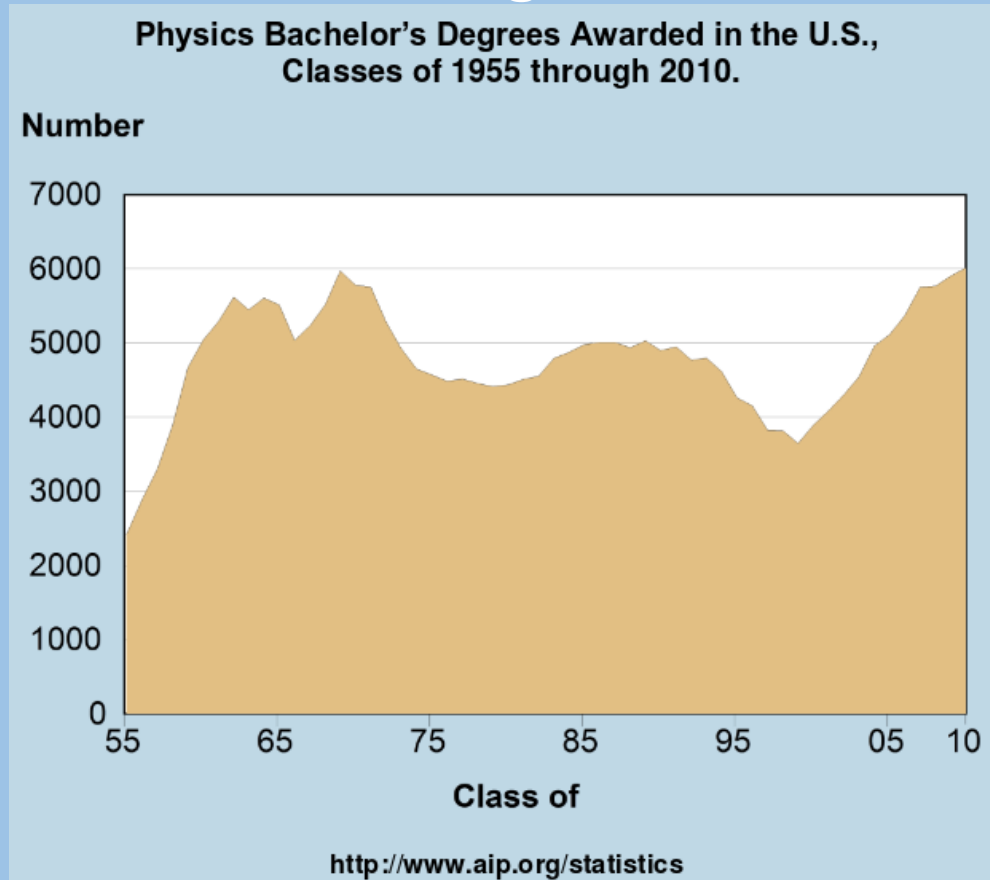


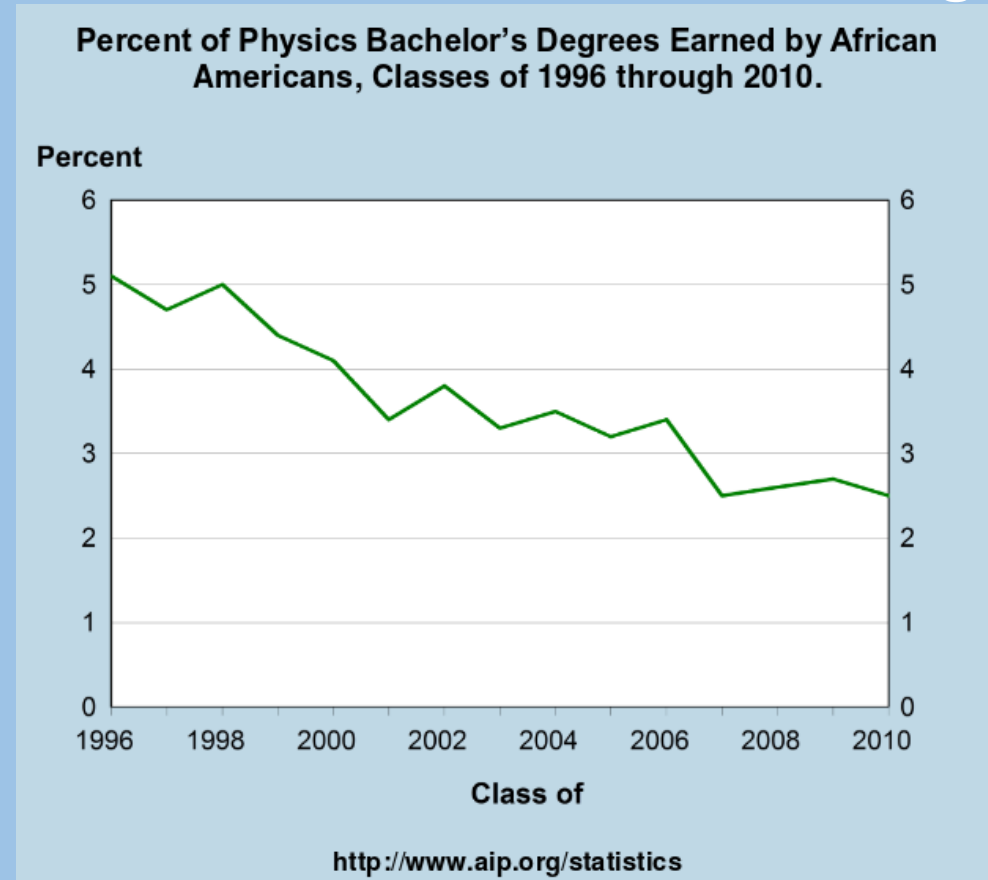


# The National Environment in Physics

- The number of physics