

**INDIANA COMMISSION** *for*  
**HIGHER EDUCATION**

# AGENDA

Monday, May 6, 2019

101 West Ohio Street, Suite 300  
Indianapolis, IN 46204-4206  
Tele: 317-464-4400 | Fax: 317-464-4410

[www.che.in.gov](http://www.che.in.gov)





**INDIANA COMMISSION** *for*  
**HIGHER EDUCATION**

**MAY COMMISSION MEETING  
AGENDA**

**Monday, May 6, 2019**

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**LOCATION**

Indiana Commission for Higher Education  
101 West Ohio Street, Suite 700  
Indianapolis, IN 46204  
*Parking available in the attached garage*

**BUSINESS MEETING**

1:00 P.M. – 3:00 P.M.  
7<sup>th</sup> Floor Conference Room

**CALL IN INFORMATION:**

DIAL: 1 (605) 475-4700  
PIN: 230295#

- I. Call to Order – 1:00 P.M. (Eastern)**  
**Roll Call of Members and Determination of Quorum**  
**Chair’s Remarks**  
**Commissioner’s Report**  
**Consideration of the Minutes of the March 14, 2019 Commission Meeting ..... 1**
- II. Business Items**
- A. Non-Binding Tuition and Mandatory Fee Targets for 2019-20 and 2020-21 ..... 5
  - B. 2019-2020 Frank O’Bannon Schedule of Awards ..... 15
  - C. Academic Degree Programs for Expedited Action ..... 17
    - 1. Master of Science in Computational Data Science to be offered by Purdue University at Indiana University Purdue University Indianapolis
    - 2. Bachelor of Arts/Bachelor of Science in Neuroscience to be offered by Indiana University Northwest
    - 3. Master of Science in Athletic Training to be offered by Ball State University
    - 4. Bachelor of Science in Civil Engineering to be offered by University of Southern Indiana
    - 5. Bachelor of Science in Applied Data and Information Science to be offered by Indiana University at Indiana University Purdue University Indianapolis

**\*\*Meeting takes place on EASTERN TIME\*\***

- D. Capital Projects for Full Discussion
  - 1. Purdue University West Lafayette – Aspire at Discovery Park Lease ..... 21
  - 2. Indiana University Bloomington – Data Center Electrical and Cooling Infrastructure Upgrades ..... 25
- E. Capital Projects for Expedited Action ..... 33
  - 1. Purdue University West Lafayette – State Farm Building Purchase
  - 1. Purdue University West Lafayette – Ground Lease to Duke Energy
  - 1. Purdue University West Lafayette – Wade Utility Plan Connection

**III. Information Items**

- A. Academic Degree Programs Awaiting Action ..... 35
- B. Academic Degree Program Actions Taken by Staff ..... 37
- D. Media Coverage ..... 43

**IV. Old Business  
New Business**

**V. Adjournment**

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The next meeting of the Commission will be on **June 13, 2019, in Fort Wayne, Indiana.**

**State of Indiana  
Commission for Higher Education**

**Minutes of Meeting**

**Thursday, March 14, 2019**

**I. CALL TO ORDER**

The Commission for Higher Education met in regular session starting at 1:00 p.m. at Indiana University-Purdue University Indianapolis, 875 W. North Street, Indianapolis, IN 46204 with Dan Peterson presiding.

**ROLL CALL OF MEMBERS AND DETERMINATION OF A QUORUM**

*Members Present:* Mike Alley, Dennis Bland, Jon Costas, Jud Fisher, Coleen Gabhart, Chris LaMothe, Kathy Parkison, Dan Peterson, Beverley Pitts and John Popp

*On the Phone:* Chris Murphy and Beverley Pitts

*Members Absent:* Al Hubbard, Lisa Hershman and Alfonso Vidal

**CHAIR'S REPORT**

On behalf of the Commission, I would like to thank Chancellor Paydar and IUPUI for your hospitality and hosting our meeting today.

Be sure to mark your calendars if you have not done so already for the Commission's two annual policy events, the State of Higher Education Address and the Kent Weldon Conference for Higher Education, which will be held on April 8 and 9 this year, addressing the transition from high school to college and careers.

**CONSIDERATION OF THE MINUTES OF THE OCTOBER, 2018 COMMISSION MEETING**

**R-19-03.1 RESOLVED:** That the Commission for Higher Education hereby approves the Minutes of the February, 2019 regular meeting. (Motion – Parkison, second – Costas, unanimously approved)

**II. PUBLIC SQUARE**

**A. Navigating Colleges and Careers**

1. Jennifer Sattem, Vice President for Policy & Research, Achieve

As the Commission continues to engage in conversations about helping student navigate through college and careers, it will have the opportunity to hear from Jennifer Sattem, Vice President for Policy & Research at Achieve. Achieve is a nonprofit education reform

organization based in New York dedicated to working with states to raise academic standards and graduation requirements among other priorities.

Stephanie Sample moderated this session.

### III. Business Items

#### A. Academic Degree Programs for Expedited Action

1. Master of Science in Nursing to be offered by Indiana University Bloomington
2. Associate of Science in Computer Science to be offered by Vincennes University

**R-19-03.2 RESOLVED:** That the Commission for Higher Education hereby approves the following academic degree programs, in accordance with the background information provided in this agenda item. (Motion – Murphy, second – Bland, unanimously approved)

#### B. Capital Projects for Full Discussion

1. Purdue University West Lafayette – Purdue Union Club Hotel Renovation

Tony Hahn presented this project. Alecia Nafziger provided the staff recommendation.

**R-19-03.3 RESOLVED:** That the Commission for Higher Education hereby approves the following capital project, in accordance with the background information provided in this agenda item. (Motion – Murphy, second – Costas, unanimously approved)

#### C. Capital Projects for Expedited Action

1. Purdue University West Lafayette – University Church Purchase
2. Purdue University Fort Wayne – Park 3000 Purchase

**R-19-03.4 RESOLVED:** That the Commission for Higher Education hereby approves the following capital projects, in accordance with the background information provided in this agenda item. (Motion – Fisher, second – Alley, unanimously approved)

### III. INFORMATION ITEMS

- A. Academic Degree Programs Awaiting Action
- B. Academic Degree Actions Taken By Staff
- C. Media Coverage

### IV. OLD BUSINESS NEW BUSINESS

There was none.

**V. ADJOURNMENT**

The meeting was adjourned at 2:10 P.M.

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Chris LaMothe, Chair

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Al Hubbard, Secretary





**COMMISSION FOR HIGHER EDUCATION**

Monday, May 6, 2019

**BUSINESS ITEM A:**

**Non-Binding Tuition and Mandatory Fee Targets for 2019-2021 and 2020-2021**

**Staff Recommendation**

That the Commission for Higher Education adopt the recommendation of non-binding tuition and mandatory fee increase targets for each of Indiana’s public postsecondary institutions for 2019-20 and 2020-21, consistent with this agenda item.

**Background**

By statute (I.C. 21-14-2-12.5), the Indiana Commission for Higher Education is charged with recommending “non-binding tuition and mandatory fee increase targets for each state educational institution.” The Commission shall make recommendations no later than 30 days after the enactment of a state budget.

State educational institutions must set tuition and fee rates no later than 60 days after the enactment of the state budget. Institutions must hold a public hearing no later than 30 days after the Commission sets non-binding tuition and fee targets. In addition, institutions must submit to the State Budget Committee a report outlining the financial and budgetary factors considered by the board of trustees in determining the amount of the increase. Tuition and fee rates are to be set by the institutions for the next two academic years.

The State Budget Committee, upon review of the Commission’s non-binding tuition and fee targets and reports submitted by the state educational institutions regarding tuition and fee rates, may request that an institution appear at a public meeting of the state budget committee concerning the report.

**Supporting Document**

Non-Binding Tuition and Mandatory Fee Increase Targets for Indiana’s Public Postsecondary Institutions for 2019-20 and 2020-21



## NON-BINDING TUITION AND MANDATORY FEE TARGETS FOR INDIANA'S PUBLIC POSTSECONDARY INSTITUTIONS FOR 2019-20 AND 2020-21

May X, 2019

### **Introduction**

The Commission for Higher Education is required under statute (I.C. 21-14-2-12.5) to recommend “non-binding tuition and mandatory fee increase targets” for Indiana’s public postsecondary institutions. This recommendation must be made no later than 30 days after the enactment of a state budget.

The official statutory authority to set tuition and mandatory fees lies with the board of trustees of each Indiana public postsecondary institution. Institutions must hold a public hearing no later than 30 days after the Commission sets non-binding tuition and mandatory fee targets. Tuition and mandatory fee rates for the next two academic years must be set by the institutions no later than 60 days after the enactment of the state budget.

The Commission’s recommended tuition and mandatory fee targets reflect the coordinated effort among members of the Commission, representatives from Indiana’s colleges and universities, and state policy-makers to strike a balance between understanding the operational realities of the institutions and the need to ensure affordable access to college for Hoosier families. Aligning with the Commission’s goal of having 60% of Hoosiers with education beyond high school by 2025, the Commission focuses its recommendation to tuition and mandatory fee rate increases for resident undergraduate students.

### **Indiana and the National Landscape: Tuition and Mandatory Fees**

Indiana’s recent tuition increases remain the lowest in nearly 30 years and are among the lowest in the nation. At Indiana’s public four-year colleges, in-state tuition and mandatory fee rates grew by an average of 1.4% each year from 2008-09 to 2018-19 compared to public four-year institutions nationally at 3.1%. This placed Indiana’s public four-year institutions as 4<sup>th</sup> in the nation for the lowest average one year increase in tuition and mandatory fee rates over the ten year period. In-state tuition and mandatory fee rates at Indiana’s public two-year colleges also increased below national averages over the same time period: 2.8% compared to 3.0% nationally (state ranking of 20).<sup>1</sup>

Strong leadership at Indiana’s public institutions has been instrumental in setting a high bar for college affordability. Purdue University-West Lafayette recently announced plans to hold tuition flat for an eighth consecutive year through the 2020-21 academic year. Indiana’s public institutions have shown

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<sup>1</sup> College Board, Annual Survey of Colleges. State-level data: <https://trends.collegeboard.org/college-pricing/figures-tables/tuition-fees-sector-state-over-time> . National-level data: <https://trends.collegeboard.org/college-pricing/figures-tables/average-rates-growth-published-charges-decade>.



strong commitments to the Commission's tuition and mandatory fee recommendations evidenced, in part, by Indiana's tuition increases falling below the national average.

