

# University System of New Hampshire

## The University System of New Hampshire: THE PRIDE OF THE GRANITE STATE

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*Parker Philips*  
assess. analyze. assert!

November 2023



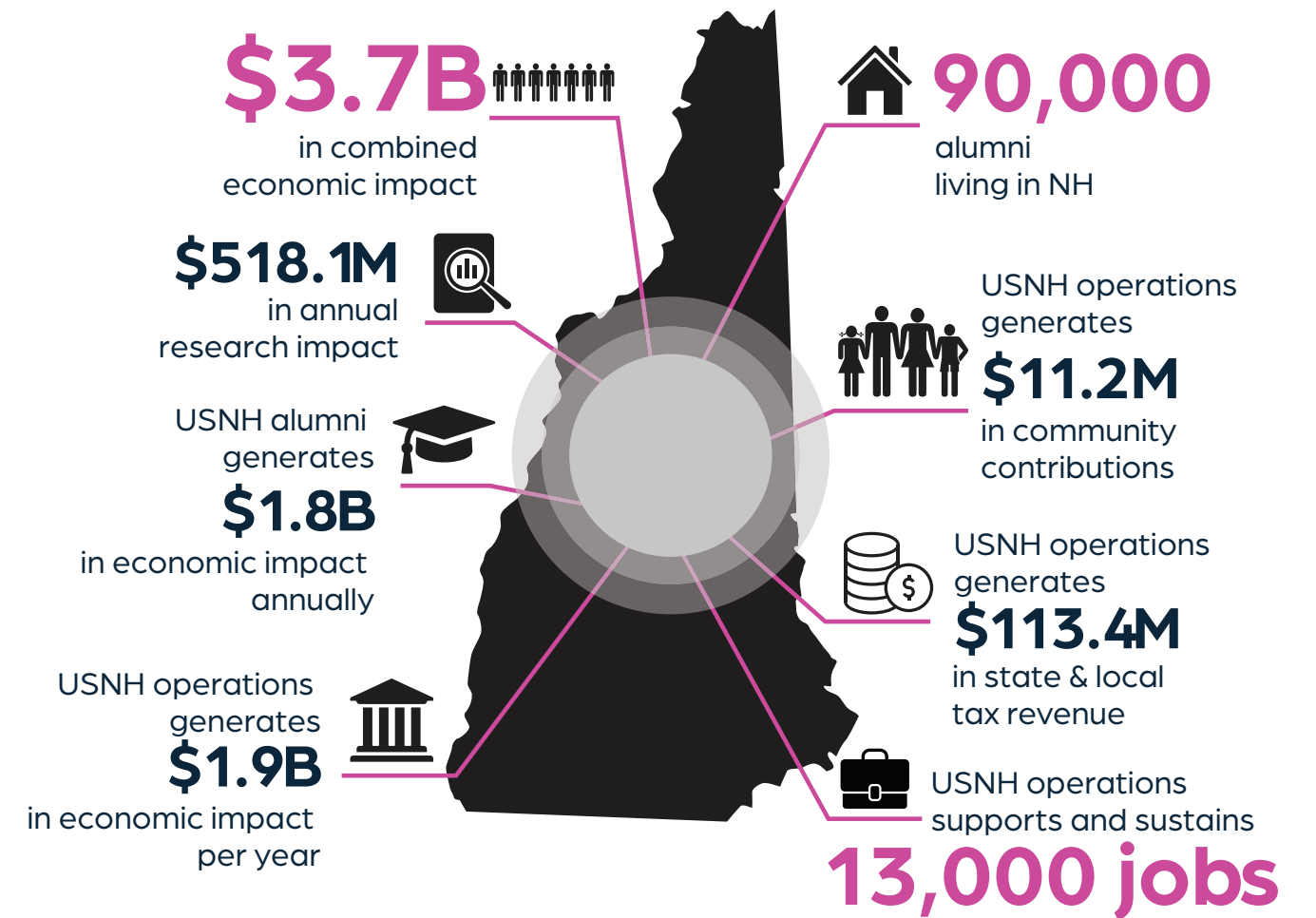
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# EXECUTIVE SUMMARY

## THE UNIVERSITY SYSTEM OF NEW HAMPSHIRE



### THE UNIVERSITY SYSTEM OF NEW HAMPSHIRE (USNH):

- Largest provider of postsecondary education in the state, educating nearly 30,000 students in 2020–21.
- Largest importer of future leaders, attracting approximately 11,000 out-of-state students each fall from across the country.
- Contributes 2,000 new bachelor's graduates on average, both resident and nonresident, to the New Hampshire workforce each year.<sup>1</sup>

<sup>1</sup> Analysis of aggregate NH Employment Security record match data by USNH System Office Institutional Research Office



With a mission to provide high-quality, affordable higher education, USNH has held the in-state tuition rate flat since 2017-18 (one of a few systems nationwide to do so). As a result of the freeze and increased financial aid from institutional resources, the average net cost of tuition and fees after institutional aid decreased for New Hampshire students by 7%, to \$10,200 in 2020-21.<sup>2</sup> For New Hampshire students most in need, the USNH Granite Guarantee fills any gap left by federal and state aid to fully cover the cost of in-state tuition.

USNH's three component institutions are economic engines for their regions and collectively for the state, performing ground-breaking research, collaborating with business, industry, and municipalities, advancing innovation and sustainability, and generating a skilled and knowledgeable workforce. The University of New Hampshire (UNH), the state's flagship research university, has a residential campus located in Durham on the seacoast, an urban campus in Manchester (UNHM), and the Franklin Pierce School of Law in Concord; Keene State College (KSC) is located in the western Monadnock Region; and Plymouth State University (PSU) bridges the North Country and central Lakes Region. In addition to the academic enterprise, the UNH Cooperative Extension reaches directly into local communities in each of the state's 10 counties. With distinctive missions and student populations, USNH institutions are uniformly committed to preparing an educated and engaged citizenry that strengthens local business, promotes entrepreneurship, builds leadership, and contributes to the quality of life and economic vitality in New Hampshire.