degrees in the US is at its highest level

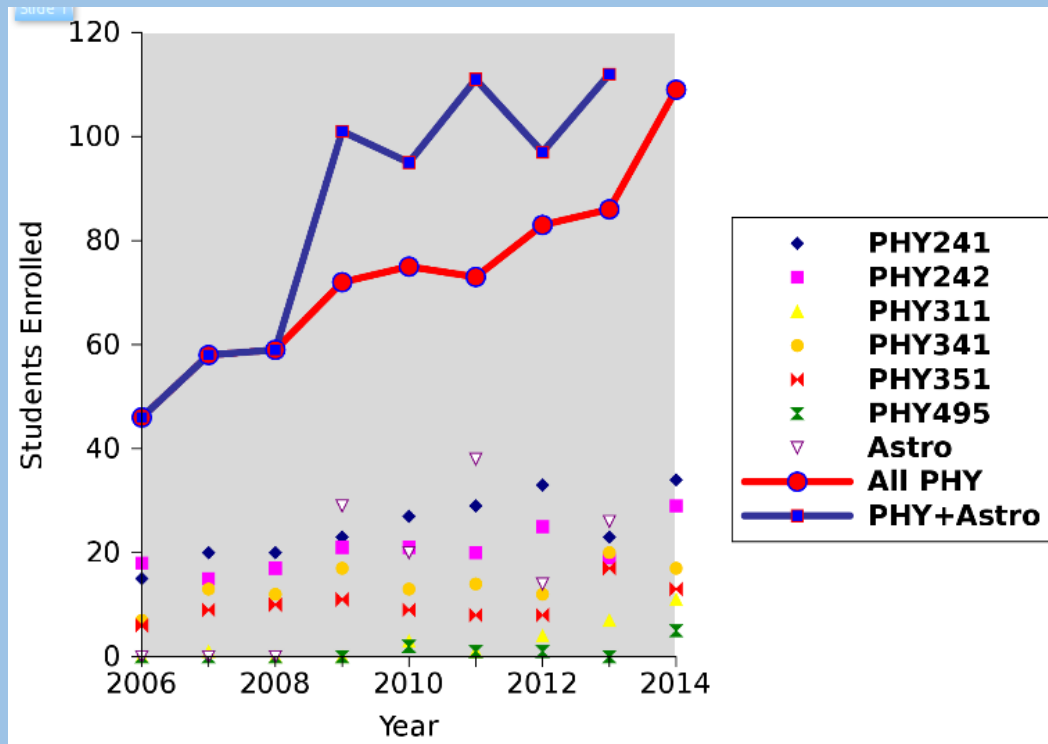


- But physics degrees earned by underserved students is falling

