Daytona State College

Environmental Scan

August 2016

Developed by the Planning Council Strategic Planning Committee
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Introduction

Through a systematic strategic planning process, Daytona State College establishes long-term goals and strategies to support its mission and vision. By anticipating key external trends, the institution can better shape its strategic plan, as well as anticipate and respond more effectively to the community and the constituencies it serves. To set the direction for the college during the 2017-2020 planning cycle, the Strategic Planning Committee, a subcommittee of the college’s Planning Council, identified external changes and influences that have implications for long-range planning and the future.

Methodology

The environmental scan is organized around five major areas of influence: demographics, economics, politics, technology and environmentalism. Research was conducted using a variety of sources, including the U.S. Census Bureau, the Florida Department of Education, the University of Florida’s Bureau of Economic Research, and other databases and publications as noted in the text of the document. To align with the primary service area of Daytona State College, much of the research focuses on Volusia and Flagler counties and the state of Florida.
Demographic Trends

State and Local Growth Predictions

Florida is the third most populous and the eighth most densely populated state in the nation. According to the U.S. Census and projections by the Bureau of Economic and Business Research (BEBR), Florida’s population as of April 1, 2015 was 19,815,183. Volusia and Flagler counties are the main service areas for Daytona State College. Volusia County has a population of 510,494 and is the 11th most populous of 67 counties, with 2.6 % of Florida’s population. Flagler County is the 36th most populous, with 101,353 people or 0.5 % of Florida’s population. Both counties have a combined estimated population of 611,847.

The BEBR expects a population increase in Flagler and Volusia counties of 3 to 5.9% in the next 20 years to 655,900. By 2020, Volusia County is expected to have increased 5%, while Flagler County’s population is projected to increase by 16%.

Table 1: Projections of Population by Country, 2015 - 2045

<table>
<thead>
<tr>
<th>County</th>
<th>Estimates</th>
<th>Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2015</td>
<td>2020</td>
</tr>
<tr>
<td>FLAGLER</td>
<td>101,353</td>
<td>120,100</td>
</tr>
<tr>
<td>VOLUSIA</td>
<td>510,494</td>
<td>535,800</td>
</tr>
<tr>
<td>TOTAL</td>
<td>611,847</td>
<td>655,900</td>
</tr>
</tbody>
</table>


Deltona has the highest population in Volusia County, with almost 88,000 residents in 2015. Palm Coast has the highest population in Flagler County, with an estimated 80,000 in 2015. According to the BEBR, Palm Coast will see the largest increase in population, 40%, by the year 2020. Deltona is expected to increase in population by about 20% during that time, while Daytona Beach will increase only slightly.

Based on 2015 estimates, the metropolitan statistical area of Deltona-Daytona Beach-Ormond Beach is ranked the 9th largest metropolitan area in Florida. Volusia County is easily accessible to major markets such as Orlando and Jacksonville by way of major highways I-4 and I-95. It also is serviced by an international airport. Volusia County is home of the World Center of Racing, and the world’s largest Harley-Davidson dealership, and is host to special events throughout the year. Notable special events are Speed Weeks in February and July, Bike Week in March and October, and Spring Break in March and April. Tourism plays a major part in Volusia County’s economy.
home to high-tech, health care and manufacturing businesses. Daytona Beach is home to NASCAR headquarters and the Daytona International Speedway, as well as the U.S. Tennis Association and the Ladies Professional Golf Association.

Age Trends

Projections and previous data from the U.S. Census Bureau and the BEBR indicate an upward trend in median age, but increasing more slowly than previously projected. Currently, the median age in Flagler County is around 48 years, while it is approximately 45 years in Volusia County. According to BEBR projections, Flagler County will see a reduction in median age over the next 20 years, but Volusia County will experience an 8% increase in median age.

Table 2: Median Age by County, 2010 - 2040

<table>
<thead>
<tr>
<th>County</th>
<th>2010</th>
<th>2020</th>
<th>2030</th>
<th>2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flagler</td>
<td>47.5</td>
<td>48.9</td>
<td>48.2</td>
<td>46.9</td>
</tr>
<tr>
<td>Volusia</td>
<td>45.3</td>
<td>47.7</td>
<td>48.6</td>
<td>49.3</td>
</tr>
</tbody>
</table>

Source: [https://www.bebr.ufl.edu/sites/default/files/Research%20Reports/projections_2015_asrh.pdf](https://www.bebr.ufl.edu/sites/default/files/Research%20Reports/projections_2015_asrh.pdf)
The largest decrease in population numbers will be in the 40 – 64 age group. According to the BEBR, the 20 – 29 age group also will experience a decline in population. This could impact college enrollment since the average age of Daytona State College students is 27 (2014-15).

For Table 3, the red shows a decrease from 2015 to 2020. The majority of DSC students fall within the 18 – 39 age groups.
Flagler County is experiencing growth in all age groups by 2020. The BEBR prediction shows that the 25 – 29 age group has the highest increase in Flagler County, followed by the baby boomer generation age groups from 60 – 79. The largest increase is expected in the 15 - 19 and 25 – 29 age groups, which is the largest student body contributor to the college.

Increase in Baby Boomers

The baby boomer generation was born between 1945 and 1964. This generation has a tremendous economic and social impact on many aspects of Florida life. The dramatic expected increase of baby boomers in both Volusia and Flagler counties has community and college implications. The age shift may lead to dramatic shifts in the demand for housing, health care and other types of goods and services that divert fiscal resources away from higher education. On the other hand, an increase in retirees may open a new market of potential students as well as increase the potential for alumni support and engagement in college activities.