## OPERATIONS AND ALUMNI IMPACT NEW HAMPSHIRE

- Alumni and operations of the University System of New Hampshire in the 2020-21 fiscal year (FY 21) generated \$3.7 billion in economic impact.

## GENERATES ECONOMIC IMPACT

- The combined economic contribution of operations of the University System of New Hampshire in FY 21 was \$1.9 billion.
- This includes a direct impact of almost \$1.1 billion and indirect/induced impact of \$812.6 million.<sup>3</sup>
- Operational and capital spending in New Hampshire generated \$1.5 billion of the total impact, and \$451.3 million in impact was generated from student and visitor spending in FY 21.

<sup>2</sup> System-level analysis of undergraduate tuition and fee revenue, unrestricted institutional aid expense, and 12-month student FTE by USNH System Office Institutional Research Office

<sup>3</sup> See Appendix A for definitions of direct, indirect, and induced impacts

## SUPPORTS AND SUSTAINS JOBS

- As a result of operations, student spending and visitor spending, the University System of New Hampshire supported 12,981 jobs (8,960 direct and 4,021 indirect/induced).
- The University System of New Hampshire employed 5,603 people.

## CONTRIBUTES TO THE STATE AND LOCAL TAX BASE

In FY 21, the University System of New Hampshire, its suppliers, students, and visitors, contributed an estimated \$113.4 million in state and local taxes through spending in the local and statewide economy. Of this \$113.4 million, \$70.1 million was generated in local taxes only.

## ALUMNI CONTINUE TO CONTRIBUTE TO NEW HAMPSHIRE

USNH alumni embark on careers and further academic pursuits, alumni embrace the New Hampshire community and are committed to contributing to the greater good. More than 90,000 alumni living in New Hampshire are making a positive economic impact on the state's economy. These graduates are an integral part of the workforce of New Hampshire, impact the economy over their careers through their spending and the extra earning power from their USNH postsecondary education. Each year, alumni generate \$1.8 billion in economic output for the New Hampshire community, support and sustain 9,560 jobs, and contribute \$96.3 million in state and local taxes. These impacts are based on the added value of earning a degree or credential from the colleges and universities in the University System of New Hampshire, not alumni full wages.

***"Each year, 3,000 new students are drawn to NH to study at USNH institutions. Those who complete an internship in NH are two times more likely to stay and work in NH. Real-world experience coupled with critical-thinking skills produces community leaders and business owners who fortify our economy."***

*- Donald L. Birx  
President, Plymouth State University*



## MISSION TO SERVE AND GIVE BACK TO NH

Based upon assumptions derived from the U.S. Census Bureau and the University of Maryland Do Good Institute regarding donation amounts and volunteerism rates by age, income level, and employment status, it is estimated that USNH staff, faculty, and students give \$4 million annually in charitable donations and volunteer for an estimated 489,310 hours, valued at \$7.2 million. In 2021, the combined impact of charitable giving and volunteerism totaled \$11.2 million. These benefits were in addition to the \$1.9 billion in annual economic impact.

Members of the University System of New Hampshire are dedicated to enriching their communities. At the University of New Hampshire, the UNH Extension connects the university with the community through partnerships, events, and volunteer work. Keene State has an active community service office that organizes many community initiatives, advises service-based student organizations, and facilitates partnerships with non-profit organizations. Plymouth State University students exemplify the motto "that I may serve" by partnering with business and community organizations to solve real-world problems through the university's integrated cluster learning model.

***"Students, faculty, and staff at USNH colleges and universities are motivated to serve others and their communities. Whether it is research completed at UNH helping individuals understand complex issues, a reading program at Keene State that fulfills a mission of promoting literacy in the early years, or a community project completed in one of Plymouth State University's integrated cluster programs, the work at USNH has a direct impact on thousands of Granite Staters."***  
- James W. Dean, Jr.  
*President, University of New Hampshire, and Interim Chancellor,  
University System of New Hampshire*

## IN THE 2020-21 SCHOOL YEAR...

**30,000**



students enrolled

**16,000**



students from New Hampshire

**38%**



first generation to attend college

**6,800**



degrees & certificates awarded

**23%**



Pell Grant eligible



# #COLLEGEBOUNDNH

The University System of New Hampshire provides a well-coordinated network of higher educational institutions that offer diverse learning opportunities. The nearly 30,000 students enrolled at the three USNH institutions each year receive a world-class education that prepares them to contribute to their communities and the greater good. USNH institutions offer undergraduate, graduate, and professional degrees and certificates and are committed to engaged teaching and to community service. With more than 90,000 alumni living in New Hampshire, the impact of the University System of New Hampshire can be felt far beyond its campuses.

Three University of New Hampshire campuses offer more than 200 degree programs, award-winning faculty, and cutting-edge facilities. The main campus, located in Durham, is home to nine of the university's colleges and schools. The campus has undergraduate and graduate students from 49 U.S. states and territories as well as 33 countries.

Established in 1985, city campus in Manchester offers 50 areas of study, including the Millyard Scholars program that provides students in the biotechnology, engineering, and computer science fields with scholarship and research opportunities. Granite State College, the university system's online college, is in the process of merging with UNH Manchester to form the UNH College of Professional Studies, effective July 1, 2023. The UNH Franklin Pierce School of Law is located in the state's capital city, Concord. The school offers JD, LLM, and master's degrees and is home to the Daniel Webster Scholar Honors Program, the first and only client-ready bar-alternative course of study offered in the country.