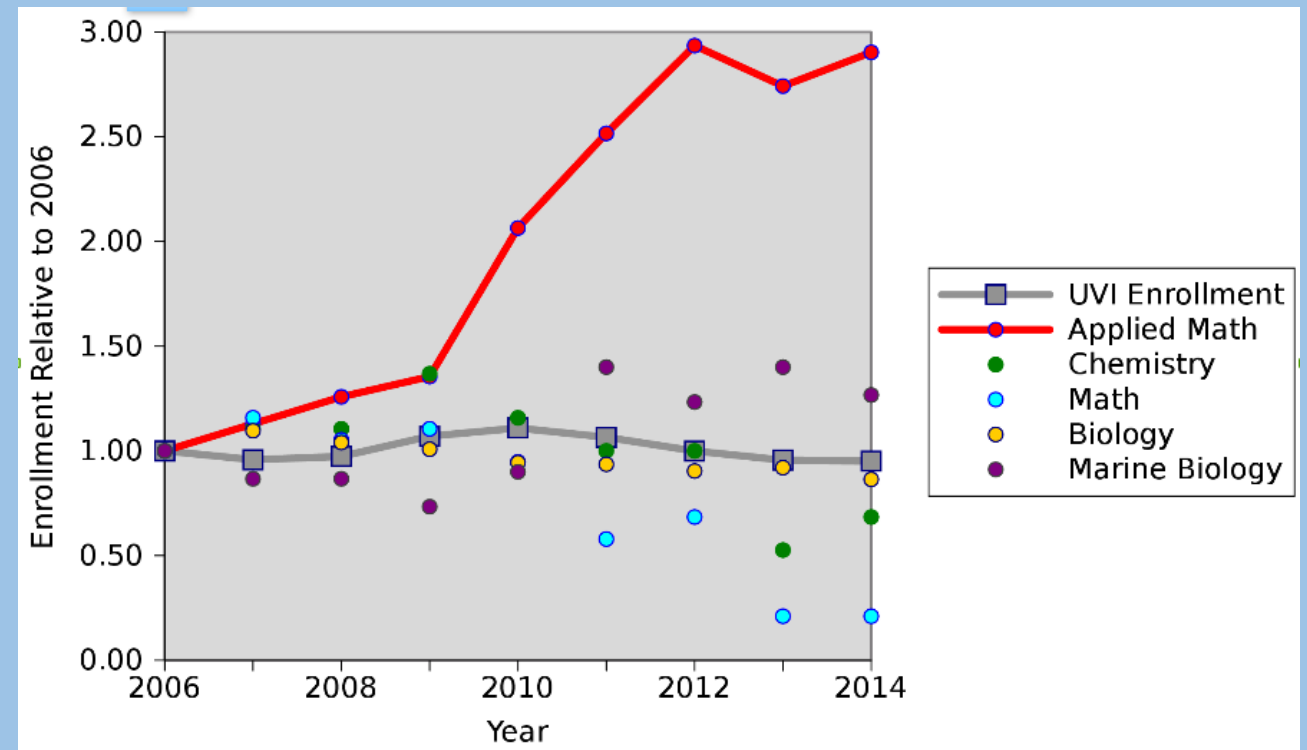


# The Need For Physics At UVI

- UVI's enrollment in physics courses has increased 143% in the past 10 years.



