

Physics, AS



CATALOG 2022-23

GE Pattern: [VVC GE](#)
Total Units: 60 Units
Program Code: [PHYS.AS](#)



Category Key

| | | | | | |
|-----|---------------------------|---|-----------|--------------------------|--|
| (a) | Articulated Credit | A course taught at the high school that teaches the same content as the community college allowing the high school student to receive college credit. | GE | General Education | A course that fulfills a specific general education requirement for this degree, which can be replaced with another course that meets the same requirements. |
| | Elec | Elective | | RE | Restricted Electives |
| | | A degree - applicable course that is part of a degree road map to ensure that there is a total of at least 60 units, which is a requirement for an AS degree. | | | A course selected from a list of elective courses specified for this degree in the course list in the catalog, which can be replaced with another course from the same list. |
| | Req | Required Core | | | A course that is required for this degree |

Year 1, Semester 1

15 Units

| Category | Course | Title | GE Area | Unit |
|----------|-------------|-----------------------------------|---------|------|
| Req | *PHYS 201 | Engineering Physics I - Mechanics | | 4 |
| GE | *MATH 226 | Analytic Geometry and Calculus I | V | 4 |
| GE | *ENGL 101.0 | English Composition and Reading | IVA | 4 |
| GE | Any | | IVB | 3 |

*Placement into MATH 226 or completion of MATH 104 and MATH 105 is required before beginning this program.
*Fulfills VVC GE Category IVA and Information Competency requirement.

Year 1, Semester 2

14 Units

| Category | Course | Title | GE Area | Unit |
|----------|----------|--|---------|------|
| Req | PHYS 202 | Engineering Physics II – Fluids, Sound, and Thermodynamics | | 4 |
| Elec | MATH 227 | Analytic Geometry and Calculus II | | 4 |
| GE | ^Any | | IIA | 3 |
| GE | ^Any | | III | 3 |

^Select a course that fulfills either GE category IIA or III and Global Citizenship requirement.

Year 2, Semester 1

13 Units

| Category | Course | Title | GE Area | Unit |
|----------|----------|--|---------|------|
| Req | PHYS 203 | Engineering Physics III – Electricity and Magnetism | | 4 |
| Elec | MATH 228 | Analytic Geometry and Calculus III | | 5 |
| GE | Any | | IIB | 3 |
| GE | Any | HLTH 102 or any APE, KIN, KIND (or TA course that is cross-listed with KIND) course. | Kin | 1 |

Year 2, Semester 2

18 Units

| Category | Course | Title | GE Area | Unit |
|----------|----------|--|---------|------|
| Req | PHYS 204 | Engineering Physics IV – Optics and Modern Physics | | 4 |
| Req | PHYS 210 | Computer Methods for Engineers | | 4 |
| GE | CHEM 201 | General Chemistry | I | 5 |
| Elec | Any | Any course(s) numbered 50 or above. | | 5 |



+27
5-year Job Demand Increase in MDCP Region

Average Hourly Wage

\$63.21
MDCP Region

\$62.64
SB County

\$69.22
California

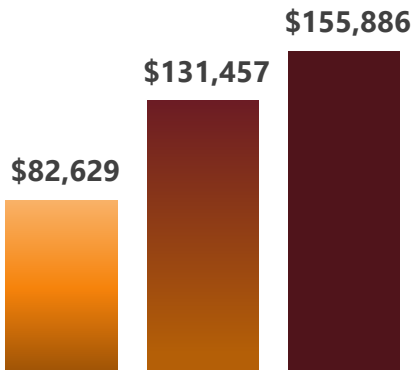
MDCP Regional Labor Market Snapshot

JOBS in Physics Occupations



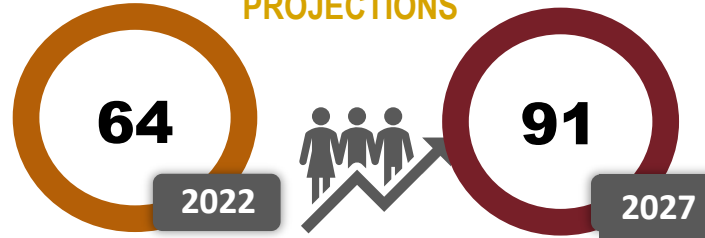
Salary Guide

AVERAGE BY EXPERIENCE



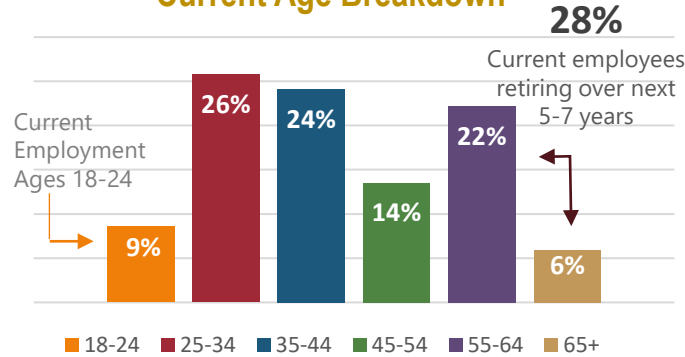
■ Starting ■ Average ■ Experienced

EMPLOYMENT PROJECTIONS



5-year demand includes new jobs, transfers, and retirements

Current Age Breakdown



AVERAGE WAGE INFORMATION PER JOBS IN REGION

| Occupation | Average Hourly Wage | | | HD Average Salary |
|--------------------------------------|---------------------|---------|------------|-------------------|
| | HD | SBC | California | |
| Nuclear Technicians (A) | \$49.99 | \$49.98 | \$52.22 | \$104,000 |
| Nuclear Engineers (B) | \$66.94 | \$65.81 | \$70.28 | \$139,200 |
| Atmospheric and Space Scientists (B) | \$58.07 | \$57.64 | \$58.92 | \$120,800 |
| Astronomers (D) | \$85.02 | \$84.43 | \$88.94 | \$176,800 |
| Biochemists and Biophysicists (D) | \$53.10 | \$56.30 | \$58.46 | \$110,400 |
| Physicists (D) | \$62.68 | \$59.89 | \$84.34 | \$130,400 |
| Physics Teachers, Postsecondary (D) | \$66.65 | \$64.46 | \$71.39 | \$138,600 |

Average hourly wage based on listed occupations
(HS = High School Diploma; PSC= Postsecondary Certificate; A = Associates Degree; B = Bachelor's Degree; M = Master's Degree, D = Professional or Doctorate Degree)

HD Average wages based on listed occupations
^High Demand Occupation



CONTINUING EDUCATION AND TRAINING

Program

- BS Physics
- BS Physics
- BS Physics
- BS Nuclear Engineering
- BS Astrophysics
- MS Physics

College

- Cal State, San Bernardino
- UC Riverside
- Cal Poly Pomona
- UC Berkeley
- UC Los Angeles
- UC Irvine

For additional information visit
<https://catalog.vvc.edu/degrees-certificates/physics/#PHYS-AS>

LOCAL EMPLOYERS



Employer

- Com AV
- Exquadrum Inc.
- General Atomics
- Minerals Technologies
- Northrop Grumman
- NASA
- Rio Tinto

Website

- <https://www.comav.com/careers/>
- <http://www.exquadrum.com/>
- <https://www.ga-careers.com/>
- <https://www.mineralstech.com/our-company>
- <https://www.northropgrumman.com/>
- <https://www.nasa.gov/>
- <https://www.riotinto.com/careers>

Current Gender Breakdown