As an institution dedicated to providing a liberal arts education, Keene State's curriculum focuses on building broad knowledge to develop critical thinking, multidisciplinary, and communication skills that will be valuable in each student's lifetime. Keene State partners with the business community to understand their needs and provides students with a transformative experience, preparing them to become engaged and dynamic members of the community. The college offers more than 40 areas of study.

Plymouth State University (PSU) is a regional comprehensive university dedicated to meeting the evolving educational needs of the New Hampshire and New England communities. Founded in 1871 as a teacher training school, PSU now offers 44 majors, 58 minors, and 25 graduate degree and certificate programs, including a Doctor of Education and a Doctor of Physical Therapy. The university has undergraduate and graduate students who come from 46 states and 30 countries.

The University System of New Hampshire is governed by a 28-member board of trustees made up of gubernatorial appointees, elected officials, presidents of each system college and university, alumni, and students. The system is committed to preserving a culture of diversity and inclusion on each campus, where all students are treated with dignity and respect. USNH is also committed to providing a quality education for all residents. Through the Granite Guarantee, eligible New Hampshire students can receive four years of tuition-free college. The program bridges the gap between federal and state aid packages offered to Pell-grant eligible students.

USNH Students AY 2020-21	
12-month Unduplicated Headcount	
UNH Durham	15,585
UNH Manchester	1,793
UNH Franklin Pierce School of Law	468
Granite State College*	2,957
Keene State College	3,559
Plymouth State University	5,079
<b>University System Total</b>	<b>29,441</b>

*\*Granite State College, the university system's online college merged with UNH Manchester to form the UNH College of Professional Studies, effective July 1, 2023.*





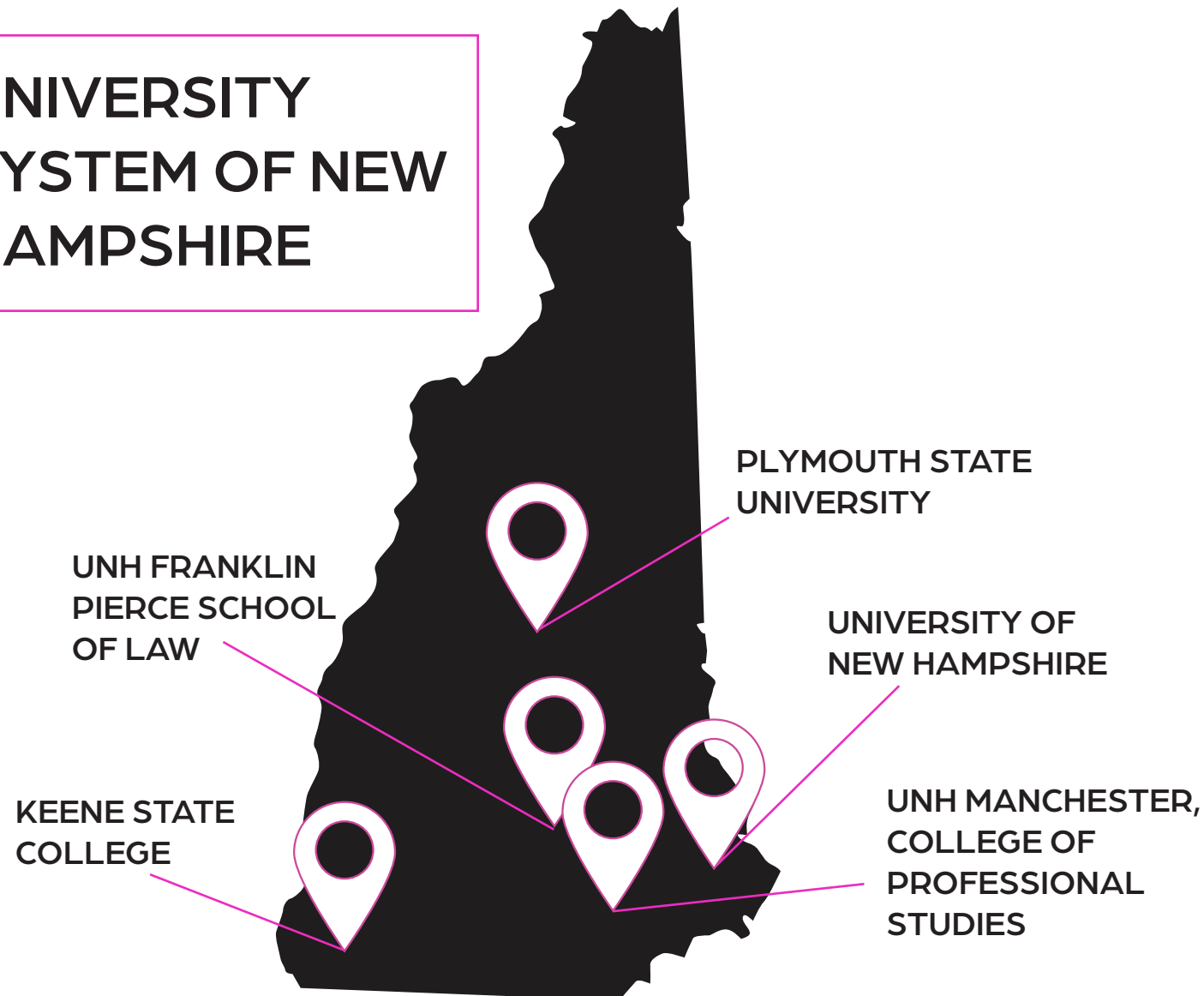
*“Our colleges and universities offer first-class facilities and faculty who care about students as learners. Through a commitment to teaching and to service, the University System of New Hampshire is helping residents of New Hampshire and indeed the nation understand complex subjects while making a difference in their communities.”*

*- Melinda Treadwell  
President, Keene State College*

### MISSION

The mission of the University System of New Hampshire is to serve the higher educational needs of the people of New Hampshire. The University System strives to ensure the availability of appropriate higher educational opportunities to all New Hampshire people; seeks to enroll a diverse student population to enhance educational experiences; and provides programs and activities based on a commitment to excellence. Through its institutions, the University System engages in research which contributes to the welfare of humanity and provides educational resources and professional expertise which benefit the state and its people, the region and the nation.