Race/Ethnicity Trends

The Census Bureau collects race data in accordance with guidelines provided by the U.S. Office of Management and Budget. People who identify their origin as Hispanic, Latino or Spanish may be of any race. Hispanics and Latinos are included as any race in Table 4 and Figure 1.

Race

Table 4: Race projections for Volusia and Flagler counties

<table>
<thead>
<tr>
<th></th>
<th>White</th>
<th>African-American</th>
<th>Non-White</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Projections</td>
<td>Projections</td>
<td>Projections</td>
</tr>
<tr>
<td>Flagler</td>
<td>85,938</td>
<td>102,250</td>
<td>117,984</td>
</tr>
<tr>
<td>Volusia</td>
<td>437,196</td>
<td>452,438</td>
<td>466,356</td>
</tr>
<tr>
<td>Total</td>
<td>523,134</td>
<td>554,688</td>
<td>584,340</td>
</tr>
</tbody>
</table>


According to the BEBR data presented in Table 4, over the next 10 years the white population in Volusia and Flagler counties will decrease from 76.8% to 75.4%. African-American residents will increase from 10.5% to 11.1%. Non-whites will increase from 12.7% to 13.5% of the population.
Volusia Flagler County Ethnicity Trends

The Census Bureau includes Hispanic or Latinos as an ethnicity.

<table>
<thead>
<tr>
<th></th>
<th>Volusia Projections</th>
<th>Flagler Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2015</td>
<td>2020</td>
</tr>
<tr>
<td>Non-Hispanic White</td>
<td>380,969</td>
<td>388,314</td>
</tr>
<tr>
<td>Non-Hispanic African-American</td>
<td>54,255</td>
<td>57,918</td>
</tr>
<tr>
<td>Hispanic</td>
<td>62,159</td>
<td>70,888</td>
</tr>
</tbody>
</table>

According to the BEBR, the Non-Hispanic White population in Volusia County appears to show only a slight increase by 2020, while Flagler County could see an increase of about 20%. The majority increase in population for both counties is projected to be the Hispanic population. The African-American population also appears to be increasing in both counties by 7% and 24% respectively.
Table 6: 2020 Ethnicity projections for Volusia/Flagler counties by age

<table>
<thead>
<tr>
<th>Age</th>
<th>Volusia</th>
<th>Flagler</th>
<th>% change</th>
<th>Volusia</th>
<th>Flagler</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2015</td>
<td>2020</td>
<td></td>
<td>2015</td>
<td>2020</td>
<td></td>
</tr>
<tr>
<td>0-4</td>
<td>14,765</td>
<td>14,580</td>
<td>-1.3</td>
<td>3266</td>
<td>3719</td>
<td>13.9</td>
</tr>
<tr>
<td>5-17</td>
<td>42,102</td>
<td>41,547</td>
<td>-1.3</td>
<td>9676</td>
<td>11028</td>
<td>14</td>
</tr>
<tr>
<td>18-24</td>
<td>26,562</td>
<td>24,401</td>
<td>-8.1</td>
<td>5108</td>
<td>5747</td>
<td>12.5</td>
</tr>
<tr>
<td>25-54</td>
<td>129,675</td>
<td>121,915</td>
<td>-6</td>
<td>24275</td>
<td>27232</td>
<td>12.2</td>
</tr>
<tr>
<td>55-64</td>
<td>65,133</td>
<td>68,072</td>
<td>4.5</td>
<td>12694</td>
<td>14226</td>
<td>12.1</td>
</tr>
<tr>
<td>65-79</td>
<td>71,604</td>
<td>86,137</td>
<td>20.3</td>
<td>16877</td>
<td>22576</td>
<td>33.8</td>
</tr>
<tr>
<td>80+</td>
<td>31,128</td>
<td>31,662</td>
<td>1.7</td>
<td>5262</td>
<td>6560</td>
<td>24.7</td>
</tr>
<tr>
<td>0-4</td>
<td>4,085</td>
<td>4,151</td>
<td>1.6</td>
<td>804</td>
<td>970</td>
<td>20.6</td>
</tr>
<tr>
<td>5-17</td>
<td>10,483</td>
<td>10,851</td>
<td>3.5</td>
<td>2464</td>
<td>2858</td>
<td>16</td>
</tr>
<tr>
<td>18-24</td>
<td>7,754</td>
<td>7,798</td>
<td>0.6</td>
<td>1241</td>
<td>1408</td>
<td>13.5</td>
</tr>
<tr>
<td>25-54</td>
<td>20,351</td>
<td>21,186</td>
<td>4.1</td>
<td>3919</td>
<td>5062</td>
<td>29.2</td>
</tr>
<tr>
<td>55-64</td>
<td>5,753</td>
<td>6,611</td>
<td>14.9</td>
<td>1188</td>
<td>1581</td>
<td>33.1</td>
</tr>
<tr>
<td>65-79</td>
<td>4,433</td>
<td>5,744</td>
<td>29.6</td>
<td>1909</td>
<td>2288</td>
<td>19.9</td>
</tr>
<tr>
<td>80+</td>
<td>1,396</td>
<td>1,577</td>
<td>13</td>
<td>686</td>
<td>1025</td>
<td>49.4</td>
</tr>
<tr>
<td>0-4</td>
<td>5,133</td>
<td>5,555</td>
<td>8.2</td>
<td>767</td>
<td>912</td>
<td>18.9</td>
</tr>
<tr>
<td>5-17</td>
<td>13,812</td>
<td>14,984</td>
<td>8.5</td>
<td>2000</td>
<td>2440</td>
<td>22</td>
</tr>
<tr>
<td>18-24</td>
<td>7,133</td>
<td>7,950</td>
<td>11.5</td>
<td>1022</td>
<td>1260</td>
<td>23.3</td>
</tr>
<tr>
<td>25-54</td>
<td>23,595</td>
<td>26,545</td>
<td>12.5</td>
<td>3552</td>
<td>4614</td>
<td>29.9</td>
</tr>
<tr>
<td>55-64</td>
<td>5,783</td>
<td>7,129</td>
<td>23.3</td>
<td>988</td>
<td>1310</td>
<td>32.6</td>
</tr>
<tr>
<td>65-79</td>
<td>5,037</td>
<td>6,617</td>
<td>31.4</td>
<td>1100</td>
<td>1423</td>
<td>29.4</td>
</tr>
<tr>
<td>80+</td>
<td>1,666</td>
<td>2,108</td>
<td>26.5</td>
<td>350</td>
<td>469</td>
<td>34</td>
</tr>
</tbody>
</table>