- Applied Math has seen an increase in enrollment of 190% in the same period







# Physics Degree Structure

- Students follow applied mathematics paradigm until Sophomore year
- Leverages existing research facilities (Etelman Observatory and X-ray detector laboratory) and previous federal funding (NASA-EPSCoR, NSF HBCU-UP)

| Freshman Year; First Semester  |             | Freshman Year; Second Semester  |             |
|--------------------------------|-------------|---------------------------------|-------------|
| Course                         | Credits     | Course                          | Credits     |
| FDS 100                        | 1           | CSC 117                         | 4           |
| SCI 100                        | 3           | SSC 100                         | 3           |
| CHE 151                        | 5           | CHE 152                         | 5           |
| MAT 143                        | 4           | MAT 153                         | 4           |
| COM 119                        | 3           | PED                             | 0.5         |
| PED                            | 0.5         |                                 |             |
|                                |             |                                 |             |
|                                |             |                                 |             |
| <b>Total</b>                   | <b>16.5</b> | <b>Total</b>                    | <b>16.5</b> |
| Sophomore Year; First Semester |             | Sophomore Year; Second Semester |             |
| Course                         | Credits     | Course                          | Credits     |
| CSC 239                        | 2           | PHY241                          | 5           |
| MAT 241                        | 4           | <b>PHY 271</b>                  | <b>3</b>    |
| MAT 261                        | 4           | MAT 242                         | 3           |
| ENG 120                        | 3           | SS elective                     | 3           |
| ECO 221                        | 3           | HUM elective                    | 3           |
| PED                            | 0.5         |                                 |             |
|                                |             |                                 |             |
|                                |             |                                 |             |
| <b>Total</b>                   | <b>16.5</b> | <b>Total</b>                    | <b>17</b>   |

| Junior Year; First Semester |             | Junior Year; Second Semester |             |
|-----------------------------|-------------|------------------------------|-------------|
| Course                      | Credits     | Course                       | Credits     |
| PHY 242                     | 5           | PHY341                       | 3           |
| PHY 311                     | 3           | PHY351                       | 1           |
| <b>PHY 397</b>              | <b>0.5</b>  | <b>PHY 398</b>               | <b>0.5</b>  |
| MAT 341                     | 3           | MAT 342                      | 3           |
| <b>PHY 371</b>              | <b>3</b>    | MAT 346                      | 4           |
| PHY 495/6                   | 1           | PHY 495/6                    | 1           |
| PED                         | 0.5         | HUM elective                 | 3           |
|                             |             | PHY 4xx                      | 2           |
|                             |             |                              |             |
| <b>Total</b>                | <b>16</b>   | <b>Total</b>                 | <b>17.5</b> |
| Senior Year; First Semester |             | Senior Year; Second Semester |             |
| Course                      | Credits     | Course                       | Credits     |
| PHY321                      | 3           | <b>PHY 4xx</b>               | <b>3</b>    |
| <b>PHY 4xx</b>              | <b>3</b>    | <b>PHY 4xx</b>               | <b>2</b>    |
| <b>PHY 497</b>              | <b>0.5</b>  | <b>PHY 498</b>               | <b>0.5</b>  |
| <b>PHY 495 / 6</b>          | <b>1</b>    | MAT 325                      | 3           |
| HUM elective                | 3           | PHY 495/6                    | 1           |
| Science elec                | 3           | HUM elective                 | 3           |
| Science elec                | 3           | Science elec                 | 3           |
|                             |             |                              |             |
| <b>Total</b>                | <b>16.5</b> | <b>Total</b>                 | <b>15.5</b> |

Authentic research activities in PHY495/6 are essential component of degree paradigm

# Funding Sources

- NASA EPSCoR (2013-2017)
  - "Development of the VI Center for Space Science at Etelman Observatory"
  - First 'resident astronomer' hire
  - First UVI NASA summer interns
  - \$750,000
- NASA EPSCoR RID (rolling)
  - "NASA EPSCoR in the VI"
  - Support seed grants to broaden UVI participation in NASA science
  - \$125,000/yr
- NASA MUREP-MIRO (2016-2020)
  - "The First 4-Year Physics and Astronomy Degree at the University of the Virgin Islands"
  - Two new faculty to teach physics B.S.
  - Support of research infrastructure and students
  - \$2,700,000