## UNIVERSITY SYSTEM OF NEW HAMPSHIRE



# University System of New Hampshire



**University of New Hampshire**





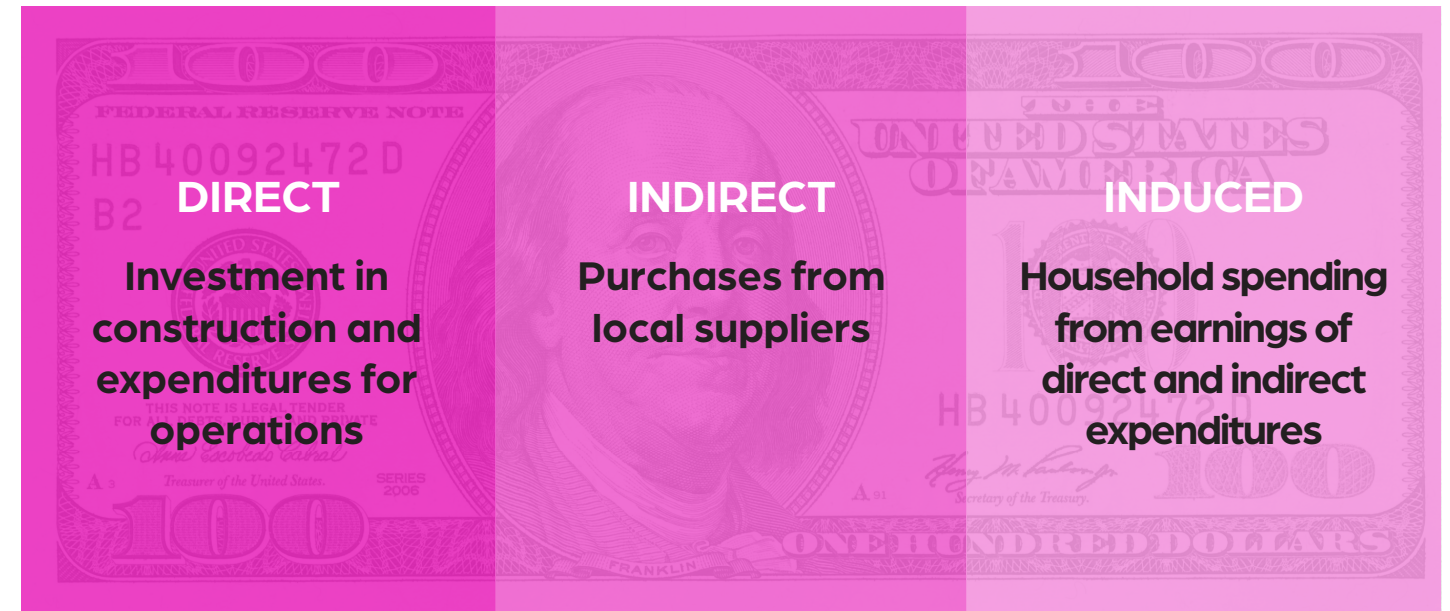
# ABOUT THE STUDY

In January 2023, the University System of New Hampshire engaged Parker Philips, Inc. to measure the economic contribution of the University System of New Hampshire colleges and universities. The goal of this analysis is to tell the University System of New Hampshire’s story from a numbers and narrative perspective. To develop this report, Parker Philips gathered student, financial, and employment data about the University System of New Hampshire and researched secondary data and information to inform the writing and key messages.



The primary tool used in the performance of this study is the Input-Output model and data set developed by IMPLAN Group LLC. Financial data used in this study was obtained from the University System of New Hampshire and included the following data points: operational expenditures, capital expenditures, and payroll and benefits for employees for FY 21. Secondary data was used to estimate spending by visitors (day and overnight) and students (undergraduate and graduate) exclusive of tuition and fees. Additional information on the methodology and assumptions used to complete this study can be found in Appendix B.

The impact presented in this analysis is broken down into three categories: direct impact, indirect impact, and induced impact. The indirect and induced impacts are commonly referred to as the “multiplier effect.” The following graphic below provides an overview of the types of impact detailed in this report.



## UNIVERSITY SYSTEM OF NEW HAMPSHIRE STUDY PROFILE

**DATA SOURCE:** The University System of New Hampshire and IPEDS

**STUDY TYPE:** Economic Contribution Analysis

**GEOGRAPHY:** New Hampshire

**BASELINE STUDY YEAR:** Fiscal Year 2021

**METHODOLOGY:** IMPLAN



# THE UNIVERSITY SYSTEM OF NEW HAMPSHIRE CONTRIBUTES TO THE STATE AND LOCAL ECONOMY

The University System of New Hampshire contributes to the local and state economy through its expenditures on operations, capital projects, wages, the spending of students off-campus, and the spending of visitors to campus. The direct, day-to-day expenditures of the University System of New Hampshire, combined with the student and visitor spending, cause a ripple effect throughout the statewide economy.

The total economic impact of the University System of New Hampshire in FY 21 was \$1.9 billion. This contribution to the local and statewide economy is a point-in-time snapshot depicting how the expenditures of the University System of New Hampshire and its faculty, staff, students, and visitors make an impact.

## OPERATIONS CONTRIBUTION

The University System of New Hampshire's operations and capital spending in FY 21 contributed a total of \$1.5 billion. The University System of New Hampshire's operations generated \$837.7 million in direct economic impact, \$178.5 million in indirect economic impact, and \$466.3 million in induced economic impact.