Based on the Office of Demographics and Research, in Volusia County, the Non-Hispanic White age group between 18 and 54 shows a steep decline in population. The greatest increase in population is predicted from the 55 -79 age group of Hispanic or Latino ethnicity.

Overall in Flagler County, the Hispanic, Latino and African-American demographic population age groups of 20 – 29 show a sharp increase in population. This trend continues with the 40 – 59 age groups. Based on the Office of Demographics and Research, the Non-Hispanic White age group between 40 and 54 shows the smallest growth in population.
Other Social Trends

Veterans

According to projections from the U.S. Department of Veterans Affairs, 13% of the population in Volusia County and 12% of Flagler County’s population are veterans.


The projections point to a decrease in the Volusia County veteran population by approximately 13% by 2020. The Flagler County veteran population appears to be stable, with a slight increase of 1.5%.

Workplace Diversity

Institutions and organizations must reflect the racial makeup of the population they are serving. The trend is for gender and racial equality at colleges and universities.

LGBTQ

Based on a Pew Research survey, 55% of Americans support same sex marriage. With recent legislative changes, gay and lesbian relationships have greater public approval. Colleges and universities should provide an open and safe environment, as well as policies that acknowledge and protect the differences of the LGBTQ community.
Immigrants

Florida is the third largest immigrant-receiving state and ranks fourth in illegal immigration. The U.S. Census Bureau projects that Florida will have gained 1.9 million additional immigrants between 1995 and 2025. Based on the U.S. Census, the percentage of foreign-born population is projected to increase to 7% for Volusia County and 13% for Flagler County.

Generations

Baby Boomers and Generation Xers are 31% of the U.S. workforce, while Millennials are 35% of the workforce. Gen Z are the next generations of college students. Gen Z have different expectations for learning than previous generations. Colleges must have a solid understanding of the generational differences as they relate to instruction and recruitment. These students are used to finding what they need, whenever they need it. They have grown up in a fast-paced technological world. If they have a question, they go online to find the answer.

Demographic Implications for Daytona State College

- The college must monitor the population growth in both counties and be responsive to increases in the population of college-age students in Flagler County, as well as increases in Hispanic and Latino populations in Volusia County.
- The largest increase in the 19-34 age group are Latino and African-Americans. The college must respond to the changing demographics and offer more diverse programs.
- The college must be proactive in working with immigrants and undocumented students, do more to promote inclusivity amongst different races and ethnicities, and offer a safe environment for the LGBTQ community.
- While the increase in Baby Boomers could divert state financial resources away from higher education, the college also can capitalize on this growing demographic for alumni support, continuing education opportunities and community cultural engagement.
- The college must continue providing services to veterans and increase its targeted recruitment.
- The college must be competitive in the work market and must recruit new talent among Millennials and Gen Xers.
Economic Trends

This section explores key economic trends, including industry shifts and job growth that may impact Daytona State College.

Performance Funding Trends

In 2014, the Commissioner of Education was charged by the Florida Legislature with developing a performance funding model for Florida College System institutions. In January 2015, the commissioner submitted the recommended performance funding model and continued soliciting feedback from college representatives, resulting in a modified model. The Florida Board of Education’s approval of the new performance-funding system for state colleges has changed the way institutions are awarded money. The college is now scored in four areas: completion rate, retention rate, placement (job placement or continuing education) and entry-level wages. This model has introduced a new level of uncertainty regarding the amount of state support that can be counted on during the budget planning process and challenges Daytona State to shift its focus even more diligently on job preparation and placement to meet workforce needs.

Occupational Projections

Florida’s economic state and job market are still rebounding from the recession. Florida continues to have the nation’s highest foreclosure rates; however, the rate has been gradually decreasing. While the recovery is by no means robust, recent reports have indicated growth in employment and state revenue ahead of the nation. Further, Florida’s prime working age population (ages 25 – 54) has been adding people each month, indicating a need for more jobs.

Table 7: Top Five Industries in Volusia and Flagler Counties

<table>
<thead>
<tr>
<th>Volusia</th>
<th>Flagler</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Care and Social Assistance</td>
<td>28,165</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>24,432</td>
</tr>
<tr>
<td>Accommodations and Social Services</td>
<td>19,797</td>
</tr>
<tr>
<td>Education Services</td>
<td>15,824</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>9,709</td>
</tr>
</tbody>
</table>

Source: Community Agenda Snapshot, 2015
As Florida’s housing market continues its resurgence, the state’s construction industry is expected to create more jobs than any other industry. The Florida Department of Economic Opportunity predicts that growth in employment from 2015 to 2024 will be driven by the following industries: Construction of Buildings (36.2% increase), Specialist Trade Contractors (34.1% increase), Nonmetallic Mineral Product Manufacturing (31.5% increase), Ambulatory Health Care Services (28.7% increase), and Heavy and Civil Engineering Construction (26.9%).