### ***Commitment to College Affordability***

Even though Indiana has shown significant progress in keeping tuition and fee rate increases low, the state must maintain its focus on increasing college. College tuition represents a large investment for Hoosier families with tuition and mandatory fees at Indiana's public institutions representing approximately 17% of Indiana per capita income. At Indiana's public four-year institutions in particular, tuition and mandatory fees can represent up to 23% of personal per capita income in the state. Considering that tuition and mandatory fees only make up a portion of the total cost of attendance, it is no surprise that many students believe that an education beyond high school is out of reach financially.

Keeping the cost of college down is essential to eliminating barriers to college access and completion, especially for low and middle-income Hoosiers. College completion can be a gateway to economic opportunity. On average, Hoosiers with a college degree earn approximately 132% more than those with only a high school diploma (\$46,596 versus \$20,054 in average annual salary).<sup>2</sup> In addition, wage outcome data of Indiana public college graduates show that the payoff of a college degree increases over time and at each degree level.<sup>3</sup> The relationship between education and income is also present at the statewide level, with a state's ranking for per capita income often correlating with its ranking for educational attainment. The benefits of a college degree can go beyond the income premium with college graduates also contributing higher levels of fiscal support, philanthropic participation, and civic engagement in their communities.<sup>4</sup> College affordability is a key component in the effort to increase educational attainment levels and create a greater well-being for all Hoosiers.

### ***Considerations for ICHE Tuition and Mandatory Fee Recommendation***

The Commission considered several factors in the process of establishing non-binding tuition and mandatory fee targets for Indiana's public postsecondary institutions for academic years 2019-20 and 2020-21. The 2019-21 higher education budget, current student debt levels, and trends in inflationary costs experienced by both Hoosier consumers and Indiana institutions all factored into the Commission's recommendation.

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<sup>2</sup> 2017 average annual wages for Indiana residents ages 25 or older: IPUMS-USA, University of Minnesota, [www.ipums.org](http://www.ipums.org).

<sup>3</sup> 2018 Return on Investment Report, Indiana Commission for Higher Education: <https://www.in.gov/che/files/2018%20ROI%20FINAL%205-9-18.pdf>.

<sup>4</sup> "Beyond the College Earnings Premium. Way Beyond," The Chronicle for Higher Education, January 29, 2017: <http://www.chronicle.com/article/Beyond-the-College-Earnings/239013>.



## State Appropriations

The state maintained a commitment to higher education throughout the 2019-21 budget development process. The Governor, House, and Senate all recommended increases to higher education funding through additional operating, line item, and repair and rehabilitation dollars. The 2019-21 biennial budget that was signed by Governor Holcomb on **MONTH DATE**, 2019 includes nearly \$2.77 billion in operating funding, \$389 million in new capital projects, and over \$930 million in line item and financial aid funding over the biennium. The state's increased financial commitment to higher education this biennium shows the continued partnership between the State and its higher education institutions.

## State Fiscal Liability and Student Need

In the upcoming biennium, the state of Indiana will provide nearly \$380 million in FY 2020 and over \$390 million in FY 2021 in student financial aid dollars to cover the cost of tuition and mandatory fees for Hoosier students. The 21st Century Scholars program, one of the state's largest financial aid programs, funds 100% of tuition and mandatory fees at Indiana public institutions. In the case of 21st Century Scholars, state expenditures are directly tied to tuition and mandatory fee rates at Indiana public institutions. Additionally, 21st Century Scholar grant amounts at Indiana private institutions represent the average tuition and mandatory fee rates at public institutions; thus, increases in tuition and mandatory fee rates at public institutions increase state expenditures at Indiana private institutions. The State has strong fiscal interest in limiting tuition increases to stay within allotted appropriation levels over the biennium.

Unlike the 21st Century Scholarship, the Frank O'Bannon grant amounts are fixed based on a student's demonstrated financial need and school choice. These grant amounts do not automatically increase to accommodate higher tuition and mandatory fees. In March 2017, the Commission approved base award amounts, which are still in effect today, that reach approximately 90% of pre-recession award levels, which will result in additional grant dollars being distributed to students. Increases in tuition and mandatory fees limit how far these award dollars can go to cover higher education expenses for Hoosier students.

## Student Debt

At Indiana's public four-year institutions, over two-thirds (68%) of graduates had student loan debt with an average loan balance of \$26,999. This compares to about half (49%) of graduates at Indiana's public two-year institutions who accumulated an average of \$17,132 in student loans.<sup>5</sup> National student loan debt estimates are not available exclusively for public college graduates for

<sup>5</sup> 2018 Return on Investment Report: Data-At-A-Glance, Indiana Commission for Higher Education:  
[https://www.in.gov/che/files/2018\\_ROI\\_Data-at-a-Glance.pdf](https://www.in.gov/che/files/2018_ROI_Data-at-a-Glance.pdf).



comparison; however, recent data for four-year public and private colleges indicate that Indiana ranks 24<sup>th</sup> in the nation for the proportion of graduates with debt at 57% and 22<sup>nd</sup> in the nation for the average level of debt at \$29,561.<sup>6</sup> Tuition increases further burden Hoosier students and families relying on loans to finance college. Restraining tuition and mandatory fee increases is one mechanism to help control student debt levels and default rates.

## Inflation Indicators

Historically, the Commission has tied its tuition and mandatory fee target recommendation to inflationary increases. The Commission staff used the same inflation indices as have been used in past recommendations. The inflation indices include data collected from the Bureau of Labor Statistics and the State Higher Education Executive Officers (SHEEO). The analysis focuses on the latest four years of available data, 2015 through 2018, to provide the most recent snapshot of price changes for the recommendation process.

The inflation indices used in the analysis are:

- Consumer Price Index - Urban
- Consumer Price Index - Urban (Less Food and Energy)
- Consumer Price Index - Education and Communications
- Consumer Price Index - Midwest Region
- Higher Education Price Index (HEPI)
- Higher Education Cost Adjustment (HECA)

The four CPI indices provide a view of cost changes from the perspective of the consumer, particularly Hoosier students and their families. The CPI indices measure the change in price of goods and services over time, and each individual CPI index allows a unique view of price changes. The CPI-Urban and CPI-Midwest indices focus on the cost of overall goods and services. This compares to the CPI (Less Food and Energy) and the CPI (Education and Communication) indices that provide a specific focus on a set of goods and services more aligned with the cost of education.

The HEPI and HECA indices provide an alternative view of cost changes that is more contoured to higher education costs from the perspective of the institutions. Colleges and universities predominately spend money on staff salaries and benefits with a smaller amount on non-personnel costs such as utilities and supplies. Staff salaries continue to be the greatest expense for colleges and universities, making up roughly 75% of total expenditures.<sup>7</sup> In the competitive

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<sup>6</sup> Project on Student Debt, The Institute for College Access and Success: [https://ticas.org/posd/map-state-data#overlay=posd/state\\_data/2018/in](https://ticas.org/posd/map-state-data#overlay=posd/state_data/2018/in).

<sup>7</sup> Higher Education Cost Adjustment: A Proposed Tool for Assessing Inflation in Higher Education Costs, State Higher Education Executive Officers Association (SHEEO): [https://sheeo.org/wp-content/uploads/2019/04/Technical\\_Paper\\_A\\_HECA\\_1.pdf](https://sheeo.org/wp-content/uploads/2019/04/Technical_Paper_A_HECA_1.pdf).



market of staffing highly educated individuals, salaries can be a high driver of cost increases at institutions. The HEPI index is based on tracking changes in a market basket of expenditures for colleges and universities, with trends in faculty and staff salaries making up the core component of the index. The HECA index is based on tracking changes in a market basket of personnel costs and non-personnel costs, measured through the Employment Cost Index (ECI) and the Gross Domestic Product Implicit Price Deflator (GDP IPD).<sup>8</sup>

As with any statistical measure, each index has its advantages and disadvantages. According to the Bureau of Labor Statistics, CPI area indices such as the CPI-Midwest allow price changes to be examined at a more local level; however, because they only include portions of the CPI sample, they are subject to substantially greater sampling error. Additionally, the CPI-Urban and CPI-Midwest indices provide a measure of overall price changes, but also include food and energy goods and services, which are highly volatile in price; for this reason, the CPI (Less Food and Energy) index is frequently used and is typically referred to as the “Core CPI.”<sup>9</sup> Compared to the HECA index, the HEPI index incorporates personnel costs more specific to higher education (faculty and staff salaries); however, the HECA index is generally more up-to-date and measures inflation costs more in line with the broader U.S. economy.<sup>10</sup>

For the recommendation process, Commission staff focused on the three year compound annual growth rate (CAGR) percentage change for the six indices. The three year CAGR incorporates longer-term historical data in the percentage change estimates (in comparison to one year percentage changes that only include the latest two years of data). It also measures the average yearly growth rate, which provides a useful interpretation for higher education stakeholders who typically make decisions on an academic year basis (compared to two year and three year percentage changes that summarize changes across multiple years). The three year CAGR percentage changes for the six indices are summarized below:

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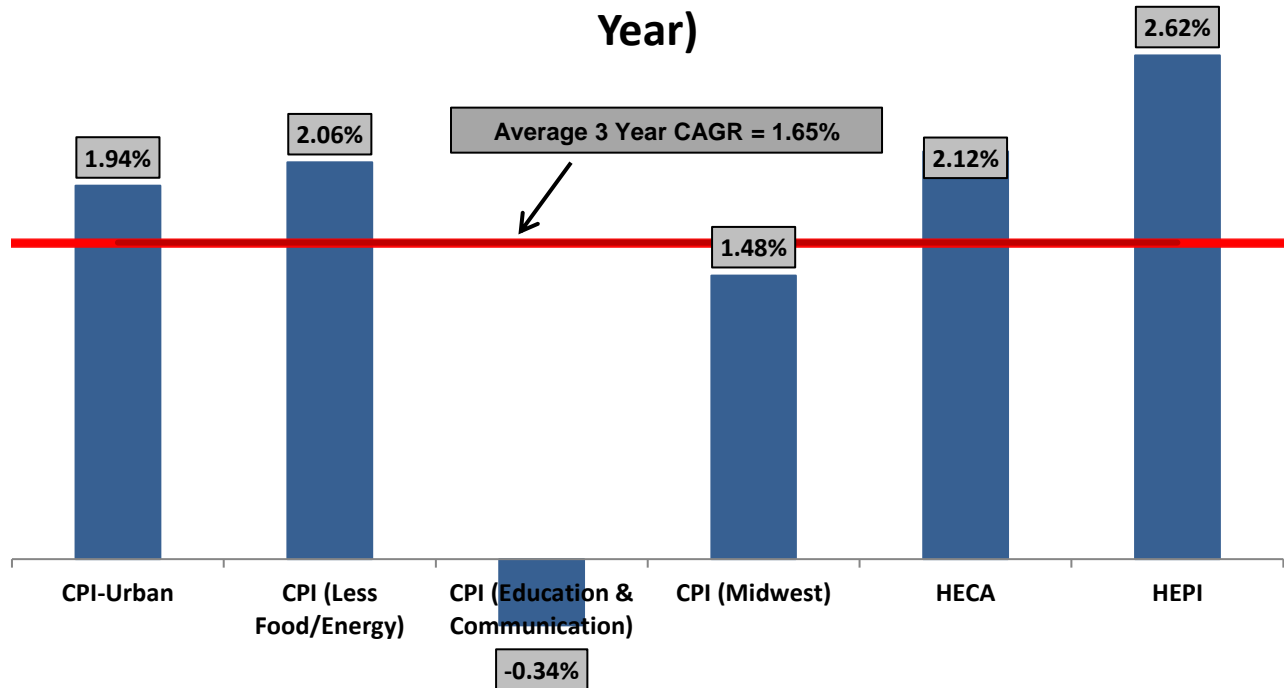
<sup>8</sup> Higher Education Cost Adjustment: A Proposed Tool for Assessing Inflation in Higher Education Costs, State Higher Education Executive Officers Association (SHEEO): [https://sheeo.org/wp-content/uploads/2019/04/Technical\\_Paper\\_A\\_HECA\\_1.pdf](https://sheeo.org/wp-content/uploads/2019/04/Technical_Paper_A_HECA_1.pdf).