## STUDENT SPENDING CONTRIBUTION

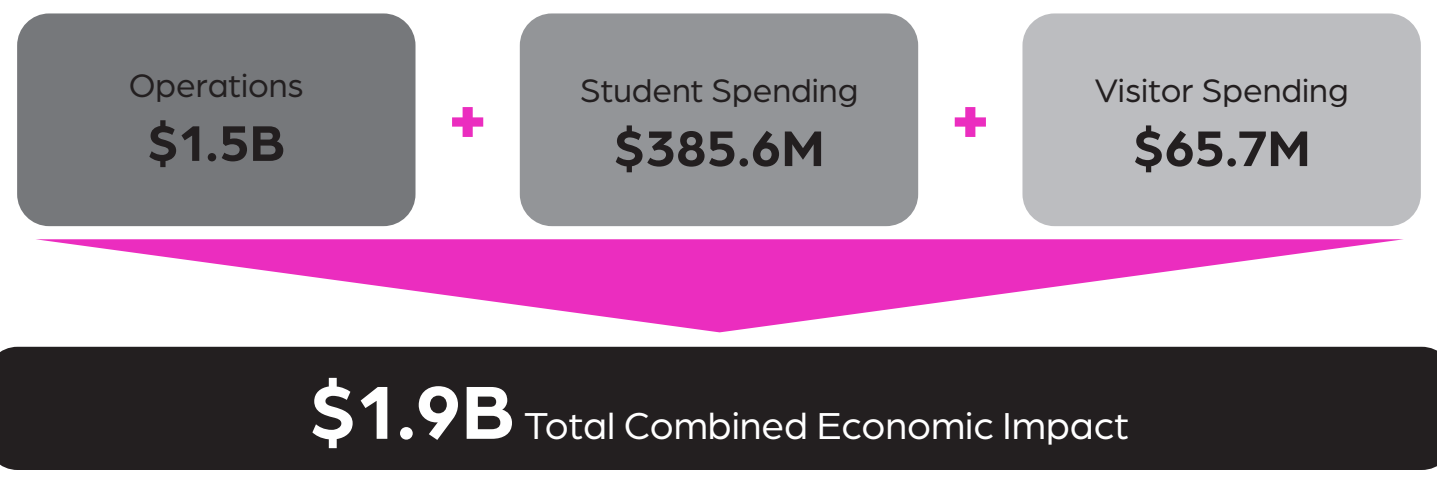
The University System of New Hampshire's students contributed a total of \$385.6 million to the state's economy in FY 21 as a result of their spending. They generated \$245.4 million in direct economic impact, \$54.1 million in indirect economic impact, and \$86.1 million in induced economic impact.

## VISITOR SPENDING CONTRIBUTION

Visitor spending at the University System of New Hampshire in FY 21 contributed a total of \$65.7 million. Visitors to University System of New Hampshire colleges and universities generated \$38.1 million in direct economic impact, \$13.1 million in indirect economic impact, and \$14.5 million in induced economic impact.

University System of New Hampshire Combined Economic Impact (FY 21)				
	Direct	Indirect	Induced	Total
Operations	\$837,712,452	\$178,496,240	\$466,283,020	\$1,482,491,712
Student Spending	\$245,428,183	\$54,139,318	\$86,010,529	\$385,578,030
Visitor Spending	\$38,078,122	\$13,147,106	\$14,498,504	\$65,723,732
<b>Combined Economic Impact</b>	<b>\$1,121,218,757</b>	<b>\$245,782,664</b>	<b>\$566,792,053</b>	<b>\$1,933,793,474</b>

Source: Parker Philips using IMPLAN with data from USNH







# CREATING AND SUSTAINING JOBS THROUGHOUT NEW HAMPSHIRE

The University System of New Hampshire supports more than 13,083 full- and part-time jobs throughout the state. Beyond the direct jobs at the university, indirect and induced jobs include construction for campus projects, retail, restaurants, daycare, real estate, and banking – to name a few.

## OPERATIONS CONTRIBUTION

The University System of New Hampshire operations supported and sustained a total of 9,063 jobs: 5,706 direct jobs, 855 indirect jobs, and 2,502 induced jobs.

## STUDENT SPENDING

Students from the University System of New Hampshire supported and sustained a total of 3,525 jobs as a result of student spending: 2,815 direct jobs, 248 indirect jobs, and 462 induced jobs.

## VISITOR SPENDING

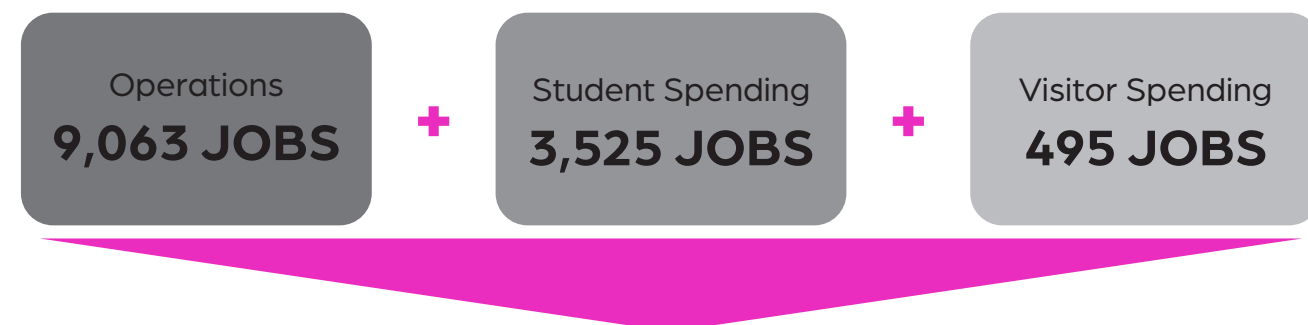
Visitors to the University System of New Hampshire supported and sustained a total of 495 jobs as a result of their spending: 354 direct jobs, 63 indirect jobs, and 78 induced jobs.