Table 8: Fastest Growing Industries – Flagler and Volusia Counties

<table>
<thead>
<tr>
<th>Rank</th>
<th>Title</th>
<th>Employment</th>
<th>2015</th>
<th>2023</th>
<th>Total</th>
<th>Change</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Building Construction</td>
<td></td>
<td>1,811</td>
<td>2,466</td>
<td>655</td>
<td>36.2</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Specialty Trade Contractors</td>
<td></td>
<td>7,544</td>
<td>10,113</td>
<td>2,569</td>
<td>34.1</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Nonmetallic Mineral Product Manufacturing</td>
<td></td>
<td>483</td>
<td>635</td>
<td>152</td>
<td>31.5</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Ambulatory Health Care Services</td>
<td></td>
<td>12,192</td>
<td>15,696</td>
<td>3,504</td>
<td>28.7</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Heavy and Civil Engineering Construction</td>
<td></td>
<td>1,287</td>
<td>1,633</td>
<td>346</td>
<td>26.9</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Nursing and Residential Care Facilities</td>
<td></td>
<td>7,244</td>
<td>8,891</td>
<td>1,647</td>
<td>22.7</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Furniture and Home Furnishings Stores</td>
<td></td>
<td>687</td>
<td>827</td>
<td>140</td>
<td>20.4</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Building Material and Garden Supply Stores</td>
<td></td>
<td>2,594</td>
<td>3,086</td>
<td>492</td>
<td>19.0</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Educational Services</td>
<td></td>
<td>6,125</td>
<td>7,258</td>
<td>1,133</td>
<td>18.5</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Performing Arts, Spectator Sports and Related Industries</td>
<td></td>
<td>1,528</td>
<td>1,800</td>
<td>272</td>
<td>17.8</td>
<td></td>
</tr>
</tbody>
</table>


In Flagler and Volusia counties, the industries expected to gain the most new jobs between 2015 and 2023 are 1) ambulatory health care services 2) specialty trade contractors 3) local government 4) food services and 5) administrative support services.

Table 9: Industries Gaining the Most New Jobs – Flagler and Volusia Counties

<table>
<thead>
<tr>
<th>Rank</th>
<th>Title</th>
<th>Employment</th>
<th>2015</th>
<th>2023</th>
<th>Total</th>
<th>Change</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ambulatory Health Care Services</td>
<td></td>
<td>12,192</td>
<td>15,696</td>
<td>3,504</td>
<td>28.7</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Specialty Trade Contractors</td>
<td></td>
<td>7,544</td>
<td>10,113</td>
<td>2,569</td>
<td>34.1</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Local Government</td>
<td></td>
<td>18,668</td>
<td>21,173</td>
<td>2,505</td>
<td>13.4</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Food Services and Drinking Places</td>
<td></td>
<td>21,017</td>
<td>23,301</td>
<td>2,284</td>
<td>10.9</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Administrative and Support Services</td>
<td></td>
<td>12,021</td>
<td>14,082</td>
<td>2,061</td>
<td>17.1</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Nursing and Residential Care Facilities</td>
<td></td>
<td>7,244</td>
<td>8,891</td>
<td>1,647</td>
<td>22.7</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Professional, Scientific, and Technical Services</td>
<td></td>
<td>7,908</td>
<td>9,179</td>
<td>1,271</td>
<td>16.1</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Educational Services</td>
<td></td>
<td>6,125</td>
<td>7,258</td>
<td>1,133</td>
<td>18.5</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Hospitals</td>
<td></td>
<td>8,455</td>
<td>9,178</td>
<td>723</td>
<td>8.6</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Construction of Buildings</td>
<td></td>
<td>1,811</td>
<td>2,466</td>
<td>655</td>
<td>36.2</td>
<td></td>
</tr>
</tbody>
</table>

According to the Florida Department of Economic Opportunity’s 2014 labor market report, between 2014 and 2021, the bachelor’s degree-level occupations gaining the most new jobs in Florida include 1) registered nurses 2) elementary school teachers (except special education) 3) accountants and auditors 4) management analysts and 5) construction managers.

Table 10: Bachelor’s Degree Level Occupations Gaining the Most New Jobs Florida Statewide 2014-2021