<sup>9</sup> The Consumer Price Index, Bureau of Labor Statistics: <https://www.bls.gov/opub/hom/pdf/homch17.pdf>.

<sup>10</sup> Higher Education Cost Adjustment: A Proposed Tool for Assessing Inflation in Higher Education Costs, State Higher Education Executive Officers Association (SHEEO): [https://sheeo.org/wp-content/uploads/2019/04/Technical\\_Paper\\_A\\_HECA\\_1.pdf](https://sheeo.org/wp-content/uploads/2019/04/Technical_Paper_A_HECA_1.pdf).



### 3 Year Compound Annual Growth Rate (2015 Base Year)



The three year CAGR results for the CPI indices varied, ranging from -0.34% (CPI-Education & Communication) to 2.06% (CPI – Less Food and Energy). Comparisons of the three year CAGR values across the four CPI indices provide insights into the different inflationary cost changes experienced by Hoosier students and their families from 2015 to 2018. For example, the CPI-Midwest index was lower than the CPI-Urban index suggesting that Hoosier consumers may have faced lower yearly price increases for similar goods and services compared to consumers nationally from 2015 to 2018. The three year CAGR averaged 1.3% over the four CPI indices. When excluding the CPI-Urban and CPI-Midwest indices which contain the highly volatile costs of food and energy, the three year CPI CAGR averaged 0.9%.

The three year CAGR percent changes for the HECA and HEPI indices which provide insights into the cost changes from the institutional perspective were 2.12% and 2.62%, respectively. Comparing the three year CAGRs for HECA and the CPI (Education and Communication), which are related in concentration, suggest that the education costs from the perspective of the institution may have increased at a higher rate than that of the education costs from the perspective of the Hoosier consumer. However, when comparing the HECA to the CPI(Less Food and Energy) index, which encompasses a broader picture of the cost changes experienced by Hoosier consumers, the cost changes were roughly the same from both perspectives.



Collectively, Hoosier consumers and Indiana institutions experienced an average yearly growth rate in prices of 1.65% from 2015 to 2018 as measured by the average three year CAGR across the six CPI and SHEEO inflation indicators. As a note, Hoosier per capita income (adjusted for inflation) grew at a rate of 1.2% using the three year CAGR calculation.<sup>11</sup>

### ***Staff Recommendation***

Consistent with historical recommendations, Commission staff ties its tuition and fees target setting process to inflationary increases. Commission staff recommends that base tuition and mandatory fees for resident undergraduate students be held at current levels or adjusted by no more than 1.65% per year in each year of the biennium. The 1.65% maximum is based on the average three year compound annual growth rate across six CPI and SHEEO inflation indicators examined through a staff analysis. The baseline for this recommendation is the 2018-19 resident undergraduate base tuition and mandatory fee rates previously submitted to the Commission during the 2017-19 biennium. The Commission's non-binding tuition and mandatory fee targets for 2019-20 and 2020-21 for each institution are included in Table 1.

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<sup>11</sup> Indiana per capita income data were sourced through the Bureau of Economic Analysis: <https://bea.gov/>. The 3 year CAGR calculation includes per capital income data from 2014 through 2017. Per capita income data for 2018 were preliminary at the time this report was created.





Table 1. Non-Binding Tuition and Mandatory Fee Targets for 2019-20 and 2020-21

Institution	2018-19 Tuition and Fees	CHE Recommendation		Impact	
		2019-20 Target	2020-21 Target	\$ for 2020	\$ for 2021
<b>INDIANA STATE UNIVERSITY</b>	\$9,090	0-1.65%	0-1.65%	\$9,240	\$9,392
<b>UNIV OF SOUTHERN INDIANA</b>	\$7,829	0-1.65%	0-1.65%	\$7,958	\$8,089
<b>BALL STATE UNIVERSITY</b>	\$9,896	0-1.65%	0-1.65%	\$10,059	\$10,225
<b>VINCENNES UNIVERSITY</b>	\$5,902	0-1.65%	0-1.65%	\$5,999	\$6,098
<b>ITCCI</b>	\$4,368	0-1.65%	0-1.65%	\$4,440	\$4,514
<b>INDIANA UNIVERSITY SYSTEM</b>					
Bloomington	\$10,680	0-1.65%	0-1.65%	\$10,857	\$11,036
East	\$7,344	0-1.65%	0-1.65%	\$7,465	\$7,588
Kokomo	\$7,344	0-1.65%	0-1.65%	\$7,465	\$7,588
Northwest	\$7,344	0-1.65%	0-1.65%	\$7,465	\$7,588
South Bend	\$7,344	0-1.65%	0-1.65%	\$7,465	\$7,588
Southeast	\$7,344	0-1.65%	0-1.65%	\$7,465	\$7,588
IUPUI	\$9,465	0-1.65%	0-1.65%	\$9,621	\$9,780
<b>PURDUE UNIVERSITY SYSTEM</b>					
West Lafayette	\$9,992	0-1.65%	0-1.65%	\$10,157	\$10,324
Northwest	\$7,686	0-1.65%	0-1.65%	\$7,813	\$7,942
Fort Wayne	\$8,450	0-1.65%	0-1.65%	\$8,589	\$8,731

Source: 2018-19 tuition and mandatory fee rates were sourced through the Indiana Commission for Higher Education Tuition and Mandatory Fees Survey

Note: Above tuition and mandatory fee totals are based on a 30 credit hour course load for resident undergraduate students



## COMMISSION FOR HIGHER EDUCATION

Monday, May 6, 2019

### BUSINESS ITEM B:

### 2019-2020 Frank O'Bannon Schedule of Awards

#### Staff Recommendation

Adopt the amounts as set in the attached schedule of awards, which represent increased award amounts compared to the current schedule of awards.

#### Background

IC 21-12-1.7-3(a) requires the Commission to annually adopt a schedule of award amounts for the Higher Education Award (HEA) and Freedom of Choice grant (FOC). The schedule must provide award amounts on the basis of the student's Expected Family Contribution (EFC) and the type of institution the student is attending. Per IC 21-12-1.7-3(c), when renewing HEA or FOC, a student earning at least 30 credit hours or the equivalent in the year the student last used aid must receive a larger award. This larger award is referred to as the "On-Time" amount. First-time recipients are initially eligible for the larger award. Students earning less than 30 credit hours, but more than 24 credit hours are eligible for a reduced amount. The reduced award is referred to as the "Full-Time" amount.

Indiana Code also requires the Commission establish performance incentives for:

- "Academic honors," which is defined, as a first-year student who graduated from high school with an academic honors or technical honors diploma or a returning student that maintains the equivalent of a cumulative grade point average of 3.0 on a 4.0 grading scale.
- "Accelerated progress" which is defined as completing at least 39 credit hours or the equivalent during the student's first or second academic year.
- Received an associate degree **prior to** enrolling in a baccalaureate program.

#### Supporting Document

Financial Aid Schedule of Awards

# 2019-2020 FRANK O'BANNON GRANTS

Updated April 15, 2019

## BASE AWARD

INSTITUTION TYPE	EXPECTED FAMILY CONTRIBUTION (EFC)																			
	\$0	\$1 to \$500	\$501 to \$1,000	\$1,001 to \$1,500	\$1,501 to \$2,000	\$2,001 to \$2,500	\$2,501 to \$3,000	\$3,001 to \$3,500	\$3,501 to \$4,000	\$4,001 to \$4,500	\$4,501 to \$5,000	\$5,001 to \$5,500	\$5,501 to \$6,000	\$6,001 to \$6,500	\$6,501 to \$7,000	\$7,001 to \$7,500	\$7,501 to \$8,000	\$8,001 to \$8,500	\$8,501 to \$9,000	
Private	On-Time	\$9,000	\$8,750	\$8,250	\$7,750	\$6,750	\$6,250	\$5,750	\$5,250	\$4,750	\$4,250	\$3,750	\$3,250	\$2,750	\$2,250	\$0	\$0	\$0	\$0	\$0
	Full-Time	\$7,400	\$7,150	\$6,650	\$6,150	\$5,150	\$4,650	\$4,150	\$3,650	\$3,150	\$2,650	\$2,150	\$1,650	\$1,150	\$650	Not Eligible for Frank O'Bannon Grant	Not Eligible for Frank O'Bannon Grant	Not Eligible for Frank O'Bannon Grant	Not Eligible for Frank O'Bannon Grant	Not Eligible for Frank O'Bannon Grant
Public	On-Time	\$4,500	\$4,250	\$3,750	\$3,250	\$2,250	\$1,750	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	Not Eligible for Frank O'Bannon Grant	Not Eligible for Frank O'Bannon Grant	Not Eligible for Frank O'Bannon Grant	Not Eligible for Frank O'Bannon Grant	Not Eligible for Frank O'Bannon Grant
	Full-Time	\$3,700	\$3,450	\$2,950	\$2,450	\$1,450	\$950	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	Not Eligible for Frank O'Bannon Grant	Not Eligible for Frank O'Bannon Grant	Not Eligible for Frank O'Bannon Grant	Not Eligible for Frank O'Bannon Grant	Not Eligible for Frank O'Bannon Grant
Proprietary or Ivy Tech	On-Time	\$3,400	\$3,150	\$2,650	\$2,150	\$1,150	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	Not Eligible for Frank O'Bannon Grant	Not Eligible for Frank O'Bannon Grant	Not Eligible for Frank O'Bannon Grant	Not Eligible for Frank O'Bannon Grant	Not Eligible for Frank O'Bannon Grant
	Full-Time	\$2,900	\$2,650	\$2,150	\$1,650	\$650	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	Not Eligible for Frank O'Bannon Grant	Not Eligible for Frank O'Bannon Grant	Not Eligible for Frank O'Bannon Grant	Not Eligible for Frank O'Bannon Grant	Not Eligible for Frank O'Bannon Grant

- Students in their **first award year** will receive the **on-time** award amount.
- To renew an **on-time** award, students must complete at least **30 credit hours\*** during their 12-month award year.
- Students failing to complete **30 credits hours\*** during their 12-month award year, but completing at least **24 credit hours\*** may receive a **full-time** amount.
- Credit hours earned in excess of 30 during an award year may be counted toward future credit completion requirements. Students may also use international baccalaureate, advanced placement or dual credit hours to meet credit completion requirements.