Based on analysis by industry sectors, other jobs supported by the university's economy outside of the higher-education and health-care sectors include jobs in real estate, retail, and services (e.g., restaurants, child-care centers, and entertainment).



University System of New Hampshire Employment Contribution (Jobs, FY 21)				
	Direct	Indirect	Induced	Total
Operations	5,706 jobs	855 jobs	2,502 jobs	9,063 jobs
Student Spending	2,815 jobs	248 jobs	462 jobs	3,525 jobs
Visitor Spending	354 jobs	63 jobs	78 jobs	495 jobs
<b>Total Jobs</b>	<b>8,875 jobs</b>	<b>1,166 jobs</b>	<b>3,042 jobs</b>	<b>13,083 jobs</b>

Source: Parker Philips using IMPLAN with data from USNH



**13,083** Total Jobs Supported and Sustained

### DIRECT EMPLOYMENT

Jobs are an annual point in time measure of employment that accounts for full-time and part-time staff and faculty at the University System of New Hampshire.

### INDIRECT EMPLOYMENT

In order to operate a college or university, you need to buy supplies. Since some of these intermediate inputs are made within the region, the college or university's spending supports additional jobs amongst suppliers within the supply chain. This figure represents the number of jobs that are supported by the business to business transactions in the scenario.

### INDUCED EMPLOYMENT

The employees of the University System of New Hampshire and their suppliers earn wages for their work, and spend much of their take-home pay locally on things like groceries, housing, and utilities. This spending supports additional jobs in industries like real estate, health care, and food service. This figure represents the number of jobs supported by the household spending generated by the business' activity.

# GENERATING LOCAL AND STATE TAX REVENUES

The University System of New Hampshire's employees, suppliers, and related constituencies contribute to the local and statewide tax bases. In FY 21, the university system contributed an estimated \$113.4 million (\$73.4 million direct and \$40 million indirect and induced) through local spending (operational, capital, students, and visitors) as well as direct and indirect support of jobs. At the state and local levels, the University System of New Hampshire contributes to the tax bases through its purchasing. Specific taxes include employee and employer contributions to state and local social-insurance funds, sales and use taxes, personal property taxes, taxes paid on motor-vehicle licenses, and payments of fines and fees.

University System of New Hampshire State and Local Tax Impacts (FY 21)				
	Direct	Indirect	Induced	Total
Sub County General	\$24,464,124	\$3,306,323	\$9,360,290	\$37,130,737
Sub County Special Districts	\$18,610,585	\$2,515,009	\$7,119,832	\$28,245,426
County	\$3,129,966	\$422,980	\$1,197,478	\$4,750,424
State	\$27,270,703	\$4,185,336	\$11,849,309	\$43,305,348
<b>Total</b>	<b>\$73,475,378</b>	<b>\$10,429,648</b>	<b>\$29,526,909</b>	<b>\$113,431,935</b>

Source: Parker Philips using IMPLAN with data from USNH



**\$113.4M** Total State and Local Tax Impact

# UNIVERSITY SYSTEM OF NEW HAMPSHIRE ALUMNI MAKE AN IMPACT IN NEW HAMPSHIRE



**90,000** alumni living in New Hampshire



**\$96.3 million** in local and state taxes



**\$1.8 billion** in annual economic impact



**9,560 jobs** supported and sustained

More than 90,000 University System of New Hampshire alumni living in New Hampshire are continuing to make a positive economic impact after graduation. Graduates from members of the University System of New Hampshire are an integral part of the workforce of New Hampshire and impact the economy over their careers through their spending and the extra earning power from earning a University System of New Hampshire degree. Each year, alumni from member institutions of the University System of New Hampshire generate \$1.8 billion in economic output for the New Hampshire community, support and sustain 9,560 jobs, and contribute \$96.3 million in state and local taxes. These impacts are based on the added value of earning a degree or credential from the University System of New Hampshire, not alumni full wages.

Famous alumni from University System of New Hampshire colleges and universities include:

- **BEST-SELLING AUTHOR:** John Irving is an internationally acclaimed author. He won a national book award in 1980 for "The World According to Garp," an Oscar for best adapted screenplay for "The Cider House Rules," and a Lambda Literary Award for "In One Person." "A Prayer for Owen Meany" is his best-selling novel. John Irving received a bachelor's degree from the University of New Hampshire in 1965.
- **FILMMAKER/DIRECTOR:** Jennifer Lee is the chief creative officer at Walt Disney Animation Studios and is best known for writing and directing the film "Frozen" and



its sequel. She is the first female director of a Disney animated feature film and the first female director of a film that earned more than \$1 billion. She won an Academy Award, a BAFTA Award, and an Annie Award. She graduated from the University of New Hampshire in 1992 with a bachelor's degree in English.

- **COLLEGE PRESIDENT:** Dr. Melinda Treadwell graduated from Keene State College with a major in industrial safety and a minor in chemistry in 1990. She earned a PhD in pharmacology and toxicology from Dartmouth Medical School. She has served as president of Keene State College since 2017.
- **FIRST WOMAN TO LEAD A COMBAT COMMAND:** General Lori Robinson of the United States Air Force was the first female officer to command a major combat command. She served as commander of the U.S. Northern Command and the North American Aerospace Defense Command from 2016–2018. General Robinson received her bachelor's degree in English from University of New Hampshire in 1981.
- **SENIOR UNITED STATES CIRCUIT COURT JUDGE:** Jeffrey Robert Howard has served as a judge for the U.S. Court of Appeals for the First Circuit since 2002, as chief judge from 2015–2022, and most recently as senior judge. He received his bachelor of arts from Plymouth State University in 1978.
- **BASEBALL PLAYER:** Carlton Fisk was a Major League Baseball catcher who spent much of his career with the Boston Red Sox and the Chicago White Sox. He was the American League rookie of the year in 1972 and is remembered for hitting a game-winning home run in game six of the 1975 World Series. He graduated from the University of New Hampshire in 1969.
- **CONGRESSWOMAN:** Donna Fern Edwards represented Maryland's fourth congressional district in the U.S. House of Representatives from 2008 to 2017. She was the first African-American to represent Maryland in Congress. She earned her JD degree from the UNH Franklin Pierce School of Law in 1989.