<table>
<thead>
<tr>
<th>Rank</th>
<th>Occupation Title</th>
<th>Employment 2014</th>
<th>Employment 2021</th>
<th>2014-21 Change</th>
<th>2014 Annual Average Wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Registered Nurses</td>
<td>173,537</td>
<td>202,635</td>
<td>29,098</td>
<td>16.77</td>
</tr>
<tr>
<td>2</td>
<td>Elementary School Teachers, Except Special Education</td>
<td>70,335</td>
<td>81,187</td>
<td>10,852</td>
<td>15.43</td>
</tr>
<tr>
<td>3</td>
<td>Accountants and Auditors</td>
<td>85,830</td>
<td>96,461</td>
<td>10,631</td>
<td>12.39</td>
</tr>
<tr>
<td>4</td>
<td>Management Analysts</td>
<td>49,331</td>
<td>57,312</td>
<td>7,981</td>
<td>16.18</td>
</tr>
<tr>
<td>5</td>
<td>Construction Managers</td>
<td>43,360</td>
<td>49,294</td>
<td>5,934</td>
<td>13.69</td>
</tr>
<tr>
<td>6</td>
<td>Middle School Teachers, Exc. Special &amp; Voc. Education</td>
<td>30,068</td>
<td>34,703</td>
<td>4,635</td>
<td>15.42</td>
</tr>
<tr>
<td>7</td>
<td>Market Research Analysts and Marketing Specialists</td>
<td>15,423</td>
<td>19,534</td>
<td>4,111</td>
<td>26.65</td>
</tr>
<tr>
<td>8</td>
<td>Software Developers, Applications</td>
<td>23,620</td>
<td>27,707</td>
<td>4,087</td>
<td>17.30</td>
</tr>
<tr>
<td>9</td>
<td>Human Resources Specialists</td>
<td>24,721</td>
<td>28,641</td>
<td>3,920</td>
<td>15.86</td>
</tr>
<tr>
<td>10</td>
<td>Substitute Teachers</td>
<td>33,716</td>
<td>37,176</td>
<td>3,460</td>
<td>10.26</td>
</tr>
<tr>
<td>13</td>
<td>Computer Systems Analysts</td>
<td>23,030</td>
<td>26,293</td>
<td>3,263</td>
<td>14.17</td>
</tr>
<tr>
<td>14</td>
<td>Cost Estimators</td>
<td>11,651</td>
<td>14,830</td>
<td>3,179</td>
<td>27.29</td>
</tr>
<tr>
<td>15</td>
<td>Personal Financial Advisors</td>
<td>15,793</td>
<td>18,861</td>
<td>3,068</td>
<td>19.43</td>
</tr>
</tbody>
</table>

Source: Florida Department of Economic Opportunity

Persistent Poverty

Poverty is pervasive among America’s youth, and Flagler and Volusia counties are no exception. A quarter of all Volusia and Flagler children under 18 live in poverty and two-thirds of all African-Americans and Latinos live in low-income households. In Volusia, 52.4% of unmarried female households with children under five presently live in poverty; this is 10% higher than the state average. Research has documented the rippling effects that poverty has on education, health care and virtually every sector of society. Poor families need more help navigating their way into and through college. It is higher education’s responsibility to make sure they have the infrastructure and support systems in place to help students from impoverished backgrounds.
Speed of Innovation

According to the Institute for the Future, rapid technology innovation is “emerging faster than our institutional capacity to adopt to them.” The speed of innovation suggests that businesses and institutions must adopt new products, services and business models, and might even consider new ways to plan strategically. Higher education program offerings have often lagged behind societal trends and employer needs, so colleges and universities must think strategically about how to keep pace with the changes.

International Students and Economic Impact

In 2014-15, 974,926 international students studied at U.S. colleges and universities. This represented an increase of 10% over the prior year, the highest rate of growth since 1978-79 (www.iie.org/opendoors).

In 2015, the continued growth in international students coming to the U.S. for higher education had a significant positive economic impact on the United States. International students contributed more than $30.5 billion to the U.S. economy and supported 373,381 jobs, according to the U.S. Department of Commerce.

Students from around the world who study in the United States also contribute to America’s scientific and technical research and bring international perspectives into U.S. classrooms, helping prepare American undergraduates for global careers, and often lead to longer-term business relationships and economic benefits.

The number of international students in Volusia and Flagler counties in 2014-15 was 1,619, representing an economic impact of $63.7 million and 443 direct and indirect jobs (NAFSA International Student Economic Value Tool website.) Daytona State College created $1.8 million, supporting 12 jobs (https://istart.iu.edu/nafsa/reports/district.cfm?state=FL&year=2014&district=06).

<table>
<thead>
<tr>
<th>Table 11</th>
<th>Volusia</th>
<th>Flagler</th>
<th>Florida</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of children under 18 living in poverty</td>
<td>23.9</td>
<td>27.2</td>
<td>24.5</td>
</tr>
<tr>
<td>Percentage of single parent female households with children under 5 living in poverty</td>
<td>52.4</td>
<td>Not available</td>
<td>40.9</td>
</tr>
</tbody>
</table>

Source: Community Agenda Snapshot, 2015
Top Employers in Volusia County

The table below ranks the largest employers in Volusia County based on the number of workers employed.

<table>
<thead>
<tr>
<th>Business/Organization</th>
<th>Number of Employees</th>
<th>Type of Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volusia County Schools</td>
<td>7,742</td>
<td>education</td>
</tr>
<tr>
<td>Halifax Health</td>
<td>4,294</td>
<td>health care</td>
</tr>
<tr>
<td>Florida Hospital – all Divisions</td>
<td>4,040</td>
<td>health care</td>
</tr>
<tr>
<td>Volusia County Government</td>
<td>3,333</td>
<td>government</td>
</tr>
<tr>
<td>Publix Supermarkets, Inc.</td>
<td>3,241</td>
<td>grocery</td>
</tr>
<tr>
<td>State of Florida</td>
<td>2,758</td>
<td>government</td>
</tr>
<tr>
<td>Wal-Mart Stores, Inc.</td>
<td>1,875</td>
<td>grocery/retail</td>
</tr>
<tr>
<td>Daytona State College</td>
<td>1,711</td>
<td>education</td>
</tr>
<tr>
<td>Embry-Riddle Aeronautical University</td>
<td>1,483</td>
<td>education</td>
</tr>
<tr>
<td>U.S. Government</td>
<td>1,216</td>
<td>government</td>
</tr>
<tr>
<td><strong>Total Employees</strong></td>
<td><strong>31,693</strong></td>
<td></td>
</tr>
</tbody>
</table>