\*or the equivalent.

## BASE AWARD + STUDENT PERFORMANCE INCENTIVE(S) = TOTAL STATE FINANCIAL AID AWARD

### STUDENT PERFORMANCE INCENTIVES

#### ✓ ACADEMIC HONORS \$800

First Award Year Only:  
Graduate high school with Academic or Technical Honors diploma.

Second, Third, Fourth Award Years: Earn at least a 3.0 cumulative GPA through end of previous award year.

#### ✓ ASSOCIATE DEGREE \$800

First, Second, Third, Fourth Award Years: Earn an associate degree before enrolling in bachelor's degree program.

#### ✓ ACCELERATED SCHEDULE \$1300

Second, Third Award Years: Complete at least 39 credit hours during the last award year.

#### ✓ FAST TRACK Up to 100% more aid for current award year

First, Second, Third Award Years: Complete 30 credits in current award year and then attempt at least 6 more credits.

Student with financial need may earn student performance incentives even if his or her base award is \$0.



INDIANA COMMISSION for HIGHER EDUCATION

**COMMISSION FOR HIGHER EDUCATION**

Monday, May 6, 2019

**BUSINESS ITEM C:**

**Academic Degree Programs for Expedited Action**

**Staff Recommendation**

That the Commission for Higher Education approve the following degree programs, in accordance with the background information provided in this agenda item:

- Master of Science in Computational Data Science to be offered by Purdue University at Indiana University Purdue University Indianapolis
- Bachelor of Arts/Bachelor of Science in Neuroscience to be offered by Indiana University Northwest
- Master of Science in Athletic Training to be offered by Ball State University
- Bachelor of Science in Civil Engineering to be offered by University of Southern Indiana
- Bachelor of Science in Applied Data and Information Science to be offered by Indiana University at Indiana University Purdue University Indianapolis

**Background**

The Academic Affairs and Quality Committee discussed these programs at its April 22, 2019 meeting and concluded that the proposed programs could be placed on the May 6, 2019 agenda for action by the Commission as an expedited action items.

**Supporting Document**

Academic Degree Program on Which Staff Propose Expedited Action April 22, 2019

**Academic Degree Program on Which Staff Propose Expedited Action**

April 22, 2019

**CHE 19-02 Master of Science in Computational Data Science to be offered by Purdue University at Indiana University Purdue University Indianapolis**

Proposal received on February 8, 2019

CIP Code: 30.3001

Fifth Year Projected Enrollment: Headcount – 18, FTE – 15

Fifth Year Projected Degrees Conferred: 12

The proposed M.S. in Computational Data Science is to be offered by two departments within the School of Science: the Department of Computer & Information Science and the Department of Mathematical Sciences. Data Science is broadly defined as a cross-disciplinary field, on the border between computer science and statistics, and involves data-driven knowledge discovery in terms of pattern analysis and prediction. As an applied field, data science includes only foundational topics from statistics, machine learning, and data mining. Through its School of Informatics and Computing at IUPUI, Indiana University offers an M.S. in Applied Data Science, which the Commission approved in June 2015 and which enrolled 39 headcount students and had 18 graduates in FY2018. A letter of support from the Executive Associate Dean of the School of Informatics points out how Purdue's proposed program will complement the IU master's program, which focuses on the data science pipeline, from data acquisition to visualization.

The M.S. in Computational Data Science requires 30 semester hours of credit.

**CHE 19-03 Bachelor of Arts/Bachelor of Science in Neuroscience to be offered by Indiana University Northwest**

Proposal received on February 19, 2019

CIP Code: 26.1501

Fifth Year Projected Enrollment: Headcount – 20, FTE – 20

Fifth Year Projected Degrees Conferred: 10

The proposed B.A./B.S. in Neuroscience would be offered through the Department of Psychology within the College of Arts and Sciences. Neuroscience is an interdisciplinary field that involves studying the structure of the nervous system and how it relates to functions like thinking and behavior, for example, neuroscientists study how drugs affect the nervous system and how neurodegenerative diseases affect the brain and behavior. This program is intended to prepare students for work in the life sciences, including health professions, as well as for positions as laboratory or medical technicians, science writers, medical and health services managers, or sales and marketing professionals. In addition to well-subscribed baccalaureate Neuroscience programs at IU Bloomington and IUPUI, the Commission also approved a B.S. in Neuroscience for IU

Southeast in March 2016; the latter enrolled 35 headcount students and graduated six students in FY2018.

The B.A./B.S. in Neuroscience requires 120 semester hours of credit, thus meeting the standard credit hour expectation for baccalaureate degrees. There is no TSAP (Transfer Single Articulation Pathway) that applies to the proposed program. However, the University has developed articulation agreements resulting in all credits in the Ivy Tech A.S. in Psychology and the Vincennes University A.S. in Psychology applying to the B.S. in Neuroscience.

**CHE 19-04 Master of Science in Athletic Training to be offered by Ball State University**

Proposal received on March 21, 2019

CIP Code: 51.0913

Fifth Year Projected Enrollment: Headcount – 25, FTE – 4

Fifth Year Projected Degrees Conferred: 8

The proposed M.S. in Athletic Training is to be offered through the School of Kinesiology within the College of Health. This request comes to the Commission because of a change in minimal, entry-level professional requirements from the Commission on Accreditation for Athletic Training Education (CAATE), which will require that all entry-level, CAATE-accredited programs be at the master's level by July 1, 2022. Ball State currently offers a CAATE-accredited Bachelor of Athletic Training (B.A.T.), which enrolled 91 headcount or 63 FTE students and had 14 graduates in FY2018. The B.A.T., which required 120 semester hours of credit, is no longer admitting students and will have only two additional graduating classes after this year. The Commission approved an M.S. in Athletic Training for Indiana University Bloomington in December 2017 (also because of CAATE accreditation changes), at which time the University indicated it would be eliminating its B.S. in Athletic Training program.

The M.S. Training requires 62 semester hours of credit.

**CHE 19-05 Bachelor of Science in Civil Engineering to be offered by University of Southern Indiana**

Proposal received on March 22, 2019

CIP Code: 14.0801

Fifth Year Projected Enrollment: Headcount – 76, FTE – 17

Fifth Year Projected Degrees Conferred: 14

The proposed B.S. in Civil Engineering would be offered through the Department of Engineering within the Pott College of Science, Engineering, and Education. In November 2015, the AA&Q Committee reviewed the University's strategic plan to move from a single, general B.S. in Engineering to separate, named programs in specific engineering disciplines. In accordance with that plan, the Commission has approved three, discipline-specific engineering programs at USI: Mechanical Engineering and Manufacturing Engineering (both in February 2016) and Electrical Engineering (March 2018). These three programs are enrolling students and moving toward ABET accreditation in a

manner consistent with expectations held at the time of their approvals. Should the Commission approve the Civil Engineering program, the University would likely seek authorization for a Biomedical Engineering program, which would complete the initial set of discipline-specific programs indicated in the University's strategic plan for engineering.

The B.S. in Civil Engineering requires 127 semester hours of credit, thus exceeding the standard credit hour expectation for baccalaureate degrees (120 hours) by seven hours; however, exceptions are allowed for programs that may typically require additional credit hours, like engineering. There is no TSAP (Transfer Single Articulation Pathway) for Civil Engineering. However, articulation agreements have been developed with Ivy Tech Community College and Vincennes University, whereby a student who completes the A.S. in Engineering at Ivy Tech and the A.S. in Engineering Sciences is eligible for full transfer into the following engineering programs: B.S. Civil Engineering, B.S. Engineering, B.S. Mechanical Engineering, B.S. Manufacturing, and B.S. Electrical Engineering.

**CHE 19-07 Bachelor of Science in Applied Data and Information Science to be offered by Indiana University at Indiana University Purdue University Indianapolis**

Proposal received on April 9, 2019

CIP Code: 11.0401

Fifth Year Projected Enrollment: Headcount – 100, FTE – 88

Fifth Year Projected Degrees Conferred: 30

The proposed B.S. in Applied Data and Information Science would be offered through two departments within the School of Informatics and Computing: the Department of Library and Information Science and the Department of Human-Centered Computing. The B.S. would have two specializations: Information Science and Applied Data Science. Focusing on data curation, management, analysis, and dissemination to create actionable insights, graduates of the program will learn core competencies that include data analytics, management, ethics, and policy for a career as data professionals dealing with big data. (The proposal cites research from 2012 indicating that five billion gigabytes of data existed from the dawn of history to 2003, whereas now five billion gigabytes of data are produced every ten seconds.)

The B.S. in Applied Data and Information Science requires 120 semester hours of credit, thus meeting the standard credit hour expectation for baccalaureate degrees. There is no TSAP (Transfer Single Articulation Pathway) that applies to the proposed program. However, an articulation agreement has been developed with Ivy Tech Community College, whereby a student who completes the A.S. in Liberal Arts could apply 62 credits toward the proposed B.S. with a specialization in Applied Data Science, completing the program in four years by taking 62 additional credits at IUPUI. No articulation agreement is possible with Vincennes University in the Applied Data specialization; students starting at Vincennes would be advised to complete the 30-hour Statewide Transfer General Education Core (STGEC) prior to transfer. No articulation is possible for the proposed B.S. with a specialization in Information Science; students starting out at Ivy Tech and Vincennes would be advised to complete the STGEC prior to transfer.



**COMMISSION FOR HIGHER EDUCATION**

Monday, May 6, 2019

**BUSINESS ITEM D-1:**

**Purdue University West Layette – Aspire at Discovery Park Lease**

**Staff Recommendation**

That the Commission for Higher Education recommends approval to the State Budget Agency and the State Budget Committee of the following project:

- Purdue University West Lafayette – Aspire at Discovery Park Lease

**Background**

By statute, the Commission for Higher Education must review all projects to construct buildings or facilities costing more than two million dollars (\$2,000,000), regardless of the source of funding. Each repair and rehabilitation project must be reviewed by the Commission for Higher Education and approved by the Governor, on recommendation of the Budget Agency, if the cost of the project exceeds two million dollars (\$2,000,000) and if any part of the cost of the project is paid by state appropriated funds or by mandatory student fees assessed all students. Such review is required if no part of the project is paid by state appropriated funds or by mandatory student fees and the project cost exceeds two million dollars (\$2,000,000). A project that has been approved or authorized by the General Assembly is subject to review by the Commission for Higher Education. The Commission for Higher Education shall review a project approved or authorized by the General Assembly for which a state appropriation will be used. All other non-state funded projects must be reviewed within ninety (90) days after the project is submitted to the Commission.