# RESEARCH

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The University System of New Hampshire brings competitive research dollars to the state due to its highly skilled faculty researchers and students. The focus on interdisciplinary collaboration at Plymouth State University promotes new levels of scholarship and knowledge among faculty and students. Research at the University of New Hampshire, a Carnegie Classification R1 university, reaches from the depths of the oceans to the edge of our solar system and the Earth and environment in which we all thrive. UNH's research portfolio includes partnerships with NOAA, NASA, NSF, and NIH, and brought in nearly \$260 million in competitive external funding in FY 21. Research generates an economic impact of \$518.1 million, supports 2,383 jobs, and \$17.3 million in local and state taxes.

# ATHLETICS

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**HOME OF THE UNIVERSITY OF NEW HAMPSHIRE WILDCATS:**  
#BETHEROAR



**HOME OF THE KEENE STATE OWLS: #OWLINATION**



**HOME OF THE PLYMOUTH STATE PANTHERS: #PANTHERPRIDE**  
#BLEEDGREEN

University System of New Hampshire institutions offer active and award-winning athletic programs. The University of New Hampshire has 18 NCAA Division I teams with more than 600 student athletes who have won 123 conference championships, including the 2022 American East Conference championship in women's soccer. The Keene State Owls play NCAA Division III sports as part of the Little East Conference. In recent years, they have won championships in women's swimming and diving as well as men's basketball. The Panthers of Plymouth State University have 25 Division III athletic teams and are members of the Little East Conference. Many Plymouth State teams have won conference and national championships, including the 2008 women's volleyball team and the 2008 men's rugby team, which was self-coached. USNH athletes serve as role models and leaders, contributing to both their campuses and the surrounding communities.



# THE UNIVERSITY SYSTEM OF NEW HAMPSHIRE GIVES BACK TO NH

The University System of New Hampshire serves the community in a variety of ways. The University of New Hampshire sponsors sustainability networks that connect organizations working to advance sustainability in the state and participates in programs like Food Solutions New England and New Hampshire Farm to School. The Warren B. Rudman Center at the UNH Franklin Pierce School of Law sponsors a summer fellows program that gives students stipends to provide free legal help to non-profit organizations and government agencies. Over the past three years, Rudman summer fellows contributed more than 41,000 hours of work, which translates into \$2.5 million in pro-bono legal services to New Hampshire non-profits and government agencies.

At Keene State College, students participate in an alternative break program involving domestic and international service-based trips during college breaks and on weekends. Students travel in teams to complete service projects focusing on unmet community needs. In the process, they learn about social issues and the importance of civic engagement. The TIGER (Theatre Integrating Guidance, Education, and Responsibility) Program at Plymouth State University has helped communities proactively address social concerns for the past 20 years. The group has performed more than 2,500 shows, hosted 3,000 workshops, and visited 500 schools in New England.

Based upon assumptions derived from the U.S. Census Bureau and the University of Maryland Do Good Institute regarding donation amounts and volunteerism rates by age, income level, and employment status, it is estimated that USNH staff, faculty, and students give \$4 million annually in charitable donations and volunteer for an estimated 489,310 hours, valued at \$7.2 million. In 2021, the combined impact of charitable giving and volunteerism totaled \$11.2 million. These benefits were in addition to the \$1.9 billion in annual economic impact.



**\$11.2 million** combined impact of charitable giving and volunteerism



**\$4 million** annually in charitable donations



**\$7.2 million** value of **489,310** volunteer hours





# CONCLUSION

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The University System of New Hampshire’s annual combined economic impact from operations and student and visitor spending (\$1.9 billion) plus the impact of New Hampshire-based alumni (\$1.8 billion) total \$3.7 billion. However, the impact of the university system is felt far beyond what economic measurement can capture. The component institutions of the University System of New Hampshire offer myriad learning opportunities for students. From a high research activity university to an interdisciplinary applied learning university to a small liberal arts college, the University System of New Hampshire provides students with a world-class education that prepares them to contribute to the greater good.



# APPENDIX A: TERMS & DEFINITIONS

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**Direct Economic Impact** – All direct expenditures made by an organization due to its operating expenditures. These include operating expenditures, capital expenditures, and pay and benefits expenditures.

**Direct Employment** – Total number of employees, both full-time and part-time, at the organization based on total jobs, not FTEs.

**Dollar Year** – Presented in 2022 dollars.

**Government Revenue/State and Local Tax Impact** – Government revenue or tax revenue that is collected by governmental units at the state and local levels in addition to those paid directly by an organization. This impact includes taxes paid directly by the organization itself, employees of the organization, and vendors who sell products to the organization and at the household level.

**IMPLAN Data Year** – 2021

**Indirect Economic Impact** – The indirect impact includes the impact of local industries buying goods and services from other local industries. The cycle of spending works its way backward through the supply chain until all money is spent outside of the local economy, either through imports or by payments to value added (multiplier effect).

**Indirect Employment** – Additional jobs created as a result of an organization’s economic impact. Local companies or vendors that provide goods and services to an organization increase their number of employees as purchasing increases, thus creating an employment multiplier.

**Induced Economic Impact** – The response by an economy to an initial change (direct effect) that occurs through re-spending of income received by a component of value added. IMPLAN’s default multiplier recognizes that labor income (employee compensation and proprietor income components of value added) is not lost to the regional economy. This money is recirculated through household spending patterns causing further local economic activity (multiplier effect).