Unemployment

The Volusia County unemployment rate continues to decrease. In March 2016, the rate was 4.8%, just below the state average of 4.9 percent. In neighboring Flagler County, the 5.3% unemployment rate reported in March 2016 was a little higher than the state average of 4.9% ([BLS Current Population Survey](http://www.floridabusiness.org/13DataReport.pdf)).
Economic Implications for Daytona State College

- The college must continue to meet the changing demands of the local economy and state mandates, and must align degree program offerings to the workforce needs of the community.
- The college must ensure that academic programs are expanded, enhanced or added to support the anticipated growth in employment opportunities in construction, manufacturing and healthcare services.
- The college must provide academic and non-academic support for students from impoverished or disadvantaged backgrounds.
- Students will benefit if the college increases exposure to diverse cultural experiences through service learning, study abroad opportunities and a larger population of international students.

Political Trends

Florida’s Political Climate

The state of Florida recently implemented many changes within its higher education system, including a performance funding model intended to improve student access, attainment, retention and success. Accountability remains at the forefront of the Florida College System Strategic Plan, establishing benchmarks and targets for colleges based on system-wide performance indicators.

The higher education paradigm continues to shift. Florida’s public institutions of higher education will be impacted by the following trends as a result of legislative and administrative policy changes:

- The four primary objectives for post-secondary institutions in the Florida College System are expanding access, reducing system and student costs, strengthening the link between the labor market and postsecondary education, and enhancing the student experience.
- The focus is on student retention and graduation rates; increasing STEM degree production and degrees in areas of strategic emphasis; and maintaining open access, availability of courses and affordability while decreasing student indebtedness.
- Institutions of higher education must use national best practices and continuous evaluation of teaching and student support methods to increase student success and shorten time to degree.
- The state system of higher education is more closely aligning degree program offerings to the economic development and workforce needs of the state. Matching Standard Occupational Classification codes to Statewide Course Numbering System codes will improve tracking of graduation and job placement, enrollment projections and industry demand.
Shifting Priorities for State Funding

Adopting performance-based funding

In its 2016 session, the Florida Legislature passed the Implementing Bill for General Appropriations Act, HB 5003, which formally establishes by law the Performance-based Funding for the Florida College System, while also requiring the State Board of Education to adopt metrics and benchmarks for retention rates, program completion and graduation rates, post-graduation employment, salaries, and continuing education for workforce and baccalaureate programs. The Distinguished Florida College System Program also was passed into law, establishing standards for excellence among FCS member institutions and creating a framework in which institutions can receive an excellence designation and be eligible to receive additional funding.

Postsecondary affordability

Passed into law during the 2016 legislative session, CS/SB 7019 requires the State Board of Education and Board of Governors to identify strategies to promote college affordability by evaluating tuition and fees, financial aid, and the cost of instructional materials and textbooks. This also establishes a requirement of both the State Board of Education and Board of Governors to submit reports to the governor, president and speaker on affordability initiatives. Additionally, CS/SB 7019 requires the State Board of Education and Board of Governors to promote college affordability through strategies focused on reducing the cost of textbooks and other instructional materials. Toward this aim, the legislation mandates that institutions review the cost of textbooks and instructional materials by course and course section each semester to identify variances in costs. Institutions are to publish textbook and instructional material requirements by course and section 45 days prior to the first day of class.

Other Significant State Legislation

Student Housing: SB0576

Expands the limit to 300 beds from 100 beds for dormitories constructed by Florida College System institutions.

Federal Focus on Higher Education Institutions

Reauthorization of HEA

Last updated in 2008, the Higher Education Act (HEA) is past due for a major overhaul. A lack of bi-partisan agreement in Washington D.C. has prevented much progress toward this goal. It is likely that a major rewrite of the HEA will not occur before the 2016 presidential election comes to a close.
Until then, it is possible that lawmakers may pass smaller bills that have wider bipartisan support. Another possibility is that lawmakers or the next president will seek to pass more ambitious higher education changes by attaching them to moving legislation or adopting them through the budget process.

**Title IV Eligibility**

The U.S. Department of Education has released a Dear Colleague Letter, clarifying changes made to the definition of ‘career pathways’ for the purpose of qualifying as an eligible program under the Pell Grant’s Ability to Benefit provision. Ability to Benefit allows students who don’t have a high school diploma or GED to qualify for Title IV student aid if they can demonstrate their ability to undertake postsecondary coursework through testing or successful completion of six credit hours. Ability to Benefit was eliminated in fiscal year (FY) 2011 in order to generate savings for the Pell Grant program. Over the last two appropriations cycles, Congress has partially reinstated Ability to Benefit for qualified students enrolled in career pathway programs. In the FY 2016 omnibus appropriations bill, Congress modified the definition of career pathway for Ability to Benefit, aligning it with the existing federal workforce definition and potentially allowing a broader range of programs to qualify.

**Presidential Campaign**

Higher Education has emerged as a central policy issue in the 2016 U.S. presidential election. Hillary Clinton, the Democratic nominee, has proposed “The New College Compact” that outlines the following positions:

- **Lowering Costs to Students:** The majority of funding would be provided to states and colleges through grants aimed at reducing the overall financial burden of attending four-year public colleges, providing free tuition at community colleges and providing assistance to private non-profit institutions that show evidence of value while keeping student costs low. TRIO and GEAR UP programs would be strengthened, while new grant funding would be provided to support intervention strategies aimed at low-income and first generation students, such as quality child care and emergency financial aid.