**Supporting Document**

Purdue Aspire at Discovery Park Lease

## Purdue University West Lafayette – Aspire at Discovery Park Lease

### **STAFF ANALYSIS**

The Purdue University Board of Trustees requests authorization to proceed to lease a portion of *Aspire at Discovery Park* in the Discovery Park District from the Purdue Research Foundation (PRF). For one academic year, the University will lease 86 apartments from PRF that include 336 beds for student housing and 4 beds for residential assistances in Aspire. The lease will provide additional housing capacity to help address the increase in student enrollment on the West Lafayette campus.

**Funding:** The estimated cost of this project is \$2,689,791 and will be funded with Operating Funds.

**Additional Staff Notes:** Staff recommends approval of the project.

April 11, 2019

The Honorable Eric J. Holcomb  
Governor of the State of Indiana  
State House  
Indianapolis, IN 46204

Dear Governor Holcomb:

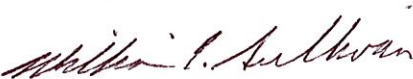
At its meeting on April 12, 2019 the Purdue University Board of Trustees is expected to approve a lease for a portion of *Aspire at Discovery Park* in the Discovery Park District from the Purdue Research Foundation.

For one academic year, the University will lease 86 apartments from PRF that include 336 beds for student housing and 4 beds for residential assistants for a total of 340 beds in *Aspire*. The total lease commitment for the 2019-2020 academic year is \$2,689,791.

The lease will provide additional housing capacity to help address the increase in student enrollment on the West Lafayette campus.

Subject to final approval by the Purdue University Board of Trustees, review by the Commission for Higher Education and recommendation by the State Budget Committee and the Budget Agency, we request your approval to proceed with this project. We will be happy to answer any questions you or your staff may have or to provide any additional information that is needed.

Sincerely,



William E. Sullivan  
Treasurer and Chief Financial Officer

Attachments

- c: Alecia Nafziger, Associate Commissioner and Chief Financial Officer, Indiana Commission for Higher Education
- Jason Dudich, Director, Indiana State Budget Agency
- Kathleen Thomason, Comptroller, Purdue University
- Anthony Hahn, Director, State Relations & Policy Analysis, Purdue University

**LEASE TERM SHEET**

**Aspire at Discovery Park**

**Purdue University- West Lafayette Campus**

**Budget Agency Project Number: B-1-19-5-17**

**Project Summary and Description:**

Purdue University proposes to lease a portion of the newly constructed *Aspire at Discovery Park* building, a facility in the Discovery Park District (DPD), from the Purdue Research Foundation (PRF). Purdue University's lease commitment will include 86 apartments that include 336 beds for student housing and 4 beds for residential assistants for a total of 340 beds in Aspire.

The lease will provide additional housing capacity to help address the increase in student enrollment on the West Lafayette campus.

**Lease Parties:** Balfour Beatty-Walsh Housing, LLC (the "Landlord")  
Purdue Research Foundation ("PRF") (the "Master Tenant")  
Purdue University (Assignment or sublease from Master Tenant)

**Lease Term:** 9 months (August 12, 2019 to May 17, 2020)

**Total Lease Commitment:** \$2,689,791

**Funding Sources of the Project:** Operating Funds

**COMMISSION FOR HIGHER EDUCATION**

Monday, May 6, 2019

**BUSINESS ITEM D-2:**

**Indiana University Bloomington – Data Center Electrical and Cooling Infrastructure Upgrades**

**Staff Recommendation**

That the Commission for Higher Education recommends approval to the State Budget Agency and the State Budget Committee of the following project:

- Indiana University Bloomington – Data Center Electrical and Cooling Infrastructure Upgrades

**Background**

By statute, the Commission for Higher Education must review all projects to construct buildings or facilities costing more than two million dollars (\$2,000,000), regardless of the source of funding. Each repair and rehabilitation project must be reviewed by the Commission for Higher Education and approved by the Governor, on recommendation of the Budget Agency, if the cost of the project exceeds two million dollars (\$2,000,000) and if any part of the cost of the project is paid by state appropriated funds or by mandatory student fees assessed all students. Such review is required if no part of the project is paid by state appropriated funds or by mandatory student fees and the project cost exceeds two million dollars (\$2,000,000). A project that has been approved or authorized by the General Assembly is subject to review by the Commission for Higher Education. The Commission for Higher Education shall review a project approved or authorized by the General Assembly for which a state appropriation will be used. All other non-state funded projects must be reviewed within ninety (90) days after the project is submitted to the Commission.

**Supporting Document**

Indiana University Bloomington Data Center

## Indiana University Bloomington – Data Center Electrical and Cooling Infrastructure Upgrades

### STAFF ANALYSIS

The Trustees of Indiana University request authorization to proceed with the upgrade and expansion of the electrical and cooling infrastructure serving the Data Center on the Bloomington campus. The Center provides space and infrastructure for computing technology services for all Indiana University campuses via the statewide I-Light optical fiber network, as well as partnering with other entities such as the Indiana Office of Technology, Ivy Tech, IU Health, IU Foundation, Ball State University, Hathi Trust (University of Michigan), Regenstrief Institute and OmniSOC. The project will include enhancements to the overall reliability and backup capabilities of the Data Center's infrastructure, particularly in the event of a power failure and during equipment maintenance, while also increasing electrical and cooling capacity. In particular, the power capacity of the Research Pod located within the Data Center, which houses IU's high performance supercomputers, will be increased from 2 megawatts to 3 megawatts.

**Funding:** The estimated cost of this project is \$12,000,000 and will be funded with Operating Funds - Reserves.

**Additional Staff Notes:** Staff recommends approval of the project.

**PROJECT COST SUMMARY**  
**DATA CENTER ELECTRICAL AND COOLING INFRASTRUCTURE UPGRADES**

<b>Institution:</b>	Indiana University	<b>Budget Agency Project No.:</b>	A-1-19-2-14
<b>Campus:</b>	Bloomington	<b>Institutional Priority:</b>	
<b>Previously approved by General Assembly:</b>		<b>Previously recommended by CHE:</b>	
<b>Part of the Institution's Long-term Capital Plan:</b>			

20191240

<b>Project Size:</b>	81,186 GSF(1)	68,361 ASF(2)	84% ASF/GSF
<b>Net change in overall campus space:</b>			

<b>Total cost of the project (3):</b>	\$ 12,000,000	<b>Cost per ASF/GSF:</b>	\$ 148 GSF
			\$ 176 ASF

<b>Funding Source(s) for project (4):</b>	Amount	Type
	\$ 12,000,000	Operating Funds - Reserves

<b>Estimated annual debt payment (6):</b>	
<b>Are all funds for the project secured:</b>	

**Project Funding:**

The project will be funded with Operating Funds - Reserves.

**Project Cost Justification**

Because of the unique function of the Data Center and the services provided, no comparable projects of a similar scale are available. Construction of the Data Center was estimated at \$403/gsf in 2007 dollars, but this project will not increase the footprint of the existing facility. Various upgrades and installations of similar pieces of equipment (chillers, air handlers, electrical distribution systems, etc.) have been made for other projects, but not at this combined scale in both size and required capacity.

<b>Estimated annual change in cost of building operations based on the project:</b>	\$ 684,383
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<b>Estimated annual repair and rehabilitation investment (5):</b>	\$ -
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(1) Gross Square Feet (GSF)- Sum of all area within the exterior envelope of the structure.  
(2) Assignable Square Feet (ASF)- Amount of space that can be used by people or programs within the interior walls of a structure. Assignable square feet is the sum of the 10 major assignable space use categories: classrooms, laboratories, offices, study facilities, special use facilities, general use facilities, support facilities, health care facilities, residential facilities and unclassified facilities. For information on assignable space use categories, see Space-Room Codes tab.  
(3) Projects should include all costs associated with the project (structure, A&E, infrastructure, consulting, FF&E, etc.)  
(4) Be consistent in the naming of funds to be used for projects. If bonding, note Bonding Authority Year (1965, 1929, 1927, etc.)  
(5) Estimate the amount of funding the institution would need to set aside annually to address R&R needs for the project. CHE suggests 1.5% of total construction cost  
(6) If issuing debt, determine annual payment based on 20 years at 4.75% interest rate  
- If project is a lease-purchase or lease, adjust accordingly. Note the total cost of the lease in the project cost, and annual payments in project description

**PROJECT DETAILED DESCRIPTION - ADDITIONAL INFORMATION**  
**DATA CENTER ELECTRICAL AND COOLING INFRASTRUCTURE UPGRADES**

<b><u>Institution:</u></b>	Indiana University	<b><u>Budget Agency Project No.:</u></b>	A-1-19-2-14
<b><u>Campus:</u></b>	Bloomington	<b><u>Institutional Priority:</u></b>	

**Description of Project**

This project will upgrade and expand the electrical and cooling infrastructure serving the Data Center on the Bloomington campus. The Data Center provides space and infrastructure for computing technology services for all Indiana University campuses via the statewide I-Light optical fiber network. Upgrades are required to the current electrical and cooling systems to enhance capacity and redundancy.

This project will include enhancements to the overall reliability and backup capabilities of the Data Center's infrastructure, particularly in the event of a power failure and during equipment maintenance, while also increasing electrical and cooling capacity. Updates will include equipment such as power distribution units and electrical panels, an uninterrupted power supply, emergency power supplies, computer room air handling units with related controls and mechanical distribution systems, a generator, a chiller, and water-to-water heat exchangers to create a new liquid cooling direct to server chip loop. In particular, the power capacity of the Research Pod located within the Data Center, which houses IU's high performance supercomputers, will be increased from 2 megawatts to 3 megawatts.

**Relationship to Other Capital Improvement Projects:** This project does not affect any other capital improvement projects.

**Historical Significance:** No historically significant buildings or structures will be affected by this project.

**Alternatives Considered:** The University decided this option best met the needs of students and the campus. The Data Center was constructed with the capability for future infrastructure upgrades and growth; this project will utilize existing available space to increase capacity and redundancy as needed in support of IU's growing technology needs. Additionally, maintaining the University's technology assets internally, rather than using a cloud service or other hosting facilities, allows the University full control over data security and costs.