# APPENDIX A: TERMS & DEFINITIONS

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**Induced Employment** – Additional jobs created as a result of household spending by employees of an organization and the employees of vendors. This is another wave of the employment multiplier.

**Multiplier Effect** – The multiplier effect is the additional economic impact created as a result of the organization’s direct economic impact. Local companies that provide goods and services to an organization increase their purchasing by creating a multiplier (indirect/supply-chain impacts). Household spending generated by employees of the organization and the organization’s suppliers create a third wave of multiplier impact (induced/household-spending impacts).

**Study Year** – FY 2021 (July 1, 2020 – June 30, 2021)

**Total Economic Output/Economic Impact** – Includes organizational spending on operations, capital expenditures, labor income expenditures, and value added to the economy as a result of expenditures made by an organization. It is the combined impact of direct, indirect, and induced impacts.



# APPENDIX B: DATA & METHODS

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The University System of New Hampshire (USNH) provided the primary economic data used to complete the contribution analysis. Data supplied included operating expenditures, capital spending (three year average), pay and benefits, and total employees. Primary and secondary data were used to complete the input-output models in IMPLAN. The study approach and economic-impact findings are a conservative estimate of impact and are based on actual financial information. The study is a snapshot in time of the University System of New Hampshire’s independent colleges and universities.

## OVERVIEW AND THE IMPLAN MODEL

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The most common and widely accepted methodology for measuring the economic impacts of economic sectors is input-output (I-O) analysis. At its core, an I-O analysis is a table that records the flow of resources to and from companies/organizations and individuals within a region at a given time. For a specified region such as a state, the I-O table accounts for all dollar flows among different sectors of the economy in a given period. With this information, a model can then follow how a dollar added into one sector is spent and represented in other sectors of the economy, generating outgoing ripples of subsequent economic activity. This chain of economic activity created by one event is called the “economic multiplier” effect.

The primary tool used in the performance of this study is the I-O model and data set developed and maintained by IMPLAN Group LLC (formerly Minnesota IMPLAN Group Inc.). IMPLAN is a widely accepted and used software model first developed by the U.S. Forest Service in 1972. Data used in the baseline IMPLAN model and data set come largely from federal-government databases. The I-O tables themselves come from the Bureau of Economic Analysis. Much of the annual data on labor, wages, final demand, and other market data come from the Bureau of Labor Statistics, the U.S. Census Bureau, and other government sources.

Government agencies, companies, and researchers use IMPLAN to estimate the economic activities associated with spending in a particular industry or on a particular



# APPENDIX B: DATA & METHODS

project. The IMPLAN model extends conventional I-O modeling to include the economic relationships among government, industry, and household sectors, allowing IMPLAN to model transfer payments such as taxes. Producers of goods and services must secure labor, raw materials, and other services to produce their product.

The resources transferred to the owners of that labor or those raw materials and services are then used to secure additional goods and services or inputs to the products they sell. For example, an organization in a region may develop a company that produces tractors with a value of \$1 million. However, to produce that product, they may be required to spend \$500,000 in wages and benefits, \$200,000 to suppliers of tractor parts, \$100,000 for electricity, \$50,000 for transportation of goods and raw materials to and from the plant, and \$50,000 in various professional services fees associated with operating a business (e.g., attorneys and accountants). The suppliers will, in turn, spend those resources on labor and raw materials necessary to produce tractors. Workers and the owners of the company will buy goods and services from other firms in the area (e.g., restaurants and gas stations) and pay taxes. The suppliers, employees, and owners of this second tier will, in turn, spend those resources on other goods and services whether within the study region or elsewhere. The cycle continues until all of the money leaves the region.

## IMPLAN METHODOLOGY

The model uses national production functions for more than 536 industries to determine how an industry spends its operating receipts to produce its commodities. These production functions are derived from U.S. Census Bureau data. IMPLAN couples the national production functions with a variety of county-level economic data to determine the impacts at a state and congressional-district level. IMPLAN collects data from a variety of economic data sources to generate average output, employment, and productivity for each industry in a given county. IMPLAN combines this data to generate a series of economic multipliers for the study area. The multiplier measures the amount of total economic activity generated by a specific industry's spending an additional dollar in the study area. Based on these multipliers, IMPLAN



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generates a series of tables to show the economic event's direct, indirect, and induced impacts to gross receipts, or output, within each of the model's more than 536 industries. The model calculates three types of effects: direct, indirect, and induced. The economic impact of the University System of New Hampshire's independent colleges and universities is the sum of these three effects.

## CONSIDERATIONS CONCERNING IMPLAN

There are three important points about the use of IMPLAN (or any other I-O model):

It is a fixed-price model. The model assumes that changes in consumption are not limited by capacity and do not affect prices. This assumption does not cause a problem for the analysis presented here, because we are taking a snapshot of the University System of New Hampshire's independent colleges and universities in a specific year. As in many studies using this type of model, the direct impacts are not calculated by the model; they reflect actual spending levels and patterns created by each college or university. Changing the level of direct spending allows us to calculate the magnitude of the indirect and induced effects associated with the initial level of spending.

Because the model continues to calculate additional spending until all of the money leaves the region (i.e., "leakage"), the larger and more economically diverse the region, the longer it will take for spending to leave the region and the larger the impact is likely to be. For example, an employee of a college or university may spend some amount of their income on buying a car. If there are no car manufacturers in the state or county, this spending will leave the region and the multiplier effect will stop. At the national level, a portion of that same spending by that same individual may go to a national auto producer. That spending would lead to more spending at the national level than would be captured by a more regional model. The national impact will be larger than the sum in the individual states, and the individual state impact will be larger than the sum of the impacts in its congressional districts.