- **Restructuring Aid Programs:** Clinton has proposed significant changes to how financial aid is awarded, including simplifying the FAFSA, providing early Pell Grant eligibility notification to students, lowering the interest rate on student loans, allowing for refinancing at the current federal rate for student loans and consolidating the four income-based repayment programs into a single program.

- **Accountability:** Clinton’s *New College Compact* supports institutional accountability measures, which require schools to share risk metrics such as graduation rates, likely earnings post-graduation and likely debt with prospective students. Additional accountability measures will be
aimed at for-profit institutions in support of the gainful employment rule to ensure that these institutions support student completion and prepare students for work. Additional measures will be implemented to hold institutions accountable for deceptive marketing tactics, fraud and other illegal practices. In such scenarios, affected students will have the option to cancel their student debt and defrauded GI Bill students will have another chance to use their educational support.

Donald Trump, the Republican nominee, has not released any formal proposal addressing educational policy and has largely avoided the topic during his campaign. However, the comments he has made regarding education have political and policy analysts speculating that Trump may support the following positions:

• Reducing Bureaucracy: Trump has suggested that the Department of Education can be downsized in an effort to reduce waste, fraud and abuse. Though Trump has defended entitlement programs such as Social Security and Medicare, he has suggested that Title I funding may not be reduced.

• Undocumented Students: A core component of Trump’s campaign is his promise to deport 11 million undocumented immigrants. If successful, this would directly impact the undocumented immigrants currently attending college as a result of President Obama’s executive action and may force institutions to include the verification of citizenship as criteria of admissions.

Political Implications for Daytona State College

• The college will continue to monitor state and federal legislative priorities and policy changes.
• The college must continue to use system-wide performance indicators to guide instructional and operational decisions.
• The college will continue to expand access, reduce system and student costs, and strengthen the link between the labor market and postsecondary education.
• The college must use national best practices and continuous evaluation of teaching and student support methods to increase student success and shorten time to degree.
• The college will monitor the state and presidential elections in 2016, as they hold an unknown impact on Florida’s future and the direction of higher education.

Technology Trends

How proactive are the college’s IT operations? How does the institution recognize the growth of the Internet of Things, clouds and other upcoming technologies? This section takes a look at technology trends.
3D Printing

3D printing is one of the latest trends in education and provides teachers with three-dimensional visual products they can use in their classrooms to illustrate a variety of concepts that might otherwise be difficult for students to understand. It also helps teachers to motivate students when they are actually seeing a three-dimensional product that in the past has been presented in a visual format. It promotes hands-on learning by producing realistic three-dimensional models/products that can be used by schools of engineering and architecture to name a few (T.H.E. Journal, 2014).

3D printing can be used to create 3D models of the human body for more realistic interactive class activities in biology (Pierce, 2016). In his research, Cole investigates how software can be used to teach spatial skills leading to greater success in Science, Technology, Engineering and Mathematics (STEM) fields (Cole, 2016).

Evidence from the literature on the uses and benefits of 3D printing highlight many reasons why higher education institutions should invest in this technology.

Gamification

Gamification, another technology trend, seeks to take enjoyable aspects of games – fun, play and challenge – and apply them to real-world processes in the educational field, in business and leisure. Experts foresee immense growth of gamification globally over the next few years. Gamification in higher education has benefits in keeping students motivated and interested in topics ranging from core disciplines to, among others, nursing, foreign languages, art, music and culinary subject areas. The overall assumption is that it helps students stay focused and interested in the assigned tasks and improves retention of the learned subjects.

Internet of Things

The large growth of materials, media and software during the last decade has led to steps toward more individualized learning approaches. According to Sujithra and Padmavathi (2016), the Internet of Things (IoT) is the connection of any device to the Internet with an on and off switch. The IoT “includes everything from cell phones, coffee makers, washing machines, headphones, lamps, wearable devices and almost anything else” (Sujithra & Padmavathi, pg. 227). The network of all the connected things includes people as well.

Colleges and universities must pay attention and guarantee that technological systems are designed and built for openness and participation (Sellinger, Sepulveda, & Buchan 2013). Challenges include developing new forms of education that accommodate great numbers of students and delivering curriculum that reflect the changes of technology (Sellinger et al., 2013).
Cloud-Based Computing

Budiawan (2016) reported that cloud computing is a style of computing where dynamically scalable and virtualized resources are provided as a service over the Internet” (pg. 2). Cloud computing provides for shared resources, software and information through the Internet (Matthew, 2012). A great advantage of cloud computing is that data and services are made available without losing sensitive information.

Benefits of cloud computing in higher education include access to applications from anywhere and support for teaching and learning (Budiawan, 2016). Faculty, staff and students can be on or off campus to access and use resources (Matthew, 2012). Cloud computing can provide great value and enables colleges and universities to save money (Budiawan, 2016).

Other Technology Trends

Addressing Cyber Attacks

Cyber attacks have increased exponentially and colleges are not immune to those attacks. Institutions of higher education must take proactive measures to prevent such attacks and have updated breach response plans. Cybersecurity also is an area for growth in terms of education and job outlook.

Social Media

Currently, 75% of adults worldwide use social media, with number one being Facebook, followed by Instagram and Twitter. With the growth of additional social media platforms geared toward the younger generation, such as Snap Chat, higher education must be creative in its use of social media for marketing, instruction, outreach and overall use.

Online Education

The number of students taking online education classes continues to increase. Based on the Babson Survey Research Group's 2014 Survey of Online Learning, 70.8% of administration says that online education is an integral part of college operations; however, only 28% agree that faculty embrace online education. Excelling in the delivery of online learning will be critical to future competitiveness.