**Need and Purpose of the Program**

The Data Center provides space and infrastructure for computing technology services for all Indiana University campuses via the statewide I-Light optical fiber network. The Data Center also is utilized by non-IU entities including the Indiana Office of Technology, Ivy Tech, IU Health, IU Foundation, Ball State University, HathiTrust (University of Michigan), the Regenstrief Institute, and OmniSOC - a shared cybersecurity operations center for higher education founded by Northwestern University, Purdue University, Rutgers University, the University of Nebraska-Lincoln, and IU.

The Data Center houses IU's advanced research technology and scholarly cyberinfrastructure supporting academic and medical research, including High Performance Supercomputers, Big Red II, Big Red II+, Jetstream, and Karst, as well as IU's enterprise technology systems and servers, including mission-critical administrative, teaching, networking, communications, data storage and IU's internal private cloud. The Data Center and its robustness of design and infrastructure redundancy are a cornerstone of IU's leadership in information technology and cyberinfrastructure. This investment positions IU to be extremely competitive for significant advanced research computing initiatives while enhancing the overall reliability and backup capabilities of the Data Center's infrastructure.

**Space Utilization**

This project will not change the use of any space.

**Comparable Projects**

Because of the unique function of the Data Center and the services provided, no comparable projects of a similar scale are available. Construction of the Data Center was estimated at \$403/gsf in 2007 dollars, but this project will not increase the footprint of the existing facility. Various upgrades and installations of similar pieces of equipment (chillers, air handlers, electrical distribution systems, etc.) have been made for other projects, but not at this combined scale in both size and required capacity.

**Background Materials**

This project was approved by the Indiana University Board of Trustees at the April 2019 meeting. The project will be funded with Operating Funds - Reserves.



**CAPITAL PROJECT REQUEST FORM**  
**INDIANA PUBLIC POSTSECONDARY EDUCATION**  
**INSTITUTION CAMPUS SPACE DETAILS FOR DATA CENTER ELECTRICAL AND COOLING INFRASTRUCTURE UPGRADES**

DATA CENTER ELECTRICAL AND COOLING INFRASTRUCTURE UPGRADES A-1-19-2-14	Current Campus Totals			Capital Request			
	Current Space in Use (1)	Space Under Construction (2)	Space Planned and Funded (3)	Subtotal Current and Future Space	Space to be Terminated (4)	New Space in Capital Request	Net Future Space
<b>A. OVERALL SPACE IN ASF</b>							
Classroom (110 & 115)	387,142	79,380	5,120	471,642	-	-	471,642
Class Lab (210,215,220,225,230,235)	466,682	33,103	35,000	534,785	-	-	534,785
Non-class Lab (250 & 255)	484,204	46,054	-	530,258	-	-	530,258
Office Facilities (300)	2,056,874	146,330	153,624	2,356,828	-	3,659	2,360,487
Study Facilities (400)	619,073	11,116	3,517	633,706	-	-	633,706
Special Use Facilities (500)	760,165	2,064	9,191	771,420	-	-	771,420
General Use Facilities (600)	1,254,554	40,032	99,406	1,393,992	-	-	1,393,992
Support Facilities (700)	1,122,392	52,837	114,985	1,290,214	-	64,702	1,354,916
Health Care Facilities (800)	26,837	10,808	-	37,645	-	-	37,645
Resident Facilities (900)	2,500,190	144,708	452,559	3,097,457	-	-	3,097,457
Unclassified (000)	168,582	1,616	-	170,198	-	-	170,198
<b>B. OTHER FACILITIES</b> (Please list major categories)							
<b>TOTAL SPACE</b>	<b>9,846,695</b>	<b>568,048</b>	<b>873,402</b>	<b>11,288,145</b>	<b>-</b>	<b>68,361</b>	<b>11,356,506</b>

Notes:

- (1) Figures reflect IUB total assignable sf
- (2) Figures include Golf Course, 3551 asf; Regional Academic Health Center, 69,003 asf; Old Crescent Renovation Phase III, 295,052 asf ; Metz Carrillon Renovation and Relocation, 300 asf; Teter Quad Mechanical Systems Replacement and Renovation, 200,142 asf
- (3) Figures include North Housing Addition, 182,000 asf; International Center, 24,646 asf; Indiana Memorial Union Dining Renovation, 25,632 asf; Renovation of Foster and McNutt Quadrangles, 351,589 asf; Armstrong Stadium North Grandstand Replacement, 13,597 asf; Wells Library Ground Floor and Accessibility Upgrades, 12,806 asf; Parking Garage/Office Building 183,950 asf

- Space/Room codes based on Postsecondary Ed Facilities Inventory and Classification Manual (2006)

**CAPITAL PROJECT COST DETAILS**  
**DATA CENTER ELECTRICAL AND COOLING INFRASTRUCTURE UPGRADES**

<b>Institution:</b>	Indiana University	<b>Budget Agency Project No.:</b>	A-1-19-2-14
<b>Campus:</b>	Bloomington	<b>Institutional Priority:</b>	

**ANTICIPATED CONSTRUCTION SCHEDULE**

	<u>Month</u>	<u>Year</u>
Bid Date	September	2019
Start Construction	October	2019
Occupancy (End Date)	April	2020

**ESTIMATED CONSTRUCTION COST FOR PROJECT**

	<u>Cost Basis (1)</u>	<u>Estimated Escalation Factors (2)</u>	<u>Project Cost</u>
<b><u>Planning Costs</u></b>			
a. Engineering	\$ 480,000		\$ 480,000
b. Architectural			\$ -
c. Consulting	\$ 130,000		\$ 130,000
<b><u>Construction</u></b>			
a. Structure	\$ 570,000		\$ 570,000
b. Mechanical (HVAC, plumbing, etc.)	\$ 3,400,000		\$ 3,400,000
c. Electrical	\$ 6,470,000		\$ 6,470,000
<b><u>Movable Equipment</u></b>			\$ -
<b><u>Fixed Equipment</u></b>			\$ -
<b><u>Site Development/Land Acquisition</u></b>			\$ -
<b><u>Other (Contingency, Admin. &amp; Legal Fees)</u></b>	\$ 950,000		\$ 950,000
<b>TOTAL ESTIMATED PROJECT COST</b>	<b>\$ 12,000,000</b>	<b>\$ -</b>	<b>\$ 12,000,000</b>

**CAPITAL PROJECT OPERATING COST DETAILS**  
**FOR: DATA CENTER ELECTRICAL AND COOLING INFRASTRUCTURE UPGRADES**

<b>Institution:</b>	Indiana University	<b>Budget Agency Project No.:</b>	A-1-19-2-14
<b>Campus:</b>	Bloomington	<b>Institutional Priority:</b>	

			<b>GSF OF AREA AFFECTED BY PROJECT</b>	81,186
<b><u>ANNUAL OPERATING COST/SAVINGS (1)</u></b>				
	<b>Cost per GSF</b>	<b>Total Operating Cost</b>	<b>Personal Services</b>	<b>Supplies and Expenses</b>
1. Operations	\$ -	\$ -	\$ -	\$ -
2. Maintenance	\$ 0.42	\$ 33,891	\$ -	\$ -
3. Fuel	\$ -	\$ -	\$ -	\$ -
4. Utilities	\$ 8.01	\$ 650,492	\$ -	\$ -
5. Other	\$ -	\$ -	\$ -	\$ -
<b>TOTAL ESTIMATED OPERATIONAL COST/SAVINGS</b>	<b>\$ 8.43</b>	<b>\$ 684,383</b>	<b>\$ -</b>	<b>\$ -</b>

**Description of any unusual factors affecting operating and maintenance costs/savings.**



**COMMISSION FOR HIGHER EDUCATION**

Monday, May 6, 2019

**BUSINESS ITEM E:**

**Capital Projects for Expedited Action**

**Staff Recommendation**

That the Commission for Higher Education recommends approval to the State Budget Agency and the State Budget Committee of the following projects:

- Purdue University West Lafayette – State Farm Building Purchase
- Purdue University West Lafayette – Ground Lease to Duke Energy
- Purdue University West Lafayette – Wade Utility Plan Connection

**Background**

Staff recommends approval to the State Budget Agency and the State Budget Committee of the following capital projects in accordance with the expedited action category originated by the Commission for Higher Education in May 2006. Institutional staff will be available to answer questions about these projects, but the staff does not envision formal presentations.

**Supporting Document**

Background Information on Capital Projects for Expedited Action, Monday, May 6

**Capital Projects for Expedited Action**  
**Monday, May 6, 2019**

**B-1-19-3-16     Purdue University West Lafayette – State Farm Building Purchase**

The Trustees of Purdue University request authorization to proceed with the purchase of the State Farm Building located at 2550 Northwestern Ave, West Lafayette, Indiana. The purchase includes 22 acres of land and an over 255,000 GSF facility. This purchase provides near-campus space for the data center currently located in the Mathematical Sciences Building, the transportation fleet currently housed at the Purdue Airport, swing space for departments that need to be temporarily relocated due to capital construction projects, administrative office space and storage space. By moving all of these groups into a single facility, over 40,000 square feet of space on campus will be made available and over \$2 million per year in rent for off-campus space will be eliminated.

**B-1-19-5-14     Purdue University West Lafayette – Ground Lease to Duke Energy**

The Trustees of Purdue University request authorization to proceed with a lease of approximately one acre of land immediately west of the Wade Utility Plant on the West Lafayette Campus to Duke Energy Indiana, LLC for a term of 35 years. This is one portion of a larger partnership project with Duke Energy and Purdue. Duke Energy will build, own and operate a new, 16 MW combined heat and power (CHP) plant that will produce both steam and electricity. Purdue will also purchase 100% of the steam produced by the new Duke Energy CHP Plant for 35 years and construct the needed infrastructure to connect the existing Wade Utility Plant to the new Duke Energy CHP Plant.

**B-1-19-1-15     Purdue University West Lafayette – Wade Utility Plant Connection**

The Trustees of Purdue University request authorization to proceed with the planning, financing, construction and award of construction contracts for the Wade Utility Plant Connection to External CHP Plant Project. This is the other portion of the partnership with Duke Energy and Purdue. As mentioned in the above project, Purdue will purchase 100% of the steam produced by the new Duke Energy CHP Plant for 35 years and construct the needed infrastructure to connect the existing Wade Utility Plant to the new Duke Energy CHP plant.

