interdisciplinary*

# Zone 1: Virtual Production Studio



The CORE - LED Wall enables in-camera visual effects with realistic lighting

# Zone 2: Deep Tech Lab



The ENGINE - High-computational power zone for AI and 3D development

# Zone 3: Collab & Design Studio



The HUB - Human-centric workspace for UI/UX and entrepreneurship

# The LED Wall: Game-Changing Technology

Not just a display - a real-time production tool driven by game engines

**Unlike green screens:**

- In-camera visual effects with realistic lighting and reflections
- Actors see the environment they're performing in
- No post-production green screen keying required

**Industry Standard:**

- Used in The Mandalorian, House of the Dragon, and major films
- Teaches complete virtual production pipeline
- Prepares students for Hollywood-level workflows

**This is the "leapfrog" technology that sets us apart**

# Career Outcomes & Pathways

## High-Growth Industries:

- AI & Machine Learning - 40% projected growth
- Digital Marketing - \$600B+ industry
- Virtual Production - Used in 75% of major productions
- XR Development - \$300B+ metaverse economy

## Portfolio-Ready Graduates:

- Professional capstone projects
- Industry-standard tool proficiency
- Real-world client experience

## College & Career Readiness:

- Stand out in college applications
- Direct pathways to tech careers
- Entrepreneurial mindset development

# Investment Overview

## PHASE 1: Core Infrastructure

- Virtual Production Studio with LED Wall: \$120,000
- Deep Tech Lab Computing Equipment: \$50,000
- Collab Studio Furniture & Whiteboards: \$15,000
- Total Phase 1: **\$185,000**

## PHASE 2: Expansion & Enhancement

- Additional camera & audio gear: \$25,000
- VR/AR development kits: \$20,000
- Software licenses & cloud services: \$15,000
- Total Phase 2: **\$60,000**

**TOTAL INVESTMENT: \$245,000**

# Return on Investment

## Student Outcomes:

- Industry-certified graduates with professional portfolios
- Competitive advantage in college admissions
- Direct career pathways to high-paying industries

## Institutional Benefits:

- Premier differentiation in competitive education market
- Attraction tool for prospective families
- Increased enrollment and retention
- National recognition as innovation leader

## Community Impact:

- Partnership opportunities with local businesses
- Student services (video production, web design) for community
- Elevates Bishop Diego's regional profile

# The Time is Now

The CORE Hub positions Bishop Diego at the forefront of education innovation

**We're not just teaching technology - we're preparing students to:**

- Create meaningful work in an AI-powered economy
- Lead with ethics and human-centered values
- Build the future while staying grounded in faith

**This is more than a facility - it's a commitment to:**

- Every student's future readiness
- Bishop Diego's competitive excellence
- Catholic education's relevance in the modern world

**Join us in building the future of learning.**

# **CORE HUB**

Where Innovation Meets Education

Bishop Diego High School

[www.bdhscorehub.pages.dev](http://www.bdhscorehub.pages.dev)