Technology Implications for Daytona State College

- Daytona State College must continue to expand online education and enhance its effectiveness through faculty and staff training and development, and strategies to increase online student success.
• The college can enhance instruction, course offerings and operations by maximizing applications related to the Internet of Things and by integrating 3D printing and gamification into its programs and services.
• The college must provide a robust infrastructure to support a growing network of devices that mobilize technology and at the same time must take proactive measures to prevent cyber attacks and have breach response plans in place.
• The college must continue to use, monitor and enhance its social media presence for marketing, instruction and outreach.

Environmental Trends

Environmental trends related to sustainability and evolving workplaces are impacting colleges at many different levels, including enrollment. According to The Princeton Review’s Senior VP-Publisher Robert Franek, “Among nearly 10,000 teens who participated in our ‘2015 College Hopes & Worries Survey,’ 61% told us that having information about a school’s commitment to the environment would influence their decision to apply to or attend the college” (The Princeton Review, 2015). Examples of sustainability categories include, but are not limited to, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality and sustainable sites.

LEED-Certified Buildings

LEED (Leadership in Energy and Environmental Design) is the “most widely used third-party verification for green buildings, with around 1.85 million square feet being certified daily” (U.S. Green Building Council, 2016). Some Florida colleges that currently have at least one LEED-certified building are Miami Dade, Santa Fe, Florida Southwestern, Florida State College at Jacksonville, State College of Florida and Seminole State College. Daytona Beach area buildings that are LEED-certified include the Daytona Beach Kennel Club and the NASCAR headquarters (Green Building Wire, 2015).

Vehicle-Based Pollution Reduction

Nationally, colleges and universities are making concerted efforts to promote “greener” ways to get to and from campus by promoting carpooling/ridesharing. “Institutions offer many incentives to encourage this practice, including reduced parking fees, preferential parking spaces, subsidized or free bus passes to get around campus and emergency rides” (Abell, 2015). In Florida specifically, Miami Dade College has a program, Get2MDC, which promotes mass transit, biking, walking and carpooling. This program provides carpool matching services, reserved carpool parking and a “backup ride” program. Its website also includes a “cost of commuting” calculator. Additionally, more colleges and universities (including Valencia, State College of Florida and College of Central Florida) are installing electric car-charging stations on campus.
Sustainability

Many Florida colleges have formed college-wide committees to discuss and implement best practices for sustainability and promote communication between departments and in the community. Furthermore, some dedicate space on their websites to publish their sustainability efforts and results. Additionally, some institutions, such as State College of Florida, have incorporated sustainability into their institutional values and strategic priorities.

Consumption/Waste

There is an increasing trend toward concerted efforts to reduce consumption and waste on campus. The following is a glimpse of initiatives:

- recycling competitions statewide and nationwide, with recycling bins across campus;
- reducing or eliminating the sale of single-use water bottles on campus and installing more water fountains that serve as water-bottle refill stations;
- composting surplus food;
- selling recyclable materials for profit;
- buying “green” products;
- reducing water usage:
  - planting native, drought-resistant plants and sod (Bahia vs. St. Augustine)
  - building rainwater catchment systems;
- Energy conservation:
  - installing LED lighting and attaching solar panels;
  - affixing occupancy sensors for lighting and cooling;
  - brushing roof coatings that reflect light and reduce cooling costs.

Office of the Future

Since individual employees prefer different types of work environments, an upcoming trend is to design office spaces that give employees more options and flexibility. According to a recent Forbes article, “Some employees work better in cubicles and others work better in a lounge or cafeteria. Based on our research, employees want flexible furniture, a distraction-free environment and lounge areas” (Schawbel, 2015). Other studies indicate that creating spaces where employees cross paths more often will boost productivity. According to a report published in Harvard Business Review, “The key to unlock the greatest productivity isn’t necessarily in the hands of the individual employee. Rather…. face-to-face encounters are the way anyone working in the knowledge economy is going to improve performance” (as cited in Dishman, 2014).
Solar-Powered Charging Stations

Institutions across the nation are purchasing powering stations for mobile devices, mostly in the form of picnic tables with umbrellas laden with solar panels. These are ideal for sunny locations such as Daytona Beach. The tables, made and sold by EnerFusion Inc. for $10,000, seat eight and provide power outlets, USB ports, battery backups, energy consumption monitors and LED lights for nighttime use. The newest 2016 model provides Qi-enabled wireless charging locations on the table surface as well as a WiFi hotspot (http://www.enerfusioninc.com/solar-power-dok.html).

The Flip-Side of the Argument

Not everyone embraces the sustainability trend occurring on college campuses nationwide. A study conducted by the National Association of Scholars (2015) claims that campus sustainability may even harm higher education. The report investigates how much colleges and universities are spending to attain sustainability goals and determined that “costs far outrun the purported savings” and that many institutions fail transparency tests when it comes to spending. Additionally, this report questions the “greening of the curriculum.” It states that “harnessing higher education and the liberal arts into the service of sustainability seriously undermines their purpose.”

Environmental Implications for Daytona State College

- The college should assess and investigate its sustainability efforts and look at LEED-certified buildings, vehicle-based pollution reduction, and consumption and waste.
- The college should examine its existing spaces and repurpose effectively to push toward nontraditional learning spaces.
- The college must educate students and staff about the basics of energy conservation.
- Through campus construction and expansion, the college has the opportunity to enhance local and regional partnerships.
References