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**INFORMATION ITEM A: Academic Degree Programs Awaiting Action**

	<u>Institution/Campus/Site</u>	<u>Title of Program</u>	<u>Date Received</u>	<u>Status</u>
01	Indiana University Purdue University Indianapolis	Master of Science in Computational Data Science (PU)	2/8/2019	On CHE Agenda for Action
02	Indiana University Northwest	Bachelor of Arts/Bachelor of Science in Neuroscience	2/19/2019	On CHE Agenda for Action
03	Ball State University	Master of Science in Athletic Training	3/21/2019	On CHE Agenda for Action
04	University of Southern Indiana	Bachelor of Science in Civil Engineering	3/22/2019	On CHE Agenda for Action
05	Indiana University Bloomington	Bachelor of Science in Atmospheric Science	4/09/2019	Under Review
06	Indiana University Purdue University Indianapolis	Bachelor of Science in Applied Data and Information Science (IU)	4/09/2019	On CHE Agenda for Action
07	Indiana University South Bend	Master of Science in Speech-Language Pathology	4/09/2019	Under Review
08	Indiana University Purdue University Indianapolis	Doctor of Philosophy in Mechanical Engineering (PU)	04/15/2019	Under Review
09	Purdue University Global	Bachelor of Science in Analytics	04/15/2019	Under Review





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**INFORMATION ITEM B: Academic Degree Program Actions Taken By Staff**

	<u>Institution/Campus/Site</u>	<u>Title of Program</u>	<u>Date Approved</u>	<u>Change</u>
01	Indiana University Purdue University Indianapolis	Associate of Arts in General Studies (IU)	04/22/19	Eliminating distance education
02	Indiana University Purdue University Indianapolis	Master of Science in Education in Special Education (IU)	04/22/19	Eliminating distance education
03	Indiana University Purdue University Indianapolis	Certificate in Human Computer Interaction (IU)	04/22/19	Eliminating distance education
04	Indiana University Bloomington	Certificate in Individualized Program	04/22/19	Eliminating a program
05	Indiana University Bloomington	Post-baccalaureate Certificate in Individualized Program	04/22/19	Eliminating a program
06	Indiana University Purdue University Columbus	Certificate in Case Management (IU)	04/22/19	Changing the credit hours
07	Indiana University Purdue University Indianapolis	Undergraduate Certificate in Intercultural Health (IU)	04/22/19	Eliminating a program
08	Indiana University Purdue University Indianapolis	Certificate in Individualized Major (IU)	04/22/19	Eliminating a program
09	Indiana University Purdue University Indianapolis	Undergraduate Certificate in Social Justice Organizing (IU)	04/22/19	Eliminating a program
10	Indiana University Purdue University Indianapolis	Post-baccalaureate Certificate in Engineering Design Innovation (PU)	04/22/19	Adding a certificate

	<u>Institution/Campus/Site</u>	<u>Title of Program</u>	<u>Date Approved</u>	<u>Change</u>
11	Purdue University West Lafayette	Master of Agriculture	04/22/19	Adding distance education
12	Purdue University Fort Wayne	Post-master's Graduate Certificate in Family Nurse Practitioner	04/22/19	Changing the name
13	Purdue University Northwest	Post-master's Certificate in Family Nurse Practice	04/22/19	Changing the name
14	Purdue University Northwest	Post-master's Certificate in Adult Gerontology CNS	04/22/19	Changing the name
15	Purdue University Northwest	Post-master's Certificate in Nursing Education	04/22/19	Changing the name
16	Indiana University Purdue University Indianapolis	Graduate Certificate in Human Resource Development (PU)	04/22/19	Adding distance education
17	Vincennes University	Certificate of Graduation in Aviation Flight Technology	04/22/19	Adding a certificate
18	Vincennes University	Certificate of Program Completion in Auto Body	04/22/19	Suspending a program
19	Vincennes University	Certificate of Graduation in Aviation Maintenance Technology	04/22/19	Changing the name
20	Vincennes University-Jasper	Certificate of Graduation in Industrial Technology	04/22/19	Adding a location
21	Vincennes University	Associate of Science in Secondary Education (Biology Concentration)	04/22/19	Splitting a program
22	Purdue University Fort Wayne	Bachelor of Science in Construction Management	04/22/19	Changing the name

	<u>Institution/Campus/Site</u>	<u>Title of Program</u>	<u>Date Approved</u>	<u>Change</u>
23	Indiana University Purdue University Indianapolis	Bachelor of Science in Construction Management (PU)	04/22/19	Changing the name
24	Purdue University West Lafayette	Post-baccalaureate Certificate in Applied Heat Transfer	04/22/19	Adding a certificate
25	Purdue University West Lafayette	Post-baccalaureate Certificate in Digital Signal Processing	04/22/19	Adding a certificate
26	Purdue University West Lafayette	Post-baccalaureate Certificate in Noise Control Engineering	04/22/19	Adding a certificate
27	Purdue University West Lafayette	Post-baccalaureate Certificate in Quantitative Research	04/22/19	Adding a certificate
28	Purdue University West Lafayette	Post-baccalaureate Certificate in Instructional Design	04/22/19	Adding a certificate
29	Purdue University West Lafayette	Post-baccalaureate Certificate in Distance Education	04/22/19	Adding a certificate
30	Purdue University West Lafayette	Post-baccalaureate Certificate in Gifted Creative and Talented Education	04/22/19	Adding a certificate
31	Purdue University West Lafayette	Post-baccalaureate Certificate in Workplace Learning	04/22/19	Adding a certificate
32	Ball State University	Bachelor of Arts/Bachelor of Science in Career and Technical Educations	04/22/19	Suspending a program
33	Ball State University	Bachelor of Arts/Bachelor of Science in Exceptional Needs: Intense Interventions	04/22/19	Changing the name
34	Ball State University	Bachelor of Arts/Bachelor of Science in Exceptional Needs: Mild Interventions	04/22/19	Splitting a program

<u>Institution/Campus/Site</u>	<u>Title of Program</u>	<u>Date Approved</u>	<u>Change</u>
35 Ball State University	Business Information Technology	04/22/19	Suspending a program
36 Ball State University	Graduate Certificate in Nursing-Adult Nursing Practitioner	04/22/19	Eliminating a program
37 Ball State University	Master of Arts in Foundational Mathematics Teaching in the Community College	04/22/19	Splitting a program
38 Ball State University	Education Specialist in School Psychology	04/22/19	Changing the CIP code
39 Ball State University	Doctor of Philosophy in School Psychology	04/22/19	Changing the CIP code
40 Ball State University	Doctor of Philosophy in Educational Psychology	04/22/19	Splitting a program
41 Ivy Tech Community College- multiple campuses	Certificate in Agribusiness Management	04/22/19	Adding a certificate
42 Ivy Tech Community College- multiple campuses	Certificate in Food Science	04/22/19	Adding a certificate
43 Ivy Tech Community College- multiple campuses	Certificate in Plant Production	04/22/19	Adding a certificate
44 Ivy Tech Community College- multiple campuses	Certificate in Animal Agribusiness	04/22/19	Adding a certificate
45 Ivy Tech Community College- multiple campuses	Certificate in Horticulture/Landscape Management	04/22/19	Adding a certificate
46 Indiana University Purdue University Indianapolis	Graduate Certificate in Business Medicine (IU)	04/22/19	Reinstating a program

	<u>Institution/Campus/Site</u>	<u>Title of Program</u>	<u>Date Approved</u>	<u>Change</u>
47	University of Southern Indiana	Certificate in Data Analytics for Business	04/22/19	Adding a certificate
48	University of Southern Indiana	Post-Master's Certificate in Addiction Science	04/22/19	Adding a certificate
49	Ivy Tech Community College	Certificate in Pre-Nursing Studies	04/22/19	Changing the credit hours
50	Purdue University Global	Graduate Certificate in Instructional Design and Technology	04/22/19	Adding a certificate
51	Ivy Tech Community College-Sellersburg	Associate of Applied Science in Diesel Technology	04/22/19	Adding locations
52	Purdue University Fort Wayne	Undergraduate Certificate in Financial Economics	04/22/19	Adding a certificate
53	Purdue University West Lafayette	Post-Master's Certificate in Medical Physics	04/22/19	Adding a certificate
54	Ivy Tech Community College-Bloomington and Sellersburg	Certificate in Maintenance and Light Repair	04/22/19	Adding locations
55	Ivy Tech Community College-multiple campuses	Certificate in Enrolled Agent	04/22/19	Adding a certificate
56	Ivy Tech Community College	Associate of Applied Science in Automation and Robotics Technology	04/22/19	Changing the credit hours
57	Ball State University	Bachelor of Arts/Bachelor of Science in Health Education and Promotion	04/22/19	Splitting a program
58	Ball State University	Master of Arts/Master of Science in Sport Performance	04/22/19	Splitting a program

	<u>Institution/Campus/Site</u>	<u>Title of Program</u>	<u>Date Approved</u>	<u>Change</u>
59	Ball State University	Master of Arts/Master of Science in Sport Administration	04/22/19	Splitting a program
60	Ball State University	Master of Arts/Master of Science in Clinical Exercise Physiology	04/22/19	Splitting a program
61	Ball State University	Master of Arts/Master of Science in Sport and Exercise Psychology	04/22/19	Splitting a program
62	Ball State University	Master of Arts in Cognitive and Social Processes	04/22/19	Splitting a program
63	Ball State University	Master of Arts/Master of Science in Teaching Major in English/Language Arts	04/22/19	Splitting a program

**COMMISSION FOR HIGHER EDUCATION**

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**INFORMATION ITEM C:                      Media Coverage**

Staff has selected a compilation of recent media coverage related to the Commission for the May meeting. Please see the following pages for details.

**WBIW**  
**Momentum Builds for Indiana's Next Level Jobs Initiative**  
**March 6, 2019**

Governor Eric J. Holcomb will attend his first meeting of the American Workforce Policy Advisory Board in Washington D.C. today where he will share that more Hoosiers are achieving education and training beyond high school due in part to his Next Level Jobs initiative.

"Indiana's greatest asset is our people, and my focus is on ensuring all Hoosiers have the tools they need to find meaningful work and careers," Gov. Holcomb said. "I'm thrilled to see Indiana gaining ground. We will continue to support those seeking education and training so that everyone has a pathway to success."

The number of Hoosiers with education beyond a high school diploma reached 43.4 percent in 2018, bringing Indiana closer to its 60 percent attainment goal by 2025. This new data from Lumina Foundation represents an increase of 1.5 percentage points in one year and 10 percentage points since 2008. These gains are supported by Next Level Jobs, which provides tuition-free certificates in high-demand fields and funding for employers who hire, train and retain new employees.

Since Next Level Jobs launched in August 2017, 36,000 people have completed the short survey to connect directly with an education provider, including Ivy Tech Community College and Vincennes University. Over 13,800 people have enrolled in Next Level Jobs Workforce Ready Grant program, and more than 5,000 of them have completed a certificate program in some of Indiana's highest demand sectors, including healthcare, information technology, and advanced manufacturing.

"We know that in today's world learning beyond high school is crucial to grow our state's economy, meet workforce demand and improve individual quality of life," said Indiana Commissioner for Higher Education Teresa Lubbers. "As we continue to make progress toward Indiana's big goal for 60 percent of Hoosiers to have a postsecondary credential by 2025, Next Level Jobs reaches an important group of Hoosiers who will help us get there."

Next Level Jobs builds on recent efforts and reforms at the K-12 level to better prepare students for future success--such as computer science courses in every school and graduation pathways requirements for high school students that incorporate a focus on career exploration and postsecondary readiness.

Currently, workforce certificates account for about 5 percent of Indiana's 43.4 percent higher education attainment rate. Next Level Jobs provides full-tuition Workforce Ready Grants for individuals who want to skill-up quickly to enter a high-demand job that improves their employability.

Employer Training Grants provide funding to Indiana companies who hire new employees, train them and keep them for at least six months. Along with the steady growth of people earning a certificate with the Workforce Ready Grant, more than 450 employers and nearly 7,000 Hoosiers utilized the Employer Training Grant.

"The high-value training and credentials achieved through this initiative are directly assisting people and employers with moving to their next level," said Fred Payne, Commissioner of the Indiana Department



of Workforce Development. "It's great to see employers enhancing their training programs and hiring as a result of the Employer Training Grants, and thousands of Hoosiers advancing their careers through the Workforce Ready Grants."

To apply for a Next Level Jobs grant, individuals and employers can go to [www.NextLevelJobs.org](http://www.NextLevelJobs.org) and complete a quick survey that gathers information about their needs and interests. Within 72 hours, individuals are contacted by an education or training provider and employers are contacted by someone from the Department of Workforce Development. This direct and individualized outreach ensures that people are connected to the best programs and resources to suit their unique needs.

**Forbes**  
**Preparing The Human Workforce For The Machine Workforce**  
**March 21, 2019**

The machine workforce is on the rise. While technological innovation has always happened, existing and emerging technology is not only changing the pace of technological innovation exponentially, it is giving rise to an entirely new competitive workforce that is intelligent. As a result, it is not only the current models of business, governance, management, and technology that are being crushed under the weight of outdated economics of efficiency, but the human workforce and much of its old skill set that it depends on are also rapidly declining in value.

The emerging artificial intelligence (AI)-driven automation is shifting the way we think about the workforce and forces us to begin a broader discussion on the changing nature of work, workplaces, skills, human capabilities, and national preparedness. *That brings us to an important question: what forces of automation are defining and determining the shape of the future workforce for respective nations?*

### **The Future of Work**

It seems that the shape the workforce of the future takes for each nation will be the result of complex, challenging, changing, and competing forces. While some of these forces are certain and known, the speed at which they unfold can be hard to predict for any nation or its decision makers. As a result, preparing the human workforce solely through today's work models and technical skills does not guarantee the human workforce the necessary skill set and competencies to compete with the emerging machine workforce that brings many unknowns.

Nations will need to prepare the human workforce for the changing nature of work. The emerging machine workforce is not just fighting for routine tasks or small jobs, but they seem to be competing for jobs even the brightest among the human workforce cannot achieve individually or collectively. As we see, machines are discovering patterns on their own, and they are learning things themselves. So, when we have intelligent tools that can find novel solutions to the complex challenges facing humanity, then it is a whole new world of machine workforce for which the human workforce is not prepared. It is going to be difficult for humans to evaluate what's left for the human workforce to do as machine workforce takes over.

Moreover, the way jobs are being designed is also changing rapidly, as is the mode of work changing. The traditional 9 to 5 position is dying as a higher number of employees are working remotely. Team structures are evolving, blurring a nation's geographical boundaries. Besides, a digitally-enabled

independent human work is rising. While independent work for humans is nothing new, and self-employment is, still the predominant form of employment in emerging economies, the digital enablement of it is a significant change, as the proportion of independent work that is conducted on digital platforms is proliferating. This is primarily due to the scale, efficiency, and ease of use for the human workforce that these digital platforms enable. From outsourcing work to ad-hoc teams, a distributed work model to a platform model, microwork to macro work, and more, each of these will be difficult transitions for the human workforce to go through. *That brings us to an important question: are nations evaluating how difficult these transitions will be?*

To understand which work model will become the future of work, it is necessary to evaluate the changing models of work and work structures. We must also assess how work will be organized and how it will look in terms of the human workforce working alongside (or maybe for) a machine workforce. At the same time, it is also essential to evaluate how entities across nations: their governments, industries, organizations, and academia (NGIOA) are evolving themselves due to competitive pressures and technological breakthroughs. *One thing is clear that lifelong careers and job security are disappearing, and this emerging reality is likely to shake up the social safety net.*

Acknowledging this emerging reality, Risk Group initiated a much-needed discussion on the Future of Work with Gary A. Bolles, an Internationally Recognized Expert, Chair for the Future of Work at Singularity University on Risk Roundup.

### **Declining Demand for Old Skills Set**

A skill set brings humans knowledge, abilities, and the experience necessary to perform a job or work. Since old skillsets are falling in demand, this brings a painful reality of the declining nature of work that the human workforce is used to. Now, since labor is the foundation of human society, when it changes radically and rapidly across nations, everything else that connects the human society falls apart as well. As we look around, we can see those old systems, models, and ways of doing things are struggling to survive as a new way of doing things is emerging rapidly. This new way of doing things requires entirely different skill sets and capabilities -- approaches and expectations for the work that many don't even fully understand yet.

As a result, the human workforce will require constant training and retraining. Moreover, traditional educational institutions will struggle with the current curriculum and training programs in the coming years as roughly half of the subject knowledge acquired during the first year of a four-year technical degree will likely be outdated by the time students graduate. This will create complex challenges for students to get jobs, but it will also raise serious questions about the return of investment for students. *That brings us to an important issue: will traditional 4-year degree programs survive? Moreover, would degrees even matter?*

### **Preparing the Human Workforce**

The future of work is in a state of instability, which is causing considerable anxiety—for a good reason. So, as automation changes the fundamental nature of work, modes of labor, and the workforce, how prepared are the decision makers across nations: its government, industries, organizations, and academia (NGIOA) in understanding these ongoing shifts to move forward?

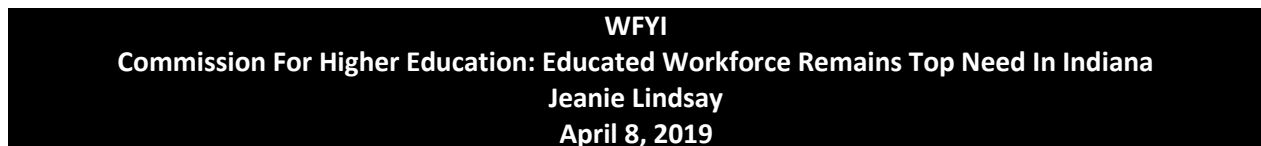
It is essential to begin a discussion on:

- How can the human workforce prepare for a future that is not clear yet?
- How should the human workforce be prepared?
- How will human workforce talent need to change?

The economic turbulence will certainly increase in the coming years. Moreover, as budgetary turmoil increases, decision-makers at all levels will need to proactively prepare for a more turbulent social climate by making the social safety net a higher strategic priority than it has ever been. *That brings us to an important question: are nations preparing the human workforce for what is to come?*

### **What Next?**

The workforce of yesterday, today, and tomorrow are very different. The massive economic disruption that is emerging will likely create enormous societal risks as competition gets fierce. The change is imminent, and this isn't the time to sit back and wait for events to unfold. To be prepared for the future is to make the future!



The central message of Monday's state of higher education address is one Hoosiers have heard before; it focused on the need for a more skilled workforce.

Commissioner for Higher Education Teresa Lubbers reinforced one of Gov. Eric Holcomb's biggest priorities during her annual state of higher education address: an educated workforce.

"More than ever, the imperative to develop human capital is the most critical issue facing the state of Indiana," she says.

In order to do that, she says education officials and employers need to work together.

Lubbers says declining enrollment is a serious issue facing colleges and universities, but she says one of Indiana's biggest issues is preparing more people for the transition from high school to college, and continued education for adults.

She stressed the importance of higher education adapting to meet the needs of more adult learners and being more personalized to different student needs.

"The needs of the individual learner should drive the delivery system, whether that's the 18-year-old college freshman or the 35-year-old returning adult," she says.

Lubbers says Indiana's largest industries are likely to see more automated jobs, but people with more education have a lower risk of losing their jobs to automation. She says it's especially important to do things differently in higher education with rapid technological change.

"If we fail to do so," she says, "we will be contributing to greater income disparity and social stratification."

Lubbers says the commission will focus largely on strategy this year, and boost efforts to get more people connected with a higher learning credential. The commission, and Gov. Holcomb, aim for at least 60 percent of Hoosiers earning some kind of college credential by 2025.

**Northwest Indiana Times**  
**More Indiana students are prepared for college; fewer are enrolling in college directly after high school, new report finds**  
**Carley Lanich**  
**April 7, 2019**

More Hoosier students than ever are prepared for college. That's according to the most recent College Readiness Report compiled by the Indiana Commission for Higher Education.

The 2019 report, released this week, shares data based on students who graduated high school in the previous academic year and enrolled in college within a year of their graduation.

Major takeaways include data trends showing fewer college-age students are in need of remediation, and more high school students are receiving college credit early, as well as a decrease in Indiana high school graduates immediately enrolling in college.

"While we understand that people are benefiting from a strong economy and job opportunities, we must continue to make a case for a quality degree or credential to ensure that Hoosiers are prepared for a dynamic economy," Indiana Commissioner for Higher Education Teresa Lubbers said in a news release.

"Despite slightly lower college-going rates, we are encouraged that more Hoosiers are prepared for college success."

This year's report shows that 63% of Hoosier students are going directly to college after graduation, as compared to 64% last year and 65% in 2017. The national average is 67%, according to the report.

Of those graduating, 64% of Hoosier high schoolers earned early college credits representing a 17 percentage-point increase in the last five years.

The report also found that students pursuing more rigorous high school degrees are more likely to enroll directly in college. Only 18% of students receiving a general diploma enroll directly in college, just more than half of Hoosier high schoolers receiving Indiana's Core 40 diploma enroll directly and 93% of students enroll directly after receiving an Honors diploma, accord to the commission.

The College Readiness Report also draws attention to credential types — 69% of 2017 Indiana high school graduates received bachelor's degrees — and college equity, evaluating gender, race, ethnic and income gaps in higher education.

The report found, of 2017 Indiana high school graduates, 69% of women pursued higher education compared to 57% of men, and that a lower percentage of rural students attended college compared to students from urban and suburban areas. The College Readiness Report further details enrollment numbers for specific Indiana public colleges, degree programs and degree type.

The full report can be viewed on the Indiana Commission for Higher Education's website.